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An Analysis of Gender Pay Disparity in the Nonprofit Sector: An Outcome of Labor Motivation or Gendered Jobs?

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Abstract:

Although pay differences between men and women with comparable characteristics are generally smaller in the nonprofit than in the for-profit sector, gender pay gaps in the nonprofit sector vary widely across industries. In some industries, gender pay gaps are as large as in the for-profit sector, but in others, women make more than comparably qualified men. Using Hierarchical Linear Modeling on the combined 2001-2006 American Community Surveys, we test nonprofit labor motivation theories against a gendered-job hypothesis to explain this variation. We find that gender pay gaps in the nonprofit sector are smaller in industries where nonprofits outnumber for-profits and where higher proportions of female-dominated occupations exist.

Introduction

Women have historically played important roles in charitable work (Themudo, 2009; Burbridge, 1994; Preston, 1994; Steinberg and Jacobs, 1994) and continue to comprise seven tenths of the nonprofit workforce, compared to around 40 or 50 percent of the for-profit and public sector workforces, respectively (Preston and Sacks, 2010; Leete, 2006). The predominance of women in the nonprofit workforce makes gender pay equity important because it can contribute to employee satisfaction and help ensure high quality work from an intrinsically motivated staff (Leete, 2000). The nonprofit sector generally pays men and women more equitably than the for-profit sector, but gender pay disparities vary widely across industries. We examine why this variation exists in the nonprofit sector.

The literature suggests two major explanations. First, from an economics, utility-based perspective, as nonprofits offer their employees more altruistic rewards, employees will accept less monetary pay. As Steinberg (1990, 160) notes, the intrinsic benefits gained by contributing to public goods or helping others derive from employees' profession instead of their sector of employment. However, because the nonprofit corporate form provides various advantages to organizations producing public rather than private goods, nonprofits tend to outnumber for-profits in industries that produce greater public or altruistic outputs. Therefore, we expect nonprofits in industries dominated by nonprofit organizations to pay less than nonprofits in for-profit dominated industries, as workers receive more of their compensation in the form of intrinsic, socially motivated benefits rather than pay. This will shrink the pay gap between men and women in nonprofit-dominated industries as managers emphasize equity in their pay decisions in order to maintain a satisfied workforce (Leete, 2000) and as the expected pay

reduction for men is greater than it is for women when they select nonprofit work (Preston, 1989).

Alternatively, from a sociological view, "women's work" pays both men and women worse than "men's work" does (England et al., 1994). Occupations traditionally filled by women pay less for comparably qualified workers than occupations traditionally filled by men, with the pay penalty typically larger for men (de Ruijter and Huffman, 2003; Cohen and Huffman, 2003; England et al., 1994). Thus, we expect industries with higher concentrations of traditionally female occupations to pay all workers less, but this pattern will be especially strong for men, leading to greater equity in earnings.

We expect both nonprofit and women's work to lower men's pay more than women's, leading to greater gender pay equity, and we test both hypotheses in this analysis. Using hierarchical linear modeling (HLM) on the 2001-2006 American Community Survey (ACS), we test the relative importance of the percentage of workers in an industry who work for nonprofits and the concentration of female-dominated occupations on men's and women's pay across the U.S. nonprofit workforce, controlling for individual characteristics.

We find evidence that lower earnings in industries dominated by nonprofits and occupations dominated by women lead to greater relative gender pay equity *within* the same industries but to greater pay disparities for workers of comparable characteristics *across* the nonprofit workforce. These findings raise employment and efficiency concerns for nonprofits concentrating in low paying industries. Already, close to 40 percent of nonprofits report staff retention problems, with many employees leaving to higher paying nonprofit positions elsewhere in the economy (Linscott, 2011; Opportunity Knocks, 2010). The persistence of low-paying

positions combined with increases in the pay and participation of women across professions

could lead to greater retention difficulties and lower performance of those nonprofits over time.

