Is there a racial pay gap among CEOs? It depends:

Testing contextual factors on the relationship between CEO race and CEO compensation

By

Seo-Young Byun

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The dissertation is approved by the following members of the Final Oral Committee:

Maria Triana, Associate Professor, Management and Human Resources
Barry Gerhart, Professor, Management and Human Resources
Russell Coff, Professor, Management and Human Resources
Markus Brauer, Professor, Psychology

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Abstract

Although the racial pay gap has been an ongoing interest for organizational scholars, whether there is a pay difference between White and racial minority CEOs is a question without a clear-cut answer. This work takes a contingency approach on the racial pay gap among CEOs, specifically examining four contextual factors of the relationship between CEO race and CEO compensation (i.e., firm performance, CEO attractiveness, evaluator perceptions of double standards, and evaluators' implicit racial bias). Building on and extending the expectation states theory and the double standards of competence theory, the findings from field and experimental studies show that racial minority CEOs, all else being equal, receive less compensation compared to their White counterparts; however, this pay gap disappears when their firm is performing well, they are attractive, evaluators demonstrate high perceptions of double standards, or evaluators do not have implicit racial bias. This indicates that racial minority CEOs may be under the influence of double standards which are less applicable to White CEOs. Overall, my dissertation provides a nuanced perspective on the role of CEO race in explaining CEO compensation by suggesting that the existence and the magnitude of the racial pay gap depend on the given context.

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Introduction

Research across multiple disciplines has extensively examined racial pay inequality and finds that racial minorities earn less than White individuals within the overall labor market (see Leicht, 2008; Mandel & Semyonov, 2016 for review). It is less clear whether this pay gap also applies to the upper echelons of organizations, especially the CEOs. This is because there are theoretical and empirical grounds for competing notions on the direction of the racial pay gap. On the one hand, the literature on status characteristics (Berger, Fisek, Norman, & Zelditch Jr., 1977; Correll & Ridgeway, 2006; Foschi, 2000) and discrimination (Colella & King, 2018; Dipboye & Colella, 2005) holds that racial minorities are likely to receive less compensation than their White counterparts due to negative biases and stereotypes associated with them in leadership positions (Carton & Rosette, 2011; Heilman, 1983; 2001). Research on the discrimination that racial minority executives and board directors experience, in particular, implies that this may also be the case for CEOs (Cook & Glass, 2014; McDonald & Westphal, 2013; Park & Westphal, 2013).

On the other hand, recent work taking a resource-based view on the upper echelons suggests that racial minority CEOs may earn more than White CEOs because their human capital is a more rare, valuable, and inimitable resource to organizations (Hill, Upadhyay, & Beekun, 2015). Especially as organizational diversity goals become more prevalent and important (PricewaterhouseCoopers 20th CEO Survey, 2017), racial minority CEOs may be valued more than White CEOs from a diversity management standpoint (Hill et al., 2015; Leslie, Manchester, & Dahm, 2017) given the scarcity of racial minorities in upper management (i.e., 4% of CEO positions are held by racial minorities; Fortune, 2013).

Recognizing these two competing perspectives on the effect of CEO race on CEO

compensation, the present research examines not only the overall racial pay difference among CEOs but also four important contextual factors, namely firm performance, CEO attractiveness, evaluator perceptions of double standards, and evaluator's implicit racial bias that may reduce or widen the pay gap between racial minority and White CEOs. By doing so, this study contributes to our understanding of the racial pay gap among CEOs in several ways. First, theoretically this investigation applies expectation states theory (Berger et al., 1977; Correll & Ridgeway, 2006) to the upper echelons and demonstrates that racial minority CEOs earn less than their White counterparts. Expectation states theory argues that people anticipate racial minorities will perform worse than Whites, and these low performance expectations negatively affect employee outcomes such as pay. This paper further extends the theory by examining four conditions when such negative expectations are mitigated and the racial pay gap is eliminated – high firm performance, CEO attractiveness, evaluators' high perceptions of double standards, and evaluators' low implicit racial bias.

Second, the current study extends the double standards of competence theory (Foschi, 2000) by introducing perceptions of double standards as an important individual difference that shapes how people react to CEOs of different racial backgrounds. This provides a novel perspective on when the pay difference between racial minority and White CEOs is reduced by distinguishing evaluators who recognize the difficulties racial minorities encounter as they advance in their organizations from those who do not.

Third, in addition to evaluator perceptions of double standards which capture individuals' explicit attitudes toward people of different racial groups, the present research examines the role of implicit racial bias in explaining the CEO racial pay gap. Extant literature on intergroup bias and discrimination has argued for the subconscious nature of biases and raised doubts about

relying solely on self-reports of individual attitudes toward different social groups (Greenwald, McGhee, & Schwartz, 1998; Uhlmann, Leavitt, Menges, Koopman, Howe, & Johnson, 2012). By taking into account both explicit beliefs and implicit biases of evaluators in making pay decisions for CEOs, the current work addresses such concerns and answers calls for more research on how subconscious biases manifest in organizations (Amodio & Mendoza, 2010; Pratt & Crosina, 2016).

Lastly, this work employs multiple methods across three studies including archival data analyses and experimental methods. This multi-method approach allows the present study to not only demonstrate more robust findings through replication but also to make causal inferences related to racial pay differences in the upper echelons. This has social and organizational implications, bridging theory and practice.

Theory and Hypotheses

Race in the Upper Echelons

It is established in the literature that there are multiple sources of barriers for racial minorities to advance in the organizational hierarchy (Colella & King, 2018; Dipboye & Colella, 2005; Ridgeway, 2014). Especially for African-American/Black leaders, regardless of their performance, they are likely to be evaluated more negatively than their White counterparts due to stereotyping (Carton & Rosette, 2011), hindering their upward mobility. Because the number of racial minorities decreases at higher levels of the organizational hierarchy, racial minorities frequently occupy token positions (Kanter, 1977), leading to performance pressures and strong stereotyping (Jackson, Thoits, & Taylor, 1995). The fact that only 4% of Fortune 500 firms are led by racial minority CEOs and 16.1% of board of director seats are held by racial minorities echoes these research findings (Fortune, 2013; Deloitte Diversity Report, 2018). Although racial

minority employees occupy 33% of the entry-level workforce, they hold only 15% of C-suite positions (McKinsey & Company Report, 2017). By comparison, White employees make up 67% of the entry-level workforce and 85% of the C-suite positions (McKinsey & Company Report, 2017). This demonstrates that the path to top leadership positions is considerably narrower for racial minorities compared to Whites. Further, when they do get leadership opportunities, racial minorities are more likely to be promoted to CEO positions that are riskier such as leading failing firms or firms in crisis, known as the glass cliff phenomenon (Cook & Glass, 2014).

More recently, relevant scholarship has started examining social discrimination that racial minorities may experience as corporate elites. For instance, racial minority directors who are newly-appointed are less likely to receive mentoring from incumbent directors, making it more difficult for them to obtain additional board seats (McDonald & Westphal, 2013). Racial minority directors are also less likely to gain advantage from engaging in monitoring, advice-giving, and ingratiation behaviors compared to White directors (Westphal & Stern, 2007). Moreover, White CEOs are more likely to make internal attributions for negative firm performance of a peer company if the company is led by a racial minority (Park & Westphal, 2013). Given that CEO positions are dominated by Whites (96% of Fortune 500 CEOs are White; Fortune, 2013), racial minority CEOs are likely to suffer from these negative, internal attributions (Park & Westphal, 2013). In fact, this appears to manifest in outcomes such as a greater likelihood of job exit for racial minority CEOs (Hill et al., 2015) and a greater likelihood of racial minority CEOs being replaced by White CEOs in the aftermath of weak performance during their tenure (Cook & Class, 2014). Overall, research highlights that racial minorities face difficulties even after they reach the very top of the organization.

Race and CEO Compensation

Another important job outcome for executives, including CEOs, is compensation. Although extensive research has examined the determinants of CEO compensation in various ways (see Finkelstein, Hambrick, & Cannella, Jr., 2009 for a review), whether CEO race directly affects compensation has been relatively underexplored. An exception is the work of Hill and colleagues (2015) which found that racial minority CEOs earned more than White CEOs using a sample of S&P 1500 CEOs over the period of 1996-2005. According to Hill et al. (2015), although the odds are against racial minorities as evidenced by the fact that only 4% of CEO positions are held by racial minorities (Fortune, 2013), they may benefit from this scarcity once they become CEOs. Based on the resource-based view (Barney, 1991), their racial minority status is a valuable, rare, and inimitable resource to the firm in several ways, which will likely result in higher pay for racial minority CEOs. Racial minority CEOs may bring in different perspectives and approach firm-level decisions in a more ethical manner compared to White CEOs (Hill et al., 2015; Post, Rahman, & Rubow, 2011). For instance, according to Post and colleagues (2011), the presence of female directors led firms to show more environment-friendly actions as women generally show greater concern for environmental issues than men. This echoes previous empirical research on female representation in the upper echelons having a positive effect on firm performance due to informational diversity women bring to top management teams (Dezso & Ross, 2012) and reduced strategic risk-taking (Jeong & Harrison, 2017). Whether these findings apply for racial minorities as well as for women needs further empirical examination, but there is potential for racial minorities in the upper echelons to have a similarly positive impact on firm performance through diversity of opinions and cultural lenses (Hill et al., 2015; Richard, Barnett, Dwyer, & Chadwick, 2004). Thus, racial minority CEOs may

be valued more and receive higher compensation compared to White CEOs.

In addition, with diversity increasing in the overall workforce, racial minority CEOs may be perceived as more valuable from a diversity management perspective because having a racial minority CEO conveys equal opportunity in human resources practices (Hill et al., 2015), positively influencing both the retention and attraction of high performing racial minority employees. This is also in line with the arguments of Leslie and colleagues (2017) that as more organizations adopt diversity goals, high potential females, especially those who have reached the upper echelons, are likely to be valued more based on the principle of supply and demand. Similarly, while the number of racial minorities decreases as they move up their organizational hierarchy (Kanter, 1977; McKinsey & Company Report, 2017), demand for high potential racial minorities who could take on CEO positions may increase due to social and organizational pressures for a greater representation of minorities in the upper echelons (Leslie et al., 2017). Thus, racial minority CEOs may be more valuable than White CEOs, earning greater pay.

However, there are extant studies that raise the possibility of the opposite case in which racial minority CEOs are compensated less than their White counterparts. The aforementioned studies on different barriers and negative outcomes that racial minorities in the upper echelons experience provide grounds for a plausible pay gap between racial minority CEOs and their White counterparts (Cook & Glass, 2014; McDonald & Westphal, 2013; Park & Westphal, 2013; Westphal & Stern, 2007). In addition, pay differentials between racial minority and White employees in the labor market as a whole are well documented (Leicht, 2008; Mandel & Semyonov, 2016). Taken together, such a pay gap between racial minorities and Whites can be present among CEOs as well.

Expectation states theory (Berger et al., 1977; Correll & Ridgeway, 2006) also provides

theoretical grounds for the claim that racial minority CEOs may receive less remuneration than White CEOs. According to the theory, people have implicit, anticipatory beliefs about the relative quality of individuals' task performance, referred to as performance expectations. The most important factors that affect performance expectations for a target are the target's status characteristics defined as "attributes on which people differ and for which there are widely held beliefs in the culture associating greater social worthiness and competence with one category of the attribute than another" (Correll & Ridgeway, 2006, p. 32). Race is a typical example of status characteristics (Foschi, 2000) and race is particularly important because it is a diffuse status characteristic which yields general performance expectations that apply to a wide range of working environments unless the setting explicitly dissociates the status characteristic from the task (Correll & Ridgeway, 2006).

Expectation states theory maintains and data have empirically shown that people have high performance expectations for Whites and low performance expectations for racial minorities (see Berger & Wagner, 2016; Correll & Ridgeway, 2006 for review). That is, people have an implicit bias that racial minority employees will show lower performance than White employees. Previous research that conducted an implicit association test using a sample of over 2.5 million participants supports this notion (Nosek et al., 2007). The results indicated that 68% of participants more quickly associated pictures of White individuals with positive words and pictures of Black individuals with negative words while only 14% showed the opposite pattern (Nosek et al., 2007). Such performance expectations shape people's behavior in a self-fulfilling manner because (a) people have low and high performance expectations for a racial minority and a White target, respectively, (b) the White target will be given more opportunities to participate, speak up, and perform a given task, (c) the White target will be considered as more competent by

others, and (d) the White target will also consider him- or herself as competent, leading to a virtuous cycle (Correll & Ridgeway, 2006). The opposite pattern will occur for racial minorities, reinforcing low performance expectations and negative evaluation by both others and themselves (Correll & Ridgeway, 2006). Especially in the context of CEOs, CEO race would be even more salient given the reality that most CEO positions are held by White CEOs (Fortune, 2013). Therefore, due to low performance expectations and racial bias associated with racial minorities, racial minority CEOs may experience negative outcomes such as earning less remuneration compared to their White counterparts, all else being equal.

Overall, there are theoretical and empirical underpinnings for two competing predictions on the racial pay gap among CEOs: racial minority CEOs may earn more or less than their White counterparts. Therefore, the following set of competing hypotheses on the main effect of CEO race on CEO compensation is proposed:

Hypothesis 1a: Racial minority CEOs will receive more compensation compared to their White counterparts.

Hypothesis 1b: Racial minority CEOs will receive less compensation compared to their White counterparts.

CEO Race, Firm Performance, and CEO Compensation

Research in the diversity literature argues that the effect of demographic variables on work-related outcomes are highly context driven (Johns, 2006; Richard, Kirby, & Chadwick, 2013; Triana, Miller, & Trzebiatowski, 2013), emphasizing the need to take into account various boundary conditions. Thus, in order to comprehensively understand the role of CEO race in explaining CEO compensation, the present paper identifies moderators of the racial pay gap among CEOs, one of which is firm performance.

Due to low performance expectations associated with racial minority CEOs (Correll & Ridgeway, 2006), I propose that they are more likely to be penalized for low firm performance compared to their White counterparts by receiving lower compensation. When the firm is not performing well and its CEO is a racial minority, there is a congruence, or consistency, between low firm performance and negative performance expectations imposed upon racial minority leaders (Carton & Rosette, 2011; Correll & Ridgeway, 2006). Prototypical leaders are White, and are associated with leadership qualities such as competence, independence, and confidence (Cook & Glass, 2014; Fiske & Taylor, 1991; Rudman & Glick, 2001). As racial minority CEOs violate the preconceived expectations for the CEO position, they are more likely to be considered as lacking fit and less competent (Heilman, 1983; 2001). Thus, when their firm performance is weak, this confirms and reinforces the negative performance expectations that racial minority CEOs are incompetent. However, White CEOs whose firms are not performing well are less likely to be penalized for low performance because of the initially high performance expectations and perceptions of leadership qualities implicitly associated with them being White (Cook & Glass, 2014; Correll & Ridgeway, 2006; Fiske & Taylor, 1991).

In addition, even when their firm is not performing well, White CEOs are more likely to get the benefit of the doubt than racial minority CEOs. Double standards of competence theory (Foschi, 2000) argues and has demonstrated that people use different standards when they evaluate a target's competence (or lack thereof) depending on the status characteristics of the target. Especially when an objective standard of measuring competence is absent or unclear, people "use status differences as the basis for double standards that disadvantage those in the devalued category" (Foschi, 2000: 25). That is, more lenient standards will be applied to individuals of higher status (e.g., White) than those of lower status (e.g., racial minority) which

allows higher status individuals to be considered more competent than their lower status counterparts with the same performance. When they are exhibiting low performance in particular, higher status individuals will be given the benefit of the doubt while lower status individuals will be scrutinized more for a similar level of low performance (Foschi, 2000; Lyness & Heilman, 2006). In fact, "the higher the status, the more convincing the demonstration of incompetence will have to be" in order for higher status individuals to be evaluated as incompetent (Foschi, 2000, p. 25). Therefore, even in the aftermath of low firm performance, White CEOs are less likely to be deemed incompetent, more likely to enjoy the benefit of the doubt, and less likely to be penalized through reduced compensation. Taken together, it is proposed that there will be a substantial pay gap between racial minority and White CEOs when their firms are not performing well.

When firms are performing well, the differences in pay between racial minority and White CEOs may be smaller or not existent. Although the low performance expectations for racial minority CEOs have a potential to negatively affect their evaluations (Correll & Ridgeway, 2006), their high performance levels will mitigate the negative influence of low performance expectations. Extant research shows that when performance information is clear and qualifications are unambiguous, bias diminishes (Heilman et al., 2004; Heilman & Haynes, 2005). Therefore, when the firm is performing well, the pay gap between racial minority and White CEOs should be reduced.

Hypothesis 2: CEO race and firm performance will have an interactive effect on CEO compensation. When firm performance is low, racial minority CEOs will receive less compensation compared to their White counterparts. This effect will be mitigated for racial minority CEOs when firm performance is high.

