5-2021

The Gender Equity Gap: A Multi-Study Investigation of Within-Job Inequality in Equity-Based Awards

Felice B. Klein
Boise State University

Aaron D. Hill
University of Florida

Ryan Hammond
Pure Storage

Ryan Stice-Lusvardi
Stanford University

The Gender Equity Gap: A Multi-Study Investigation of Within-Job Inequality in Equity-Based Awards

Felice B. Klein
Boise State University

Aaron D. Hill
University of Florida

Ryan Hammond
Pure Storage

Ryan Stice-Lusvardi
Stanford University

Abstract

Laws in many countries mandate paying men and women equally when in similar jobs. Such laws, coupled with considerable organizational efforts, lead some scholars to contend that within-job pay inequality is no longer a source of the gender pay gap. We argue important differences in a widely utilized form of pay heretofore overlooked in existing studies – equity-based awards (i.e., pay where the value is tied to the employing organization's stock, such as stock and stock options) – may cause underestimation of gender-based within-job pay inequality. Specifically, we theorize that due to differences in both *why* and *how* equity-based awards are distributed to employees compared to other forms of pay, a gender gap will exist in equity-based awards, with biased perceptions of retention driving the gap. Using a multi-method study with novel data from two technology organizations, archival data from publicly traded firms, and experimental data, we find consistent support for our hypotheses. Taken together, our results suggest that using equity-based awards as a means to retain employees, and the rationale and processes associated with distributing such pay, can result in gender-based within-job inequality. Thus, our study sheds light on a previously overlooked form of inequality in the workplace while offering implications for both theory and practice.

Keywords: gender inequality, gender pay gap, employee compensation, stock and stock options, retention

Scholars have long sought to understand the mechanisms underlying gender pay gaps (for a recent review, see Blau & Kahn, 2017), with explanations typically falling into one of three processes (Hultin & Szulkin, 1999; Petersen & Saporta, 2004). First, women may sort into lower paid jobs and firms than men, known as *allocative inequality*. As Petersen and Morgan (1995, p. 330) noted, allocative inequality is in essence a "matching process" with women "differentially allocated" to lower paying jobs and firms (Fernandez-Mateo & Kaplan, 2018; Kossek, Su, & Wu, 2017; Milkman, Akinola, & Chugh, 2015). Second, female-dominated jobs may pay less than male-dominated jobs, known as *valuative inequality*. Fundamentally, valuative inequality suggests despite the requisite skills and other pay-relevant factors being similar, jobs primarily held by women are devalued, and thus, paid less than jobs primarily held by men (England, Farkas, Kilbourne, & Dou, 1988). Third, women may receive lower pay than men in the same job at the same firm, known as *within-job pay inequality*. Within-job pay gaps arise for various reasons, as when women receive lower initial pay and smaller raises because they lack "friends in high places" (Seidel, Polzer, & Stewart, 2000, p. 1) or because "employers consciously or unconsciously discount" the merits and performance of female workers (Castilla, 2008, p. 1483).

In the substantial literature on gender pay inequality, scholars often agree that allocative and valuative inequality continue to be major causes of the pay gap (e.g., Padavic & Reskin, 2002; Petersen & Morgan, 1995; Petersen & Saporta, 2004). In contrast, consistent with laws barring within-job pay discrimination (e.g., European Commission's Directive; United States' Equal Pay Act; Japan's Labor Standards Law) and considerable organizational efforts – such as formalized pay practices (Abraham, 2017; Elvira & Graham, 2002) and increased oversight (Castilla, 2008, 2015) – some scholars contend within-job pay inequality is small to nonexistent, and thus no longer an important cause of gender inequality (e.g., Hultin & Szulkin, 1999; Petersen, Saporta, & Seidel, 2000; Tomaskovic-Devey, 1993a; 1993b). These contentions about within-job inequality rely on studies focusing almost exclusively on more traditional forms of employee pay, such as base pay and performance-based rewards (e.g., Abraham, 2017; Castilla, 2008; Judge

& Livingston, 2008), thus overlooking the fact that workers today are also paid in the form of equity-based awards (defined as pay where the value is tied to the employing organization's stock; Blasi, Freeman, & Kruse, 2013; Core & Guay, 2001; Park & Sturman, 2016).[1]

We argue the lack of attention on equity-based awards in gender inequality research is problematic for theory and practice alike. Theoretically speaking, failing to attend to differences in pay types implicitly assumes the underlying mechanisms driving inequality are the same for all pay forms (Fulmer & Shaw, 2018; Park & Sturman, 2016). Important differences exist, however, in both *why* (i.e., rationale used as a basis for awarding; Castilla, 2008, 2015) and *how* (i.e., structure of practices used; Heilman & Haynes, 2008; Petersen & Saporta, 2004) equity-based awards are distributed, calling such assumptions into question (as we explain below). In turn, studying these differences offers a means to add to our understanding of both gender inequality and equity-based pay. Practically speaking, equity-based awards are commonly used in firms and pose substantial implications for employees' wealth. For example, the 2014 General Social Survey found 19.5 percent of all private sector workers reported owning stock or stock options in their firms, while 7.2 percent specifically held stock options (NCEO, 2018). Further, some estimates suggest the mean value held by employees in stock options (if exercised at time of survey) was $249,901 and in stock was $60,078 (Kruse, Blasi, & Park, 2010). What is more, while gender pay gaps are central to numerous sex discrimination lawsuits, claims of equity-based award gaps are less prevalent; shedding light on this topic, then, may be of use to establishing equal pay going forward.[2] Given potential theoretical and practical insights from studying equity-based awards, it may not be surprising that we are not alone in highlighting a need to address possible within-job pay inequality in this form of pay (e.g., Elvira & Graham, 2002; Fulmer & Shaw, 2018; Gupta, Conroy, & Delery, 2012). These calls remain largely unanswered, with inaccessibility of required data often noted as a driving reason (e.g., Hallock & Olson, 2010; Oyer & Schaefer, 2005).

In this study, we answer the aforementioned calls and extend our knowledge of gender inequality by focusing on equity-based awards. We build on the body of research indicating that prevailing gender role stereotypes can foster cognitive biases favoring men in the workplace (Eagly, 1987; Heilman, 2001), and such biases are likely to elicit pay gaps when structural conditions allow managerial discretion (Castilla, 2008, 2015; Petersen & Saporta, 2004). We argue that both the *why* (i.e., for retaining employees) and *how* (i.e., processes allowing for managerial discretion) of distributing equity-based awards allow such biases to materialize, thus causing a gender gap favoring male employees. Further, we theorize that biased perceptions of employees' retention – not only regarding the importance of retaining certain employees, but also employees' opportunity and risk of leaving the company – drives this gap. To test our arguments, we use a multi-method approach based on novel field data from two firms, a laboratory study, and archival data from executives. Additionally, to enrich our theorizing, we use semi-structured interviews of human resources (HR) professionals (mostly executives) to provide important contextual information about the processes and logic underlying distributing equity-based awards.

The results of our multi-method inquiry support our theorizing, extending knowledge on gender pay gaps and compensation in important ways. Most notably, we challenge the notion that within-job inequality is currently "unimportant" (Petersen & Saporta, 2004, p. 853; see also Padavic & Reskin, 2002; Petersen & Morgan, 1995). Specifically, we show a gender gap exists in employee equity-based awards and that biased views of retention drive this gap. Our findings contribute to research suggesting that within-job inequality remains a worthy area of study (Blau & Kahn, 2017; Chan & Anteby, 2016; Eagly & Wood, 2016) – particularly as one of society's 'grand challenges' that scholars can help address (Banks et al., 2016) – and show a previously unexamined cause of gender inequality; namely, biased views of retention. Our findings also highlight the need for both scholars and practitioners to broaden their views of employee pay by considering the specific elements of various pay forms (Park & Sturman, 2016), as this may influence inequality. To this point, our findings bring awareness to an important practical phenomenon, which we believe can drive positive change in firms.

[1] Executive compensation research has long investigated equity-based awards (see Devers, Cannella, Reilly, & Yoder, 2007), as this form of pay attempts to align executives' interests with those of shareholders by making pay contingent on firm performance (Eisenhardt, 1989). As we detail below, there are important differences in the distribution of pay to nonexecutives (Gerhart, Rynes, & Fulmer, 2009), which affects gender pay gaps. Nonetheless, extant studies of executive gender-based pay differences tend to lump all pay together into a total pay measure rather than investigating gaps in specific forms (cf., Bertrand & Hallock, 2001; Hill, Upadhyay, & Beekun, 2015).

[2] For example, using the database Lexis-Nexis, we searched for United States federal sex discrimination court cases in 2019, using the search terms "sex discrimination" and either "pay" or "stock options." While we found 697 federal cases citing the term "pay" and "sex discrimination," we only found four cases citing "stock options" and "sex discrimination". We elaborate on the legal implications of our study in the discussion section of the paper.

Theoretical Background

While scholars continue to focus attention on gender pay inequality (e.g., Abraham, 2017; Blau & Kahn, 2017; Castilla, 2008, 2015), some evidence suggests the gender pay gap within the same occupation at the same establishment is so small as to be unimportant or even nonexistent (e.g., Hultin & Szulkin, 1999; Petersen & Saporta, 2004; Tomaskovic-Devey, 1993a; 1993b). For example, Petersen and Morgan (1995, p. 329) showed wage differences in given occupations and establishments in the United States (U.S.) were around 1.7 percent among blue-collar, clerical, and some technical employees and 3.1 percent in professional and administrative occupations, leading them to label within-job pay inequality as "much less important" than other causes of pay gaps. Similarly, Petersen and colleagues (1997, p. 199) stated that "it has been established" that within-job pay inequity is "not a driving force" of gender pay gaps.

Despite offering valuable insights, past studies of within-job gender inequality mainly focus on traditional forms of pay, such as base pay (e.g., Groshen, 1991; Petersen & Morgan, 1995; Petersen & Saporta, 2004) and performance-based rewards (e.g., bonuses; pay raises; Abraham, 2017; Castilla, 2008, 2015; Elvira & Graham, 2002). Employees today are paid in additional ways (Gerhart & Rynes, 2003; Hallock, 2012; Milkovich, Newman, & Gerhart, 2011); however, little attention addresses possible gender pay gaps in these other pay forms. As Chan and Anteby (2016, p. 186) stated, inequality can persist "for subtle reasons and in spite of efforts to resolve it"; thus, "there remains a theoretical and societal imperative to identify its hidden mechanisms." Given the importance of pay inequality coupled with the fact that firms are paying employees in additional ways, we agree with Chan and Anteby and others (e.g., Elvira & Graham, 2002; Fulmer & Shaw, 2018; Gupta et al., 2012) that it is important to investigate these other, less understood pay forms to ensure within-job gender inequality is truly addressed.

Two large portions of employees' total pay packages have yet to be examined in gender inequality research: 1) benefits (e.g., retirement; health insurance), and 2) equity-based awards (e.g., stock and option grants). Benefits offered to employees within jobs tend to be standardized; in other words, managers are unlikely to have discretion in granting retirement or insurance. Indeed, as Pierce (2010, p. 95) argued, "one would expect within-job differences in employer benefit offers to be small because of nondiscrimination rules and the desire to be perceived as treating similar workers in a similar fashion." Thus, gender gaps in such benefit plans are unlikely (Pierce, 2001). In contrast, some prior research on equity-based awards suggests the same standardized processes are not in place, giving managers discretion in these awards. For example, Ittner, Lambert, and Larcker (2003, p. 93) noted equity-based awards tend to be given out to retain "key employees" or "the right 'type'" of worker. As we detail below, subjectivity inherent in determining who is "key" or "the right type" of worker going forward likely creates an opportunity for gender bias to manifest. Without monitoring and correcting for the disparity, gender pay gaps are likely to persist (Heilman & Haynes, 2008; Petersen & Saporta, 2004).

Two common forms of equity-based awards exist today (NCEO, 2018). First, stock grants provide employees with shares of firm stock or the right to buy them at the fair market value. Second, stock option grants offer employees the right (but not the requirement) to buy a certain number of shares in the future at a preset price, known as the exercise price (Rosen, Case, & Staubus, 2005). Both stock grants and option grants are generally subject to a vesting period during which employees cannot sell the grants or exercise the granted options to buy. Once the vesting period elapses, the payoff for stock grants is the current market price while the payoff for option grants is the difference between the exercise price and current share price (Hallock, 2012).

As detailed above, equity-based awards are important parts of employees' total pay package (Core & Guay, 2001; Kruse et al., 2010). Some estimates suggest about 32 million U.S. workers own stock or options in their firms (NCEO, 2018); moreover, such pay can substantially impact workers' wealth (Blasi et al., 2013). Nonetheless, research on gender inequality in these awards is virtually unexplored. The only academic study we are aware of is Carberry (2010), who used voluntary surveys in 14 firms to show that while participation in equity-based plans do not differ by gender, the value given participation is lower for women. His study has many merits, but he noted several limitations, including: 1) he was unable to control for either specific job categories or other important factors of pay such as tenure, age, and job level; 2) the data came from voluntary surveys, and is thus susceptible to selectivity bias; and 3) the way equity is distributed could impact inequality, so future research should examine this important mechanism.

Many countries have outlawed within-job pay discrimination, and firms are expending a great deal of time and money to ensure pay equality (Abraham, 2017; Elvira & Graham, 2002). Absent research on equity-based awards, the question remains whether these efforts are effective in addressing inequality. We fill this gap in theory and practice, arguing that both *why* and *how* equity-based awards are distributed to employees can precipitate within-job inequality.

Gender Bias and Pay Inequality

Long-held beliefs about gender roles are changing (Hentschel et al., 2019; Pew Research Center, 2015), and practices that inhibit such beliefs from fostering workplace inequalities are increasing (Brands & Fernandez-Mateo, 2017; Castilla, 2015). Nevertheless, studies continue to find myriad ways in which male and female career outcomes are unequal (e.g., Bowles, Thomason, & Bear, 2019; Paustian-Underdahl, Eaton, Mandeville, & Little, 2019)—key among which is pay (Blau & Kahn, 2017; Joshi, Son, & Hoh, 2015). Researchers point to both cognitive and structural processes as contributing to the persistence of gender pay inequality.

