

# **THE ROAD TO PAY INEQUITY IS PAVED WITH GOOD INTENTIONS: EXAMINING THE GENDER PAY GAP IN EMPLOYEE EQUITY-BASED AWARDS**

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## **ABSTRACT**

Using novel data from two organizations that have been recognized as leaders for their gender equality efforts, we show that even when organizations are taking active steps to reduce gender inequality in more traditional forms of pay (e.g., salary and bonuses), gender pay gaps continue to exist for equity-based awards.

## **INTRODUCTION**

Although mounting evidence points to the reduction of within-job pay inequality, extant studies focus almost exclusively on more traditional forms of compensation, such as base pay and performance-based rewards, namely bonuses and merit raises (e.g., Abraham, 2017; Castilla, 2008; Petersen & Morgan, 1995; Petersen & Saporta, 2004). Thus, existing work overlooks the fact that workers today are increasingly paid in the form of equity-based awards, as well as the substantial implications this form of pay poses for their wealth (Bidwell, Briscoe, Fernandez-Mateo, & Sterling, 2013; Blasi, Freeman, & Kruse, 2013; Core & Guay, 2001; Hallock, 2012). For example, equity-based awards like stock and option grants have grown in popularity over the years, with the General Social Survey estimating that 19.5% of all private sector employees reported owning stock or stock options in their companies, while 7.2% specifically held stock options (NCEO, 2018). At the same time, some have estimated that the mean value of stock options held by option holders (if exercised on the day of their survey) was \$249,901, which represents nearly twice the respondents' annual pay, while the mean value of stock held is \$60,078 (Kruse, Freeman, & Blasi, 2010).

Given the lack of attention by scholars on equity-based awards coupled with the substantial implications such offerings pose for workers both in absolute and relative terms, it is unclear whether within-job pay inequality truly is "unimportant," as some claim (Petersen & Saporta, 2004: 853). To draw insight on within-job pay inequality in equity-based awards, we pair qualitative and quantitative data in this study. Given equity-based awards are virtually unexplored in the gender pay inequality literature (one exception: Carberry, 2010) and gender

pay gaps should not be present due to legislation, we adopt a more grounded approach to this investigation rather than developing formal hypotheses. Using a grounded approach helps us avoid any *a priori* biases we as researchers may have, and at the same time, enables us to gather insights which we can subsequently develop and further investigate (cf. Bansal & Corley, 2012; Bettis, Gambardella, Helfat, & Mitchell, 2015; Creswell, 2007). As such, we begin with semi-structured interviews of Human Resources (HR) professionals (mostly executives) which provide a basis for subsequent empirical tests. Our interview responses led us to believe that even when firms have learned to effectively reduce gaps in more traditional forms of pay, pay gaps are likely to still exist for equity-based awards.

To assess our predictions about pay gaps for equity-based awards, we next gathered quantitative field data. Notably, to help rule out alternative explanations for a gender pay gap in equity-based awards, we sought data from firms which have both been recognized as leaders for their gender equality efforts, and in which, equity-based awards were an important part of employees' compensation packages. Such sampling provides a conservative test of our expectations; that is, if exemplar firms have gender pay gaps in equity-based awards, the gaps in other firms are likely to be much larger (Cardador, 2017). Unlike any study we are aware of, we gain access to a wide array of different forms of employee compensation data, including equity-based awards, base pay, and performance-based rewards, as well as typical predictors of pay within firms including prior performance ratings, firm level, department, and job family. Perhaps surprisingly, we find that even in these exemplar firms, gender pay gaps in equity-based awards exist.

## METHODS

### Interviews with HR Professionals

We began with semi-structured exploratory interviews with HR professionals from distinct publicly traded companies, which we recruited from our own networks. Due to logistical reasons, we conducted interviews through a variety of means, including in-person, over the phone, and through e-mail. Our questions included whether their firms offered equity-based awards to employees, the extent that managers had discretion in the granting of these awards, whether their organization investigated gender pay gaps for equity (as well as other forms of employee pay), and the reasons for providing equity-based awards to employees.