Literature Review

Nonprofit employees earn less than employees in other sectors. However, male-female

pay differentials for similarly qualified workers are smaller in the nonprofit sector (Preston and

Sacks, 2010; Leete, 2000; Preston, 1989). Preston (1990) argues that women disproportionately

prefer nonprofit employment because of greater gender equity in the sector. Controlling for

human capital characteristics, location, industry, and occupation, women earn less than men in

the nonprofit sector (Preston and Sacks, 2010; Leete, 2000; Ruhm and Borkowski, 2000;

Preston, 1990; Preston, 1989), but the male-female pay gap is around 8 percentage points smaller

in the nonprofit sector than in the for-profit sector (Lewis and Faulk, 2008; Leete, 2000).

However, the magnitude of the gender pay gap in the nonprofit sector varies significantly by

industry (McGinnis, 2011; Lewis and Faulk, 2008; Salamon and Sokolowski, 2006; Salamon,

2002; Leete, 2000; Ruhm and Borkowski, 2000). While nonprofits generally demonstrate greater

gender pay equity than for-profits, nonprofit gender pay gaps in some industries approach those

found in the for-profit sector (Lewis and Faulk, 2008). We find two potential explanations of this

variation in the literature.

Labor Donation and Worker Motivation Hypotheses

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First, intrinsic rewards generally attract employees to the nonprofit sector and compensate for its lower pay (Handy and Katz, 1998; Preston, 1989; Mirvis and Hackett, 1983). Nonprofit employees value the mission-related performance of the sector as part of their compensation and are willing to accept lower wages (De Cooman, De Gieter, Pepermans, and Jegers, 2009; Auteri and Wagner, 2007; Leete, 2006; Leete, 2000). Nonprofit organizations also use bonus and pay-related incentives less than for-profits (Roomkin and Weisbrod, 1999), in part because extrinsic motivation through pay incentives could conflict with the self-selection process that attracts altruistic, mission-focused employees (Kreps, 1997).

However, nonprofits operate in many different industries with varying levels of public or altruistic outputs (Young and Steinberg, 1995; Titmuss, 1970). Due to the public or private nature of goods produced in different industries, nonprofit organizations are more active in certain industries than in others. Only a few nonprofits exist in industries such as manufacturing and construction that primarily produce private goods. Many more operate in industries such as broadcasting, publications, and healthcare that produce a mix of public and private goods. Meanwhile, nonprofits predominate in industries such as social services that produce more public-oriented goods and services.

Nonprofits concentrate in industries that produce public goods partly because work performance and outcomes in these industries are difficult to assess, which increases the severity of information asymmetries between buyers and sellers, or principals and agents (Hansmann, 1987, 1980; Krashinsky, 1997, 1986; Easley and O'Hara, 1986). The goods produced may be non-rival and non-excludable, such as public radio, where donors cannot assess the independent impact that their specific contribution makes on the quality or quantity of the outputs. Alternatively, donors or purchasers may not directly receive the services themselves. Examples

of these industries include nursing home care for Alzheimer's patients, pre-school childcare, or international relief. Since the person paying for the services does not receive them directly, they cannot fully evaluate the quality of care, and the person receiving the care cannot fully report to them. Nonprofits' non-distribution constraint and mission-orientation rather than profit-orientation lead consumers and the public at large to trust people working in nonprofits to unscrupulously take advantage of such information asymmetries less than for-profit employees (Handy and Katz, 1998; Hansmann, 1980).

Workers who will accept lower pay in exchange for mission-related satisfaction are more likely to choose these industries than are more pay-focused employees, facilitating greater internal trust within organizations and reinforcing society's trust of nonprofits (Handy and Katz, 1998, 248). However, because intrinsic motivation is essential to a mission-focused workforce, managers must maintain high motivation to retain employees and ensure high-quality work. Because pay incentives are difficult to implement fairly due to the information asymmetries, nonprofits in nonprofit-dominated industries rely heavily on the intrinsic motivation of their employees (Leete, 2000; Kreps, 1997; Preston, 1990; Hansmann, 1980). In these settings, non-pecuniary work incentives, such as an equitable work environment, work-life balance, and feeling a part of a team, all motivate high-quality work (Mirvis and Hackett, 1983). If women, who represent a large proportion of the nonprofit workforce, feel they are not being paid equitably to men, this would lower work productivity (Ben-Ner, Ren, and Paulson, 2010). This creates a strong incentive for managers to design wages to be more equitable across workers to provide a motivating work environment (Leete, 2000), which leads to lower wage dispersion in industries that rely more heavily on intrinsic motivation. Thus, gender pay gaps may be smaller

in more nonprofit-dominated industries due both to the wage compression associated with everyone accepting less pay and to efforts to raise women's pay to be more comparable to men's.