From a cognitive perspective, social role theorizing indicates gender biases manifest from long-held stereotypes about men, women, and their respective roles in society (Eagly, 1987). Specifically, as Eagly and Karau (2002, p. 574) noted, "a key proposition of social role theory" (for which evidence "is abundant"), is that people tend to "believe that each sex has typical – and divergent – traits and behaviors." Men tend to be associated with agentic traits such as assertiveness, aggressiveness, and ambition whereas women tend to be associated with communal traits such as compassion, nurturance, and interpersonal sensitivity (Bakan, 1966; Diekman & Eagly, 2000). At the same time, these stereotypical beliefs are associated with expected behaviors – men should be 'breadwinners' or 'providers' while women should be 'homemakers' or 'caregivers' – and reinforced over time as individuals are taught and rewarded for 'gender appropriate' behaviors (Eagly, Wood, & Diekman, 2000). In turn, whether conscious or unconscious, social role stereotypes can shape others' view of women and men, and ultimately the treatment of women and men in the workplace (Castilla, 2008; Cortina, 2008).

For example, studies show that evaluators both tend to rate women as less competent than men even when performance or skills are similar (Davison & Burke, 2000; Heilman, 2001) and often hold women to higher standards of performance than men (Botelho & Abraham, 2017; Foschi, 2000; Heilman, Manzi, & Caleo, 2019). Prior work also has found that evaluators tend to give women less credit for success and greater blame for failure compared to men with the same observed outcomes (Heilman & Haynes, 2005; Park & Westphal, 2013). Further, as Rivera and Tilcsik (2019, p. 250) stated, "top-performing women are significantly less likely than men to be described as exceptional performers, geniuses, 'stars,' or 'superstars' due to gender stereotypes of brilliance." Gendered views of roles, such as household labor (Hebl, Cheng, & Ng, 2020), can also lead to women being seen as less career committed (Hoobler, Wayne, & Lemmon, 2009; Paustian-Underdahl et al., 2019). Ultimately, these biases may cause women to be viewed as less valuable than men in work settings, affecting pay allocations (Blau & Kahn, 2017).

From a structural perspective, organizational processes that allow for even small amounts of discretion in how compensation is awarded create an 'opportunity structure' for the stereotypes discussed above to affect pay outcomes (Petersen & Saporta, 2004). Namely, when managers have discretion, such as when pay decisions are based on subjective evaluations or rationale, they have the ability to manipulate, consciously or unconsciously, both the award and the explanation to justify the award (Castilla, 2008; Fiske & Taylor, 1991; Heilman, 2012). In turn, organizations are put in a quandary: many jobs require some degree of subjective evaluation (e.g., not all aspects of jobs can be clearly quantified; He, Li, Feng, Zhang, & Sturman, in press), but even well-designed evaluation procedures are subject to biases (Chan & Anteby, 2016; Cortina, 2008).

All told, the work referenced above suggests despite legislative and organizational efforts to reduce inequalities, cognitive and structural processes can lead to female employees being awarded less pay than their male counterparts. While such biases are likely to affect many parts of employees' compensation, we believe these biases are likely to be particularly impactful for equity-based awards due to differences in both *why* and *how* equity-based awards are distributed.

Gender Bias and the Distribution of Equity-Based Awards

To begin, we argue that the underlying rationale for distributing equity-based awards to employees can lead to gender inequality. Specifically, equity-based awards usually have a vesting period, requiring employees to forfeit grants when they leave the firm. Thus, a principle aspect of equity-based awards is that they can be used to motivate employees to remain with the firm (Oyer & Shaefer, 2005), leading this form of pay to be widely called 'golden handcuffs'- they provide upside (i.e., golden) to workers only if they remain (i.e., handcuffed) with the firm.

Retaining key workers is indeed the most cited reason for awarding equity to employees (Murphy, 2003; Oyer & Schaefer, 2005; WorkatWork & Vivient Consulting, 2014). For example, Ittner et al. (2003, p. 90) surveyed 217 unique firms about their primary motivations for an equity-based award program, finding the firms sampled "rank employee retention as the most important objective of their equity grant programs." Specifically, 89.7 percent of surveyed firms rated retention as the most important objective of their stock option program, and 71.5 percent rated retention as the most important objective for their restricted stock program – both numbers were significantly higher ($p < 0.001$) than the next most important stated objective. Exploratory interviews with HR professionals during the preliminary phase of this project further supports this notion.[3] For example, one HR professional we interviewed described equity-based awards as "keep grants for high performers." Another stated, "we use equity as a 'forward-looking' reward program so we stress the individual's future potential and the desire to retain the individual more than past performance—addressed through the annual cash-based incentive programs…hence, it's not abnormal to see somebody get a high cash-based incentive based on prior year performance, but a lower equity award given limited potential beyond the current role." Finally, one HR professional shared an e-mail sent to managers about distributing equity: "This share level continues to provide ample resources to differentiate and reward our best performers and most critical retention risks with big awards."

There are at least three interrelated reasons why biases about retention advantage male workers over their female counterparts, leading men to receive more equity-based awards. First, managers' perceptions of which employees to retain are based, at least partly, on perceived capability (Galperin, Hahl, Sterling & Guo, 2020). That is, workers that are seen as more capable are likely to be seen as more "key" or critical to a firm's success and thus, more important to retain (Carnahan, Agarwal & Campbell, 2012; Mindruta, 2012; Zucker, Darby, & Armstrong, 2002). Given evidence that managers tend to perceive men as more capable than women in work settings (Heilman, 2001; Rivera & Tilcsik, 2019), it stands to reason the same managers will see male employees as more valuable to retain and in turn, grant men more equity than women. At the same time, although some women may be viewed as very capable by their managers, stereotypes about "ideal workers", viewed as completely devoted to their jobs (Acker, 1990; Blair-Loy, 2003), conflict with stereotypes about women, viewed as primary caregivers (e.g., for children or aging parents). Consequently, female employees, even highly capable ones, are likely to be seen as less committed to their work than similar male employees (Correll, Benard, & Paik, 2007; Rivera & Tilcsik, 2016). This should reduce managers' perceptions of their retention value and in turn, the allocations of equity that women receive.

Second, building on this idea, employees that are seen as more capable are also likely to be viewed as having a greater quantity and quality of job opportunities (Nyberg, 2010; Schwab, 1991; Trevor, 2001), and thus, a greater possibility of leaving the firm (Galperin et al., 2020; Gerhart, 1990). As such, perceptions that men are more capable than women should lead them to be seen as having greater outside job opportunities. At the same time, gender stereotypes may cause managers to believe their female employees are more likely than male employees to leave the labor force to care for children or extended family (Hom, Roberson, & Ellis, 2008; Paustian-Underdahl et al., 2019). These same stereotypes, however, discount women's expected commitment to their careers and result in a motherhood and/or caregiver penalty for women (e.g., Bear & Glick, 2017; Budig & England, 2001). That is, motherhood and/or caregiving penalties arise because managers view female employees as less dedicated and thus less valuable both to their firms and also to other firms, resulting in perceptions that they will receive fewer and lower caliber outside job opportunities than their male employees. Consequently, perceptions that there is less of a market for women may result in less effort from managers to retain women and thus, result in fewer equity awards compared to men.

[3] To gain contextual insight into how firms distribute equity-based awards, we interviewed 27 HR professionals from distinct companies representing both the private and public sector, and from various industries including technology, financial services, consumer products, and pharmaceuticals.

Third, managers may perceive female workers as less likely than male workers to entertain outside job opportunities. As discussed, women are often viewed as primarily responsible for caregiving and more communal in nature (Paustian-Underdahl et al., 2019), even when that is not the case (Hoobler, Wayne, & Lemmon, 2009). Thus, views that women will not want to disrupt their 'community' of friends and family may lead to perceptions that women are less willing to relocate for job opportunities than men (Eby, Allen, & Douthitt, 1999), reducing the possibility of considering some outside job opportunities. Women may also be seen as less willing to take risks with their careers, such as switching firms, to enhance their own outcomes (Rosen & Jerdee, 1974; Rosenfeld, 1979). In turn, these perceptions are likely to lead managers to believe that the firm does not need to use equity as a means of retaining female workers.

Compounding the aforementioned biases, the above points suggest that managers' decisions concerning employee retention draw heavily on perceptions of workers' future behaviors, which are inherently subjective. That is, deciding which workers to retain is not based solely on past or current behaviors (like performance or prior choices to remain with the firm), but instead factors in how employees will act in the future. Even though past behaviors may be a factor, forward-looking assessments require inference regarding if those behaviors will continue, making them susceptible to gender bias (Nieva & Gutek, 1980; Roth, Purvis, & Bobko, 2012). For example, in trying to forecast if workers are desirable to retain, the view that men are more competitive and ambitious (Diekman & Eagly, 2000; Eagly & Karau, 2002) suggests they will not 'rest on their laurels' or exhibit a tapering of the qualities that made them a candidate for retention in the first-place. Thus, going forward, men may be seen as more likely than women to continually strive for success. At the same time, social roles suggest that women will assume the caregiver role at some point during their careers (Paustian-Underdahl et al., 2019), leading expectations of the future to: 1) discount women's expected commitment to their careers long-term; 2) have fewer, and lower quality, opportunities on the job market; and 3) see them as less motivated to pursue or take any outside opportunities in the future. In turn, views of future work behaviors as they pertain to retention are likely to favor men. For these reasons, it has long been argued to remove subjectivity from pay decisions (Castilla, 2008, 2015), but this may not be entirely possible when the rationale for distributing pay is based on a projection (and thus, by nature, subjective).

We further argue that *how* equity-based awards are distributed to workers will enable the above gender-based biases regarding retention to result in within-job inequality. Specifically, scholars argue various firm practices that increase formalization and oversight can help "reduce sex-based bias by limiting decision makers' use of discretion and subjectivity when evaluating employees" (Abraham, 2017, p. 29). Indeed, significant research shows the impact of gender stereotypes on pay outcomes can be constrained when organizations limit managers' discretion on determining pay (e.g., Castilla, 2008; Kronberg, 2020). For example, both Elvira and Graham (2002) and Abraham (2017) showed more formalized types of pay had lower gender-based pay gaps compared to less formalized pay. Similarly, Castilla (2015) showed the adoption of accountability and transparency practices reduced the impact of biases on performance-based rewards, leading to more equitable pay outcomes.

Nonetheless, evidence suggests equity-based awards are not standardized in the same way as more traditional forms of employee pay. While firms have begun to adopt practices to formalize and monitor base pay, merit raises, and annual bonuses (e.g., Abraham, 2017; Castilla, 2015), there is still significant discretion in the granting of equity-based awards (Elvira & Graham, 2002; Pressman, 2017; Weeden et al., 2001). For instance, a common practice firms use to monitor and ultimately fix pay gaps is voluntary pay audits (Miller, 2019): a 2019 WorldatWork and Korn Ferry survey found that 93 percent of firms surveyed used such audits. Firms are not focusing these same efforts on equity-based awards, however. For example, Sotherlund (2003: 92) argued regulators are less knowledgeable about equity-based pay and thus less likely to audit it; in turn, the incentive for firms to self-audit equity-based awards is reduced. Further, Hinchliffe (2019) stated: "Intel just closed its pay gap again—this time taking stock into account," while Arjuna Capital's (2019) Gender Pay Gap Scorecard stated, "full gender pay gap analysis should not be limited to base pay or salary alone." Our own exploratory interviews revealed a similar pattern: while nearly all respondents acknowledged their firms were doing pay audits for base pay, and sometimes performance-based rewards, only three of the 27 HR professionals we spoke to said they were conducting audits on equity-based awards.

Given equity-based awards are distributed for the purpose of retaining employees and the processes for distributing it allows for managerial discretion, we argue that gender biases will influence the distribution of equity-based awards such that female employees will be awarded fewer equity-based awards than male employees. We further theorize that biased perceptions of retention explain this gender gap. Thus, we hypothesize:

Hypothesis 1 (H1): All else equal, female employees will receive fewer equity-based awards than male employees.

Hypothesis 2 (H2): A female employee will receive fewer equity-based awards than a male employee because of gender-based perceptions of retention.

Research Overview

To test our hypotheses, we conducted four studies. In Study 1, we collected data from a private U.S. start-up (which we refer to as TechStart) to test if a gender gap exists within similar jobs for equity-based awards (H1). In Study 2, we conducted a policy-capturing experiment to examine if the most cited reason for distributing equity-based awards, retention concerns, leads to the equity-based award gap (H2). In Study 3, we used data from a publicly traded U.S. firm (which we refer to as TechCo), to further test H1 and H2. Specifically, in Study 3, we are able to control for additional predictors of worker pay (including individual performance), and test the retention mechanism in a field setting using what is commonly known as 'refresh' equity grants. Given equity-based awards have a vesting period, firms tend to 'refresh', or offer additional equity awards after-hire so that desired employees constantly have unvested stock. In this way, firms maintain 'golden handcuffs' by always providing incentive for workers deemed important to stay with the firm (to secure the value of the grant; Feld, 2013; Maniar, 2019; Pressman, 2017), thus motivating retention. Comparing the gender gap for refresh awards versus initial (or new hire) awards enables us to test how perceptions of retention influence the gender equity gap in organizations. Finally, in Study 4, we test whether our findings on refresh awards generalize to a different context, executive compensation for U.S. public firms.[4]

Study 1: Field Study of a Private Start-Up

We first obtained data from a private, U.S. technology start-up ('TechStart', for anonymity) to examine the gender gap in equity-based awards. Gender equality is a core value of TechStart and this has been validated by external recognition for their efforts. We reason if gender gaps exist in an exemplar firm, such as TechStart, it is likely present (or greater) in other firms, providing a conservative test of our logic. TechStart provided personnel demographic, employment-related, and compensation data for all U.S. employees in 2016 (n = 216).