Our interviews revealed a few consistent patterns. First, each respondent stated their firms were examining the extent that pay gaps existed for base pay and sometimes performance-based rewards (notably, it is possible that less focus is given to performance-based rewards in part because not all firms offer such rewards or because many firms examine gender gaps in performance evaluations, which performance-based rewards are often based on), and reducing these gaps when found. However, very few were taking the same steps for equity-based awards. Second, our interviews also revealed that managers both generally had discretion in the granting of equity to their employees (either in the determination of who receives equity or in the value of equity that employees receive) and the rationale for providing equity-based awards to employees tended to be more subjective and open to interpretation than the rationale of granting of other forms of employee compensation.

Prior research indicates that subjectivity in the rationale for distributing pay can lead to gender bias (Castilla, 2008; Heilman, 2012; Heilman & Haynes, 2008; Joshi, Son, & Hoh, 2015).

If firms are not checking and correcting for such bias, gender gaps in pay will continue to persist. Based on our interviews, it became apparent to us that while many firms are effectively reducing the pay gap for more traditional forms of employee pay such as base pay and performance-based rewards, the lack of attention on equity-based awards coupled with subjective reasons for distributing it, it is possible a gender pay gap may still exist for equity-based awards. Thus, we propose female employees will earn less than male employees for equity-based awards, even when in similar occupations and firms.

### **Study 1: Field Study of a Private Start-up**

To examine whether a gender pay gap existed in equity-based awards, we first gained access to personnel record data from a small (private) technology start-up in the United States. This organization has been public with employees about their commitment to addressing gender inequality, and has even won awards for their efforts. This organization provided us with personnel data, including demographic, employment-related, and compensation data, for all U.S. employees in 2016 ( $n = 216$ ).

#### **Measures**

*Dependent variables.* The dependent variables in our study are three different forms of employee compensation: 1) base pay, 2) performance-based rewards, and 3) equity-based awards. *Base pay* was measured using annual salary and *performance-based rewards* was measured using annual bonuses plus variable compensation, which is pay based on sales. Results are similar if we focus on only bonus pay similar to previous studies, such as Abraham (2017) and Elvira and Graham (2002). *Equity-based 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. Similar to previous studies, we logged all compensation variables in order to achieve a more normal distribution (Abraham, 2017; Castilla, 2015).

*Independent variables.* *Female* was coded as 1 if the employee was female and 0 if male.

*Control variables.* We controlled for a number of individual-level variables that relate to employee compensation (Abraham 2017; Castilla 2008). Given workers' experience often affects their pay level, we controlled for both employee *tenure* (measured in years at firm) and *age* (in years). We also controlled for the level within the firm by including dummy variables for each level of the organization (which ranged from level 1 to 7). The lowest organizational level, level one, was excluded from all models to avoid perfect collinearity and serves as a reference point.

#### **Analysis**

In our analysis, we used fixed effects assigned to the job family for each worker. Robust standard errors were also used to account for heteroscedasticity present in the data.

#### **Results**

We find no significant gap exists in base pay ( $p > .30$ ) or performance-based rewards ( $p > .80$ ); however, women earn significantly less than men in equity-based awards ( $p < .05$ ). Specifically, we find that after accounting for factors which may otherwise explain pay, female employees do not receive less than men in base pay or performance-based rewards, but receive over 15 percent less in equity-based awards than male employees. In other words, female employees averaged over 8,000 less stock option grants than male employees when in similar jobs and controlling for standard determinants of pay. As a robustness check, we controlled for salary and bonus in the regression of equity: the gender pay gap in favor of male employees remains even with these additional controls, but drops to above 10 percent. The findings from Study 1 support our belief that while firms may have eliminated within-job pay inequality for base pay and performance-based rewards, even a firm which has won awards for their gender equality efforts exhibits statistically significant differences in equity-based pay that result in female employees earning over 15% less than their male colleagues.

## Study 2: Field Study of a Publicly Traded Firm

In Study 2, we seek to provide further evidence that equity-based awards will be susceptible to gender pay gaps. We use personnel data from a large publicly traded technology firm. This firm provided personnel data for all U.S. employees in 2016 ( $n = 3,461$ ), including demographic data, employment-related data, and various forms of compensation data. Unlike the firm in Study 1, managers in this firm rated employees' performance on a yearly basis. The firm provided us with this data for the three most recent years, which allowed us to examine the extent to which female employees earn less than male employees while controlling for differences in performance. Similar to the start-up in Study 1, this firm has been public about their commitment to addressing the gender pay gap and has regularly been cited in the media as an exemplar for their gender equality efforts.