CEO Race, CEO Attractiveness, and CEO Compensation

In addition to race, the attractiveness of an individual is another important status characteristic that influences performance expectations (Correll & Ridgeway, 2006; Foschi, 2000). According to a meta-analysis by Eagly, Ashmore, Makhijani, and Longo (1991), individuals stereotypically associate attractiveness with social competence (i.e., skills and inclinations related to sociability, and relevant outcomes, such as popularity), intellectual competence (e.g., task-related capability, career success, and rational mentality), psychological stability and well-being, and potency (i.e., dominance over other people). In other words, people implicitly have higher performance expectations for individuals who are attractive than for those who are less attractive. Different performance expectations based on attractiveness then impact the behaviors and perceptions of both the focal individuals whose attractiveness is being judged and others around them in a self-fulfilling manner. Compared to those who are unattractive, attractive individuals are more likely to be given opportunities to participate in and perform tasks, more likely to be evaluated as competent and favorably by others, and more likely to enhance and exercise their influence over others (Correll & Ridgeway, 2006). Indeed, the positive effect of attractiveness on various life and work-related outcomes such as hiring and promotion decisions, performance evaluation, and income, is documented in the literature (see Hosoda, Stone-Romero, & Coats, 2003; Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000; Stone, Stone, & Dipboye, 1992 for review). Especially with respect to compensation, empirical research has accumulated substantial evidence for a significant difference between attractive and unattractive people, often referred to as the beauty premium or the ugliness penalty (e.g., Fruhen, Watkins, & Jones, 2015; Judge, Hurst, & Simon, 2009; Mobius & Rosenblat, 2006). At the CEO level, research shows that CEO appearance may have

performance implications. For instance, firms led by male CEOs with wider faces, which are considered as more masculine, performed better than other CEOs with narrower faces (Wong, Ormiston, & Haselhuhn, 2011).

High performance expectations associated with attractiveness show a sharp contrast with the low performance expectations attached to racial minority CEOs. As racial minority CEOs are incongruent with commonly held expectations of typical leaders (i.e., being White), they are regarded as less competent and lacking fit (Carton & Rosette, 2011; Heilman, 1983; 2001). If racial minority CEOs are also unattractive, low performance expectations associated with both their race and their unattractiveness can reinforce negative performance expectations. Therefore, it is proposed that unattractive racial minority CEOs will be most likely to be penalized in the form of decreased compensation.

Conversely, when racial minority CEOs are attractive, the two status characteristics (i.e., race and attractiveness) provide differing performance expectations, leading to a discrepancy between low performance expectations for their racial minority status and high performance expectations for their attractiveness. According to expectation states theory, when people aggregate multiple sources of information in order to form an overall expectation of a focal target, inconsistent information has the largest effect on the final evaluation (Correll & Ridgeway, 2006). Specifically, a piece of positive status information that contradicts existing negative status characteristics carries more weight than it would have if it were the only piece of information available (Correll & Ridgeway, 2006). Thus, the positive performance expectations associated with attractiveness is likely to compensate for, or reduce, the negative performance expectations attached to racial minority status for CEOs.

As for White CEOs, regardless of their attractiveness, people have higher performance

expectations for them based on their higher racial status and on the fact that Whites overwhelmingly hold CEO positions. Thus, White CEOs are implicitly considered as more fit and competent because they are the default image people are accustomed to seeing of a CEO (Correll & Ridgeway, 2006; Heilman, 1983; 2001). For unattractive White CEOs, the overall performance expectations are likely to diminish due to the negative performance expectations associated with their unattractiveness. However, in the process of developing an overall expectation through combining information from multiple status characteristics, the more salient the status characteristic, the more weight it gets (Correll & Ridgeway, 2006). In the context of CEOs, attractiveness is an important characteristic as CEOs are the ones who set the overall image of the firm, and are frequently seen through the media. However, given that only 4% of CEOs of the Fortune 500 companies are racial minorities (Fortune, 2013), together with the cultural and political history of race relations in the US (Feagin, 2006; Feagin & O'Brien, 2003; Feagin & Sikes, 1994), CEO race is likely to be highly salient. Thus, for White CEOs, it is proposed that being unattractive will not have as significant an effect on their compensation as it will for racial minority CEOs.

In regards to White CEOs who are attractive, their high racial status and attractiveness provide consistent information. Expectation states theory maintains that additional consistent information has a declining marginal effect on overall performance expectations (Correll & Ridgeway, 2006). Thus, the positive performance expectations associated with their attractiveness is unlikely to have a substantially large impact on increasing the overall performance expectations for White CEOs. Taken together, the difference between attractive racial minority CEOs and attractive White CEOs in terms of their performance expectations will be smaller (or even not existent) compared to the difference between racial minority and White

CEOs who are unattractive. Therefore, racial minority CEOs are likely to earn substantially less than their White counterparts only when they are unattractive.

Hypothesis 3: CEO race and CEO attractiveness will have an interactive effect on CEO compensation. When CEOs are unattractive, racial minority CEOs will receive less compensation compared to their White counterparts. This will be mitigated for racial minority CEOs who are attractive.

Study 1 Methods

Sample

In order to test the hypotheses, I used the S&P 500 list in 2013 to identify the largest 500 public firms in the US and tracked CEOs of these firms for 10 years, from 2004 to 2013. I used Compustat for firm-level accounting and financial data and ExecuComp for compensation data. CEO demographic information including CEO race were obtained from the RiskMetrics database, and CEO-level experience data were obtained from BoardEx. CEO attractiveness was measured through a survey which will be discussed in detail in the following sections. After accounting for missing data, the final sample included 3,462 firm-year observations with 450 unique firms, and this covered a total of 716 CEOs, 34 (4.7%) of whom were racial minorities.

Measures

CEO compensation (t). Execucomp's total direct compensation variable was used as the CEO compensation measure. This total direct compensation includes CEO annual salary, bonus, other annual compensation, restricted stock grants, long-term incentive plan (LTIP) payouts, and the value of options granted using the Black-Scholes methodology (e.g., Hill et al., 2015; Graffin, Wade, Porac, & McNamee, 2008; Wade, O'Reilly, & Pollock, 2006). As CEO compensation is known to be skewed, I took a natural logarithm transformation of the total direct

compensation to prevent extreme values from affecting the analyses and results. Also, as the dependent variable, CEO compensation was lagged by 1 year.

CEO race. CEO race was obtained from RiskMetrics. It was a dichotomous variable coded 0 for White CEOs, and 1 for racial minority CEOs. Racial minority CEOs included those who were identified as African-American, Asian, Hispanic, or Native American.

Firm performance (t-1). To measure firm performance, following extant research that examined racial minorities in the upper echelons (e.g., Cook & Glass, 2014; Hill et al., 2015; McDonald, Keeves, & Westphal, 2018), return on assets (ROA) was used, calculated as earnings before interest divided by total assets. I also used two other performance measures, namely total shareholder return (TSR) and earnings per share (EPS) that are frequently used to determine long-term incentives for CEOs (FW Cook Top 250 Report, 2017). The pattern of results with the latter two variables of firm performance were consistent with those using ROA. Thus, I present the results using ROA in the main manuscript, but the results with other measures of firm performance are included in Appendix 1.

CEO attractiveness. A group of research assistants searched for photographs of CEOs through Google searches, company websites, and online company documents. The goal was to find professional headshots of each CEO displaying their head and shoulders/torso, with the CEO facing the camera, and wearing professional attire. The photos were cropped to the same pixel height and width across all photos so they were consistent in size. Research assistants created 85 web surveys, each of which included 10 to 13 CEO headshots. The CEO headshots were randomly assigned to be in one of the 85 surveys so that the order of the photos would be random. The 85 surveys were then administered to 605 participants, resulting in 5 to 9 participants (with an average of 7 participants) rating each photo. Participants were randomly

assigned to complete one survey. Participants were enrolled in business classes (executive education, full-time MBA, and undergraduates who came primarily from an institution with an older than average student body) at three universities located in three different regions of the US. Participants were invited to complete an online survey via email, either on a volunteer basis or as part of a class assignment to earn course credit. They were asked to look at each CEO's photo and rate CEO attractiveness. Participants were 58% female, 44% White, 26% Hispanic, 11% Black, 9% Asian, 1% American Indian, and 9% bi-racial or other. They were 29 years old on average, and 80% were currently working (54% full-time, 26% part-time). They had nine years of full-time work experience and four years of part-time work experience, on average.

CEO attractiveness was measured using one item asking participants the following: "To what extent do you agree that this person appears attractive?" The participants rated each CEO's photo on a five-point Likert-type scale (*1 = strongly disagree* to *5 = strongly agree*). To examine the interrater reliability, the ICC (2) of CEO attractiveness was calculated for each survey. The average ICC(2) across the 85 surveys was 0.66, suggesting adequate agreement across raters to aggregate their ratings (Atwater, Ostroff, Yammarino, & Fleenor, 1998; Kristof-Brown & Stevens, 2001). Also, according to a meta-analysis (Langlois et al., 2000), raters easily agree on who is and is not attractive both within and across cultures.

Control variables (t-1). I controlled for CEO-level, firm-level, and year fixed effects to rule out alternative explanations. For CEO-level variables, CEO *age* and *gender* (0 = male, 1 = female) were controlled. CEO work experience data were hand coded based on work experience included in BoardEx, such as the *number of boards*, *number of functional areas*, *number of firms*, and *number of industries* the CEO has worked in. Whether the CEO had experience as a CEO prior to serving as CEO in a particular year was also included to take into account his/her

prior CEO experience. To rule out education effects, each CEO's educational background was checked to determine whether the CEO had obtained a *Ph.D. degree* or a *master's degree*. *CEO tenure* was used to control for CEO experience and power (e.g., Nyberg, Fulmer, Gerhart, & Carpenter, 2010).

As for firm level controls, I included *capital intensity* (capital expenditures divided by total sales), *R&D intensity* (total R&D expenditures divided by total sales) and *financial leverage* (total debt divided by total assets). Because firm size strongly influences CEO compensation (Finkelstein et al., 2009), I controlled for *firm size*, calculated as the log of total assets. To account for the influence of corporate boards, pertinent governance characteristics such as *CEO duality*, *board racial diversity* (proportion of racial minority directors), *compensation committee racial diversity* (proportion of racial minority directors on the compensation committee), and *board independence* (proportion of outside directors) were controlled. I also included *year* dummies to control for year fixed effects. Before creating interaction terms, I mean-centered firm performance and CEO attractiveness to avoid multicollinearity as recommended by Aiken and West (1991).

Study 1 Results

Preliminary Analyses

A series of preliminary analyses were performed first to descriptively understand the data. First, to examine whether there is a baseline difference between White and racial minority CEOs in terms of the two moderators, firm performance (i.e., ROA, TSR, and EPS) and their attractiveness, t-tests were conducted. For firm performance, there was no significant difference between White and racial minority CEOs in their firm's performance as measured by TSR (White: $M = 16.83$, $SD = 38.62$, Racial minority: $M = 15.04$, $SD = 37.83$; $t = 0.57$, $df = 3{,}347$, $p =$

0.56) and EPS (White: M = 2.70, SD = 3.59, Racial minority: M = 2.74, SD = 3.10; t = -0.15, df = 3,342, p = 0.88). In terms of ROA, firms led by racial minority CEOs performed better (M = 0.13, SD = 0.07) than those led by White CEOs (M = 0.11, SD = 0.08; t = -2.52, df = 3,460, p = 0.01). As for CEO attractiveness, there was no significant difference between the two groups (White: M = 2.84, SD = 0.52, Racial minority: M = 2.79, SD = 0.50; t = 0.66, df = 714, p = 0.51).

Second, although the primary focus of this investigation pertains to the pay difference between White and racial minority CEOs which include all other non-White CEOs, for a better understanding of the data, Table 1 provides a more fine-grained breakdown of descriptive statistics. The statistics are related to the main variables of interest across three different racial groups of CEOs – White, Asian/Asian-American, and Others including African-American/Black and Hispanic CEOs. Between the two groups within racial minority CEOs, there was no significant difference in EPS and TSR, but firms led by Asian/Asian-American CEOs performed better than those led by other racial minority CEOs in terms of ROA (Asian/Asian-American: M = 0.14, SD = 0.07, Others: M = 0.11, SD = 0.06; t= 2.78, df = 167, p = 0.01). There was no significant difference between other racial minority CEOs and Asian/Asian-American CEOs in terms of their attractiveness (Others: M = 2.95, SD = 0.54; Asian/Asian-American: M = 2.66, SD = 0.44; t = 1.69, df = 32, p = .10). However, as the sample size is small for each group (15 for other racial minority CEOs and 19 for Asian/Asian-American CEOs), this comparison needs to be interpreted with caution.

[Insert Table 1 about here]

Test of the Hypotheses

In testing the hypotheses, I employed firm fixed effects estimation to take into account potential unobservable firm-specific characteristics that may influence CEO compensation.

Means, standard deviations, and inter-correlations among variables are presented in Table 2.

[Insert Table 2 about here]

Hypothesis 1 made competing predictions on the main effect of CEO race on CEO compensation in which Hypothesis 1a proposed that racial minority CEOs will be paid more than White CEOs while Hypothesis 1b predicted that racial minority CEOs will be paid less than White CEOs. As the second column of Table 3 indicates, the main effect of CEO race on CEO compensation is statistically significant and negative (b = -.32, p = .01), demonstrating that there is a pay difference in which racial minority CEOs receive less compensation compared to their White counterparts, all else being equal. Specifically, racial minority CEOs on average earn about 27.4% (= $e^{-.32} - 1$) less than their White counterparts. Thus, Hypothesis 1b is supported.

Hypothesis 2 suggested that racial minority CEOs will be paid less than their White counterparts when their firm is not performing well, but this will be mitigated when firm performance is high. As the third column of Table 3 shows, the interaction term between CEO race and firm performance was statistically significant (b = 5.92, p < .01). The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, firm performance (see Figure 1 for the interaction plot). Figure 1 shows that the relationship between CEO race and CEO compensation is negative when the firm is showing low performance (b = -.88, t = -4.86, p < .01) but not significantly different from zero when the firm is showing high performance (b = .10, t = .64, p = .52). Specifically, when the firm is showing poor performance, racial minority CEOs on average earn about 58.5% (= $e^{-.88} - 1$) less than their White counterparts while there is no difference in compensation when the firm is performing well. Thus, Hypothesis 2 is supported.

[Insert Table 3 and Figure 1 about here]

Hypothesis 3 proposed that racial minority CEOs will receive less remuneration than White CEOs when they are unattractive, but this will be mitigated when they are attractive. As Table 4 demonstrates, the interaction term between CEO race and CEO attractiveness was statistically significant ($b = .67$, $p < .01$). The interaction is plotted in Figure 2 at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, CEO attractiveness. Figure 2 shows that the relationship between CEO race and CEO compensation is negative when the CEOs are unattractive ($b = -.58$, $t = -3.72$, $p < .01$) but not significantly different from zero when they are attractive ($b = .11$, $t = .58$, $p = .56$). That is, when CEOs are unattractive, racial minority CEOs on average earn approximately 44.7% ($= e^{-.58} - 1$) less than their White counterparts while there is no difference in compensation when they are attractive. Therefore, Hypothesis 3 is supported.

[Insert Table 4 and Figure 2 about here]

Study 1 Discussion

Study 1 not only demonstrates that there is a racial pay gap among CEOs where racial minority CEOs are paid less than their White counterparts but also identifies two important contextual factors, namely firm performance and CEO attractiveness that reduce such a pay difference. Specifically, while racial minority CEOs are penalized more for low firm performance through decreased compensation compared to their White counterparts, this pay gap disappears when the firms of racial minority CEOs are performing well. Also, controlling for performance, if racial minority CEOs are attractive, they earn as much as White CEOs. These results provide a nuanced picture of the pay gap between White and racial minority CEOs. On the one hand, the study highlights an optimistic perspective that racial minority CEOs will earn as much as their White counterparts as long as their firm performs well or they are attractive. On

the other hand, results show that low performance and being less attractive does not have a significantly negative effect on White CEOs. This implies that a more lenient standard is being applied to White CEOs in comparison with racial minority CEOs, consistent with the double standards of competence theory (Foschi, 2000).

Although the present study finds support for the hypotheses using archival data on the CEOs of the S&P 500 from 2004 to 2013, field studies are limited in drawing causal inferences because they are based on correlations rather than experimental manipulations. Furthermore, with archival data at the firm level, it is difficult to empirically test the effect of individual differences across perceivers, or evaluators, of CEOs. An important theoretical framework in Study 1 is the double standards of competence theory (Foschi, 2000), which argues that observers apply different standards when evaluating a racial minority CEO versus a White CEO. However, whether there is a difference among individuals in the extent to which they actually recognize the use of double standards cannot be tested with the existing data from Study 1. Therefore, a second study was conducted with two main purposes. First, Study 2 utilizes an experimental design which will allow for causal inferences to be made by testing the hypotheses presented in Study 1. Second, Study 2 extends Study 1 by testing the effect of a theoretically interesting moderator, namely the perceptions of double standards of competence (hereafter referred to as perceptions of double standards) applied to racial minorities compared to Whites. Study 2 takes individual perceptions of double standards of the observer into account and examines how this individual difference interacts with CEO race, firm performance, and CEO attractiveness to predict recommendations for CEO compensation.