Distribution of Equity-Based Awards

TechStart grants equity-based awards to all its employees, including entry-level employees. Thus, every employee at TechStart holds some equity. Although TechStart has developed job-based ranges for the amount of equity that can be awarded, managers often have the "ability to dial up or dial down" these amounts. Managers at TechStart also have the ability to offer stock options to employees that threaten to leave, known in the industry as "dive and save" packages, but these awards are only offered to employees viewed as most critical to retain.

Measures

Dependent Variables. The dependent variables in our study are three forms of employee pay: 1) base pay, 2) performance-based rewards, and 3) equity-based awards. *Base pay* was measured using annual salary and *performance rewards* was measured using annual bonuses (based on the firm's performance against annual recurring revenue) plus commission pay based on sales.[5] *Equity awards* was defined as the number of stock option grants awarded to an employee over their tenure at the firm, as this organization did not offer stock grants to employees. We were unable

[4] For Studies 1 and 3, institutional review board (IRB) determined approval was not required because the data was secondary and did not include any identifiable information. Similarly, IRB approval was not required for Study 4 given the data was publicly available. The data for Study 2 was collected by the third listed author while at an institution in South Korea. Although there was not an IRB process in place at his institution at the time of collection, the research was conducted with due concern for human subjects, abiding by all guidelines for the ethical treatment of human subjects (e.g., Hu, Zhang, Jiang, & Chen, 2019), including not collecting any identifiable information (e.g., Smit & Montag-Smit, 2019).

[5] This company does not do annual performance reviews, but rather has "on-going crucial conversations and feedback." As indicated by the HR Manager, performance-based rewards are "not reflective of personal performance, but rather company and team performance."

to obtain the value of stock option grants given private firms do not receive on-going valuations, and valuation of private firms is often very difficult and subjective (Koeplin, Sarin, & Shapiro, 2000). As in previous studies, we log transformed all compensation variables to achieve a more normal distribution (Abraham, 2017; Castilla, 2015).

Independent Variable. *Female* was coded '1' if the employee was female and '0' if male.

Control Variables. We controlled for various individual-level variables that relate to employee pay (Castilla, 2008). All controls were based on personnel records. To account for potential gender differences in human capital (Abraham, 2017), we controlled for both employee *tenure* (measured in years with the firm) and *age* (in years).[6] We also controlled for position level (obtained via personnel databases) to account for differences in sorting (Elvira & Graham, 2002), by including dummy variables for each level of the organization.[7] This position-level variable ranged from level 1 to 7; the lowest organizational level (level 1) was excluded from models to avoid perfect collinearity and serves as a reference point.

Analysis and Results

We used fixed-effects assigned to 26 distinct job families to account for differences across jobs.[8] Our hypotheses address within-job inequality in equity-based awards. Fixed-effects models, also known as deviation from means estimator, require mean-deviating the sample by a specified group, allowing us to control for any unobserved heterogeneity at the group level (Angrist & Pischke, 2009; Wooldridge, 2002). In other words, in the case of job family fixed-effects, each observation is adjusted by its within-job family mean (essentially equivalent to adding a dummy variable for each job family; Greene, 1993). Estimates are thus based strictly on within-job family variance with fixed-effects models. This is important to testing our hypotheses, as certain job families (within firms) are more likely to receive equity-based awards than others (e.g., engineering versus HR), and women may sort into different, often lower paying, jobs than men (Blau & Kahn, 2017). Thus, with fixed-effects models, we reduce concerns that unmeasured job family-level variables could be accounting for the relationship between employee gender and employee pay. Robust standard errors were also used to account for heteroscedasticity.

Descriptive statistics for Study 1 appear in Table 1, while fixed-effects regression results appear in Table 2 (use of fixed-effects models over random-effects models is supported by a significant Chi^2 of the Hausman test; $p < 0.001$ for our hypothesized model). Using a two-tailed test, we find women earn significantly fewer equity-based awards than men, even when in similar jobs ($p = 0.042$). Interestingly, we do not find a significant gender gap in base pay ($p = 0.327$) or performance-based rewards ($p = 0.825$), alluding to TechStart's commitment to gender equality, which is consistent with prior research that gender gaps in such forms of pay are not significant (Petersen & Saporta, 2004; Padavic & Reskin, 2002; Petersen & Morgan, 1995).

Assessing the magnitude of the gender equity gap, we find female employees receive 15.1 percent fewer equity-based awards (=exp(-0.164)-1). Assuming a linear relation between female and equity-based awards, female employees averaged 8,013 fewer stock option grants than male employees. Since TechStart is private, the actual market value of the stock is indeterminable, but an 8,000 share difference can lead to a large difference in value (Lien, 2017).

To test the robustness of our results, we ran cross-classified mixed-effects models rather than fixed-effects models[9] while including the percent of women in each job family to account for gender composition differences that may affect pay decisions[10] (Elvira & Graham, 2002; we cannot include this variable in fixed-effects models due to collinearity with the job family fixed-effect). Results are robust using the mixed-effects approach (see Online Supplement A). Results are also substantially similar if we: 1) exclude workers at the highest levels of the firm (Vice Presidents and

[6] TechStart neither collects education in their HR information system nor uses education in pay decisions.
[7] Position level accounts for a substantial amount of variance in equity-based awards. Specifically, for Model 3 of Table 2, we find the Adjusted R^2 increases by 0.229 (= 0.719 - 0.490), due to the inclusion of position level. Further, we find the estimate on female becomes much larger without including position level: -0.259 ($p = 0.013$). These results suggest the importance of controlling for position level in predicting equity-based awards.
[8] Speaking to practitioners doing firm audits and consultants providing litigation support to firms, analyses of within-job pay gaps are typically done using job families and levels since it is common to only have one person in specific job titles (as we explain below, our results are largely similar using job title fixed-effects instead).
[9] McNeish and Kelley (2019) compared fixed- and mixed-effects models, finding the former better minimizes bias, controls Type I error rates, and maximizes power, particularly in smaller samples and models with fewer than 30 groups (as both Study 1 and Study 3 below have). We thus present fixed-effects, but note robustness to both models.
[10] We thank an anonymous reviewer for this suggestion.

above); 2) use job title fixed-effects instead of job family fixed-effects; or 3) control for base pay and performance-based rewards in the regression of equity-based awards - the gender pay gap favoring males remains even with the added pay controls but drops to 10.1 percent (see Online Supplements B through D).

The findings from Study 1 support H1. Even when a firm has eliminated within-job inequality for base pay and performance-based rewards, a statistically significant, and substantially meaningful (Edwards & Berry, 2010), equity-based award gap exists.

*** Insert Tables 1 and 2 About Here ***

Study 2: Experimental Data with Working Professionals

In Study 2, we seek to provide insight regarding how the rationale for distributing equity-based awards can lead to a gender gap (H2). Specifically, we predicted that managers' perceptions regarding retention lead them to award fewer equity-based awards to female workers. Using an experiment, we manipulate the rationale for distributing equity and employee gender, allowing us to test how perceptions of employee retention affect gender pay inequality.

Method

Participants. We conducted a policy-capturing experiment using data gathered from 400 working professionals through Qualtrics. Qualtrics recruited participants and administered the survey (similar to Galperin et al., 2020; Triana et al., 2016) - we neither had contact with the participants nor collected identifiable information from them. All participants were employed full-time and over age 30; 58 percent identified as female (42 percent as male).

Procedure. Based on Castilla and Benard (2010), we asked participants to play the role of a manager in a fictitious firm. Participants were asked to read a set of employee performance reviews and distribute option awards based on one of two rationales: either *retaining talent* (retention), the most commonly cited reason for granting equity-based awards (Ittner et al., 2003), or *recognizing high-potential employees* (potential; Wisper, 2019), which was described as the second most common reason for distributing equity in our exploratory interviews. We used potential as a control group.

Participants examined three separate hypothetical employee profiles: two "test" profiles which differed only in gender, and one "filler" profile (a male with considerably lower performance ratings over time; the "filler" helps lessen beliefs that our study focused on gender; Castilla & Benard, 2010). We randomly manipulated the gender of the "test" profiles using gender-typical names (specifically, Steven and Susan), giving each profile the same performance score and counterbalancing feedback across the two profiles following Castilla and Benard (2010). The feedback included major accomplishments and areas of improvement for the most recent year. The feedback was counterbalanced across the two profiles so that each set of comments were assigned to the male and female test profiles for half the sample. Participants were told that each stock option was currently worth $10, and were asked to decide on the amount of stock options to award each employee. Although they were told they must distribute all 5,000 available stock options, they were able to do so as they saw fit (that is, we did not set an upper or lower limit to the awards resulting in awards ranging from zero to 5,000 options).

Analysis and Results

We used *t*-tests (two-tailed) to compare awards for the test profiles (depicted in Figure 1). When participants were asked to award stock options based on the rationale of retention, we found a significant gender gap ($p = 0.002$): the male employee was awarded 179 more stock options than the female peer, or $1,790 (given participants were told the current value of a stock option was $10 per share). When participants were asked to award stock options based on the rationale of potential, we did not find a significant difference in the number of awards by gender ($p = 0.851$). These results suggest managers perceive male workers as more important to retain (even with the same qualifications as females), leading to the gender equity-based award gap.

*** Insert Figure 1 About Here ***

Study 3: Field Study of a Publicly Traded Firm

In Study 3, we further tested our hypotheses of equity-based awards being susceptible to gender pay gaps and occurring principally due to biases in retention decisions (H1 and H2). We used personnel data from a public U.S. technology firm (TechCo, for anonymity). TechCo provided data for all employees in 2016 (n = 3,461), including demographic data, employment-related data, and various forms of compensation data. Unlike TechStart in Study 1, managers in TechCo rated employees' performance on a yearly basis. TechCo provided us with this data for the three most recent years, which allowed us to examine gender differences in equity-based awards while controlling for performance differences. As with TechStart, TechCo values gender equality and has regularly been cited as an exemplar for their efforts, which we believe offers a conservative test of our theory. In fact, TechCo is taking active steps to reduce gender gaps for its employees, including adopting many organizational efforts shown to be effective, such as formalizing pay decisions and increasing oversight through yearly gender gap audits.

Distribution of Equity-Based Awards

TechCo grants equity-based awards to workers at all levels throughout the firm and uses equity bands, which specify an employee's target equity based on their job family and level. In general, employees in technical and corporate roles receive equity, whereas those in customer service roles are not awarded equity unless in higher level roles or in a role for more than a year. Although TechCo has instituted equity bands, managers have discretion over the awards distributed within the band, and HR managers noted that equity awards can sometimes go over bands (e.g., to help retain top talent). Further, although TechCo conducts annual pay audits to uncover and address pay disparities, these audits did not focus on equity-based awards.

Measures

Dependent Variables. We tested four different forms of employee compensation: 1) base pay, 2) performance-based rewards, 3) number of equity-based awards, and 4) value of equity-based awards. *Base pay* was measured using annual salary, and *performance rewards* was measured using annual bonuses (Abraham, 2017). *Equity awards* was defined in two different ways. First, the *number of equity-based awards* was measured as the total number of stock and stock options awarded to an employee over their tenure at the firm. Second, the *value of equity-based awards* was calculated as the total face value of employees' stock and option awards at the award date (that is, number of shares multiplied by the market value of shares on date awarded) over their tenure. Similar to prior compensation studies, we log transformed all compensation variables in order to achieve a more normal distribution.

TechCo also provided data on equity awards (number and value) per year for all employees hired since 2011 (n = 2,052). Thus, we were able to distinguish between employees' 'initial (new hire) awards' and 'refresh awards' for these employees, which as we explained above, allows us to test H2 in a field setting. We measured *initial awards* with two variables: 1) the total number of stock and stock options awarded to an employee in their first year at the firm, and 2) the total value of these awards. We also measured *refresh awards* using two variables: 1) the total number of stock and stock options awarded to an employee after their first year of firm tenure, and 2) the total value of these awards. We again log transformed these variables to achieve normality.

Independent Variable. *Female* was coded as '1' if the worker was female and '0' if male.

Control Variables. We controlled for individual-level variables that affect employee pay, drawing on prior studies (Abraham, 2017; Castilla, 2008). All controls were based on personnel record data. We included employee *tenure* and *age* as well as *part-time status* ('1' if part-time; '0' otherwise) to control for possible differences in human capital (Abraham, 2017).[11] Further, we used dummy variables to control for position level and department to account for gender sorting that may affect pay (Blau & Kahn, 2017; Elvira & Graham, 2002).[12] Position level ranged from 1 to 9 (defined as '1' if in the level, and '0' otherwise) and 78 distinct departments were measured with dummy variables ('1' if in department; '0' if not), the lowest level (level 1) and department 1 were excluded to avoid collinearity and serve as a reference points.

[11] TechCo neither collected education in their HR information system nor used it to distinguish pay within jobs.

[12] Similar to TechStart, position level explains a large amount of variance in equity in TechCo. Focusing on Model 1d of Table 4, Adjusted R^2 increases by 0.067 (= 0.326 – 0.259) when including position level. Further, we find the estimate on female for Model 1d becomes larger without controlling for position level: -0.525 ($p < 0.001$).

Finally, as discussed above, in some models, we controlled for employees' average *performance rating* across the last three years. In each year, managers rated employees' performance (except some lower-level employees, mainly level 1). As performance ratings are excluded for some employees, we conduct analyses both with and without this control variable for robustness (similar to Abraham, 2017). Performance ratings vary from 1 to 3, indicating: (1) "needs improvement"; (2) "strong"; and (3) "exceptional." Given performance ratings were missing for many lower-level employees, models without this variable include all employees (n = 3,461), while the models including performance ratings are based on 1,832 employees.

Analysis and Results

As employees in TechCo are grouped in 28 distinct job families, we used job family fixed-effects models. Examples of job families (based on personnel databases) include engineering, marketing, sales, and legal. As explained above, fixed-effects models analyze variation within job family and reduce concerns that unmeasured job family-level variables affect the relationship between gender and employee pay. We also control for department and position level, so the estimates essentially allow us to address whether a gender pay gap exists between women and men in the same job family, department, and level; they thus allow us to examine within-job pay inequality. Robust standard errors were used to account for heteroscedasticity present in the data.