### Measures

*Dependent variables.* The dependent variables are 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 wages or salary and *performance-based rewards* was measured using annual bonuses (Abraham, 2017). *Equity-based awards* were defined in two different ways. First, the *number of equity-based awards* was measured as the total number of stock and stock option grants awarded to an employee over their tenure at the firm. Second, the *value of equity-based awards* was calculated as the total face value at the time of grant of employees' stock and option grants over their tenure. As with Study 1, and similar to previous compensation studies, we logged all compensation variables in order to achieve a more normal distribution (Abraham, 2017; Castilla, 2015).

*Independent variables.* *Female* was again coded as 1 if the employee was female and 0 if male.

*Control variables.* We again controlled for individual-level variables that affect employee pay (similar to Abraham, 2017; Castilla, 2008). Like Study 1, we controlled for employee *tenure* and *age*. We also controlled for *part-time status*, which equals one when an employee is part-

time. In addition, we controlled for organizational level using dummy variables for each level, which ranged from one to nine. The lowest organizational level, level one, was excluded from all models to avoid collinearity and serves as a reference point. In addition, in all models, we included dummy variables for each department (e.g., internal tools, product development, user experience, etc.) to better isolate within-job differences.

Last, as discussed above, in some models, we also controlled for employees' average *performance rating* across the last three years. In each year, managers rated the performance of their employees, excluding some lower-level employees (mainly level one). As some employees are excluded, we conduct analyses both with and without performance ratings to assess robustness (similar to Abraham, 2017). Performance ratings vary from 1 to 3, and are defined as the following: 1 indicates "needs improvement," 2 indicates "strong," and 3 indicates "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 were based on 1,832 employees.

## Analysis

Since employees in the firm are nested in job families, we used job family fixed effects models. Robust standard errors were used to account for heteroscedasticity present in the data.

## Results

Like Study 1, although we find small to insignificant gender gaps in base pay and performance-based rewards, we find a significant gender gap exists for equity-based awards. Specifically, we find that female employees received approximately 2 percent less in base pay than male employees, but no significant gap exists in performance-based rewards between female and male employees. Although the former relationship is statistically significant at the 0.01 level of analyses, the practical difference is small, amounting to a base pay difference of about \$1,500 in actual dollars. However, we find female employees received over 20 percent less in the number of equity-based awards ( $p < 0.01$ ) and over 30 percent less in the value of equity-based awards ( $p < 0.01$ ) than male employees in similar jobs. Moreover, the latter difference amounts to over \$5,000 in actual dollars. As a robustness check, we controlled for salary and bonus in the regression of number of equity awards and the value of equity awards: the gender pay gap in favor of male employees remains even with these additional controls, but drops slightly. Last, the above findings are robust to the inclusion of performance ratings in the sub-sample of employees where this variable is not missing: while women again earn a small amount less in base pay and similar amounts to men in bonus, they are granted over 20% less in the number of equity-based grants and approximately 30% less in the value of these grants. Thus, this leads to female employees earning an average of over \$11,000 less than male employees in equity-based awards, even when controlling for standard reasons why women often earn less than men.

## DISCUSSION

Using novel data from two distinct firms that are considered exemplars for their gender equality efforts, we show that while firms are taking care to reduce, and in some cases eliminate, within-job pay inequality in base pay and performance-based rewards, women earn significantly

less than men in equity-based awards. Thus, we show that even when firms are taking active steps to reduce gender pay gaps in some areas, female workers may still experience within-job pay inequality stemming from equity-based awards. According to our findings, within-job pay inequality continues to exist, and continues to be an important area of study. Yet, we show there has been a shift from traditional forms of employee pay to equity-based awards. Moreover, as we document the presence of within-job pay inequality for equity-based awards in two firms singled out as exemplars for their pay equality efforts, we believe that such gender-based pay gaps are likely to appear on a broader-level. That is, if firms which are praised for equality efforts have within-job gender pay inequality, it seems likely that firms which are less attentive to gender pay gaps are likely to have similar, if not worse, pay gaps. To our knowledge, no study has examined gender pay gaps for equity-based awards within the same job and establishment while controlling for many of the typical reasons that women earn less than men. The lack of investigation of such factors is likely due to, in part, the difficulty in attaining such personnel record data from firms (Hallock & Olson, 2010). In gaining access to such data, our study thus is the first in-depth investigation to bring insight to this important and overlooked area of research.

#### **REFERENCES AVAILABLE FROM THE AUTHORS**