Study 2 Theory and Hypotheses

Perceptions of Double Standards as an Individual Difference

According to double standards of competence theory, racial minority employees have to meet stricter standards compared to White employees in order to be evaluated as equally competent and successful (Foschi, 2000). Thus, racial minorities are likely to experience more barriers and difficulties than their White counterparts in their career advancement. This reasoning is supported by evidence from practice, where the path to C-suite positions dramatically narrows for racial minorities but widens for Whites according to a 2017 McKinsey & Company report[1].

However, there is some evidence that raises the following possibility: Once racial minorities reach the top leadership positions, namely the CEO level, the existence of double standards may actually work in their favor (Rosette & Tost, 2010). When a minority employee has been successful despite the disadvantages and the odds being against him or her, the individual is likely to be perceived as highly capable and deserving (Crocker & Major, 1989; Rosette & Tost, 2010). Thus, racial minority CEOs may be perceived favorably because the fact that they are in the CEO position indicates that they must have demonstrated exceptional performance in their career to overcome more stringent performance standards. Previous research supports this notion of stricter standards applied to minority groups by showing that racial minority directors are more likely to hold advanced degrees than their White counterparts (Hillman, Cannella Jr., & Harris, 2002).

Although people have a general tendency to apply different standards depending on the

[1] While 33% of the entry-level workforce is comprised of racial minorities, this number goes down to 15% at the C-suite level. By contrast, Whites comprise 67% of the entry-level workforce, and this proportion increases to 85% of positions at the C-suite (McKinsey & Company Report, 2017).

social status of the target (Foschi, 2000), the extent to which they recognize the existence and implications of double standards may not be uniform. For instance, some people may not be aware of or believe that racial minority employees are evaluated more harshly compared to those who are White. Meanwhile, others may recognize that stricter standards are being used to evaluate racial minorities and understand how this would impact their career outcomes. Therefore, people may differ in their perceptions of double standards applied to racial minority and White CEOs, and I propose that this individual difference will affect how they respond to CEOs of different racial backgrounds.

Perceptions of Double Standards as a Moderator

When evaluators' perceptions of double standards are high (i.e., they believe that double standards are applied to employees based on their racial background), they are more likely to consider the focal racial minority CEO as competent compared to those who have low perceptions of double standards (Rosette & Tost, 2010). Because evaluators with high perceptions of double standards acknowledge the difficulties that racial minorities generally go through in organizations, they will regard holding the top leadership position as an indicator of the focal racial minority CEO's ability and deservingness. Furthermore, for those who believe in double standards, the rarity of racial minorities in CEO positions would enhance the value of the focal racial minority CEO (Hill et al., 2015). As a result, the potential negative effect of low performance expectations associated with racial minority status may not be applicable to evaluators with high perceptions of double standards.

By contrast, when the evaluator has low perceptions of double standards, they are less likely to be aware of, or agree that double standards are applied to people of different racial status. Thus, it is unlikely for them to consider racial minority CEOs as particularly competent

just because they are CEOs. They may therefore be more likely to apply low performance expectations and stricter performance standards to racial minorities, often unconsciously (Foschi, 2000). Taken together, people with high perceptions of double standards, ceteris paribus, are likely to evaluate racial minority CEOs more favorably and reward them more generously compared to those with low perceptions of double standards.

Hypothesis 4: CEO race and evaluator perceptions of double standards will have an interactive effect on CEO compensation. Evaluators with high perceptions of double standards are more likely to reward racial minority CEOs compared to their counterparts with low perceptions of double standards.

Study 2 Methods

Participants

A total of 320 participants were recruited from Amazon's Mechanical Turk, an online platform of potential survey respondents. In order to ensure the validity of the experimental data, responses that indicated any misunderstanding of the manipulated conditions (i.e., answered incorrectly on manipulation checks for CEO race, firm performance, and/or CEO attractiveness) were excluded prior to analyses. The details will be explained in the following sections. Taking missing cases and incomplete responses into account, a total of 268 observations (84%) were retained in the final sample. Just over half of the participants were male (56.3%) and their average age was 36 years (*SD* = 10.8 years). The racial background of the sample was as follows: 79.5% Caucasian, 3.7% Hispanic, 7.8% Asian American, 6.7% African American, and 2.2 % Other. Most of them were employed (89.9%) either full-time (73.1%) or part-time (16.8%) at the time of the study and average full-time work experience was 14 years (*SD* = 11 years).

Manipulations

The study used a 2 (CEO race: White CEO or Black CEO) × 2 (Firm performance: low or high firm performance) × 2 (CEO attractiveness: unattractive or attractive) between-participant design. Participants were randomly assigned to read one of eight conditions describing earnings announcements made by Matthew Brown, the CEO of a manufacturing firm called Smith Manufacturing, that contained the manipulations (see Appendix 2). These announcements were based on real press releases made by S&P 500 firms obtained from the LexisNexis database.

CEO race (White or Black CEO) and CEO attractiveness (unattractive or attractive) were manipulated using four different headshot photos of the CEO. A pretest using 136 participants prior to the main experiment showed a significant difference between attractive and unattractive CEO headshots in the extent to which participants agreed that the CEO in the photograph was attractive ($t = 4.20$, $df = 134$, $p < .01$).

Firm performance was manipulated by describing the earnings and performance of the firm in the earnings announcements. The following comments were included in low/high firm performance conditions: "Smith Manufacturing has [shown a disappointing performance this year, falling behind our competitors. / performed very well this year, above and beyond our competitors.] The company's earnings have [decreased by / increased by] 5% compared to the previous year. This [decreasing / increasing] trend has persisted during each of Brown's 3 years as CEO. Meanwhile, the industry average has been persistently [increasing / declining] in earnings over the past 3 years."

Measures

CEO compensation. For the dependent variable, CEO compensation, participants were asked to imagine themselves as a member of the compensation committee and to recommend the

total compensation for the CEO in the experimental manipulation. In order to prevent participants from making unrealistic estimates of CEO compensation, there were two features within the survey (see Appendix 3). First, the survey provided brief information on CEO compensation in general including the average total compensation for CEOs of S&P 500 companies (i.e., "Across S&P 500 companies over the last several years, the average of total CEO pay ranged from $10 million to $14 million"). Second, the CEO compensation question was a multiple choice question with a certain range of dollar amounts associated with each choice based on real statistics from ExecuComp and other sources on CEO compensation (Corporate Governance Research Initiative CEO Compensation Report, 2017; The Wall Street Journal and Hay Group Report, 2014). The choices were as follows: 1 = Below $4 million, 2 = $4 million ~ $6 million, 3 = $6 million ~ $8 million, 4 = $8 million ~ $10 million, 5 = $10 million ~ $12 million, 6 = $12 million ~ $14 million, 7 = $14 million ~ $16 million, 8 = $16 million ~ $18 million, 9 = $18 million ~ $20 million, 10 = Over $20 million.

Perceptions of double standards. To measure participants' perceptions of double standards, I used the four-item double standards scale developed by Rosette and Tost (2010) using racial minority and White CEOs as reference points as opposed to women and men as was used in the original measure. Participants indicated the extent to which they agreed with each item on a 7-point Likert-type scale (1 = *strongly disagree* to 7 = *strongly agree*). A sample item is "In general, people from ethnic minority groups have to work twice as hard to become a CEO as people from ethnic majority groups do." Scale Cronbach alpha reliability was $\alpha = 0.95$. Prior to computing interaction terms, I mean-centered perceptions of double standards to avoid multicollinearity as recommended by Aiken and West (1991).

Manipulation checks. To test the CEO race manipulation, participants were asked the

following question: “What was the race of the CEO in the article you read?” Participants answered one of five choices (1 = White/Caucasian, 2 = Hispanic/Latino, 3 = Black/African-American, 4 = Asian/Asian-American, 5 = Native American). To test the CEO attractiveness manipulation, I asked “To what extent do you agree that the CEO in the picture is attractive?” Participants indicated the extent to which they agreed with the statement on a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*).

In order to check if participants were aware of firm performance, I asked two questions. First question was “To what extent do you agree that the company in the article has been performing well?” and participants answered on a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*). The second question was “In the article, Smith Manufacturing company’s earnings:” and participants chose one among three options (1 = increased by 5% compared to the previous year, 2 = decreased by 5% compared to the previous year, 3 = stayed the same compared to the previous year).

Study 2 Results

Manipulation Checks

Responses to the manipulation checks indicated that most participants correctly processed the manipulations. First, regarding the CEO race manipulation, 32 out of 320 responses indicated an incorrect answer to the question asking about the race of the CEO in the earnings announcement. Incorrect responses were excluded from the analyses. Second, the firm performance manipulation was checked based on two questions. The initial screening was based on the answers to “In the article, Smith Manufacturing company’s earnings:” followed by three options: increased by 5% compared to the previous year, decreased by 5% compared to the previous year, and stayed the same compared to the previous year. Additional 16 cases were

excluded from the study as they provided incorrect responses. Within the final sample, participants in the high firm performance condition (M = 4.65, SD = .55) were much more likely to answer that the firm was performing well than those in the low firm performance condition (M = 1.64, SD = .66; t= -40.35, df = 266, $p < 0.01$). Third, participants in the attractive CEO condition were more likely to find the CEO attractive (M = 3.31, SD = .85) than those in the unattractive CEO condition (M = 2.63, SD = .80; t = -6.77, df = 266, $p < 0.01$). Taken together, all manipulation checks demonstrated that the manipulations were effective in the final sample.

Test of the Hypotheses

To test the hypotheses, I conducted hierarchical multiple regression analyses. Table 5 presents descriptive statistics and correlations for all Study 2 variables.

[Insert Table 5 about here]

Hypothesis 1a and Hypothesis 1b made competing predictions on the main effect of CEO race on CEO compensation. As the second column of Table 6 shows, the main effect of CEO race on CEO compensation is not statistically significant (b = .29, p = .19), indicating that there is no difference between racial minority and White CEOs in terms of their compensation, all else being equal. Therefore, neither Hypothesis 1a nor Hypothesis 1b are supported with the experimental data.

[Insert Table 6 about here]

Across the remaining hypotheses, there are three moderators, namely firm performance, CEO attractiveness, and perceptions of double standards, being examined as they relate to the relationship between CEO race and CEO compensation. Depending on which hypothesis is being tested, only one or two of the three moderators interact with CEO race in predicting CEO compensation. Therefore, to focus on the effect of each hypothesized interactive effect

independent of other moderators, I control for the remaining moderator(s) for every hypothesis. For instance, in testing Hypothesis 2 that predicted an interactive effect of CEO race and firm performance on CEO compensation, I controlled for CEO attractiveness prior to including CEO race and firm performance variables in the model. As shown in the third column of Table 6, the interaction term between CEO race and firm performance was not statistically significant (b = .15, p = .73), indicating that there is no difference in compensation between racial minority and White CEOs regardless of their performance. Thus, Hypothesis 2 is not supported with the experimental data.

Hypothesis 3 suggested an interactive effect of CEO race and CEO attractiveness on CEO compensation. Similar to the procedure for testing Hypothesis 2, I controlled for firm performance prior to having CEO race and CEO attractiveness variables in the model. Table 7 indicates that the interaction term between CEO race and CEO attractiveness was statistically significant (b = 1.13, p = .01). To examine its form, I plotted the interaction following Aiken and West (1991). Figure 3 shows that the relationship between CEO race and CEO compensation is more positive for CEOs who are attractive (b = .84, t = 2.75, p < .01) than CEOs who are unattractive (b = -.29, t = -.92, p = .36). This indicates that when the CEO is unattractive, there is no statistically significant difference between White and racial minority CEOs in pay, but there is a significant beauty premium effect for racial minority CEOs who are attractive. Among attractive CEOs, there is a .85 point difference in the CEO compensation scale between White and racial minority CEOs. This can be interpreted as racial minority CEOs receiving about $1.68 million (i.e., $2 million range in each choice on the 10-point response scale multiplied by b = .84) more than their White counterparts only when they are attractive. Thus, although the pattern of the interaction between CEO race and CEO attractiveness on CEO compensation is

similar to the results of Study 1, Study 1 highlights an ugliness penalty while Study 2 shows a beauty premium for racial minority CEOs. Therefore, Hypothesis 3 is partially supported with the experimental data.

[Insert Table 7 and Figure 3 about here]

Hypothesis 4 proposed that evaluators with high perceptions of double standards would reward racial minority CEOs more than others with low perceptions of double standards, all else being equal. Thus, I controlled for both firm performance and CEO attractiveness to examine the effects of CEO race and evaluators' perceptions of double standards independent of the two variables. Table 8 indicates that the interaction between CEO race and perceptions of double standards of competence was not statistically significant ($b = .17$, $p = .21$), not supporting Hypothesis 4.

[Insert Table 8 about here]

Study 2 Discussion

Overall, Study 2 shows a beauty premium effect for racial minority CEOs, supporting the notion that attractiveness is more important for racial minority CEOs than for their White counterparts in being compensated. However, the moderating roles of firm performance and evaluator perceptions of double standards were not supported. As for the former, this may partly be due to the fact that while a myriad of factors can be perceived as affecting firm performance in the field, the CEO may have been considered as the only driver of firm performance in the experimental condition given the limited information included in the scenario. A very strong main effect of firm performance on CEO compensation ($b = 2.51$, $p < .01$) adds some support to this conjecture.

Regarding evaluator perceptions of double standards, one possible reason behind the

absence of moderation is the discrepancy between explicit self-report of attitudes and implicit or unconscious bias that evaluators may have toward different ethnic groups. The conventional approach to studying stereotypes and discrimination has been to use self-report measures of attitudes and discriminatory behaviors. This is largely based on the assumption that one's attitudes and behaviors, especially those in organizational settings, are under the deliberate control and consciousness of employees (Uhlmann et al., 2012). However, more recently, research on subconscious, or implicit, bias has raised concerns regarding this perspective by arguing that intergroup biases and stereotypes are often subconscious in nature and are manifested in more subtle ways (Amodio & Mendoza, 2010; Greenwald et al., 1998). Therefore, although individuals may not be aware of or overtly endorse biases, they may still display biased behaviors and decision-making often without being conscious of their actions (Dovidio, 2001). Also, particularly when participants answer survey questions on sensitive topics such as discriminatory attitudes and behaviors, they may be influenced by self-presentation biases, adjusting or manipulating their responses (Amodio & Mendoza, 2010; Dunton & Fazio, 1997; Ziegert & Hanges, 2005). Taken together, the theoretical construct as well as the self-report measure of perceptions of double standards may not have been sufficient in capturing evaluators' genuine attitudes toward CEOs of different racial backgrounds.

Therefore, a third study was conducted with two main purposes. First, Study 3 aims to replicate the results of Study 1 and 2 using revised experimental scenarios that depict a more realistic situation of CEO compensation decision making. Even though the details and the actual amount of CEO compensation package may change over their tenure, general terms of contractual agreement between the CEO and the firm are established at the beginning of their appointment. Furthermore, because race and attractiveness are readily observable characteristics

of CEOs, they are most likely to affect the decision making of board directors and relevant stakeholders in early interactions. Therefore, experimental scenarios that describe a situation in which a new CEO is appointed may be a more realistic setting around CEO pay decisions. Second, Study 3 extends Study 2 by examining the effect of evaluators' implicit racial biases in determining CEO compensation. This will allow Study 3 to investigate both explicit and implicit attitudes of evaluators toward CEOs from different racial groups.

Study 3 Theory and Hypotheses

Implicit Racial Bias as a Moderator

People who have negative beliefs or expectations about specific racial groups without reasonable or fact-based grounds are considered as being biased or having racial bias (Duguid & Thomas-Hunt, 2015; Nelson, Acker, & Manis, 1996). The distinction between implicit and explicit psychological phenomena is based on the level of one's awareness of a particular psychological process (Amodio & Mendoza, 2010). According to Nosek (2007, p. 65), implicit attitudes such as implicit racial bias are different from explicit attitudes "by having at least one of the following characteristics: (a) reduced controllability, (b) lack of intention, (c) reduced awareness of the origins, meanings, or occurrence of a response, or (d) high efficiency of processing." Thus, individuals are not able to consciously explain or report on their implicit racial bias, thus making it difficult for researchers to measure and examine its impact.

However, since the development of the Implicit Association Test (IAT; Greenwald et al., 1998), a large number of studies have demonstrated the existence of implicit or unconscious racial bias and its influence on people's behaviors (see Blanton & Jaccard, 2008; Greenwald, Poehlman, Uhlmann, & Banaji, 2009; Haines & Sumner, 2006; Pratt & Crosina, 2016; Uhlmann et al., 2012 for review). The IAT is "a computerized response latency measure designed to tap

individual differences in automatic associations between concepts (e.g., White vs. Black people) and attributes (e.g., good vs. bad)." (Agerstrom & Rooth, 2011, p. 790). The IAT task requires participants to quickly classify a range of stimuli, and a faster response to a specific association is considered as more automatic to the individual. For instance, if it takes longer to respond when pictures of Black people are coupled with the attribute 'good' than when those of White people are coupled with the same attribute, and vice versa when the attribute is 'bad', this indicates that the participant has an automatic, implicit anti-Black bias. Because the IAT relies on the response time for making associations that do not involve deliberate thinking or introspection, the scores are relatively free from self-presentation and social desirability bias (Amodio & Mendoza, 2010; Greenwald et al., 2009).