For Study 3, Table 3 presents descriptive statistics for study variables and Table 4 presents results from fixed-effects models. Similar to TechStart, for TechCo we find small to insignificant gender gaps in base pay and performance-based rewards but a significant gap for equity-based awards (all tests are two-tailed). Specifically, as columns 1a and 1b of Table 4 show, we find female employees receive 2.3 percent less in base pay than male employees, but no significant gender gap exists in performance-based rewards. In contrast, columns 1c and 1d show females receive 23.2 percent fewer equity-based awards and 31.1 percent less in the value of those awards than males in similar jobs (p < 0.001). The latter difference amounts to $5,261 in actual dollars when assessing the magnitude of this effect assuming a linear relation between female and the value of equity-based awards. These differences are based on fixed-effects models, as the significant Chi^2 of the Hausman test indicates inferences based on fixed-effects are more appropriate than random effects (p < 0.05 for models 1c and 1d). Thus, the differences reported above represent the equity award difference between women and men within similar jobs.

As models 2a – 2d of Table 4 show, our results are robust to including performance ratings in the sub-sample where this variable is available (n = 1,832): while women earn somewhat less in base pay (3.6 percent) and similar amounts in performance-based rewards, they are awarded 24.6 percent less in the number of equity-based awards and nearly 30.9 percent less in the value of these awards (p = 0.004). Assuming a linear relation between variables, female employees receive about $11,729 less in equity-based awards, even when controlling for standard reasons women often earn less. These results suggest there are significant gender differences in equity-based awards and that these differences are substantially meaningful (Edwards & Berry, 2010).

*** Insert Tables 3 and 4 About Here ***

In addition, our findings remain robust if: 1) rather than fixed-effects models, we used cross-classified mixed-effects models while including the percent of women in each job family; 2) Vice Presidents and above were excluded; or 3) job title fixed-effects were used (similar to Castilla, 2008). These results are available in Online Supplements E, F, and G, respectively. Finally, we also controlled for base pay and performance-based rewards in regressions on number and value of equity-based awards: the gender pay gap favoring men remains in these models, but drops to 13.7 percent and 20.5 percent, respectively (see Online Supplement D).

Table 5 presents results comparing initial awards and refresh awards for those hired after 2011 (the first year we can disentangle the two awards types; n = 2,052). We do not find a gender pay gap for the number (p = 0.944) or value (p = 0.679) of initial awards, but we do find that compared to male employees, females receive about 12.9 percent fewer refresh awards (p = 0.082) worth about 21.0 percent less in the value (p = 0.035). The average employee at TechCo received refresh awards worth $8,908, so a 21.0 percent difference amounts to $1,871. These findings provide support that within-job inequality exists in refresh awards, offering further support that the gender gap is driven by gender-based perceptions of retention.

*** Insert Tables 5 About Here ***

Study 4: Archival Data of Executives in Publicly Traded Firms

Although we sought to address employee pay broadly, we looked for further evidence that gender inequality exists due to differences in perceptions of retention in Study 4. Again, we study this by examining refresh equity awards within a different context: executive compensation. Prior work has examined executive gender pay gaps by looking at total pay, which includes equity-based awards (e.g., Bertrand & Hallock, 2001; Hill et al., 2015). No study we are aware of has argued or tested how the gender gap may vary based on retention concerns.

To test our premise in an executive sample, we used publicly available data. Specifically, since the 1930s, publicly traded U.S. firms have been required to report data on their executives' pay to shareholders in public proxy statements. Execucomp aggregates this data (starting in 1992) and includes additional information on executives (e.g., gender) and firms. Using 1993 as a starting point (the first year we can view refresh awards) with complete data through 2016, we include all executives in all firms where a hire date is listed. The hire date allows distinguishing executives' initial and refresh equity-based awards, enabling tests of our proposed mechanism (differences in retention perceptions) in a large-scale field setting. Our sample included 46,344 executive-year observations (representing 2,465 unique firms across all 10 industry sectors identified by the U.S. Bureau of Labor Statistics; see Online Supplement H).

Measures

Dependent Variables. We measured *initial equity awards* in two ways: 1) the total number of stock and stock options awarded to an executive in the first year at the firm, and 2) the total value of these awards. We also measured *refresh equity awards* using two variables: 1) the total number of stock and stock options held by an executive after the first year in the firm, and 2) the total value of these awards. As the total number of stock and stock options may not account for vesting periods, we also measured *unvested refresh awards* using: 1) the number of unvested stock and stock options held, and 2) their value. We log transformed these variables to achieve a more normal distribution.

Independent Variable. *Female* was coded '1' if the executive was female and '0' if male.

Control Variables. We controlled for various individual- and firm-level variables related to executive pay (based on Bertrand & Hallock, 2001). Using U.S. Bureau of Labor Statistics data, we controlled for the *percent female in industry*. We controlled for *firm size* using log transformed market value, and *firm performance* measured as lagged shareholder return. We also controlled for executive *age* in all models, and firm *tenure* only for the refresh award models. To control for positional factors which might affect pay, we included dummy variables for 16 different executive titles in the models (e.g., *CEO*, *CFO*; Menz, 2012), leaving out one dummy as a reference point. Last, we controlled for year using year dummies (Certo & Semadeni, 2006).

Analysis and Results

Given we use panel data with repeated observations over time and are focused on the gender pay gap within the firms, we employed firm fixed-effects to account for unobserved firm-level factors that affect executive pay (a Hausman test was significant for both initial and refresh awards; $p < 0.01$). Robust standard errors were used to address heteroscedasticity.

For Study 4, descriptive statistics and correlations for study variables appear in Table 6 and regression results appear in Table 7 (all tests reported are two-tailed). As shown in Table 7, we do not find a significant gender gap in the number or value of executives' initial equity awards but we do find a gender gap for both refresh awards and unvested refresh awards. Specifically, we find female executives receive fewer refresh awards (about 17.1 percent; $p = 0.001$) and fewer unvested refresh awards (about 15.1 percent; $p = 0.004$), and these awards are of lesser value (about 16.1 percent for refresh awards; $p = 0.028$; about 17.3 percent for unvested refresh awards; $p = 0.026$). The average executive in our sample received $3,716,795 in unvested refresh awards, so a 17.3 percent difference in their value would amount to a $643,006 difference.

To ensure the robustness of our findings, we ran a number of supplemental analyses. First, we examine the gender pay gap for all forms of executive pay (including base pay and bonus), for all executive-year observations. These results are presented in Online Supplement I and are consistent with our findings for Studies 1 and 3. More specifically, although we find a gender gap for equity-based awards, we do not find a gender gap exists between executives for bonus, and find a marginal difference between male and female executives for base pay ($b = -0.033$; $p = 0.096$). In

addition, we ran the same analyses presented above but substituted alternative measures of various controls (following Muñoz–Bullón, 2010): the estimate on female is negative and statistically significant for refresh and unvested refresh awards, but is not for initial awards (see Online Supplement J). The results of this study are consistent with those of Study 3, providing evidence that a gender gap in equity-based awards exists due to retention concerns.

*** Insert Tables 6 and 7 About Here ***

Discussion

Some scholars have argued that largely due to laws and considerable firm efforts, within-job inequality is no longer 'a major source of' or 'an issue for' gender pay gaps (e.g., Padavic & Reskin, 2002; Petersen & Morgan, 1995; Petersen & Saporta, 2004). Such views have been cited as playing a role in both "scholarly neglect of within-job gender inequality" and practitioners' efforts to identify and eliminate it (Chan & Anteby, 2016, p. 185). Indeed, if within-job pay inequality is no longer problematic, it stands to reason scholars and practitioners will focus on other issues. We join Chan and Anteby, as well as others (e.g., Elvira & Graham, 2002; Fulmer & Shaw, 2018; Gupta et al., 2012), in calling for continued research on within-job pay inequality, specifically noting how extant research largely overlooks equity-based awards. We see investigating equity-based awards as particularly important, given these awards: 1) differ from other forms of pay in both rationale and the underlying processes in awarding; 2) are a vital pay form today; and 3) substantially affect workers' wealth.

To advance understanding in this key area, we develop theory proposing that both *why* and *how* equity-based awards are distributed to employees will lead managers to award their female employees with fewer equity-based awards than their male counterparts. We further theorize that biased perceptions of retention drive this gap. The results of our multi-method study using field data from two firms, a policy-capturing experiment, and archival executive pay data support our arguments, offering theoretical and practical implications.

Theoretical Implications

Our theorizing and supportive evidence enhances our understanding of within-job inequality on a broad level and equity-based pay more specifically. First, we contribute to literature challenging the view that within-job inequality is unimportant to understanding gender pay gaps (cf. Chan & Anteby, 2016; Elvira & Graham, 2002; Fulmer & Shaw, 2018; Gupta et al., 2012). Specifically, we find support for our theorizing that female employees receive fewer equity-based awards than male employees within similar jobs. In other words, we find a "gender equity gap" in favor of men. This result stands in stark contrast to our findings on traditional forms of employee pay (but is consistent with prior work on these pay forms; e.g., Hultin & Szulkin, 1999; Petersen & Morgan, 1995; Petersen & Saporta, 2004)—that is, we find pay differences between women and men for base pay and performance-based rewards are small to nonexistent. Importantly, our results are from two exemplar firms in terms of their efforts for gender equality and a context of executive pay that is fairly transparent (Hill et al., 2015), suggesting such disparities are present (and likely larger) in other firms and contexts. Thus, our findings contribute to ongoing theorizing regarding if women today continue to face gender bias in work settings (e.g., Blau & Kahn, 2017; Eagly & Wood, 2016)—in particular, our results suggest workplace inequalities do indeed persist in some forms. More directly, though, our theorizing and findings underscore the implicit assumptions present in arguments of within-job inequalities as no longer existing. Specifically, arguments that within-job inequality is not present imply that both the mechanisms underlying such inequality and firm efforts to address them are fundamentally the same (i.e., base pay and performance-based rewards are the same as equity-based awards and other forms of pay). We call these assumptions into question by theorizing that important differences exist in the rationale and processes for distributing equity-based awards, thus resulting in gender inequality. While our theorizing and evidence pertains most specifically to pay and equity-based awards, on a broader level we call attention to the need to theoretically address how these subtle and hidden mechanisms affect all forms of workplace inequalities.

We further extend theorizing by showing that the gender equity gap is driven by gender-based differences in perceptions of retention. Specifically, in an experiment, we manipulated the hypothetical worker's gender and asked participants to distribute equity based on either retaining workers or recognizing their future potential. We found that participants awarded a male employee more equity than a female employee with identical merits in the retention manipulation, but not the potential manipulation. We further show a gender gap for refresh equity awards, which is also consistent with a gender-based bias in perceptions of retention. While a large literature investigates the reasons why women receive less pay than men (Blau & Kahn, 2017; Graham, Hotchkiss, & Gerhart, 2000), our study offers

a new theoretical mechanism: biased perceptions of retention. That is, we theorize and find support for the claim that gender bias in perceptions of retention lead managers to distribute more equity-based awards to their male employees. We thus extend prior literature by articulating that despite objective indicators to the contrary, perceptions regarding employee retention may rely on traditional social roles that cast women as likely to take on stereotypically female roles and behaviors that lead them to receive less equity. Additional research is needed to understand how these gender-based perceptions influence other gender differences (e.g., other forms of employee pay and allocative decisions, such as training and promotion opportunities; Petersen and Saporta, 2004), as well as the ways to combat such biases.

Finally, our study answers calls for greater attention to specific forms of employee pay, particularly those that are "less-studied" (Fulmer & Shaw, 2018: 952), as these forms can affect gender inequality (Elvira & Graham, 2002; Graham et al., 2000) and other important individual and organizational outcomes (Gupta et al., 2012; Park & Sturman, 2016). As discussed, we show that the gender gap exists for equity-based awards, but not base pay or performance-based rewards. We further show that the gender equity gap exists for refresh awards, but not initial (new hire) awards, given refresh awards are commonly distributed to employees to encourage them to stay at the firm. Our results thus extend prior work showing the importance of considering various elements of employees' total pay package (Park & Sturman, 2016) – that is, our results suggest that grouping all forms of employee pay together to examine within-job pay inequality may be insufficient for theory development. Thus, to truly make progress on understanding gender inequality, as well as other important organizational pay issues, our findings suggest greater precision is needed in how we define employee pay (e.g., breaking apart total pay packages and exploring why and how each element is distributed to employees).

Practical Implications

While our theorizing and results enhance theoretical understanding, they also offer valuable practical implications. First, and perhaps foremost, for firms to progress on gender equality, our collective body of evidence demonstrates the importance of monitoring all forms of pay with the same diligence that now seems common for both base pay and performance-based rewards. Indeed, our results suggest what firms are doing to address gender inequality appears to be working, but such practices are not being applied to all forms of pay – particularly, equity-based awards. Without attention to this point, practitioners may see within-job inequalities as no longer important and thus shift focus to other areas. At the same time, lawsuits over gender pay gaps rarely apply to equity-based awards. As noted above, we found only four U.S. federal court cases citing "stock options" in 2019 using the Lexis-Nexis database (compared to 697 federal cases using the term "pay"). Similarly, in *Ledbetter v. Goodyear Tire & Rubber Co.* (2007) – notable in leading to pay equality legislation in the U.S. (i.e., the Lily Ledbetter Fair Pay Act of 2009) – Goodyear had long used equity-based pay, but it was not considered in the lawsuit. More recently, in *Lenzi v. Systemax, Inc*. (2019) – notable for ruling that comparable workers are not necessary to establish unequal pay under Title VII of the U.S. Civil Rights Act of 1964 (Feigel, 2019) – although Systemax utilized equity-based awards, the pay audit used in the trial did not include them. Additionally, a suit filed in 2018, *Cahill v. Nike*, does explicitly include equity-based pay, while a 2017 lawsuit, *Jewett v. Oracle America, Inc.*, does not. Both cases are still in progress at the time of submission, but a judge in the latter case recently upheld the inclusion of a pay audit that drew attention to equity-based pay, finding that similarly situated women received "3.8% less in base salaries on average than men in the same job categories, 13.2% less in bonuses, and 33.1% less in stock value" (Levin, 2019; Rosenblatt & Burnson, 2020). We believe awareness of the issues in our study can both help drive change in firms and draw attention to equity-based pay gaps in legal matters. To this end, our work answers calls for research illuminating sources of inequality in the workplace as a way to address this 'grand challenge' (Banks et al., 2016).