Since nonprofit organizations operate in industries with a wide range of mixes of public and private goods, managers' dependence on intrinsic worker motivation varies across nonprofits. Nonprofits in industries dominated by for-profit firms tend to have higher pay, worker outputs that are more easily monitored and extrinsically rewarded, and less reliance on intrinsic motivation. Therefore, the higher the predominance of nonprofits in an industry, the lower the pay will be for all employees, in part to ensure self-selection of employees motivated more by mission than pay, and the more equitably nonprofit managers will pay their employees to maintain this motivation.

> *Hypothesis 1: The higher the percentage of employees in an industry who work for nonprofit organizations, the lower pay will tend to be for both men and women with comparable qualifications.*

> *Hypothesis 2: The higher the percentage of employees in an industry who work for nonprofit organizations, the smaller the gender pay disparities will tend to be.*

Gendered Jobs Hypothesis

From a sociological perspective, occupations traditionally filled by women typically pay comparable workers less than occupations traditionally filled by men. The pay penalty in traditionally female jobs is larger for men (de Ruijter and Huffman, 2003; Cohen and Huffman, 2003; England et al., 1994). This pattern may be especially strong in nonprofits, as unpaid female volunteers historically provided many services. This depressed pay in these positions when nonprofits began to hire employees to fill them (Steinberg and Jacobs, 1994). Before the

twentieth century, women had few professional options, and some opted to dedicate themselves as volunteers in health, social services, social justice, and other nonprofit positions (McCarthy, 1994). As these fields professionalized in the 1900s, women entered into paid professions, but these jobs remained low-paying (Burbridge, 1994).

Thus, traditionally female jobs in the nonprofit sector pay less than other positions, though research applying a gendered jobs hypothesis within the nonprofit sector has relied more on descriptive statistics than on multivariate analysis (e.g., Gibelman, 2003). Outside of the nonprofit context, however, a large body of research examines the impact of gender-dominated occupations and industries on male-female pay gaps. A strong research stream on the gender composition of occupations uses women's self-selection into particular jobs, tokenism, or the devaluing of women's work to explain male-female wage differentials (Cohen and Huffman, 2003; deRuijter and Huffman, 2003; England et al., 1998; Odendahl and Youmans, 1994). Multivariate analyses controlling for human capital and job characteristics (e.g., de Ruijter and Huffman, 2003) find that both men and women earn significantly less in female-dominated than in male-dominated occupations, but the pay disadvantage is larger for men. Thus, unexplained gender pay gaps are smaller in female-dominated occupations.

The industries in which nonprofits operate vary in the proportion of their employees who work in traditionally female occupations. We expect this variation to partially explain differences in the magnitude of nonprofit gender pay gaps across industries. We expect nonprofits in industries with higher proportions of employees in traditionally female occupations to pay workers less, but more equitably, than nonprofits in other industries.

Hypothesis 3: Nonprofit workers in industries with higher proportions of female-dominated occupations will experience greater gender pay equity since men will earn less in those jobs.

Finding support for each of these three hypotheses would have different implications for how we assess persistent gender pay gaps across the nonprofit sector. Support for either the labor donation hypothesis (H1) or the gendered jobs hypothesis (H3) would indicate that gender pay equity is the product of wages bottoming-out in certain industries rather than women's pay being raised to that of men with comparable characteristics. Alternatively, support for the equity motivation hypothesis (H2) alone would defend the notion that managers intentionally set women's pay as high as men's where intrinsic motivation is an important factor to employee productivity. Women would earn more *and* earn more comparably to men in those industries. Albeit through different mechanisms, finding support for either the labor donation or the intrinsic motivation hypothesis would further support the notion that the nature of the goods produced drives gender pay equity in the sector. In contrast, if gender pay equity is driven by workers being paid less in industries dominated by traditionally female occupations, latent gender pay discrimination could explain the apparent gender equity in those industries, raising concerns that the historical and societal implications of 'female work' are the culprits of overall female pay "equity" in the sector.