In addition to Nosek et al.'s (2007) work that shows the pervasiveness of negative implicit bias toward Black versus White targets using data from more than 2.5 million people, several others have used the IAT and found that implicit racial bias affects hiring decisions at work. Ziegert and Hanges (2005), for example, demonstrated that individuals with greater implicit anti-Black bias displayed more discrimination against Black applicants in an organizational climate for racial bias while this effect did not appear using explicitly reported racist attitudes. Similarly, Rooth (2010) showed that the likelihood to invite Arab-Muslim job applicants for an interview significantly decreased as the recruiters indicated stronger implicit anti-Arab-Muslim bias. Son Hing, Chung-Yan, Hamilton, and Zanna (2008) also found that people with stronger implicit anti-Asian bias were less likely to make hiring recommendations for Asian applicants compared to their White counterparts especially when their qualifications were ambiguous.

Building on this line of work, I propose that evaluators' implicit racial bias will interact

with CEO race in predicting CEO compensation. According to various dual process theories (see Chaiken & Trope, 1999 for review; Kahneman, 2011), there are two core cognitive processes that operate in parallel, one being more quick and automatic while the other is more effortful and deliberate. Because the former, automatic mode of cognitive processing uses "simple, low-effort, [and] readily available decision rules" (Agerstrom & Rooth, 2011, p. 790), implicit biases and stereotypes are likely to be activated automatically and affect how people make intergroup judgements and decisions. Therefore, when evaluators such as the compensation committees on boards of directors are making CEO compensation decisions, their implicit racial bias may intervene in the process without their awareness. As the use of implicit racial bias, by definition, is more efficient and convenient (Nosek, 2007), not requiring many cognitive resources, board directors may be susceptible to its influence when making complex decisions around CEO compensation. In fact, the IAT measures the subconscious reactions people have the moment they see a Black or White face. These ideas are automatically primed, and it is important to note that the researchers believe that "… most of a person's everyday life is determined not by their conscious intentions and deliberate choices but by mental processes that … operate outside of conscious awareness and guidance" (Bargh & Chartrand, 1999, p. 462). Thus, compared to evaluators who are not implicitly biased or have weak implicit bias, those with strong implicit negative biases toward Black targets will be more likely to make discriminatory pay decisions against Black CEOs.

Hypothesis 5: CEO race and evaluators' implicit racial biases will have an interactive effect on CEO compensation. Evaluators with weak implicit racial bias toward Blacks are more likely to reward Black CEOs compared to their counterparts with strong implicit racial biases favoring Whites over Blacks.

Study 3 Methods

Participants

Undergraduate students enrolled in Management courses across three universities in the US were recruited to participate in an online survey. In exchange for their participation, students received extra credit points in their respective courses. As in Study 2, in order to ensure the validity of the data, responses that indicated any misunderstanding of the manipulated conditions (i.e., answered incorrectly on manipulation checks for CEO race, firm performance, and/or CEO attractiveness) were excluded prior to analyses. The details will be explained in the following sections. Initially, 411 students were invited to participate. Accounting for responses that showed misunderstanding of the manipulations, missing cases, and incomplete responses, a total of 314 observations (76%) were retained in the final sample. Just over half of the participants were female (57.4%) and their average age was 22.7 years (*SD* = 5.02 years). The racial background of the sample was as follows: 66.8% Caucasian, 13.7% Hispanic, 13.1% Asian American, 3.8% African American, and 2.6% Other. Most of them were employed (67.5%) either full-time (18.1%) or part-time (49.4%) at the time of the study. For testing Hypothesis 5 that predicted an interactive effect of CEO race and evaluators' implicit racial bias on CEO compensation, the final sample size was 295 responses due to missing cases in the IAT.

Manipulations

The design of the experiment was the same as that of Study 2, utilizing a 2 (CEO race: White CEO or Black CEO) × 2 (Firm performance: low or high firm performance) × 2 (CEO attractiveness: unattractive or attractive) between-participant design. I manipulated CEO race (White or Black CEO) and CEO attractiveness (unattractive or attractive) using the same four headshot photos of the CEO from Study 2. However, in order to make the scenarios more

realistic, they were revised such that participants were randomly assigned to read one of eight excerpts from a press release from Smith Manufacturing, announcing the appointment of a new CEO, Matthew Brown (as opposed to compensation decisions about a current CEO as was used in Study 2; see Appendix 4).

Firm performance was manipulated by describing the performance of a peer company of Smith Manufacturing named Johnson Manufacturing from which the new CEO was coming. The following description was included in low/high firm performance conditions: "Johnson Manufacturing has [shown a disappointing performance this year, falling behind our competitors. / performed very well this year, above and beyond our competitors.] The company's earnings have [decreased by / increased by] 5% compared to the previous year. This [decreasing / increasing] trend has persisted during each of Brown's 3 years as CEO. Meanwhile, the industry average has been persistently [increasing / declining] in earnings over the past 3 years."

Measures

CEO compensation. The measure for CEO compensation was identical to that of Study 2 (see Appendix 3).

Perceptions of double standards. I used the same four-item double standards scale as in Study 2 (Rosette & Tost, 2010). Scale Cronbach alpha reliability was $\alpha = 0.88$.

Manipulation checks. The questions used in Study 2 to check manipulations for CEO race and CEO attractiveness were utilized. For firm performance, the questions were referencing Johnson Manufacturing (i.e., the peer firm that the CEO has been leading thus far before being appointed as a new CEO of Smith Manufacturing) as opposed to Smith Manufacturing as in Study 2. The first question was "To what extent do you agree that Johnson Manufacturing, the company the CEO in the article is currently leading, has been performing well?" and participants

answered on a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*). The second question was "In the article, Johnson Manufacturing (the company the CEO in the article is currently leading) company's earnings:" and participants chose one among three options (1 = increased by 5% compared to the previous year, 2 = decreased by 5% compared to the previous year, 3 = stayed the same compared to the previous year).

Black/White Race IAT. After completing the main survey containing the experimental scenarios with the manipulations, participants were redirected to an online platform on which the IAT was conducted. There are five rounds within the task. First, participants are asked to quickly sort pictures of White or Black people into the correct categories (e.g., 'White' to the left of the screen and 'Black' to the right of the screen) using certain keys on the keyboard. Second, participants are asked to sort different words related to an evaluative attribute (e.g., 'good' to the left of the screen and 'bad' to the right of the screen) using the same keys. Third, the categories are combined and participants need to sort both the pictures and words to the correct categories. For example, 'White/good' is on the left of the screen and 'Black/bad' is on the right, and participants are required to sort either pictures or words into the corresponding category. Fourth, the placement of the category changes. For instance, 'White/good' is now on the right of the screen and 'Black/bad' on the left. Lastly, the categories are combined in a way that is opposite to what they previously were in the third round. For instance, the categories will now become 'White/bad' and 'Black/good'. One thing to note is that the trials participants saw were randomized, meaning that the order in which the different combinations of categories were presented varies randomly across participants (Project Implicit, 2011, https://implicit.harvard.edu/implicit/iatdetails.html). Thus, some people will do 'White/bad' and 'Black/good' first and others will do 'White/good' and 'Black/bad' first.

The final IAT score is based on how long it takes for a person, on average, to sort the pictures and words in the third phase of the IAT versus the fifth phase of the IAT. If participants are faster in categorizing pictures and words when 'White' and 'good' share a response key and 'Black' and 'Bad' share a response key, they are considered as having an implicit anti-Black/pro-White bias. If the opposite is true, then participants would have a pro-Black and anti-White bias. The scores range from -2 to 2 where negative numbers indicate having implicit pro-Black/anti-White bias, 0 indicating no bias, and positive numbers indicate pro-White/anti-Black bias. For more details on the design and validation of the IAT, see Greenwald et al. (1998), Greenwald, Nosek, and Banaji (2003), and Greenwald et al. (2009). For the processes of the IAT, please see https://implicit.harvard.edu/implicit/iatdetails.html.

Study 3 Results

Manipulation Checks

Responses to the manipulation checks showed that most participants processed the manipulations accurately. First, regarding the CEO race manipulation, 33 out of 411 responses indicated an incorrect answer to the question asking about the race of the CEO in the press release. Incorrect responses were excluded from the analyses. Second, the firm performance manipulation was checked based on two questions. The initial screening was based on the answers to "In the article, Johnson Manufacturing company's earnings:" followed by three options: increased by 5% compared to the previous year, decreased by 5% compared to the previous year, and stayed the same compared to the previous year. An additional 39 cases were excluded from the study as they provided incorrect responses. Within the final sample, participants in the high firm performance condition (M = 4.33, SD = .65) were much more likely to answer that the firm was performing well than those in the low firm performance condition (M

= 1.95, *SD* = .75; *t* = -30.00, *df* = 312, *p* < .01). Third, participants in the attractive CEO condition were more likely to find the CEO attractive (*M* = 3.08, *SD* = .79) than those in the unattractive CEO condition (*M* = 2.62, *SD* = .87; *t* = -4.93, *df* = 311, *p* < .01). Taken together, all manipulation checks demonstrated that the manipulations were effective in the sample.

Test of the Hypotheses

To test the hypotheses, I conducted hierarchical multiple regression analyses. Table 9 presents descriptive statistics and correlations for all Study 3 variables.

[Insert Table 9 about here]

Hypothesis 1a and Hypothesis 1b made competing predictions on the main effect of CEO race on CEO compensation. As the second column of Table 10 shows, the main effect of CEO race on CEO compensation is not statistically significant (*b* = .25, *p* = .14), indicating that there is no difference between racial minority and White CEOs in terms of their compensation, all else being equal. Therefore, neither Hypothesis 1a nor Hypothesis 1b is supported.

[Insert Table 10 about here]

Hypothesis 2 predicted an interactive effect of CEO race and firm performance on CEO compensation. As shown in the third column of Table 10, the interaction term between CEO race and firm performance was not statistically significant (*b* = .20, *p* = .54), indicating that there is no difference in compensation between racial minority and White CEOs regardless of their performance. Thus, Hypothesis 2 is not supported.

Hypothesis 3 suggested an interactive effect of CEO race and CEO attractiveness on CEO compensation. Table 11 indicates that the interaction term between CEO race and CEO attractiveness was not statistically significant (*b* = -.45, *p* = .17), implying that there is no difference in compensation between Black and White CEOs regardless of their attractiveness.

Therefore, Hypothesis 3 is not supported.

[Insert Table 11 about here]

Hypothesis 4 proposed that evaluators with high perceptions of double standards would reward racial minority CEOs more than others with low perceptions of double standards, all else being equal. Table 12 indicates that the interaction between CEO race and perceptions of double standards of competence is statistically significant (b = .28, p = .03). To examine its form, I plotted the interaction following Aiken and West (1991). Figure 4 shows that the relationship between CEO race and CEO compensation is more positive for evaluators with high perceptions of double standards (b = .61, t = 2.61, p = .01) than their counterparts with low perceptions of double standards (b = -.12, t = -.53, p = .60). This can be interpreted as racial minority CEOs earning about $1.22 million (i.e., $2 million range in each choice on the 10-point response scale multiplied by b = .61) more than their White counterparts only when the evaluators making the pay decisions acknowledge and believe in the double standards of competence applied to CEOs of different racial backgrounds. However, this effect does not apply when evaluators have low levels of perceptions of double standards, supporting Hypothesis 4.

[Insert Table 12 and Figure 4 about here]

Hypothesis 5 posited that evaluators with weak implicit racial bias toward racial minority targets would be more likely to reward racial minority CEOs than others with strong implicit racial bias, all else being equal. Table 13 shows that the interaction between CEO race and the IAT score is statistically significant (b = -1.18, p = .006). This interaction is plotted in Figure 5 at values of one standard deviation above and below the mean of the moderator (Aiken & West, 1991). In the current data, the IAT score value at one standard deviation below the mean is .037. This score is close to 0 and within the range of having no implicit preference (or neutral) for

either race. The IAT computer script considers absolute values between 0 and .15 to have no bias, absolute values from .16 to .35 to have a slight bias, absolute values from .36 to .64 to have a moderate bias, and absolute values greater than or equal to .65 to have a strong bias. Therefore, I refer to the lower value of the IAT scores as 'No bias' in Figure 5.

Figure 5 indicates that the relationship between CEO race and CEO compensation is more positive for evaluators with no bias (i.e., the IAT score being around 0; b = .73, t = 3.01, p = .003) than their counterparts with strong implicit racial bias favoring White over Black targets (b = -.21, t = -.88, p = .38). This can be interpreted as Black CEOs receiving about $1.46 million (i.e., $2 million range in each choice on the 10-point response scale multiplied by b = .73) more than their White counterparts only when the decision makers do not have implicit racial bias. However, this does not apply for evaluators with strong implicit racial bias against Blacks. Thus, Hypothesis 5 is supported.

[Insert Table 13 and Figure 5 about here]

A summary of the main features and findings of the three studies is included in Table 14.

[Insert Table 14 about here]

Overall Discussion

Theoretical Implications

This study contributes to theory in several ways. First, this investigation broadens the scope of the expectation states theory (Berger et al., 1977; Correll & Ridgeway, 2006) by applying its theoretical arguments to the context of the upper echelons. Expectation states theory maintains that individuals have lower performance expectations for racial minorities than for Whites, which will result in unfavorable outcomes for the former such as reduced pay. Although these claims have been supported by prior work on the difficulties and barriers that racial

minorities encounter as they advance in their career (see Correll & Rideway, 2006 for review), it is ambiguous as to whether the arguments hold even for racial minority CEOs who have already reached the apex of an organization. Thus, the present study addresses this gap by showing that the predictions of expectations states theory indeed apply to CEOs based on the empirical finding that racial minority CEOs, ceteris peribus, earn less than White CEOs. In doing so, this study adds to extant research on social discrimination that racial minority executives and board directors face (e.g., Cook & Glass, 2014; McDonald & Westphal, 2013; Park & Westphal, 2013; Westphal & Stern, 2007).

Further extending expectation states theory (Correll & Ridgeway, 2006) and the executive compensation literature (see Finkelstein et al., 2009 for review), this work examines firm performance and CEO attractiveness as pertinent contextual factors of the relationship between CEO race and CEO pay. Although racial minority CEOs are associated with lower performance expectations (Correll & Ridgeway, 2006), when they demonstrate high performance or have another status characteristic that counters the low performance expectations such as being attractive, the negative influence of low performance expectations is mitigated, eliminating the pay gap. These findings highlight that although CEO race is important in explaining CEO compensation, its effect has to be considered within context for a more comprehensive understanding of the racial pay gap among CEOs (Johns, 2006). This contingency approach differentiates the present study from extant research such as the work of Hill and colleagues (2015) which focused on the main effect of race on CEO pay.

Moreover, the current study expands the double standards of competence theory (Foschi, 2000) by identifying evaluators' perceptions of double standards as a meaningful individual difference that influences how people make pay decisions for CEOs. While applying more

lenient standards to Whites and more stringent standards to racial minorities is argued to be the general tendency (Foschi, 2000), this paper takes a novel perspective by pointing out that the extent to which people believe in double standards may differ across individuals. Therefore, this work makes an innovative attempt to understand the role of evaluator attitudes in the CEO racial pay gap by differentiating evaluators who recognize the difficulties racial minorities experience as they advance in their organizations from those who do not.

In addition to their explicitly stated attitudes as captured by evaluator perceptions of double standards, this investigation explores implicit racial bias, providing a more complete picture regarding the racial pay difference among CEOs. Although openly endorsed negative intergroup attitudes and overt forms of racism have declined, subconscious biases and more subtle forms of discrimination still remain prevalent (Dovidio & Gaertner, 2004; Maass et al., 2000; Nosek et al., 2007). As a result, researchers have suggested addressing this gap by focusing on implicit biases and their influence on employees (Greenwald, Banaji, & Nosek, 2015; Pratt & Crosina, 2016). Consistent with this shift, the current paper proposes and finds that the strength of evaluators' implicit racial bias measured with the IAT indeed impacts how they compensate CEOs of different races. Especially given that the different performance expectations associated with race as well as the application of double standards are mostly implicit (Correll & Ridgeway, 2006; Foschi, 2000), empirically examining the moderating effect of subconscious racial bias in predicating CEO pay adds further support for the theory. In testing these nuanced approaches to the racial pay gap among CEOs, this paper adopts a multi-method approach using both the archival data on real CEOs of the largest companies in the US and experimental methods to make causal inferences.