Second, and very much related, our research has direct practical utility. For example, we shared our results with TechStart and TechCo. We have since been informed that based on our findings, both firms have begun to audit equity-based awards on a yearly basis and developed means to counteract the inherent subjectivity in the rationale and process for distributing equity. We hope our findings spur other firms to make similar changes. What is more, we provided evidence about one area – equity-based awards – with substantial impact on workers' wealth. Thus, our findings suggest an area that practitioners seeking to reduce gender inequality can focus on, with a potentially large effect (Anderson et al., 2019; Banks et al., 2016).

Limitations and Associated Future Research

As with all research, our study has limitations that also offer avenues for future inquiry. First, we show gender pay gaps continue to exist for equity-based awards; yet, employees today receive a variety of different forms of pay, including signing bonuses, moving relocation, employee stock ownership and purchase plans, and 401(k) plans (Park & Sturman, 2016; Rosen et al., 2005). As Carberry (2010) argued, some of these forms of pay tend to be more standardized; thus, the gender inequities we find may not exist for some of these additional forms. Nevertheless, to truly understand (and close) gender gaps, future research could examine all forms of employee pay, as well as other allocative decisions affecting women's careers (e.g., perks, such as golf club memberships and spending accounts, as well as hiring decisions).

Second, given different position levels (e.g., managerial; entry level) and job families (e.g., HR; engineering) may affect whether employees are offered equity, future research may also benefit by addressing how allocative and valuative inequality can contribute to gender differences in equity-based pay. Specifically, our research addresses gender differences within similar jobs for equity-based awards. Additional research shedding light on how gender inequality in equity-based awards may vary across jobs and levels can help enrich our understanding of all the reasons why the gender equity gap occurs.

Third, we showed that female employees face a gender equity gap but we do not study the consequences of such inequities for workers and firms (Fulmer & Shaw, 2018; Gupta et al., 2012; He et al., in press; Park & Sturman, 2016). Specifically, we argued that equity-based awards are used to motivate retention. In fact, recent work has shown that the granting of equity-based awards can effectively reduce turnover in the years following the grant (Aldatmaz, Ouimet, & Van Wesep, 2018). Based on our findings, it is possible that women are less motivated to stay given they receive less equity to tie them to the firm. This raises an interesting question of how the gender gap in equity awards increases women's likelihood of turnover. In addition, prior work has argued "the more options an employee holds, the more his or her wealth is tied to future share prices, and the greater the incentive to perform well in order to drive share price higher" (Cappelli, Conyon, & Almeda, 2020, p. 133). This logic could suggest that due to being granted more equity, men will be more motivated to perform well on the job than women. Additional work is needed to explore both of these motivational consequences of gender equity award gaps, as well as how the motivational effect could vary when employees have no idea about their possible wealth gains from equity. Future work can also explore if gaps exist in other tools that may be utilized to motivate retention (e.g., more flexible work hours), and effectiveness of these other tools in motivating retention for both female and male employees.

Fourth, we find gender bias exists when managers are asked to distribute equity based on retention, but not based on potential. We argue these results suggest managers have biases about retention that affect the awards of equity to men versus women, as is consistent with our findings on refresh awards. Nevertheless, distributing equity based on potential is also subjective, and our findings raise questions as to the extent that using the potential rationale could actually reduce gender gaps. It is possible that gender gaps do not exist for potential, given "potential" represents the possibility of becoming a leader in the future, rather than being seen as a leader right away, which evidence suggests puts women at a disadvantage (Eagly & Karau, 2002). Scholars could continue to explore how the rationale of distributing pay can precipitate actions that are detrimental or helpful to any single group, especially for important outcomes yet to be explored.

Finally, future research may help identify ways to combat inequality in equity-based awards. For example, transparency (Arnold & Fulmer, 2018; Smit & Montag-Smit, 2019) and worker unionization (Rios-Avila & Hirsch, 2013) have been argued to be effective means of reducing inequality in traditional forms of pay. Likewise, Anderson and colleagues (2019) suggest firms might optimally allocate raises to strategically reduce gender pay gaps at minimum cost (which can help address inequality in the near term). Examining how these, as well as other practices, affect the gender equity gap is an interesting avenue for future scholars to pursue.

Conclusion

We proposed that the underlying rationale and processes for distributing equity-based pay differs from traditional forms of employee pay in prior studies (i.e., base pay and performance-based pay), meriting attention as a source of gender inequality. Using a multi-method approach, we find empirical support across multiple empirical settings that

a gender gap exists in equity-based awards, and that biased perceptions of retention drive the gap. Our research extends theory and practice of gender-based pay inequalities and opens avenues for future research aimed at better understanding the causes of gender inequality and the practical steps to address it.

References

Abraham, M. (2017). Pay formalization revisited: Considering the effects of manager gender and discretion on closing the gender wage gap. *Academy of Management Journal, 60*(1), 29-54. https://doi.org/10.5465/amj.2013.1060

Acker, J. (1990). Hierarchies, jobs, bodies: A theory of gendered organizations. *Gender and Society, 4*(2),139–58. https://doi.org/10.1177/089124390004002002

Aldatmaz, S., Ouimet, P., & Van Wesep, E. D. (2018). The option to quit: The effect of employee stock options on turnover. *Journal of Financial Economics, 127*(1), 136-151. https://doi.org/10.1016/j.jfineco.2017.10.007

Anderson, D., Bjarnadóttir, M. V., Dezső, C. L., & Ross, D. G. (2019). On a firm's optimal response to pressure for gender pay equity. *Organization Science, 30*(1), 214-231. https://doi.org/10.1287/orsc.2018.1248

Angrist, J. D., & Pischke, J. S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton, NJ: Princeton University Press.

Arnold, A., & Fulmer, I.S. (2018). *Pay transparency.* In S.J. Perkins (Ed.), The Routledge Companion to Reward Management. London: Routledge.

Arjuna Capital. (2019, April). Gender pay scorecard: Navigating corporate gender pay disclosures. Retrieved from https://arjuna-capital.com/wp-content/uploads/2019/04/Gender-Pay-Scorecard-2019.pdf

Bakan, D. (1966). *The duality of human existence: An essay on psychology and religion*. Chicago, IL: Rand McNally.

Banks, G. C., Pollack, J. M., Bochantin, J. E., Kirkman, B. L., Whelpley, C. E., & O'Boyle, E. H. (2016). Management's science–practice gap: A grand challenge for all stakeholders. *Academy of Management Journal, 59*(6), 2205-2231. https://doi-org.stanford.idm.oclc.org/10.5465/amj.2015.0728

Bear, J. B., & Glick, P. (2017). Breadwinner bonus and caregiver penalty in workplace rewards for men and women. *Social Psychological and Personality Science, 8*(7), 780-788. https://doi-org.stanford.idm.oclc.org/10.1177/1948550616683016

Bertrand, M., & Hallock, K. (2001). The gender gap in top corporate jobs. *Industrial and Labor Relations Review, 55(1),* 3–21. https://doi.org/10.1177/001979390105500101

Blair-Loy, M. (2003). *Competing devotions: Career and family among women executives*. Cambridge, MA: Harvard University Press.

Blasi, J. R., Freeman, R. B., & Kruse, D. L. (2013). *The citizen's share: Reducing inequality in the 21st century*. New Haven, CT: Yale University Press.

Blau, F. D., & Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature, 55*(3), 789–865. https://doi.org/10.1257/jel.20160995

Botelho, T. L., & Abraham, M. (2017). Pursuing quality: how search costs and uncertainty magnify gender-based double standards in a multistage evaluation process. *Administrative Science Quarterly*, *62*(4), 698-730. https://doi.org/10.1177/0001839217694358

Bowles, H. R., Thomason, B., & Bear, J. B. (2019). Reconceptualizing what and how women negotiate for career advancement. *Academy of Management Journal*, *62*(6), 1645-1671. https://doi.org/10.5465/amj.2017.1497

Brands, R. A., & Fernandez-Mateo, I. (2017). Leaning out: How negative recruitment experiences shape women's decisions to compete for executive roles. *Administrative Science Quarterly*, *62*(3), 405-442. https://doi.org/10.1177/0001839216682728

Budig, M. J., & England, P. (2001). The wage penalty for motherhood. *American Sociological* R*eview*, *66*(2), 204-225. https://www-jstor-org.stanford.idm.oclc.org/stable/2657415

Cahill v. Nike, Inc. No. 3:18-cv-01477. District of Oregon. U.S. (2018).

Cappelli, P., Conyon, M., & Almeda, D. (2020). Social exchange and the effects of employee stock options. *ILR Review*, *73*(1), 124-152. https://doi-org.stanford.idm.oclc.org/10.1177/0019793919827934

Carberry, E. J. (2010). Who benefits from shared capitalism? The social stratification of wealth and power in companies with employee ownership. In D. L. Kruse, R. B. Freeman, & J. R. Blasi (Eds.), *Shared Capitalism at Work: Employee Ownership, Profit and Gain Sharing, and Broad-Based Stock Options* (pp. 317-349). Chicago, IL: University of Chicago Press.

Carnahan, S., Agarwal, R., & Campbell, B. A. (2012). Heterogeneity in turnover: The effect of relative compensation dispersion of firms on the mobility and entrepreneurship of extreme performers. *Strategic Management Journal, 33*(12), 1411-1430. https://doi.org/10.1002/smj.1991

Castilla, E. J. (2008). Gender, race, and meritocracy in organizational careers. *American Journal of Sociology, 113*(6), 1479–1526. https://www.journals.uchicago.edu/doi/abs/10.1086/588738

Castilla, E. J. (2015). Accounting for the gap: A firm study manipulating organizational accountability in pay decisions. *Organization Science 26*(2), 311–333. https://doi.org/10.1287/orsc.2014.0950

Castilla, E. J., & Benard, S. (2010). The paradox of meritocracy in organizations. *Administrative Science Quarterly, 55*, 543-576. https://doi.org/10.2189/asqu.2010.55.4.543

Certo, S. T., & Semadeni, M. (2006). Strategy research and panel data: Evidence and implications. *Journal of Management, 32*(3), 449–471. https://doi.org/10.1177/0149206305283320

Chan, C. K., & Anteby, M. (2016). Task segregation as a mechanism for within-job inequality women and men of the transportation security administration. *Administrative Science Quarterly*, *61*(2), 184–216. https://doi.org/10.1177/0001839215611447

Core, J. E., & Guay, W. R. (2001). Stock option plans for non-executive employees. *Journal of Financial Economics*, *61*, 253-287. https://doi.org/10.1016/S0304-405X(01)00062-9

Correll, S. J., Benard, S., & Paik, I. (2007) Getting a job: Is there a motherhood penalty? *American Journal of Sociology*, *112*(5), 1297–1339. https://doi-org.stanford.idm.oclc.org/10.1086/511799

Cortina, L. M. (2008). Unseen injustice: Incivility as modern discrimination in organizations. *Academy of Management Review*, *33*(1), 55-75. https://doi-org.stanford.idm.oclc.org/10.5465/amr.2008.27745097

Davison, H. K., & Burke, M. J. (2000). Sex discrimination in simulated employment contexts: A meta-analytic investigation. *Journal of Vocational Behavior*, *56*(2), 225-248. https://doi.org/10.1006/jvbe.1999.1711

Devers, C. E., Cannella, A. A., Reilly, G. P., & Yoder, M. E. (2007). Executive compensation: A multi-disciplinary review of recent developments. *Journal of Management*, 33(6), 1016-1072. https://doi.org/10.1177/0149206307308588

Diekman, A. B., & Eagly, A. H. (2000). Stereotypes as dynamic constructs: Women and men of the past, present, and future. *Personality and Social Psychology Bulletin*, *26*(10), 1171-1188. https://doi.org/10.1177/0146167200262001

Eagly, A. H. (1987). *Sex differences in. social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice towards female leaders. *Psychological Review*, *109*, 573–598. http://dx.doi.org/10.1037/0033-295X.109.3.573

Eagly, A. H., & Wood, W. (2016). Social role theory of sex differences. *The Wiley Blackwell encyclopedia of gender and sexuality studies*, 1-3. https://doi.org/10.1002/9781118663219.wbegss183

Eagly, A. H., Wood, W., & Diekman, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. In Eckes, T., & Trautner, H. M. (2012), *The developmental social psychology of gender* (pp. 17-46). Mahwah, New Jersey: Erlbaum.

Eby, L. T., Allen, T. D., & Douthitt, S. S. (1999). The role of nonperformance factors on job-related relocation opportunities: A field study and laboratory experiment. *Organizational Behavior and Human Decision Processes*, *79*(1), 29-55. https://doi.org/10.1006/obhd.1999.2836

Edwards, J. R., & Berry, J. W. (2010). The presence of something or the absence of nothing: Increasing theoretical precision in management research. *Organizational Research Methods, 13*(4), 668-689. https://doi.org/10.1177/1094428110380467

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, *14*,(1) 57–74. https://doi.org/10.5465/amr.1989.4279003

England, P., Farkas, G., Kilbourne, B. S., & Dou, T. (1988). Explaining occupational sex segregation and wages: Findings from a model with fixed effects. *American Sociological Review, 53*(4), 544-558. https://doi.org/10.2307/2095848

Elvira, M. M., & Graham, M. E. (2002). Not just a formality: Pay system formalization and sex-related earnings effects. *Organization Science, 13*(6), 601–617. https://doi.org/10.1287/orsc.13.6.601.499

Feigel, L. (2019). Lower pay for equal work is not sole path for pay discrimination claim. *National Law Review*. Retrieved from https://www.natlawreview.com/article/lower-pay-equal-work-not-sole-path-pay-discrimination-claim

Feld, B. (2013, January 17). A different approach to refreshing stock option grants. *Business Insider.* Retrieved from https://www.businessinsider.com/a-different-approach-to-refreshing-stock-option-grants-2013-1

Fernandez-Mateo, I., & Kaplan, S. (2018). Gender and organization science: Introduction to a virtual issue. *Organization Science*, *29*(6), 1229-1236. https://doi.org/10.1287/orsc.2018.1249

Fiske, S. T., & Taylor, S. E. (1991). *Social cognition*, 2nd ed. New York, NY: McGraw Hill Book Company.