We test the relative importance of the gender composition of occupations versus the nonprofit composition of industries on reducing gender pay disparities. Because women are over-represented in nonprofit work (Preston and Sacks, 2010), nonprofit-dominated industries may have both a greater need for intrinsic worker motivation and greater proportions of female workers, potentially conflating the two effects. Therefore, we assess the independent effects of

the nonprofit-dominance of industries and the gender-dominance of occupations, controlling for each in our analysis. The more nonprofits dominate an industry, the more equitable nonprofit pay will be. However, we expect the female-dominance of occupations within industries to explain part of this effect since nonprofit workers sort by occupation as well as by industry.

Data & Methodology

Data

We test our hypotheses using the Census Bureau's annual American Community Survey (ACS) for 2001 through 2006.[1] Over those six years, the ACS includes data on 4.3 million private-sector workers, including over 400,000 who work for nonprofit organizations. We use all 4,311,000 private-sector workers to calculate the nonprofit percentage of each industry and the female percentage of each occupation. We restrict our analysis to 346,000 white, nonprofit-sector employees to allow us to focus on gender pay gaps. Due to missing data, the final sample comprises 313,670 nonprofit workers.

Method

Because we use variables measured at the individual, occupation, and industry levels, we use a two-level Hierarchical Linear Model (HLM). The second level of the model includes industry-occupation groups in a cross-classified second level (Raudenbush and Bryk, 2002), since workers are sorted by both industry and occupation. HLM is superior to OLS regression for our purposes because HLM recognizes that the workers are nested in industries and occupations,

and it allows the regression coefficients to vary across industries and occupations. Since previous studies have shown that nonprofit gender pay gaps vary by industry, we cannot assume that gender has a fixed effect on pay across industries (Loeb, 2003).

While using interaction terms in OLS allows slopes and intercepts to vary, HLM allows a richer interpretation of such variance. We can demonstrate what percentage of the variance is attributed to differences between industry-occupation groups and the percentage of variance that takes place within industry-occupation groups (Loeb, 2003). This permits us to determine how much gender pay gaps vary across industries, controlling for individual characteristics, and the extent to which the nonprofit-dominance of the industry and the female-dominance of occupations explain that variance.

Variables and Models

Our dependent variable is the natural logarithm of earnings in the previous year converted to 2006 real dollars using the consumer price index (Bureau of Labor Statistics, 2009). We code our gender variable 1 for women and 0 for men. Variables on the first (individual) level include a dummy for whether individuals work part-time (less than 40 hours a week or 48 weeks a year), hours worked per week, weeks worked per year, estimated experience, estimated experience-squared, state, a dummy for people who are not proficient in English, a dummy for having a disability, and two sets of dummies for educational attainment and year. We calculate estimated experience by subtracting individuals' years of education and six years of pre-education from their age. As is common in wage studies, we also include squared experience because we expect earnings to increase at a decreasing rate with experience.

[Table 1 Here]

Our second level comprises 16,538 industry-occupation cells generated by combining detailed industry and occupation information for nonprofit workers in the U.S. workforce. These industry-occupation cells include all combinations found in the sample between the 250 detailed census industry categories and the 845 detailed census occupation codes. To test our hypotheses, we introduce two main variables on this second level of analysis, one that varies by industry and one that varies by occupation.

To test the labor donation and equity motivation hypotheses (H1 and H2), we measure the nonprofit dominance of each industry, calculated as the percentage of its employees who work for nonprofits. This variable is roughly comparable to Weisbrod's (1988, 75) "collectiveness (or publicness) index," reflecting the degree of public rather than private good outputs generated by nonprofit industries. As that measure is typically calculated as the percent of organizations' revenues that comes from contributions and the ACS measures data at the individual level, our measure captures the nonprofit nature of an industry using workers rather than revenues. We also include the percent nonprofit squared, since Lewis and Faulk (2008) find a curvilinear relationship with wage. We calculate these variables by industry, yielding 250 unique values across all industry-occupation groups. Industries in the sample range from 0.4% to 100% nonprofit. The average industry is 25 percent nonprofit (Table 1).