Practical Implications

The present investigation has implications from a practical standpoint. The racial pay gap among CEOs calls for the need to increase organizational awareness of diversity issues that may be present in the upper management. Racial minority CEOs are earning significantly less than their White counterparts controlling for various factors including firm size, firm performance, and governance characteristics that are known to be highly related to CEO compensation (Finkelstein et al., 2009). Although there have been different interventions to increase the diversity in the workforce at the entry level including the affirmative action and others to reduce discrimination and foster an inclusive environment (e.g., PricewaterhouseCoopers 20th CEO Survey, 2017 ; Triana, Garcia, & Colella, 2010), such efforts seem to have less impact as they pertain to the top management (McKinsey & Company Report, 2017). In fact, executives and board directors may be in greater need for organizational diversity efforts as it is more likely for racial minorities in the upper echelons to be in token positions (Kanter, 1977). Specifically, organizations may address the racial pay gap among CEOs by assisting the decision-makers of executive compensation. The findings highlight that individuals involved in making executive compensation decisions, such as directors on compensation committees, may be susceptible to the influence of performance expectations associated with race, the use of double standards, expectations associated with attractiveness levels, and implicit biases. Some of these biases may operate outside of their conscious awareness. Thus, it will be important for organizations to adopt policies and training programs to help the decision-makers in the upper echelons to be more cognizant of potential biases associated with race and attractiveness.

The final implication to be addressed centers around the interesting contrast between the findings of Hill et al. (2015) and those of the present study. Hill and colleagues (2015), using a

sample of S&P 1500 companies over the period of 1996-2005, found that racial minority CEOs received higher pay compared to White CEOs. However, the current study demonstrated the opposite, whereby racial minority CEOs earned less than White CEOs. One of the reasons behind this discrepancy is the different samples employed. This work specifically examined the racial pay gap among CEOs of S&P 500 companies over the years 2004-2013. Compared to S&P 1500 firms that cover 90% of the market capitalization of US stock, S&P 500 comprises a more selective set of companies which are much larger in market capitalization. It may be possible that racial minority CEOs of the largest and highest status firms like those of S&P 500 may be seen as more atypical and less of a fit to the position compared to racial minority CEOs of smaller and less prestigious firms from the S&P 1500. Thus, racial minority CEOs of S&P 500 companies may be more vulnerable to the negative consequences of low performance expectations and biases associated with their racial status. Overall, building on and extending the work of Hill and colleagues (2015), the present study indicates that the effect of CEO race on CEO compensation may differ depending upon the organizational differences between samples in practice.

Limitations and Future Research

The present work has limitations that suggest avenues for future research. First, in Study 1, the sample size of racial minority CEOs is relatively small. However, it is important to note that this sample is, in fact, the population of S&P 500 CEOs over the period of 2004-2013. This limited number of CEO positions held by racial minorities is the reality in which critical research questions on diversity in the upper echelons must be examined and understood. Thus, although the small sample size requires a more careful interpretation of the results, this study underscores that the dynamics surrounding the racial pay gap among CEOs are still an important area to be investigated given the reality. This small sample size of racial minority CEOs was also one of the

practical reasons that made it difficult for this study to take a more fine-grained approach in categorizing different racial minority groups (e.g., Asian/Asian-American, African-American/Black, and Hispanic CEOs). Assuming that the number of racial minority CEOs increases over time, future research can provide further insight into the effect of CEO race and CEO outcomes in a more detailed manner.

Second, future studies may consider using multiple samples to examine how people make CEO compensation decisions. Ideally, the directors in compensation committees would be the most representative sample as they are the major actors who determine CEO pay. Acknowledging the difficulty in practice to gain access to this sample, the current paper uses regular employees and undergraduate students as participants of the experimental study. However, additional research may replicate and/or extend the findings by utilizing other samples such as consultants with expertise in executive compensation or HR professionals familiar with the CEO compensation processes.

Third, the findings that support the moderating effect of evaluators' implicit racial bias apply only to the racial pay gap between White and Black CEOs. This paper indeed takes an innovative approach in examining the role of implicit racial bias toward White versus Black targets in the context of CEO compensation. However, future work may explore implicit bias toward other racial groups in explaining the racial pay gap among CEOs. Extending this study as well as previous research on implicit racial bias in hiring decisions using White/Asian IAT (Son Hing et al., 2008) and Swedish/Muslim IAT (Rooth, 2010) that show a similar pattern of results, additional work along this line of inquiry will provide a more comprehensive understanding of implicit racial bias and the pay gap in the upper echelons.

Lastly, the moderating role of firm performance was not supported in either of the

experimental studies. As previously speculated, this may in part be due to the differences between a real business environment and a more controlled setting of experiments. While various factors may be perceived as influencing firm performance in practice, in experimental conditions, participants may have attributed firm performance solely to the CEO given the limited information provided in the scenario. In both Study 2 and Study 3, the main effect of firm performance on CEO compensation was strong and positive, adding support to this possibility. Therefore, future research may continue pursuing experimental studies to examine the causal mechanisms underlying observations in the field related to CEO compensation based on various designs that resemble reality as much as possible to increase the generalizability of findings.

Conclusion

The present research examines the relationship between race and compensation at the CEO level, emphasizing the moderating roles of firm performance, CEO attractiveness, and evaluators' perceptions of double standards and implicit racial biases. Using the data of S&P 500 CEOs, the findings show that racial minority CEOs tend to receive less compensation compared to their White counterparts but such a pay difference may disappear when their firm is performing well or they are attractive. The direction of the pay gap may even reverse when the compensation decisions are made by evaluators who acknowledge and believe in the double standards applied to people of racial minority backgrounds or those who do not have strong implicit racial bias. This work extends expectation states theory (Berger et al., 1977), double standards of competence theory (Foschi, 2000), and the executive compensation literature (Finkelstein et al., 2009) by arguing for the need to take a more nuanced approach to understand the racial pay gap in the upper echelons.

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Table 1

Descriptive Statistics Breakdown of Different Racial Groups of CEOs

		White	Asian/Asian-American	Others (African-American/Black and Hispanic)	Total
ROA	Mean	0.11	0.14	0.11	0.11
	SD	0.08	0.07	0.06	0.08
	N	3,294	88	80	3,462
TSR	Mean	16.83	16.74	15.24	13.74
	SD	38.62	38.58	37.76	38.58
	N	3,275	86	78	3,439
EPS	Mean	2.70	3.15	2.28	2.70
	SD	3.59	4.11	1.14	3.57
	N	3,270	86	78	3,434
CEO Attractiveness	Mean	2.85	2.66	2.95	2.85
	SD	0.52	0.44	0.54	0.52
	N	682	19	15	716
Total Compensation (in $1,000)	Mean	10,228.38	11,874.81	11,710.12	10,604.47
	SD	9,284.92	11,037.36	8,275.47	9,314.75
	N	3,294 (682 CEOs)	88 (19 CEOs)	80 (15 CEOs)	3,462

Table 2

Descriptive Statistics and Correlations in Study 1

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1	CEO compensation	8.90[a]	1.27									
2	Firm size	9.62	1.38	0.21								
3	Capital intensity	0.05	0.05	-0.01	-0.14							
4	R&D intensity	0.02	0.05	0.04	-0.22	-0.08						
5	Leverage	0.25	0.17	0.01	0.02	0	-0.15					
6	Board racial diversity	0.10	0.10	0.16	0.28	-0.05	-0.06	0.10				
7	Compensation committee racial diversity	0.04	0.06	0.07	0.12	-0.01	-0.02	0.10	0.60			
8	Board independence	0.79	0.12	0.16	0.23	0	0.03	0.07	0.22	0.16		
9	CEO duality	0.63	0.48	0.12	0.17	0.06	-0.10	0.04	0.13	0.03	0.20	
10	CEO gender	0.02	0.15	0.03	0.02	-0.04	-0.03	0.08	0.15	0.09	0.06	0.02
11	CEO age	56.29	5.98	-0.02	0.09	0.03	-0.06	0.01	0.01	0.01	0.02	0.26
12	CEO tenure	7.02	6.27	0	-0.05	0.07	0.04	-0.01	-0.04	-0.02	-0.07	0.18
13	N. of boards served	5.73	7.18	0.01	0.09	-0.01	0.01	-0.01	0.02	-0.06	0.02	0.19
14	N. of functions worked in	1.89	1.06	0.01	0.16	-0.02	0.06	-0.01	0.07	0.01	0.04	0.07
15	N. of firms worked in	6.44	4.19	0.02	0.13	-0.03	0.03	0.04	0.03	-0.04	0.01	0.11
16	N. of industries worked in	2.83	1.51	0.03	0.12	-0.02	-0.03	0.05	0.07	-0.01	0.06	0.16
17	Prior CEO experience	0.22	0.41	0.02	0	0.03	0.01	0.03	-0.05	-0.05	0.03	0.07
18	Masters degree	0.44	0.50	0.09	0.11	-0.11	0	0.01	0.03	0	0.12	0.04
19	Doctoral degree	0.16	0.37	0.03	0.06	-0.02	0.09	0.05	-0.01	0.01	0.03	0.05
20	CEO race	0.05	0.22	0.02	0.02	-0.05	0	0.04	0.22	0.03	0.03	0
21	Firm performance (ROA)	0.11	0.08	0	-0.38	0.09	0.03	-0.10	0.02	0.03	-0.08	-0.03
22	CEO attractiveness	2.84	0.51	0.12	0.09	-0.03	-0.07	0.08	0.11	0.06	0.05	0

Note: $p < .05$ for $.03 \leq |r| < .05$, $p < .01$ for $|r| \geq .05$. CEO gender coded as 0 = male, 1 = female. CEO race coded as 0 = White, 1 = racial minority.

[a] Calculated as the average of the natural log values of total compensation in thousand dollars (variable tdc1 in Execucomp) of each CEO.

Table 2 (continued)

Descriptive Statistics and Correlations in Study 1

	Variables	10	11	12	13	14	15	16	17	18	19	20	21
10	CEO gender												
11	CEO age	-0.06											
12	CEO tenure	-0.06	0.36										
13	N. of boards served	0.02	0.21	0.11									
14	N. of functions worked in	0.01	0.15	0.02	0.22								
15	N. of firms worked in	0.06	0.18	0.05	0.66	0.28							
16	N. of industries worked in	0.10	0.12	0.08	0.51	0.35	0.64						
17	Prior CEO experience	-0.03	0.08	-0.05	0.19	0.02	0.31	0.13					
18	Masters degree	-0.03	-0.02	-0.04	0.01	0.02	0	0.02	-0.01				
19	Doctoral degree	-0.03	0.04	0.06	0.07	0.21	0.13	0.16	-0.01	-0.39			
20	CEO race	0.17	-0.08	0.01	0.01	-0.01	0.05	0.07	-0.03	-0.02	0.10		
21	Firm performance (ROA)	0.03	-0.03	-0.03	-0.09	-0.05	-0.12	-0.05	-0.07	-0.10	-0.01	0.04	
22	CEO attractiveness	0.19	-0.13	-0.12	-0.07	0.02	-0.01	-0.03	-0.08	-0.06	0.01	0.01	0.01

Note: $p < .05$ for $.03 \leq |r| < .05$, $p < .01$ for $|r| \geq 0.05$. CEO gender coded as 0 = male, 1 = female. CEO race coded as 0 = White, 1 = racial minority.

Table 3

Panel Regression Results of the Interactive Effect of CEO Race and Firm Performance (ROA) Predicting CEO Compensation in Study 1

Variables	(1)	(2)	(3)
		CEO compensation	
Firm size	0.468**	0.507**	0.530**
	(0.058)	(0.059)	(0.059)
Capital intensity	-0.161	-0.437	-0.439
	(0.719)	(0.719)	(0.717)
R&R intensity	1.126	1.176	1.176
	(0.793)	(0.789)	(0.787)
Leverage	-0.425*	-0.268	-0.329
	(0.202)	(0.204)	(0.203)
Board racial diversity	-0.130	-0.038	0.039
	(0.300)	(0.301)	(0.301)
Compensation committee racial diversity	0.637	0.507	0.410
	(0.405)	(0.404)	(0.404)
Board independence	0.126	0.132	0.162
	(0.197)	(0.196)	(0.196)
CEO duality	0.065	0.070	0.081
	(0.050)	(0.050)	(0.049)
CEO gender	-0.170	-0.068	-0.208
	(0.180)	(0.183)	(0.185)
CEO age	-0.008	-0.010	-0.008
	(0.006)	(0.006)	(0.006)
CEO tenure	-0.007	-0.006	-0.008
	(0.005)	(0.005)	(0.005)
N. of boards served	-0.002	-0.003	-0.001
	(0.005)	(0.005)	(0.005)
N. of functions worked in	-0.044*	-0.044*	-0.052*
	(0.022)	(0.022)	(0.022)
N. of firms worked in	-0.006	-0.006	-0.005
	(0.009)	(0.009)	(0.009)
N. of industries worked in	0.032	0.034	0.029
	(0.026)	(0.026)	(0.026)
Prior CEO experience	0.199**	0.173*	0.152*
	(0.069)	(0.069)	(0.069)
Master's degree	0.223**	0.234**	0.248**
	(0.062)	(0.062)	(0.062)
Doctoral degree	0.172	0.203*	0.220*
	(0.090)	(0.090)	(0.090)
CEO attractiveness	0.268**	0.235**	0.257**
	(0.057)	(0.058)	(0.058)
CEO race [Hypothesis 1]		-0.322*	-0.389**
		(0.129)	(0.129)
Firm performance (ROA)		1.563**	1.390**
		(0.324)	(0.326)
CEO race x Firm performance (ROA) [Hypothesis 2]			5.918**
			(1.358)
Intercept	3.917**	3.694**	3.296**
	(0.675)	(0.675)	(0.679)
Year dummies	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Firm-year observations	3,462	3,462	3,462
R-squared	0.084	0.093	0.098

Notes: Unstandardized regression coefficients are reported. Standard error in parentheses.
** p <0.01, * p <0.05

Table 4

Panel Regression Results of the Interactive Effect of CEO Race and CEO Attractiveness Predicting CEO Compensation in Study 1

Variables	(1)	(2)	(3)
	CEO compensation		
Firm size	0.497**	0.507**	0.512**
	(0.059)	(0.059)	(0.059)
Capital intensity	-0.527	-0.437	-0.459
	(0.722)	(0.719)	(0.718)
R&R intensity	1.071	1.176	1.224
	(0.792)	(0.789)	(0.788)
Leverage	-0.290	-0.268	-0.242
	(0.204)	(0.204)	(0.203)
Board racial diversity	-0.222	-0.038	-0.030
	(0.299)	(0.301)	(0.301)
Compensation committee racial diversity	0.634	0.507	0.545
	(0.405)	(0.404)	(0.404)
Board independence	0.103	0.132	0.126
	(0.197)	(0.196)	(0.196)
CEO duality	0.062	0.070	0.060
	(0.050)	(0.050)	(0.050)
CEO gender	-0.045	-0.068	-0.099
	(0.178)	(0.183)	(0.183)
CEO age	-0.012*	-0.010	-0.011
	(0.006)	(0.006)	(0.006)
CEO tenure	-0.006	-0.006	-0.005
	(0.005)	(0.005)	(0.005)
N. of boards served	-0.004	-0.003	-0.003
	(0.005)	(0.005)	(0.005)
N. of functions worked in	-0.042	-0.044*	-0.039
	(0.022)	(0.022)	(0.022)
N. of firms worked in	-0.006	-0.006	-0.005
	(0.009)	(0.009)	(0.009)
N. of industries worked in	0.036	0.034	0.028
	(0.026)	(0.026)	(0.026)
Prior CEO experience	0.162*	0.173*	0.183**
	(0.069)	(0.069)	(0.069)
Master's degree	0.216**	0.234**	0.242**
	(0.062)	(0.062)	(0.062)
Doctoral degree	0.226*	0.203*	0.198*
	(0.089)	(0.090)	(0.090)
Firm performance (ROA)	1.577**	1.563**	1.561**
	(0.326)	(0.324)	(0.324)
CEO race [Hypothesis 1]		-0.322*	-0.230
		(0.129)	(0.132)
CEO attractiveness		0.235**	0.191**
		(0.058)	(0.060)
CEO race x CEO attractiveness [Hypothesis 3]			0.671**
			(0.228)
Intercept	4.455**	4.190**	4.210**
	(0.648)	(0.647)	(0.646)
Year dummies	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Firm-year observations	3,462	3,462	3,462
R-squared	0.084	0.093	0.095

Notes: Unstandardized regression coefficients are reported. Standard error in parentheses.
** p <0.01, * p <0.05

Table 5

Descriptive Statistics and Correlations in Study 2

	Variables	Mean	SD	1	2	3	4
1	CEO compensation	4.31	2.21				
2	CEO race	0.46	0.50	0.06			
3	Firm performance	0.49	0.50	0.58**	0		
4	CEO attractiveness	0.51	0.50	0.01	0	0.03	
5	Evaluator perceptions of double standards	4.91	1.60	0.05	-0.02	0.05	0.14*

** p <0.01, * p <0.05

Notes: CEO race coded as 0 = White CEO, 1 = Black CEO.
Firm performance coded as 0 = low performance manipulation, 1 = high performance manipulation.
CEO attractiveness coded as 0 = unattractive CEO manipulation, 1 = attractive CEO manipulation

Table 6

Hierarchical Regression Results of the Interactive Effect of CEO Race and Firm Performance Predicting CEO Compensation in Study 2

Variables	(1)	(2)	(3)
	CEO compensation		
CEO attractiveness	0.051	-0.028	-0.028
	(0.271)	(0.220)	(0.221)
CEO race [Hypothesis 1]		0.288	0.215
		(0.221)	(0.309)
Firm performance		2.574**	2.506**
		(0.220)	(0.299)
CEO race × Firm performance [Hypothesis 2]			0.151
			(0.443)
Intercept	4.280**	2.940**	2.974**
	(0.193)	(0.213)	(0.235)
N	268	268	268
R-squared	0	0.343	0.344
Adj. R-squared	0	0.336	0.334