Foschi, M. (2000). Double standards for competence: Theory and research. *Annual Review of Sociology*, *26*(1), 21-42. https://doi.org/10.1146/annurev.soc.26.1.21

Fulmer, I. S., & Shaw, J.D. (2018). Person-based differences in pay reactions: A compensation- activation theory and integrative conceptual review. *Journal of Applied Psychology*, *103*(9), 939- 958. http://dx.doi.org/10.1037/apl0000310

Galperin, R. V., Hahl, O., Sterling, A. D., & Guo, J. (2020). Too good to hire? Capability and inferences about commitment in labor markets. *Administrative Science Quarterly*, *65*(2), 275-313. https://doi.org/10.1177/0001839219840022

Gerhart, B. (1990). Voluntary turnover and alternative job opportunities. *Journal of Applied Psychology*, *75*(5), 467–476. https://doi.org/10.1037/0021-9010.75.5.467

Gerhart, B. A., & Rynes, S. (2003). *Compensation: Theory, evidence, and strategic implications.* California: Sage Publications.

Gerhart, B., Rynes, S., & Fulmer, I.S. (2009). Pay and performance: Individuals, groups, and executives. *The Academy of Management Annals, 3*(1), 251-315. https://doi.org/10.1080/19416520903047269

Graham, M., Hotchkiss, J., & Gerhart, B. (2000). Discrimination by parts: A fixed-effects analysis of starting pay differences across gender. *Eastern Economic Journal*, *26*(1), 9-27. https://www-jstor-org.stanford.idm.oclc.org/stable/40325965

Greene, W. H. (1993). *Econometric analysis* (2nd ed.). New York: MacMillan.

Groshen, E. (1991). The structure of the female/male wage differential: Is it who you are, what you do, or where you work? *Journal of Human Resources*, *26*(3), 457-472. https://doi.org/10.2307/146021

Gupta, N., Conroy, S. A., & Delery, J. E. (2012). The many faces of pay variation. *Human Resource Management Review*, *22*(2), 100-115. https://doi.org/10.1016/j.hrmr.2011.12.001

Hallock, K. F. (2012). *Pay*. New York, NY: Cambridge University Press.

Hallock, K. F., & Olson, C. A. (2010). New Data for answering old questions regarding employee stock options. In K. G. Abraham, J. R. Spletzer, & M. Harper (Eds.), *Labor in the New Economy* (pp. 149-180). Chicago, IL: University of Chicago Press.

He, W., Li, S. L., Feng, J., Zhang, G., & Sturman, M. C. (in press). When does pay for performance motivate employee helping behavior? The contextual influence of performance subjectivity. *Academy of Management Journal*. https://doi-org.stanford.idm.oclc.org/10.5465/amj.2018.1408

Hebl, M., Cheng, S. K., & Ng, L. C. (2020). Modern discrimination in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, *7*(1), 257-282. https://doi.org/10.1146/annurev-orgpsych-012119-044948

Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57*(4), 657–674. https://doi.org/10.1111/0022-4537.00234

Heilman, M. E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, *32*, 113-135. https://doi.org/10.1016/j.riob.2012.11.003

Heilman, M. E., & Haynes, M. C. (2008). Subjectivity in the appraisal process: A facilitator of gender bias in work settings. In E. Borgida E, & S. T. Fiske (Eds.), *Psychological science in court: Beyond common knowledge* (pp. 127-155). Mahwah, NJ: Larry Erlbaum Associates.

Heilman, M. E., & Haynes, M. C. (2005). No credit where credit is due: Attributional rationalization of women's success in male-female teams. *Journal of Applied Psychology, 90*(5), 905-916. https://doi.org/10.1037/0021-9010.90.5.905

Heilman, M. E., Manzi, F., & Caleo, S. (2019). Updating impressions: The differential effects of new performance information on evaluations of women and men. *Organizational Behavior and Human Decision Processes*, *152*, 105-121. https://doi.org/10.1016/j.obhdp.2019.03.010

Hentschel, T., Heilman, M. E., & Peus, C. V. (2019). The multiple dimensions of gender stereotypes: a current look at men's and women's characterizations of others and themselves. *Frontiers in Psychology*, *10*, 11-19. https://doi.org/10.3389/fpsyg.2019.00011

Hill, A., Upadhyay, A. D., & Beekun, R. I. (2015). Do female and ethnically diverse executives endure inequity in the CEO position or do they benefit from their minority status? An empirical examination. *Strategic Management Journal*, *36*(8), 1115-1134. https://doi.org/10.1002/smj.2274

Hinchliffe, E. (2019, January 22). Intel just closed its pay gap again- This time taking stock into account. *Fortune*. Retrieved from https://fortune.com/2019/01/22/intel-gender-pay-gap-stock/

Hoobler, J. M., Wayne, S. J., & Lemmon, G. (2009). Bosses' perceptions of family-work conflict and women's promotability: Glass ceiling effects. *Academy of Management Journal*, *52*(5), 939-957. https://doi-org.stanford.idm.oclc.org/10.5465/amj.2009.44633700

Hom, P. W., Roberson, L., & Ellis, A. D. (2008). Challenging conventional wisdom about who quits: Revelations from Corporate America. *Journal of Applied Psychology, 93*(1): 1-34. https://doi.org/10.1037/0021-9010.93.1.1

Hu, J., Zhang, Z., Jiang, K., & Chen, W. (2019). Getting ahead, getting along, and getting prosocial: Examining extraversion facets, peer reactions, and leadership emergence. *Journal of Applied Psychology, 104*(11): 1369-1386. http://dx.doi.org/10.1037/apl0000413

Hultin, M., & Szulkin, R. (1999). Wages and unequal access to organizational power: An empirical test of gender discrimination. *Administrative Science Quarterl*y, *44*(3), 453–472. https://doi.org/10.2307/2666958

Ittner, C. D., Lambert, R. A., & Larcker, D. F. (2003). The structure and performance consequences of equity grants to employees of new economy firms. *Journal of Accounting and Economics, 34*, 89-127. https://doi.org/10.1016/S0165-4101(02)00088-5

Jewett v. Oracle America, Inc. 17-CIV-02669, California Superior Court (2017).

Joshi, A., Son, J., & Hoh, H. (2015). When can women close the gap? A meta-analytic test of sex differences in performance and rewards. *Academy of Management Journal, 58*(5), 1516-1545. https://doi.org/10.5465/amj.2013.0721

Judge, T. A., & Livingston, B. (2008). Is the gap more than gender? A longitudinal analysis of gender, gender role orientation, and earnings. *Journal of Applied Psychology, 93*(5), 994-1012. http://dx.doi.org/10.1037/0021-9010.93.5.994

Klein, F.B., Hammond, R., Hill, A.D., & Stice-Lusvardi, R. (2019). The road to pay inequity is paved with good intentions: Examining the gender pay gap in employee equity-based awards. In Guclu Atinc (Ed.), *Proceedings of the 79th Annual Meeting of the Academy of Management*. https://doi.org/10.5465/AMBPP.2019.59

Koeplin, J., Sarin, A., & Shapiro, A. C. (2000). The private company discount. *Journal of Applied Corporate Finance, 12*(4), 94-101. https://doi.org/10.1111/j.1745-6622.2000.tb00022.x

Kossek, E., Su, R., Wu, L. (2017). "Opting out" or "pushed out"? Integrating perspectives on women's career equality for gender inclusion and interventions. *Journal of Management, 43*(1), 228-254. https://doi.org/10.1177/0149206316671582

Kronberg, A. K. (2020). Workplace gender pay gaps: Does gender matter less the longer employees stay? *Work and Occupations. 47*(1), 3-43. https://doi.org/10.1177/0730888419868748

Kruse, D. L., Blasi, J. R., & Park, R. (2010). Shared capitalism in the U.S. economy. In D.

Kruse, R. B. Freeman, & J. R. Blasi (Eds.), *Shared Capitalism at Work: Employee Ownership, Profit and Gain Sharing, and Broad-Based Stock Options* (pp. 41-75). Chicago, IL: University of Chicago Press.

Ledbetter v. Goodyear Tire & Rubber Co. 550 U.S. 618 (2007).

Lenzi v. Systemax, Inc. No. 18-979, Second Circuit U.S. (2019).

Levin, S. (2019, April 18). Oracle systematically underpaid thousands of women, lawsuit says. *The Guardian.* Retrieved from https://www.theguardian.com/technology/2019/jan/18/oracle-women-workers-lawsuit-salaries-pay

Lien, T. (2017, February 24). When tech companies go public, employees can strike it rich — or not. And then the trouble starts. Los Angeles Times. Retrieved from https://www.latimes.com/business/technology/la-fi-tn-ipo-employees-20170224-story.html

Maniar, T. (2019, April 18). Retaining all-stars with refresh grants – tips and best practices. *Mayfield 50.* Retrieved from https://www.mayfield.com/retaining-all-stars-with-refresh-grants-tips-and-best-practices/

McNeish, D., & Kelley, K. (2019). Fixed effects models versus mixed effects models for clustered data: Reviewing the approaches, disentangling the differences, and making recommendations. *Psychological Methods, 24*(1), 20-35. https://doi.org/10.1037/met0000182

Menz, M. (2012). Functional top management team members: A review, synthesis, and research agenda. *Journal of Management, 38*(1), 45-80. https://doi.org/10.1177/0149206311421830

Milkman, K. L., Akinola, M., & Chugh, D. (2015). What happens before? A field experiment exploring how pay and representation differentially shape bias on the pathway into organizations. *Journal of Applied Psychology, 100*(6), 1678-1712. http://dx.doi.org/10.1037/apl0000022

Milkovich, G. T., Newman, J. M., & Gerhart, B. (2011). *Compensation.* New York, NY: McGraw-Hill / Irwin.

Miller, S. (2019). U.S. companies are working to fix pay- equity issues. *Society for Human Resource Management (SHRM).* Retrieved from https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/companies-are-working-to-fix-pay-equity-issues.aspx

Mindruta, D. (2012). Value creation in university-firm research collaborations: A matching approach. *Strategic Management Journal*, *34*(6), 644-665. https://doi.org/10.1002/smj.2036

Muñoz–Bullón , F. (2010). Gender-compensation differences among high-level executives in the United States. *Industrial Relations: A Journal of Economy and Society*, *49*(3), 346-370. https://doi.org/10.1111/j.1468-232X.2010.00604.x

Murphy, K. J. (2003). Stock-based pay in new economy firms. *Journal of Accounting and Economics*, *34*(1-3), 129-147. https://doi.org/10.1016/S0165-4101(02)00090-3

National Center for Employee Ownership (NCEO). (2018). Data show widespread employee ownership in U.S. Retrieved from https://www.nceo.org/articles/widespread-employee-ownership-us

Nieva, V. F., & Gutek, B. A. (1980). Sex effects on evaluation. *Academy of Management Review*, 5(2), 267-276. https://doi-org.stanford.idm.oclc.org/10.5465/amr.1980.4288749

Nyberg, A. (2010). Retaining your high performers: Moderators of the performance–job satisfaction–voluntary turnover relationship. *Journal of Applied Psychology*, *95*(3), 440–453. https://doi.org/10.1037/a0018869

Oyer, P., & Schaefer, S. (2005). Why do some firms give stock options to all employees?: An empirical examination of alternative theories. *Journal of Financial Economics*, *76*(1), 99-133. https://doi.org/10.1016/j.jfineco.2004.03.004

Padavic, I., & Reskin, B. F. (2002). *Women and men at work*, 2nd ed. London, UK: Sage.

Park, S., & Sturman, M. C. (2016). Evaluating form and functionality of pay-for-performance plans: The relative incentive and sorting effects of merit pay, bonuses, and long-term incentives. *Human Resource Management*, *55*(4), 697-719. https://doi.org/10.1002/hrm.21740

Park, S. H., & Westphal, J. D. (2013). Social discrimination in the corporate elite: How status affects the propensity for minority CEOs to receive blame for low firm performance. *Administrative Science Quarterly*, *58*(4), 542-586. https://doi-org.stanford.idm.oclc.org/10.1177/0001839213509364

Paustian-Underdahl, S. C., Eaton, A. A., Mandeville, A., & Little, L. M. (2019). Pushed out or opting out? Integrating perspectives on gender differences in withdrawal attitudes during pregnancy. *Journal of Applied Psychology*, *104*(8), 985-1002. https://doi.org/10.1037/apl0000394

Petersen, T., & Morgan, L. (1995). Separate and unequal: Occupation-establishment segregation and the gender wage gap. *American Journal of Sociology, 101*(2), 329–365. https://doi.org/10.1086/230727

Petersen, T., & Saporta, I. (2004). The opportunity structure for discrimination. *American Journal of Sociology, 109*(4), 852-901. https://doi.org/10.1086/378536

Petersen, T., Saporta, I., & Seidel, M.-D. L. (2000). Offering a job: Meritocracy and social networks. *American Journal of Sociology, 106*(3), 763–816. https://doi.org/10.1086/318961

Petersen, T., Snartland, V., Becken, L. E., & Olsen, K. M. (1997). Within-job wage discrimination and the gender wage gap: The case of Norway. *European Sociological Review*, 13(2), 199-213. https://doi.org/10.1093/oxfordjournals.esr.a018212

Pew Research Center. (2015, January 14). Women and leadership: public says women are equally qualified, but barriers persist. *Pew Research Center*. Retrieved from http://www.pewsocialtrends.org/2015/01/14/women-and- leadership/

Pierce, B. (2001). Compensation inequality. *Quarterly Journal of Economics, 116*(4), 1493-1525. https://doi.org/10.1162/003355301753265633

Pierce, B. (2010). Recent trends in compensation inequality. In K. G. Abraham, J. R. Spletzer, M. Harper (Eds.), *Labor in the New Economy* (pp. 63-98). Chicago, IL: University of Chicago Press.

Pressman, J. (2017, July 19). Why option refresh grants are essential for startup recruiting and retention. *Forbes.* Retrieved from forbes.com/sites/valleyvoices/2017/07/19/option-refresh-grants-are-essential-for-startup-recruiting/#61d273cb6abd

Rios-Avila, F., & Hirsch, B. T. (2013). Unions, wage gaps, and wage dispersion: new evidence from the Americas. *Industrial Relations: A Journal of Economy and Society*, *53*(1), 1-27. https://doi.org/10.1111/irel.12044

Rivera, L. A., & Tilcsik, A. (2016). Class advantage, commitment penalty: The gendered effect of social class signals in an elite labor market. *American Sociological Review*, *81*(6), 1097–1131. https://doi-org.stanford.idm.oclc.org/10.1177/0003122416668154

Rivera, L. A., & Tilcsik, A. (2019). Scaling down inequality: rating scales, gender bias, and the architecture of evaluation. *American Sociological Review*, *84*(2), 248–274. https://doi.org/10.1177/0003122419833601

Rosen, C., Case, J., & Staubus, M. (2005). Every employee an owner [really]. *Harvard Business Review* (June), 122-130. https://europepmc.org/abstract/med/15938443

Rosen, B., & Jerdee, T. H. (1974). Effects of applicant's sex and difficulty of job on evaluations of candidates for managerial positions. *Journal of Applied Psychology, 59*(4), 511–512. https://doi.org/10.1037/h0037323

Rosenblatt, J., & Burnson, R. (2020, April 30). Oracle women score major win in court battle over equal pay. *Bloomberg.* Retrieved from https://www.bloomberg.com/news/articles/2020-05-01/oracle-women-score-major-win-in-court-battle-over-equal-pay

Rosenfeld, R. A. (1979). Women's occupational careers: Individual and structural explanations. *Sociology of Work and Occupations*, *6*(3), 283-311. https://doi-org.stanford.idm.oclc.org/10.1177/073088847900600302

Roth, P. L., Purvis, K. L., & Bobko, P. (2012). A meta-analysis of gender group differences for measures of job performance in field studies. *Journal of Management*, *38*(2), 719–739. https://doi.org/10.1177/0149206310374774

Schwab, D. P. (1991). Contextual variables in employee performance-turnover relationships. *Academy of Management Journal*, *34*(4), 966-975. https://doi-org.stanford.idm.oclc.org/10.5465/256400

Seidel, M. D. L., Polzer, J. T., & Stewart, K. J. (2000). Friends in high places: The effects of social networks on discrimination in salary negotiations. *Administrative Science Quarterly*, *45*(1), 1–24. https://doi.org/10.2307/2666977

Smit, B. W., & Montag-Smit, T. (2019). The pay transparency dilemma: Development and validation of the pay information exchange preferences scale. *Journal of Applied Psychology, 104*(4), 537-558. http://dx.doi.org/10.1037/apl0000355

Sotherlund, J. (2003). When pay plans go wrong: Managing compliance issues before the audit. *World at Work.* Retrieved from https://www.worldatwork.org/docs/aca-legacy-archives/publications-books-and-booklets/when-pay-plans-go-wrong-e1579631290.pdf

Tomaskovic-Devey, D. (1993a). *Gender and racial inequality at work: The sources and consequences of job segregation*. Ithaca, NY: Cornell University Press.

Tomaskovic-Devey, D. (1993b). The gender and race composition of jobs and the male/female, white/black pay gaps. *Social Forces*, *72*(1), 45–76. https://doi.org/10.1093/sf/72.1.45

Trevor, C. O. (2001). Interactions among actual ease-of-movement determinants and job satisfaction in the prediction of voluntary turnover. *Academy of Management Journal, 44*(4), 621-638. https://doi-org.stanford.idm.oclc.org/10.5465/3069407

Triana, M. D. C., Richard, O. C., & Yücel, İ. (2017). Status incongruence and supervisor gender as moderators of the transformational leadership to subordinate affective organizational commitment relationship. *Personnel Psychology*, *70*(2), 429-467. https://doi-org.stanford.idm.oclc.org/10.1111/peps.12154

Weeden, R., Rosen, C., Carberry, E, & Rodrick, S. (2001). *Current practices in stock option plan design*, 2nd edition. Oakland, CA: The National Center for Employee Ownership.

Wisper, L. (2019, October 21) Purpose-driven pay for performance. *Workspan Daily*. Retrieved from https://www.worldatwork.org/workspan/articles/purpose-driven-pay-for-performance

Wooldridge, J. (2002). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

WorldatWork and Korn Ferry (2019). Pay equity practices survey of C-suite and reward leaders. Retrieved from https: //www.worldatwork.org/Survey%20Brief%20-%20Pay%20Equity%20Practices%20Snapshot.pdf

WorldatWork and Vivient Consulting (2014). Incentive pay practices survey: Privately held companies. Retrieved from https://www.worldatwork.org/docs/research-and-surveys/survey-brief-incentive-pay-practices-survey-privately-held-companies.pdf

Zucker, L. G., Darby, M. R., & Armstrong, J. S. (2002). Commercializing knowledge: University science, knowledge capture, and firm performance in biotechnology. *Management Science*, *48*(1), 138-153. https://doi-org.stanford.idm.oclc.org/10.1287/mnsc.48.1.138.14274

Table 1

Descriptive Statistics and Correlations (Study 1: TechStart)

Variable	Mean	SD	Min.	Max.	1	2	3	4	5	6	7	8	9	10	11	12
1. *Base pay*	11.787	0.309	10.714	12.429												
2. *Performance rewards*	4.854	5.237	0.000	12.206	.258											
3. *Equity awards*	9.973	0.923	8.007	12.849	.732	.383										
4. *Female*	0.292	0.456	0.000	1.000	-.214	-.046	-.223									
5. *Tenure*	1.861	1.596	0.000	8.000	.231	.131	.617	-.245								
6. *Age*	37.769	7.514	22.000	65.000	.424	.199	.348	.025	.035							
7. *Level 1*	0.079	0.270	0.000	1.000	-.554	.001	-.367	.229	-.212	-.262						
8. *Level 2*	0.324	0.469	0.000	1.000	-.283	-.252	-.320	-.053	-.095	-.223	-.202					
9. *Level 3*	0.301	0.460	0.000	1.000	.114	-.204	-.027	-.020	.000	.090	-.192	-.454				
10. *Level 4*	0.162	0.369	0.000	1.000	.170	.178	.183	-.033	.141	.114	-.129	-.305	-.289			
11. *Level 5*	0.079	0.270	0.000	1.000	.304	.288	.242	-.036	.004	.193	-.085	-.202	-.192	-.129		
12. *Level 6*	0.046	0.211	0.000	1.000	.324	.266	.485	.004	.130	.157	-.064	-.153	-.145	-.097	-.064	
13. *Level 7*	0.009	0.096	0.000	1.000	.178	.125	.280	-.062	.221	.068	-.028	-.067	-.063	-.043	-.028	-.021

Note. n = 216 individuals. Correlations above $|0.135| = p < 0.05$. Values of base pay, performance rewards, and equity awards are log transformed in this table (actual mean values are as follows: $137,430, $24,342, and 36,190, respectively). Female equals '1', male equals '0'. Tenure and age are in number of years. Each level variable is coded as a '1' if the employee is in the given level and '0' otherwise (level 1 is the lowest level and level 7 is the highest level).

Table 2

Job Family Fixed-Effects Models Predicting Compensation (Study 1: TechStart)

	Model 1	Model 2	Model 3
Variables	Base pay	Performance rewards	Equity awards
Female	-0.041	-0.092	-0.164*
	(0.041)	(0.412)	(0.077)
Tenure	-0.008	0.312*	0.241**
	(0.011)	(0.121)	(0.016)
Age	0.008**	0.084**	0.019**
	(0.003)	(0.023)	(0.007)
Level 2	0.310**	-0.292	0.345†
	(0.085)	(0.516)	(0.181)
Level 3	0.501**	-0.230	0.641**
	(0.089)	(0.362)	(0.193)
Level 4	0.542**	5.815**	0.910**
	(0.083)	(1.024)	(0.165)
Level 5	0.742**	8.948**	1.317**
	(0.123)	(0.739)	(0.275)
Level 6	0.835**	7.964**	2.256**
	(0.092)	(0.580)	(0.352)
Level 7	0.986**	8.650**	2.940**
	(0.100)	(0.626)	(0.232)
Constant	11.052**	-0.790	8.143**
	(0.148)	(0.992)	(0.289)
Within R^2	0.624	0.648	0.731
Adjusted R^2	0.607	0.636	0.719

Note. $n = 216$ individuals. † Significant at the $p < 0.10$, * Significant at the $p < 0.05$, and ** Significant at $p < 0.01$ (two-tailed). Estimated values appear without parentheses while robust standard errors are below in parentheses. Values of base pay, performance rewards, and equity awards are log transformed. Female equals '1', male equals '0'. Tenure and age are in number of years. Each level variable is coded as a '1' if the employee is in the given level and '0' otherwise (level 1 is the lowest level and level 7 is the highest level). Level 1 omitted to avoid perfect collinearity.

Table 3

Descriptive Statistics and Correlations (Study 3: TechCo)

Variable	Mean	SD	Min.	Max.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. *Base pay*	10.942	0.576	9.931	12.680																	
2. *Performance rewards*	4.557	4.630	0.000	11.633	.619																
3. *Equity awards (number)*	4.066	3.310	0.000	12.251	.837	.481															
4. *Equity awards (value)*	5.747	4.372	0.000	14.706	.776	.456	.979														
5. *Female*	0.231	0.421	0.000	1.000	-.065	.070	-.091	-.086													
6. *Performance*	2.202	0.391	1.000	3.000	.277	.165	.240	.232	.018												
7. *Tenure*	4.725	3.236	0.900	16.600	.037	.010	.171	.142	-.122	.016											
8. *Age*	36.409	8.884	19.500	70.000	.364	.220	.322	.296	.017	-.069	.230										
9. *Part-time status*	0.007	0.083	0.000	1.000	-.084	-.015	-.004	-.003	-.005	.000	-.025	.004									
10. *Level 1*	0.637	0.481	0.000	1.000	-.660	-.542	-.573	-.547	-.048	-.223	-.078	-.223	.031								
11. *Level 2*	0.065	0.246	0.000	1.000	-.120	-.019	-.094	-.076	-.023	-.038	-.001	-.110	-.019	-.254							
12. *Level 3*	0.115	0.319	0.000	1.000	.092	.166	.073	.090	.027	-.007	.037	-.015	-.002	-.364	-.191						
13. *Level 4*	0.079	0.270	0.000	1.000	.232	.190	.203	.194	-.011	.137	.080	.104	-.022	-.289	-.152	-.218					
14. *Level 5*	0.063	0.243	0.000	1.000	.324	.210	.287	.257	.064	.079	.029	.171	.013	-.254	-.134	-.191	-.152				
15. *Level 6*	0.024	0.154	0.000	1.000	.304	.150	.263	.234	.017	.135	-.039	.129	-.011	-.151	-.080	-.114	-.091	-.080			
16. *Level 7*	0.012	0.111	0.000	1.000	.290	.117	.239	.208	-.002	.073	-.042	.129	-.008	-.106	-.056	-.080	-.064	-.056	-.033		
17. *Level 8*	0.004	0.063	0.000	1.000	.171	.082	.146	.127	-.003	.056	-.017	.089	-.004	-.059	-.031	-.044	-.035	-.031	-.018	-.013	
18. *Level 9*	0.001	0.024	0.000	1.000	.079	.030	.053	.043	-.019	.053	-.018	.018	-.002	-.023	-.012	-.017	-.014	-.012	-.007	-.005	-.003

Note. n = 3,461 individuals (except for performance where n = 1,832); correlations above $|0.033| = p < 0.05$. Values of base pay, performance rewards, equity awards (number) and equity awards (value) are log transformed in this table (actual mean values are as follows: $68,048, $6,670, 2,839, and $39,654, respectively). Female equals '1', male equals '0'. Performance is rated on a scale of '1' (needs improvement), '2' (strong) and '3' (exceptional). Tenure and age in number of years. Part-time status is coded '1' if the individual works part-time and '0' if not. Each level variable is coded as a '1' if the employee is in the given level and '0' otherwise (level 1 is the lowest level and level 9 is the highest level).