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$

Table 7

Hierarchical Regression Results of the Interactive Effect of CEO Race and CEO Attractiveness Predicting CEO Compensation in Study 2

Variables	(1)	(2)	(3)
	CEO compensation		
Firm performance	2.573**	2.574**	2.573**
	(0.220)	(0.220)	(0.218)
CEO race [Hypothesis 1]		0.288	-0.286
		(0.221)	(0.312)
CEO attractiveness		-0.028	-0.542
		(0.220)	(0.295)
CEO race × CEO attractiveness [Hypothesis 3]			1.130*
			(0.438)
Intercept	3.058**	2.940**	3.202**
	(0.153)	(0.213)	(0.234)
N	268	268	268
R-squared	0.339	0.343	0.360
Adj. R-squared	0.337	0.336	0.350

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$, * $p<0.05$

Table 8

Hierarchical Regression Results of the Interactive Effect of CEO Race and Evaluator Perceptions of Double Standards Predicting CEO Compensation in Study 2

Variables	(1)	(2)	(3)
	CEO compensation		
Firm performance	2.574**	2.570**	2.562**
	(0.221)	(0.221)	(0.221)
CEO attractiveness	-0.027	-0.043	-0.043
	(0.221)	(0.223)	(0.223)
CEO race		0.290	0.288
		(0.222)	(0.221)
Evaluator perceptions of double standards		0.035	-0.053
		(0.070)	(0.100)
CEO race × Evaluator perceptions of double standards [Hypothesis 4]			0.172
			(0.138)
Intercept	3.071**	2.949**	2.957**
	(0.188)	(0.214)	(0.214)
N	268	268	268
R-squared	0.339	0.344	0.348
Adj. R-squared	0.334	0.334	0.335

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$

Table 9

Descriptive Statistics and Correlations in Study 3

	Variables	Mean	SD	1	2	3	4	5
1	CEO compensation	4.90	1.69					
2	CEO race	.52	.50	.07				
3	Firm performance	.53	.50	.51**	-.00			
4	CEO attractiveness	.52	.50	-.04	-.03	-.03		
5	Evaluator perceptions of double standards	5.09	1.29	-.01	-.03	.01	.05	
6	Evaluators' implicit racial bias (IAT score)	.43	.40	-.06	-.06	-.09	-.10	-.07

** p <0.01

Notes: CEO race coded as 0 = White CEO, 1 = Black CEO.
Firm performance coded as 0 = low performance manipulation, 1 = high performance manipulation.
CEO attractiveness coded as 0 = unattractive CEO manipulation, 1 = attractive CEO manipulation

Table 10

Hierarchical Regression Results of the Interactive Effect of CEO Race and Firm Performance Predicting CEO Compensation in Study 3

Variables	(1)	(2)	(3)
	CEO compensation		
CEO attractiveness	-0.150	-0.093	-0.100
	(0.191)	(0.164)	(0.165)
CEO race [Hypothesis 1]		0.246	0.139
		(0.164)	(0.329)
Firm performance		1.739**	1.633**
		(0.164)	(0.238)
CEO race × Firm performance [Hypothesis 2]			0.203
			(0.330)
Intercept	4.973**	3.901**	3.961**
	(0.138)	(0.173)	(0.235)
N	314	314	314
R-squared	0	0.271	0.272
Adj. R-squared	0	0.264	0.262

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$

Table 11

Hierarchical Regression Results of the Interactive Effect of CEO Race and CEO Attractiveness Predicting CEO Compensation in Study 3

Variables	(1)	(2)	(3)
	CEO compensation		
Firm performance	1.741**	1.739**	1.754**
	(0.164)	(0.164)	(0.164)
CEO race [Hypothesis 1]		0.246	.482*
		(0.164)	(0.238)
CEO attractiveness		-0.093	0.143
		(0.164)	(0.238)
CEO race × CEO attractiveness [Hypothesis 3]			-0.450
			(0.329)
Intercept	3.980**	3.901**	3.766**
	(0.119)	(0.173)	(0.199)
N	314	314	314
R-squared	0.265	0.271	0.275
Adj. R-squared	0.262	0.264	0.266

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$, * $p<0.05$

Table 12

Hierarchical Regression Results of the Interactive Effect of CEO Race and Evaluator Perceptions of Double Standards Predicting CEO Compensation in Study 3

Variables	(1)	(2)	(3)
	CEO compensation		
Firm performance	1.739**	1.740**	1.766**
	(0.165)	(0.165)	(0.164)
CEO attractiveness	-0.102	-0.092	-0.140
	(0.165)	(0.165)	(0.165)
CEO race		0.245	-1.202
		(0.165)	(0.684)
Evaluator perceptions of double standards		-0.011	-0.175
		(0.064)	(0.098)
CEO race × Evaluator perceptions of double standards [Hypothesis 4]			0.284*
			(0.130)
Intercept	4.035**	3.956**	4.809**
	(0.148)	(0.366)	(0.535)
N	314	314	314
R-squared	0.265	0.271	0.282
Adj. R-squared	0.261	0.261	0.270

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$, * $p<0.05$

Table 13

Hierarchical Regression Results of the Interactive Effect of CEO Race and Evaluators' Implicit Racial Bias Predicting CEO Compensation in Study 3

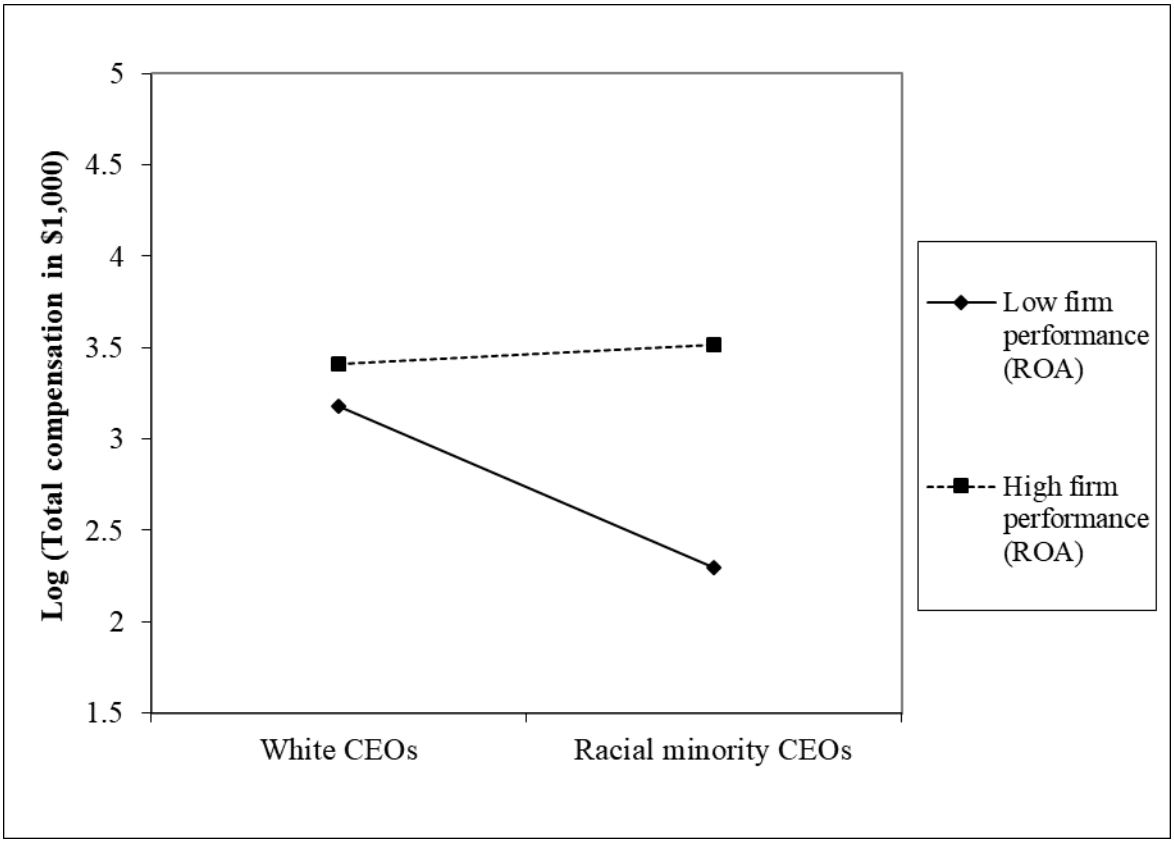
Variables	(1)	(2)	(3)
	CEO compensation		
Firm performance	1.762**	1.756**	1.741**
	(0.172)	(0.173)	(0.171)
CEO attractiveness	-0.101	-0.096	-0.102
	(0.172)	(0.173)	(0.171)
CEO race		0.255	0.771**
		(0.172)	(0.253)
Evaluators' implicit racial bias		-0.056	0.565
		(0.219)	(0.313)
CEO race × Evaluators' implicit racial bias [Hypothesis 5]			-1.185**
			(0.430)
Intercept	4.011**	3.900**	3.626**
	(0.155)	(0.217)	(0.236)
N	295	295	295
R-squared	0.266	0.272	0.291
Adj. R-squared	0.261	0.262	0.278

Note: Unstandardized regression coefficients are reported. Standard errors in parentheses.
** $p<0.01$, * $p<0.05$

Table 14

Summary of the Main Features and Findings Across the Three Studies

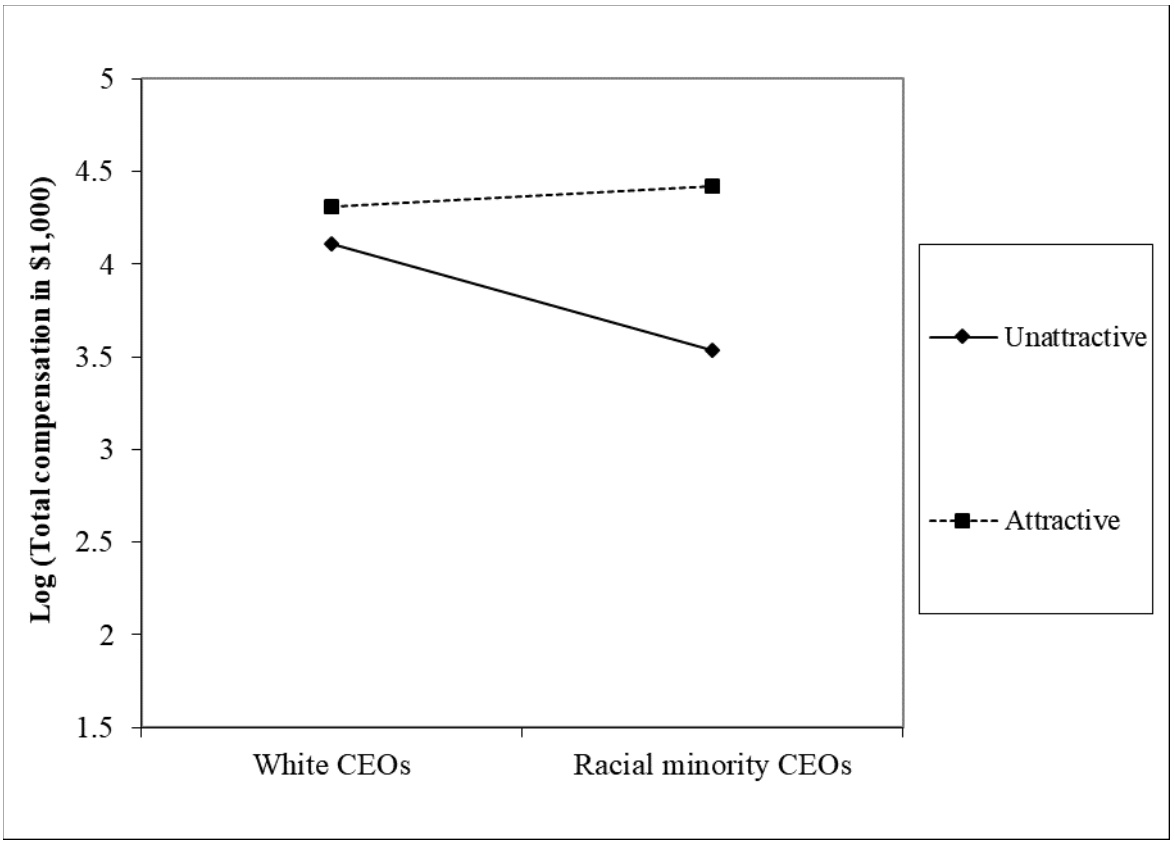
		Study 1	Study 2	Study 3
Study Design/Data		Archival panel data	Scenario-based experimental data	Scenario-based experimental data
Sample		• S&P 500 CEOs during 2004-2013 • *N* = 3,462 firm-year observations	• Employees (MTurk) • *N* = 268	• Undergraduate students • *N* = 295 – 314
H1	(a) Racial minority CEOs receive more compensation compared to their White counterparts. (b) Racial minority CEOs receive less compensation compared to their White counterparts.	H1b supported	Neither supported; insignificant difference between racial minority and White CEOs in pay	
H2	Interactive effect of CEO race and firm performance on CEO compensation	Supported	Not supported	
H3	Interactive effect of CEO race and CEO attractiveness on CEO compensation	Supported	Partially supported	Not supported
H4	Interactive effect of CEO race and evaluator perceptions of double standards on CEO compensation		Not supported	Supported
H5	Interactive effect of CEO race and evaluators' implicit racial bias on CEO compensation			Supported



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, firm performance.

Figure 1

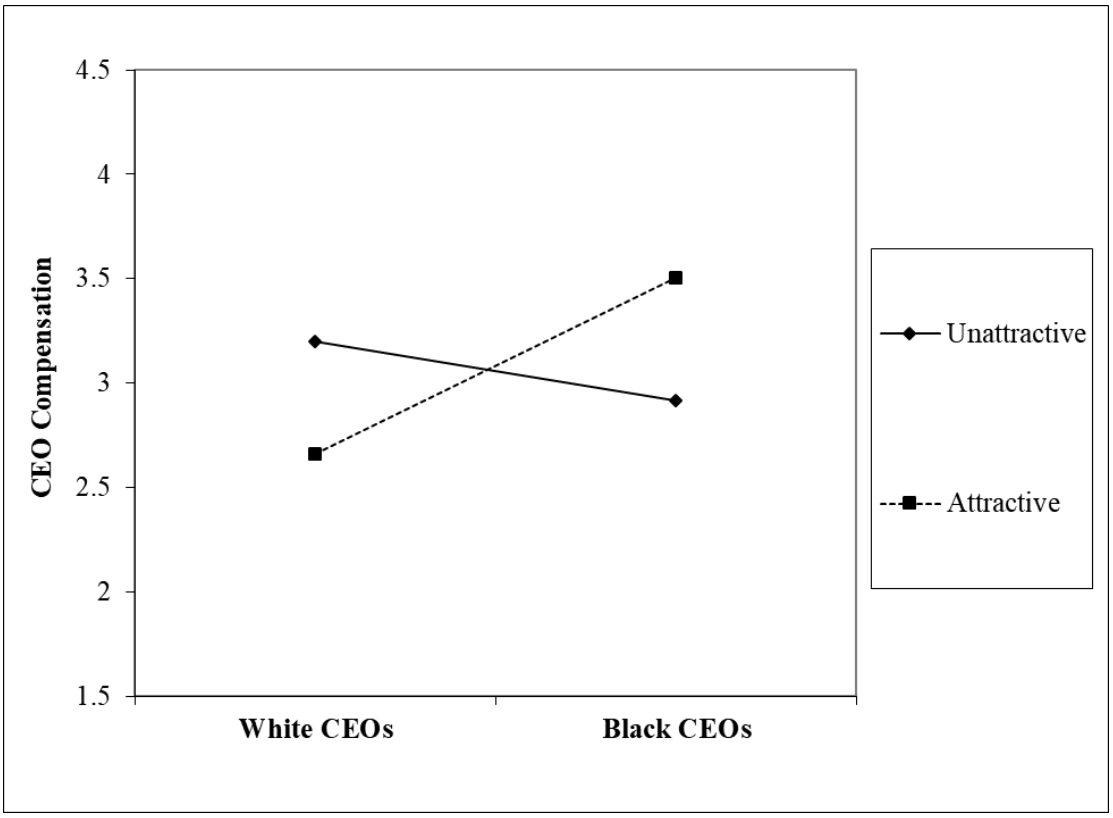
The Interactive effect of CEO Race and Firm Performance (ROA) on CEO Compensation in Study 1 (H2)



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, CEO attractiveness.

Figure 2

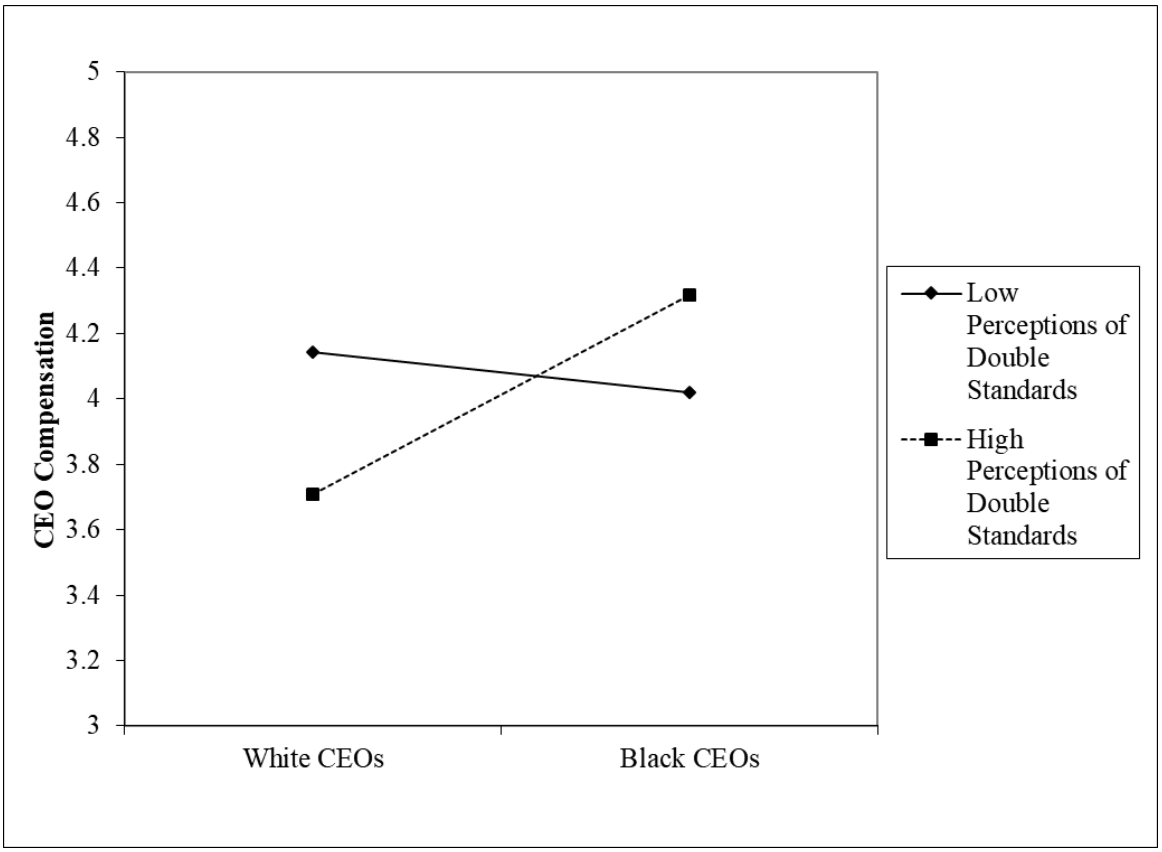
The Interactive effect of CEO Race and CEO attractiveness on CEO Compensation in Study 1 (H3)



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, CEO attractiveness. CEO Compensation is measured according to the following scale: 1) Below $4 million, 2) $4 million ~ $6 million, 3) $6 million ~ $8 million, 4) $8 million ~ $10 million, 5) $10 million ~ $12 million, 6) $12 million ~ $14 million, 7) $14 million ~ $16 million, 8) $16 million ~ $18 million, 9) $18 million ~ $20 million, 10) Over $20 million.

Figure 3

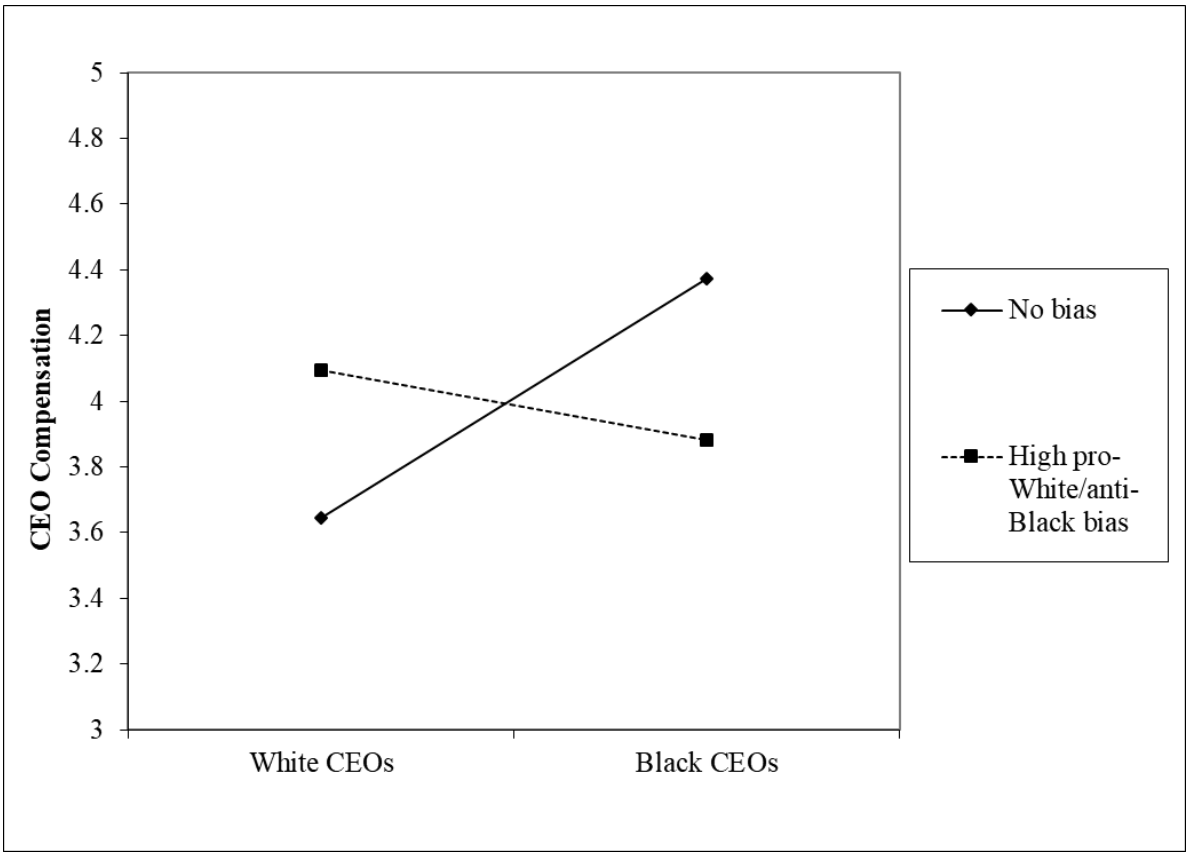
The Interactive effect of CEO Race and CEO attractiveness on CEO Compensation in Study 2 (H3)



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, evaluator perceptions of double standards. CEO Compensation is measured according to the following scale: 1) Below $4 million, 2) $4 million ~ $6 million, 3) $6 million ~ $8 million, 4) $8 million ~ $10 million, 5) $10 million ~ $12 million, 6) $12 million ~ $14 million, 7) $14 million ~ $16 million, 8) $16 million ~ $18 million, 9) $18 million ~ $20 million, 10) Over $20 million.

Figure 4

The Interactive effect of CEO Race and Evaluator Perceptions of Double Standards on CEO Compensation in Study 3 (H4)



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, evaluators' implicit racial bias (i.e., IAT scores). CEO Compensation is measured according to the following scale: 1) Below $4 million, 2) $4 million ~ $6 million, 3) $6 million ~ $8 million, 4) $8 million ~ $10 million, 5) $10 million ~ $12 million, 6) $12 million ~ $14 million, 7) $14 million ~ $16 million, 8) $16 million ~ $18 million, 9) $18 million ~ $20 million, 10) Over $20 million.

Figure 5

The Interactive effect of CEO Race and Evaluators' Implicit Racial Bias on CEO Compensation in Study 3 (H5)

Appendix 1

Table A

Descriptive Statistics and Correlations in Study 1 with Different Measures of Firm Performance

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1	CEO compensation	8.90[a]	1.27										
2	Firm size	9.62	1.38	0.21									
3	Capital intensity	0.05	0.05	-0.01	-0.14								
4	R&D intensity	0.02	0.05	0.04	-0.22	-0.08							
5	Leverage	0.25	0.17	0.01	0.02	-0.00	-0.15						
6	Board racial diversity	0.10	0.10	0.16	0.28	-0.05	-0.07	0.10					
7	Compensation committee racial diversity	0.04	0.06	0.07	0.12	-0.01	-0.02	0.10	0.61				
8	Board independence	0.79	0.12	0.16	0.23	-0.00	0.03	0.07	0.22	0.16			
9	CEO duality	0.63	0.48	0.13	0.17	0.06	-0.10	0.04	0.13	0.04	0.20		
10	CEO gender	0.02	0.15	0.03	0.02	-0.04	-0.03	0.09	0.15	0.09	0.07	0.02	
11	CEO age	56.29	5.98	-0.02	0.09	0.02	-0.05	0.01	0.01	0.01	0.02	0.26	-0.06
12	CEO tenure	7.02	6.27	-0.00	-0.05	0.07	0.04	-0.02	-0.05	-0.01	-0.06	0.18	-0.06
13	N. of boards served	5.73	7.18	0.01	0.09	-0.01	0.01	-0.01	0.02	-0.06	0.02	0.19	0.02
14	N. of functions worked in	1.89	1.06	0.01	0.16	-0.02	0.06	-0.01	0.08	0.01	0.04	0.07	0.01
15	N. of firms worked in	6.44	4.19	0.02	0.13	-0.03	0.03	0.04	0.03	-0.04	0.01	0.10	0.06
16	N. of industries worked in	2.83	1.51	0.03	0.12	-0.02	-0.03	0.06	0.07	-0.01	0.06	0.16	0.10
17	Prior CEO experience	0.22	0.41	0.02	-0.00	0.03	0.01	0.03	-0.05	-0.05	0.03	0.07	-0.03
18	Masters degree	0.44	0.50	0.09	0.11	-0.11	-0.00	0.01	0.03	0.00	0.12	0.04	-0.03
19	Doctoral degree	0.16	0.37	0.03	0.06	-0.02	0.09	0.05	-0.01	0.01	0.03	0.05	-0.03
20	CEO race	0.05	0.22	0.02	0.02	-0.05	-0.00	0.03	0.22	0.04	0.03	0.00	0.17
21	Firm performance (ROA)	0.11	0.08	-0.01	-0.38	0.08	0.03	-0.10	0.02	0.03	-0.08	-0.04	0.03
22	Firm performance (TSR)	16.74	38.58	0.04	-0.09	0.05	0.02	-0.06	-0.03	0.00	-0.02	0.00	-0.01
23	Firm performance (EPS)	2.70	3.57	0.07	0.14	0.01	-0.11	-0.07	0.09	0.07	0.07	0.11	-0.01
24	CEO attractiveness	2.84	0.51	0.12	0.10	-0.03	-0.08	0.08	0.11	0.06	0.05	0.00	0.20

Note: $p < .05$ for $.04 \leq |r| < .05$, $p < .01$ for $|r| \geq .05$. CEO gender coded as 0 = male, 1 = female. CEO race coded as 0 = White, 1 = racial minority.

[a] Calculated as the average of the natural log values of total compensation in thousand dollars (variable tdc1 in Execucomp) of each CEO.

Table A (continued)

Descriptive Statistics and Correlations in Study 1 with Different Measures of Firm Performance

	Variables	11	12	13	14	15	16	17	18	19	20	21	22	23
11	CEO age													
12	CEO tenure	0.35												
13	N. of boards served	0.21	0.11											
14	N. of functions worked in	0.15	0.02	0.22										
15	N. of firms worked in	0.18	0.05	0.66	0.28									
16	N. of industries worked in	0.12	0.08	0.51	0.35	0.64								
17	Prior CEO experience	0.08	-0.05	0.19	0.02	0.31	0.13							
18	Masters degree	-0.02	-0.04	0.01	0.02	0.00	0.02	-0.01						
19	Doctoral degree	0.04	0.06	0.08	0.21	0.13	0.16	-0.01	-0.39					
20	CEO race	-0.08	0.01	0.01	-0.01	0.05	0.07	-0.04	-0.02	0.10				
21	Firm performance (ROA)	-0.03	-0.04	-0.09	-0.05	-0.12	-0.05	-0.07	-0.10	-0.01	0.05			
22	Firm performance (TSR)	0.00	0.04	-0.05	-0.03	-0.02	-0.02	0.02	0.00	0.01	-0.01	0.18		
23	Firm performance (EPS)	0.03	-0.01	-0.07	0.03	-0.09	-0.05	-0.06	0.03	0.01	0.00	0.22	0.14	
24	CEO attractiveness	-0.13	-0.13	-0.07	0.02	-0.01	-0.03	-0.08	-0.06	0.01	0.01	0.01	-0.02	0.05

Note: $p < .05$ for $.04 \leq |r| < .05$, $p < .01$ for $|r| \geq .05$. CEO gender coded as 0 = male, 1 = female. CEO race coded as 0 = White, 1 = racial minority.

Table B-1

Panel Regression Results of the Interactive Effect of CEO Race and Firm Performance (Total Shareholder Return, TSR) Predicting CEO Compensation in Study 1

Variables	(1)	(2)	(3)
		CEO compensation	
Firm size	0.468**	0.501**	0.503**
	(0.058)	(0.059)	(0.059)
Capital intensity	-0.161	-0.107	-0.115
	(0.719)	(0.718)	(0.717)
R&R intensity	1.126	1.366	1.349
	(0.793)	(0.792)	(0.791)
Leverage	-0.425*	-0.336	-0.343
	(0.202)	(0.203)	(0.203)
Board racial diversity	-0.130	-0.032	-0.015
	(0.300)	(0.303)	(0.303)
Compensation committee racial diversity	0.637	0.509	0.485
	(0.405)	(0.406)	(0.406)
Board independence	0.126	0.131	0.127
	(0.197)	(0.199)	(0.199)
CEO duality	0.065	0.083	0.084
	(0.050)	(0.050)	(0.050)
CEO gender	-0.170	-0.091	-0.076
	(0.180)	(0.183)	(0.183)
CEO age	-0.008	-0.010	-0.010
	(0.006)	(0.006)	(0.006)
CEO tenure	-0.007	-0.008	-0.008
	(0.005)	(0.005)	(0.005)
N. of boards served	-0.002	-0.002	-0.002
	(0.005)	(0.005)	(0.005)
N. of functions worked in	-0.044*	-0.041	-0.041
	(0.022)	(0.022)	(0.022)
N. of firms worked in	-0.006	-0.005	-0.005
	(0.009)	(0.009)	(0.009)
N. of industries worked in	0.032	0.032	0.032
	(0.026)	(0.026)	(0.026)
Prior CEO experience	0.199**	0.176*	0.173*
	(0.069)	(0.070)	(0.070)
Master's degree	0.223**	0.241**	0.242**
	(0.062)	(0.062)	(0.062)
Doctoral degree	0.172	0.173	0.177
	(0.090)	(0.091)	(0.091)
CEO attractiveness	0.268**	0.244**	0.238**
	(0.057)	(0.058)	(0.058)
CEO race [Hypothesis 1]		-0.346**	-0.320*
		(0.130)	(0.130)
Firm performance (Total Shareholder Return)		0.002**	0.002**
		(0.000)	(0.000)
CEO race x Firm performance (TSR) [Hypothesis 2]			0.004*
			(0.002)
Intercept	3.917**	3.692**	3.708**
	(0.675)	(0.680)	(0.680)
Year dummies	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Firm-year observations	3,462	3,439	3,439
R-squared	0.084	0.094	0.096

Notes: Unstandardized regression coefficients are reported. Standard error in parentheses.
** p <0.01, * p <0.05

Table B-2

Panel Regression Results of the Interactive Effect of CEO Race and CEO Attractiveness Predicting CEO Compensation in Study 1 (using TSR to control for firm performance)