Table 4

Job Family Fixed-Effects Models Predicting Compensation (Study 3: TechCo)

	Model 1a	Model 1b	Model 1c	Model 1d	Model 2a	Model 2b	Model 2c	Model 2d
Variables	Base pay	Performance rewards	Equity awards (number)	Equity awards (value)	Base pay	Performance rewards	Equity awards (number)	Equity awards (value)
Female	-0.023**	0.073	-0.264**	-0.372**	-0.037**	0.162	-0.282**	-0.370**
	(0.005)	(0.074)	(0.044)	(0.077)	(0.010)	(0.147)	(0.089)	(0.118)
Performance					0.070**	0.076	0.289†	0.403†
					(0.024)	(0.162)	(0.156)	(0.233)
Tenure	0.010	0.027	0.290†	0.391	-0.001	-0.012	0.101	0.085
	(0.009)	(0.019)	(0.147)	(0.231)	(0.005)	(0.011)	(0.072)	(0.103)
Age	0.002	-0.004	0.018**	0.029**	0.006**	0.007	0.016	0.021
	(0.002)	(0.004)	(0.005)	(0.006)	(0.001)	(0.006)	(0.013)	(0.015)
Part-time	-0.397**	0.078	-0.150	-0.350†	-0.690**	1.255	0.397	0.494
	(0.039)	(0.216)	(0.131)	(0.194)	(0.010)	(1.320)	(0.234)	(0.332)
Level 2	0.162*	0.033	1.032**	1.311**	0.122*	-0.017	0.875*	1.106*
	(0.063)	(0.325)	(0.254)	(0.299)	(0.053)	(0.295)	(0.029)	(0.495)
Level 3	0.353**	0.523	1.758**	2.058**	0.328**	0.595*	1.739**	2.099**
	(0.058)	(0.319)	(0.294)	(0.365)	(0.059)	(0.256)	(0.390)	(0.505)
Level 4	0.486**	0.748*	2.229**	2.394**	0.450**	0.845**	2.369**	2.701**
	(0.057)	(0.356)	(0.305)	(0.417)	(0.059)	(0.281)	(0.380)	(0.483)
Level 5	0.721**	1.305**	3.393**	3.545**	0.687**	1.359**	3.521**	3.867**
	(0.071)	(0.455)	(0.409)	(0.503)	(0.072)	(0.397)	(0.468)	(0.580)
Level 6	0.942**	1.639**	4.503**	4.834**	0.896**	1.682**	4.544**	4.938**
	(0.074)	(0.402)	(0.428)	(0.588)	(0.074)	(0.320)	(0.436)	(0.567)
Level 7	1.242**	2.167*	5.908**	6.316**	1.175**	2.175*	5.775**	6.210**
	(0.098)	(0.985)	(0.442)	(0.439)	(0.097)	(0.874)	(0.568)	(0.637)
Level 8	1.316**	3.019**	6.175**	6.542**	1.225**	2.929**	6.024**	6.457**
	(0.080)	(0.548)	(0.552)	(0.868)	(0.067)	(0.523)	(0.389)	(0.567)
Level 9	1.646**	2.690**	6.995**	7.105**	1.532**	2.642**	6.478**	6.414**
	(0.074)	(0.388)	(0.398)	(0.508)	(0.062)	(0.306)	(0.387)	(0.491)
Departments	Included	Included	Included	Included	Included	Included	Included	Included
Constant	10.874**	9.437**	3.098**	4.983**	10.759**	9.854**	3.594**	6.135**
	(0.128)	(0.978)	(0.779)	(1.039)	(0.185)	(1.242)	(1.034)	(1.257)
Within R^2	0.612	0.572	0.422	0.343	0.660	0.406	0.432	0.340
Adjusted R^2	0.602	0.561	0.407	0.326	0.643	0.376	0.403	0.306

Note. n = 3,461 individuals for Models 1a – 1d and 1,832 individuals for models 2a – 2d. † Significant at the $p < 0.10$, * Significant at the $p < 0.05$, and ** Significant at $p < 0.01$ (two-tailed). Estimated values appear without parentheses while robust standard errors are below in parentheses. Values of base pay, performance rewards, equity awards (number) and equity awards (value) are log transformed. Female equals '1', male equals '0'. Performance is rated on a scale of '1' (needs improvement), '2' (strong) and '3' (exceptional). Tenure and age in number of years. Part-time status is coded '1' if the individual works part-time and '0' if not. Each level variable is coded as a '1' if the employee is in the given level and '0' otherwise (level 1 is the lowest level and level 9 is the highest level; level 1 omitted to avoid perfect collinearity). Department is measured in the same way as level with department 1 omitted to avoid perfect collinearity; estimates corresponding to each department are included in analyses but omitted from the table for parsimony (department estimates provided in Online Supplement K).

Table 5

Job Family Fixed-Effects Models Predicting Equity Awards (Study 3: TechCo)

	Initial awards		Refresh awards	
Variables	Number	Value	Number	Value
Female	0.008	0.067	-0.138†	-0.236*
	(0.112)	(0.160)	(0.076)	(0.106)
Tenure			1.259**	1.944**
			(0.059)	(0.068)
Age	0.019	0.026	-0.007	-0.006
	(0.012)	(0.016)	(0.009)	(0.011)
Part-time	0.420**	0.637**	0.209*	0.236*
	(0.105)	(0.134)	(0.092)	(0.101)
Level 2	1.140†	1.663†	0.006	-0.182
	(0.601)	(0.865)	(0.311)	(0.478)
Level 3	1.726*	2.470*	0.208	-0.110
	(0.630)	(0.909)	(0.382)	(0.596)
Level 4	2.695**	3.707**	0.394	0.164
	(0.831)	(1.210)	(0.360)	(0.550)
Level 5	4.092**	5.027**	0.252	-0.188
	(0.986)	(1.378)	(0.437)	(0.682)
Level 6	5.595**	7.053**	0.305	-0.208
	(0.793)	(1.153)	(0.555)	(0.830)
Level 7	6.616**	7.861**	2.430**	2.468*
	(1.230)	(1.650)	(0.697)	(0.957)
Level 8	5.102*	6.071†	3.826	4.360
	(2.315)	(3.091)	(2.646)	(3.279)
Level 9	9.740**	11.082**	4.156**	4.672**
	(0.696)	(0.967)	(0.316)	(0.500)
Department	Included	Included	Included	Included
Constant	5.908**	8.720**	-3.756**	-5.636**
	(1.621)	(2.430)	(1.356)	(1.986)
Within R^2	0.382	0.331	0.437	0.451
Adjusted R^2	0.358	0.305	0.414	0.429

Note. n = 2,052 individuals. † Significant at the $p < 0.10$, * Significant at the $p < 0.05$, and ** Significant at $p < 0.01$ (two-tailed). Estimated values appear without parentheses while robust standard errors are below in parentheses. Values of initial awards and refresh awards are log transformed. Female equals '1', male equals '0'. Tenure and age in number of years (tenure omitted from models predicting initial awards since it is at hire; thus, tenure equals '0' for all observations). Part-time status is coded '1' if the individual works part-time and '0' if not. Each level variable is coded as a '1' if the employee is in the given level and '0' otherwise (level 1 is the lowest level and level 9 is the highest level; level 1 omitted to avoid perfect collinearity). Department is measured in the same way as level with department 1 omitted to avoid perfect collinearity; estimates corresponding to each department are included in analyses but omitted from the table for parsimony (department estimates provided in Online Supplement L).

Table 6

Descriptive Statistics and Correlations (Study 4: Top Executives)

	Variable	Mean	SD	Min.	Max.	1	2	3	4	5	6	7	8	9	Mean	SD	Min.	Max.
1.	*Equity awards (number)*	5.851	1.776	0.000	14.141		.373	-.056	.111	.175	-.007	.040	---	---	5.239	1.922	0.000	11.071
2.	*Equity awards (value)*	6.977	2.892	0.000	15.049	.347		-.050	-.009	.460	.077	.020	---	---	4.615	3.280	0.000	11.787
3.	*Female*	0.049	0.216	0.000	1.000	-.088	-.032		-.014	.000	-.017	-.116	---	---	0.058	0.233	0.000	1.000
4.	*% Female in industry*	14.767	14.617	0.085	50.723	.042	-.025	.017		.088	.041	-.131	---	---	16.720	15.372	0.085	50.723
5.	*Firm size*	7.362	1.660	0.693	13.352	.315	.560	-.027	-.099		.195	.040	---	---	6.733	1.663	0.086	12.146
6.	*Firm performance*	0.191	0.568	-0.783	3.000	.044	.169	-.006	.028	.103		-.057	---	---	0.109	0.631	-0.783	3.000
7.	*Age*	53.373	8.126	26.000	90.000	.203	.089	-.092	-.138	.168	-.031		---	---	49.419	6.600	28.000	75.000
8.	*Tenure*	13.503	11.040	1.000	66.000	.274	.095	-.067	-.071	.211	-.021	.464		---	---	---	---	---
9.	*Unvested equity awards (number)*	4.311	1.961	0.000	10.535	.600	.545	-.041	.014	.300	.037	-.021	-.030		---	---	---	---
10.	*Unvested equity awards (value)*	5.660	3.159	0.000	14.203	.390	.788	-.023	-.023	.471	.146	.024	.019	.711	---	---	---	---

Note. Values for refresh awards (n = 44,476 executive-year observations) listed below the darkened diagonal; correlations above $|0.009| = p < 0.05$. Values for initial awards (n = 1,868 executive-year observations) are listed above the darkened diagonal; correlations above $|0.046| = p < 0.05$. Values of equity awards (number and value; in thousands), as well as firm size (measured as market value in millions) are log transformed (actual mean values for initial awards are: 744,075 for number and $1,825,801 for value; for refresh awards: 2,214,398 for number and $9,929,318 for value, and 274,593 for unvested number and $3,716,795 for unvested value). Female equals '1', male equals '0'. Firm performance is measured as shareholder return. Age and tenure are in number of years (note that tenure is omitted from the initial awards, as all employees have '0' tenure at time of initial award).

Table 7

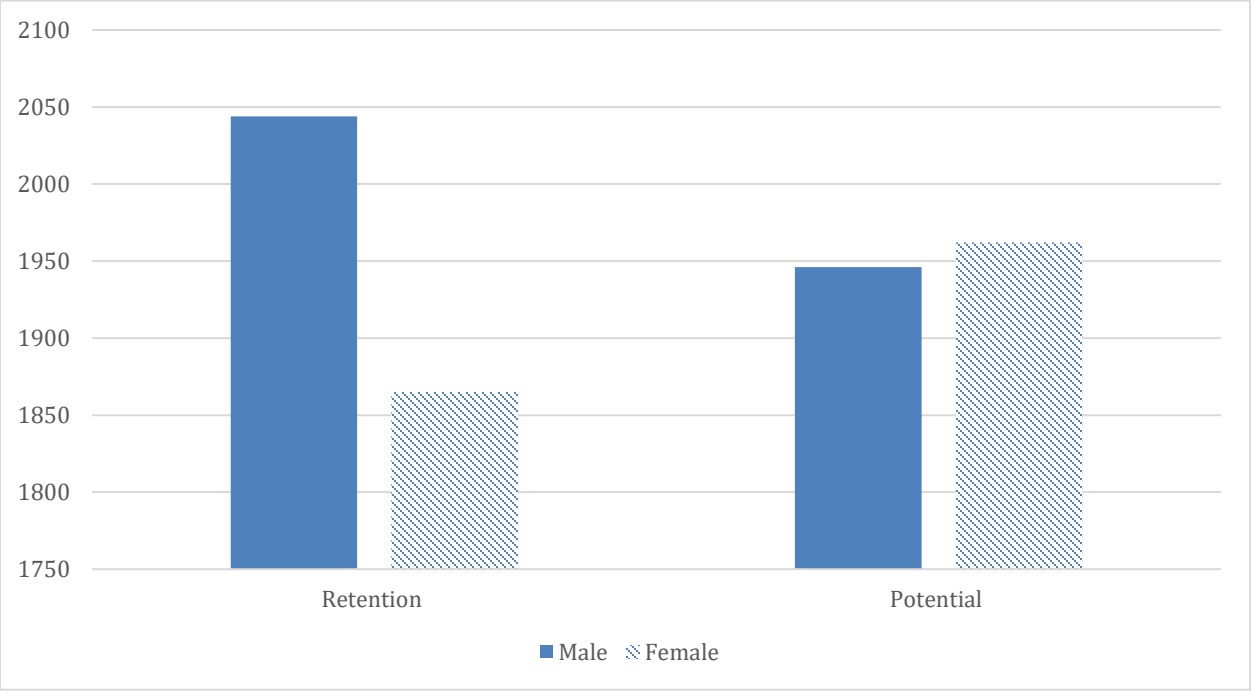
Firm Fixed-Effects Models Predicting Equity (Study 4: Top Executives)

	Initial awards		Refresh awards		Unvested refresh awards	
	Number	Value	Number	Value	Number	Value
Female	-0.192	-0.526	-0.188**	-0.176*	-0.164**	-0.190*
	(0.179)	(0.354)	(0.055)	(0.080)	(0.056)	(0.085)
% Female in industry	-0.130*	-0.014	0.020†	-0.036†	-0.015	-0.044†
	(0.061)	(0.092)	(0.011)	(0.020)	(0.014)	(0.023)
Firm size	0.359**	1.618**	0.114**	1.319**	0.207**	1.158**
	(0.124)	(0.159)	(0.021)	(0.037)	(0.027)	(0.043)
Firm performance	-0.039	-0.082	0.039**	0.371**	0.008	0.401**
	(0.078)	(0.173)	(0.013)	(0.027)	(0.018)	(0.032)
Age	-0.017*	-0.027*	0.009**	-0.012**	-0.019**	-0.025**
	(0.008)	(0.014)	(0.002)	(0.004)	(0.003)	(0.004)
Tenure			0.028**	-0.004	-0.013**	-0.021**
			(0.002)	(0.003)	(0.002)	(0.003)
Position dummies	Included	Included	Included	Included	Included	Included
Year effects	Included	Included	Included	Included	Included	Included
Constant	4.814**	-5.260**	2.701**	-2.185**	2.898**	-1.265*
	(1.349)	(2.202)	(0.256)	(0.454)	(0.342)	(0.553)
Within R^2	0.281	0.199	0.299	0.267	0.156	0.188
Adjusted R^2	0.266	0.183	0.299	0.266	0.155	0.187

Note. n = 1,868 executives-year observations for initial awards and 44,476 executive-year observations for refresh and unvested refresh awards. † Significant at the $p < 0.10$, * Significant at the $p < 0.05$, and ** Significant at $p < 0.01$ (two-tailed). Estimated values appear without parentheses while robust standard errors are below in parentheses. Values of equity awards (number), equity awards (value), and firm size (measured as market value) are log transformed. Female equals '1', male equals '0'. Firm performance is measured as shareholder return. Age and tenure in number of years (note that tenure is omitted from the initial awards, as all employees have '0' tenure at time of initial award). Position and year variables, measured with values of '1' if an observation is in a given position or year and '0' otherwise, are included in analyses but omitted from the table for parsimony (position and year estimates provided in Online Supplement M).

Figure 1

Distribution of Number of Stock Options by Employee Gender (Study 2: Experiment)



Note. two-tailed *t*-test for retention: *p*-value = 0.002; two-tailed *t*-test for potential: *p*-value = 0.851. The vertical scale begins at 1,750 instead of zero.