Variables	(1)	(2)	(3)
	CEO compensation		
Firm size	0.491**	0.501**	0.506**
	(0.059)	(0.059)	(0.059)
Capital intensity	-0.203	-0.107	-0.129
	(0.721)	(0.718)	(0.717)
R&R intensity	1.250	1.366	1.423
	(0.795)	(0.792)	(0.791)
Leverage	-0.362	-0.336	-0.308
	(0.204)	(0.203)	(0.203)
Board racial diversity	-0.219	-0.032	-0.026
	(0.302)	(0.303)	(0.303)
Compensation committee racial diversity	0.635	0.509	0.551
	(0.408)	(0.406)	(0.406)
Board independence	0.107	0.131	0.124
	(0.200)	(0.199)	(0.199)
CEO duality	0.073	0.083	0.073
	(0.050)	(0.050)	(0.050)
CEO gender	-0.070	-0.091	-0.122
	(0.178)	(0.183)	(0.183)
CEO age	-0.012*	-0.010	-0.011
	(0.006)	(0.006)	(0.006)
CEO tenure	-0.008	-0.008	-0.007
	(0.005)	(0.005)	(0.005)
N. of boards served	-0.004	-0.002	-0.003
	(0.005)	(0.005)	(0.005)
N. of functions worked in	-0.040	-0.041	-0.035
	(0.022)	(0.022)	(0.022)
N. of firms worked in	-0.005	-0.005	-0.004
	(0.009)	(0.009)	(0.009)
N. of industries worked in	0.034	0.032	0.026
	(0.026)	(0.026)	(0.026)
Prior CEO experience	0.168*	0.176*	0.187**
	(0.069)	(0.070)	(0.070)
Master's degree	0.223**	0.241**	0.251**
	(0.062)	(0.062)	(0.062)
Doctoral degree	0.199*	0.173	0.166
	(0.090)	(0.091)	(0.091)
Firm performance (TSR)	0.002**	0.002**	0.002**
	(0.000)	(0.000)	(0.000)
CEO race [Hypothesis 1]		-0.346**	-0.253
		(0.130)	(0.133)
CEO attractiveness		0.244**	0.231**
		(0.058)	(0.058)
CEO race x CEO attractiveness [Hypothesis 3]			0.703**
			(0.229)
Intercept	4.632**	4.348**	4.378**
	(0.651)	(0.650)	(0.649)
Year dummies	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Firm-year observations	3,439	3,439	3,439
R-squared	0.085	0.094	0.097

Notes: Unstandardized regression coefficients are reported. Standard error in parentheses.
** p <0.01, * p <0.05

Table C-1

Panel Regression Results of the Interactive Effect of CEO Race and Firm Performance (Earnings per Share, EPS) Predicting CEO Compensation in Study 1

Variables	(1)	(2)	(3)
	CEO compensation		
Firm size	0.468**	0.375**	0.380**
	(0.058)	(0.059)	(0.059)
Capital intensity	-0.161	-0.573	-0.532
	(0.719)	(0.714)	(0.714)
R&R intensity	1.126	1.180	1.164
	(0.793)	(0.785)	(0.785)
Leverage	-0.425*	-0.391	-0.413*
	(0.202)	(0.202)	(0.202)
Board racial diversity	-0.130	-0.077	-0.101
	(0.300)	(0.301)	(0.301)
Compensation committee racial diversity	0.637	0.476	0.453
	(0.405)	(0.404)	(0.404)
Board independence	0.126	0.086	0.081
	(0.197)	(0.195)	(0.195)
CEO duality	0.065	0.064	0.066
	(0.050)	(0.050)	(0.049)
CEO gender	-0.170	-0.098	-0.115
	(0.180)	(0.182)	(0.182)
CEO age	-0.008	-0.009	-0.009
	(0.006)	(0.006)	(0.006)
CEO tenure	-0.007	-0.007	-0.007
	(0.005)	(0.005)	(0.005)
N. of boards served	-0.002	-0.002	-0.002
	(0.005)	(0.005)	(0.005)
N. of functions worked in	-0.044*	-0.041	-0.042*
	(0.022)	(0.021)	(0.021)
N. of firms worked in	-0.006	-0.003	-0.002
	(0.009)	(0.009)	(0.009)
N. of industries worked in	0.032	0.030	0.029
	(0.026)	(0.026)	(0.026)
Prior CEO experience	0.199**	0.158*	0.151*
	(0.069)	(0.069)	(0.069)
Master's degree	0.223**	0.224**	0.228**
	(0.062)	(0.062)	(0.062)
Doctoral degree	0.172	0.166	0.171
	(0.090)	(0.090)	(0.090)
CEO attractiveness	0.268**	0.222**	0.229**
	(0.057)	(0.058)	(0.058)
CEO race [Hypothesis 1]		-0.324*	-0.325*
		(0.129)	(0.129)
Firm performance (Earnings per Share)		0.045**	0.047**
		(0.005)	(0.005)
CEO race x Firm performance (EPS) [Hypothesis 2]			0.063*
			(0.029)
Intercept	3.917**	5.007**	4.932**
	(0.675)	(0.683)	(0.684)
Year dummies	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Firm-year observations	3,462	3,434	3,434
R-squared	0.084	0.109	0.111

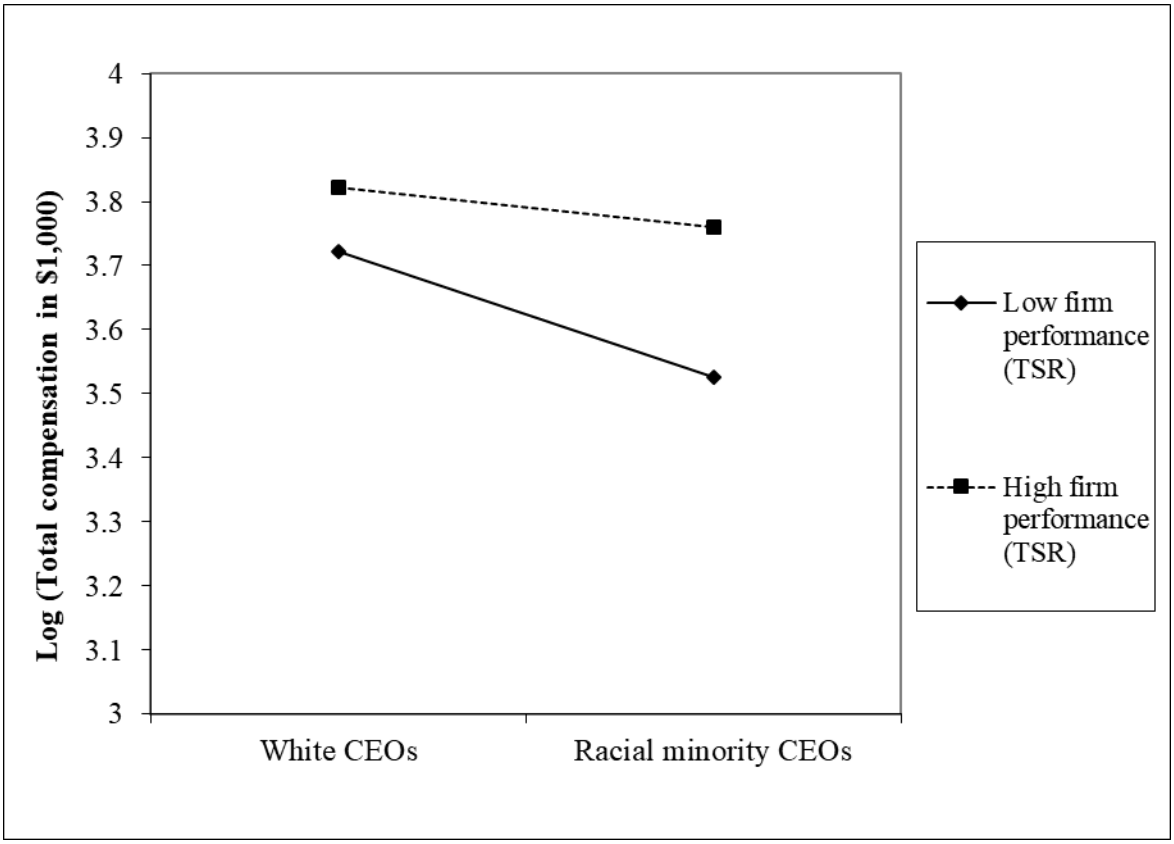
Notes: Unstandardized regression coefficients are reported. Standard error in parentheses.
** p <0.01, * p <0.05

Table C-2

Panel Regression Results of the Interactive Effect of CEO Race and CEO Attractiveness Predicting CEO Compensation in Study 1 (using EPS to control for firm performance)

Variables	(1)	(2)	(3)
	CEO compensation		
Firm size	0.362**	0.375**	0.379**
	(0.060)	(0.059)	(0.059)
Capital intensity	-0.673	-0.573	-0.597
	(0.717)	(0.714)	(0.713)
R&R intensity	1.078	1.180	1.237
	(0.788)	(0.785)	(0.784)
Leverage	-0.413*	-0.391	-0.363
	(0.202)	(0.202)	(0.202)
Board racial diversity	-0.250	-0.077	-0.071
	(0.299)	(0.301)	(0.301)
Compensation committee racial diversity	0.590	0.476	0.519
	(0.405)	(0.404)	(0.403)
Board independence	0.059	0.086	0.078
	(0.196)	(0.195)	(0.195)
CEO duality	0.055	0.064	0.053
	(0.050)	(0.050)	(0.050)
CEO gender	-0.082	-0.098	-0.130
	(0.177)	(0.182)	(0.182)
CEO age	-0.012*	-0.009	-0.011
	(0.006)	(0.006)	(0.006)
CEO tenure	-0.007	-0.007	-0.006
	(0.005)	(0.005)	(0.005)
N. of boards served	-0.004	-0.002	-0.003
	(0.005)	(0.005)	(0.005)
N. of functions worked in	-0.039	-0.041	-0.035
	(0.022)	(0.021)	(0.022)
N. of firms worked in	-0.003	-0.003	-0.001
	(0.009)	(0.009)	(0.009)
N. of industries worked in	0.032	0.030	0.024
	(0.026)	(0.026)	(0.026)
Prior CEO experience	0.150*	0.158*	0.169*
	(0.069)	(0.069)	(0.069)
Master's degree	0.206**	0.224**	0.233**
	(0.062)	(0.062)	(0.062)
Doctoral degree	0.187*	0.166	0.158
	(0.089)	(0.090)	(0.090)
Firm performance (EPS)	0.047**	0.045**	0.045**
	(0.005)	(0.005)	(0.005)
CEO race [Hypothesis 1]		-0.324*	-0.229
		(0.129)	(0.132)
CEO attractiveness		0.222**	0.210**
		(0.058)	(0.058)
CEO race x CEO attractiveness [Hypothesis 3]			0.712**
			(0.227)
Intercept	5.800**	5.516**	5.551**
	(0.650)	(0.649)	(0.648)
Year dummies	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Firm-year observations	3,462	3,434	3,434
R-squared	0.101	0.109	0.112

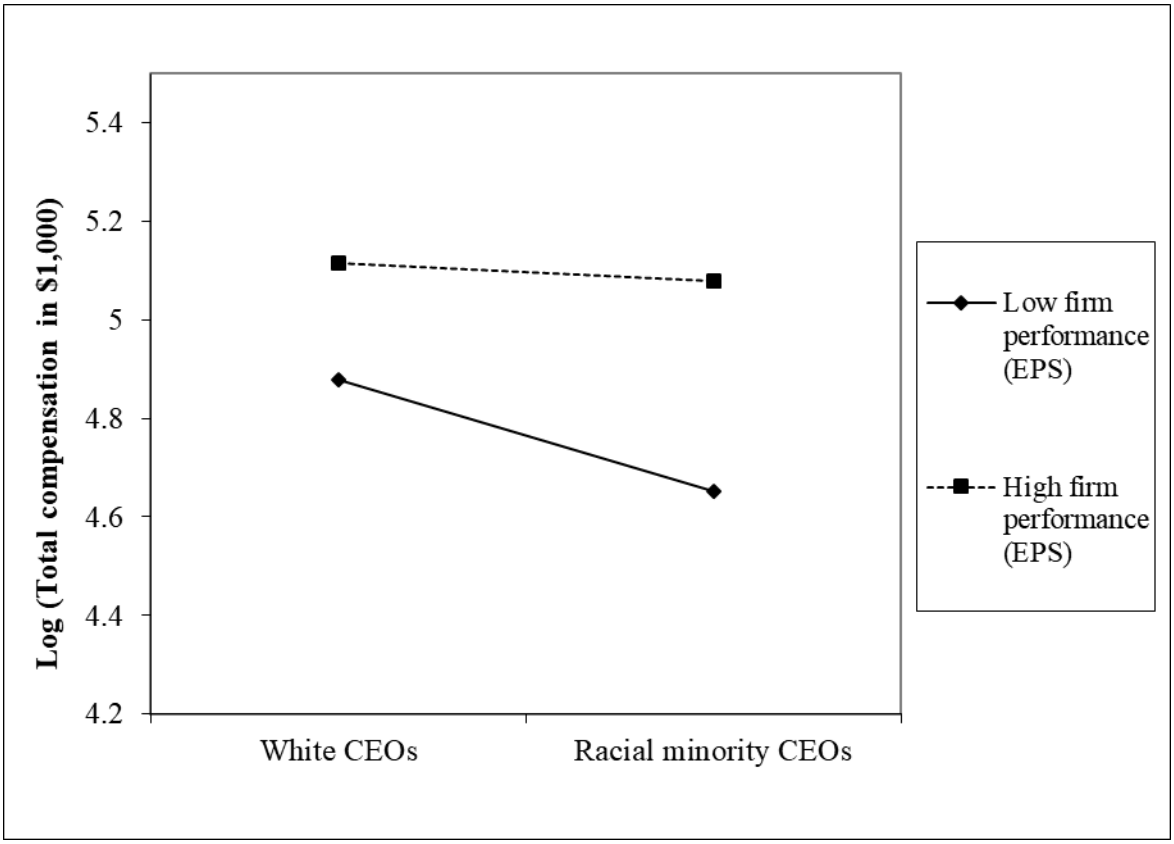
Notes: Unstandardized regression coefficients are reported. Standard error in parentheses.
** p <0.01, * p <0.05



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, firm performance.

Figure A

The Interactive effect of CEO Race and Firm Performance (TSR) on CEO Compensation in Study 1 (H2)



Note: The interaction is plotted at values of one standard deviation above and below the mean (Aiken & West, 1991) of the moderator, firm performance.

Figure B

The Interactive effect of CEO Race and Firm Performance (EPS) on CEO Compensation in Study 1 (H2)

Appendix 2

Study 2 Manipulations

Smith Manufacturing Co., Inc. Announces Earnings

The Chief Executive Officer of Smith Manufacturing Co., Inc., Matthew Brown (photograph, 62) announced today that "Smith Manufacturing has [shown a disappointing performance this year, falling behind our competitors. / performed very well this year, above and beyond our competitors.] The company's earnings have [decreased by / increased by] 5% compared to the previous year." This [decreasing / increasing] trend has persisted during each of Brown's 3 years as CEO. Meanwhile, the industry average has been persistently [increasing / declining] in earnings over the past 3 years."

Prior to becoming the CEO of Smith Manufacturing, Brown held the position of the President of Smith Manufacturing. In his 25-year history with the company he has held a number of positions including Chief Development Officer. He has a Bachelor's degree from Rutgers University and an MBA from Harvard Business School. He is also currently serving on multiple Boards of Directors.

Smith Manufacturing Co., Inc. is a nation-wide company that designs, engineers and is a leading manufacturer of wood-to-wood, wood-to-concrete and wood-to-masonry connectors and fastening systems, stainless steel fasteners and pre-fabricated shearwalls. Smith Manufacturing Co., Inc. also offers a full line of adhesives, mechanical anchors and powder actuated tools for concrete, masonry and steel. Smith Manufacturing is one of the Standard & Poor's 500 (S&P 500) which are the 500 largest publicly held companies in the US.

Appendix 3

Study 2 and Study 3 CEO Compensation Measure

Instructions: Imagine you are a member of the board of directors of Smith Manufacturing on the compensation committee. You are asked to design and propose a pay package for Matthew Brown. Please read the information below on CEO pay and answer the questions that follow.

CEO pay

The company has done an analysis of this industry and provided a range of numbers that are considered appropriate CEO pay in this industry. Across S&P 500 companies over the last several years, the average of total CEO pay ranged from $10 million to $14 million.

Please recommend the total CEO pay for Matthew Brown:

1) Below $4 million
2) $4 million ~ $6 million
3) $6 million ~ $8 million
4) $8 million ~ $10 million
5) $10 million ~ $12 million
6) $12 million ~ $14 million
7) $14 million ~ $16 million
8) $16 million ~ $18 million
9) $18 million ~ $20 million
10) Over $20 million

Appendix 4

Study 3 Manipulations

Smith Manufacturing Co., Inc. Announces New CEO

Smith Manufacturing Co., Inc. announced today that Matthew Brown (photograph, 62) has been selected as the new CEO effective January 31st, 2019. Brown is currently the CEO of a peer company, Johnson Manufacturing.

Johnson Manufacturing has [shown a disappointing performance this year, falling behind our competitors. / performed very well this year, above and beyond our competitors.] The company's earnings have [decreased by / increased by] 5% compared to the previous year. This [decreasing / increasing] trend has persisted during each of Brown's 3 years as CEO. Meanwhile, the industry average has been persistently [increasing / declining] in earnings over the past 3 years. In his 25-year history with Johnson Manufacturing, he has held a number of positions including Chief Development Officer. He has a Bachelor's degree from Rutgers University and an MBA from Harvard Business School. He is also currently serving on multiple Boards of Directors.

Smith Manufacturing Co., Inc. is a nation-wide company that designs, engineers and is a leading manufacturer of wood-to-wood, wood-to-concrete and wood-to-masonry connectors and fastening systems, stainless steel fasteners and pre-fabricated shearwalls. Smith Manufacturing Co., Inc. also offers a full line of adhesives, mechanical anchors and powder actuated tools for concrete, masonry and steel. Smith Manufacturing is one of the Standard & Poor's 500 (S&P 500) which are the 500 largest publicly held companies in the US.