To test the gendered jobs hypothesis, we follow previous studies (e.g., de Ruijter and Huffman, 2003) by including the percent of employees in each person's occupation in the private sector workforce who are women. We measure this variable for each occupation code, generating 845 unique values. After excluding for-profit workers, close to 70 percent of the final sample is female, which is consistent with previous research (Preston and Sacks, 2010; Leete, 2006). This demonstrates the prevalence of female employment in the nonprofit sector.

However, female sorting by occupation varies widely across the sector. Occupations range from

0% to 98.3% female, with an average of 48 percent.

We divide both industry-occupation variable percentages by 10 so that coefficients

represent changes in earnings for each ten-percentage point increment in the nonprofit share of

industries' workers and occupations' female representation, respectively. We interact these

industry-occupation variables with gender to explain differences between industry-occupation

groups in women's expected earning gaps, controlling for the other variables in the model.

Incorporating each of these variables, we develop the following two-level model[2]:

First level: $ln(earnings)=b_{0j}+b_{1j}Female+b_{2j}X+r_{ij}$

Second Level:
$$b_{0j}=\gamma_{00}+\gamma_{01}NP+\gamma_{02}NP^2+\gamma_{03}FM+u_{0j}$$
$$b_{1j}=\gamma_{10}+\gamma_{11}NP+\gamma_{12}NP^2+\gamma_{13}FM+u_{1j}$$
$$b_{2j}=\gamma_{20}$$

Combined Model:
$$ln(earnings)=\gamma_{00}+\gamma_{01}NP+\gamma_{02}NP^2+\gamma_{03}FM+\gamma_{10}Female+\gamma_{11}Female*NP+$$
$$\gamma_{12}Female*NP^2+\gamma_{13}Female*FM+\gamma_{20}X+r_{ij}$$

Where:
$Female$ = 1 if female and 0 if male
X = all control variables (part-time status, state, English ability,
disability, education, hours worked per week, weeks worked per year, estimated
experience, estimated experience^2, and year)
NP = Percentage of nonprofit employees within industries
NP^2 = Squared percentage of nonprofit employees within industries
FM = Percentage of female employees within occupations

Our analysis proceeds in four steps. First, we run a fully unconditional model including

female as the independent variable without controls to determine the base-level variance of the

gender pay gap across industries and occupations. Second, we introduce our level-one

(individual) variables. The proportional reduction in the pay gap variance from the base model to

the full level-one model indicates how much of the variance across industries and occupations is

explained by differences between individual worker characteristics.[3] The coefficient on *female* in this model is essentially the average within industry-occupation pay gap across industries and occupations. The full level-one model also provides a partially conditional model from which to measure the amount of between-group variance we explain with the industry-level variables in the subsequent models. Third, we add the percentage of employees in an industry who work for nonprofits. We expect this to lower pay for both men and women but for its effect to be stronger for men. Therefore, the *female* coefficient should shrink. Fourth, we add the percentage of workers in each person's occupation who are women. We expect the percent female of an occupation to have a negative effect on earnings for all workers, but especially for men. Since we expect industries dominated by nonprofits to have higher proportions of employees in "female" occupations, we expect part of *NP's* effect to be indirect through *FM*. Therefore, we expect the fully conditional model to estimate (1) weaker direct effects (i.e., weaker coefficients) of *NP* than model 3, (2) significant negative effects of *FM* on expected earnings across industries and occupations, and (3) significant positive moderating effects on expected male-female pay equity. Calculating the proportions of intercept and slope variances that this model explains, compared to the unconditional and partially conditional models, allows us to determine how much our models contribute to explaining nonprofit pay variance across industries and occupations (Raudenbush and Bryk, 2002). This and any remaining unexplained intercept and slope variance can help inform future research directions concerning nonprofit pay equity.

Analysis

As can be seen in the correlation matrix in Table 2, without introducing any controls, being female and the percentage of females in an occupation are moderately and negatively correlated with earnings. The percentage of nonprofits in an industry is weakly and negatively correlated with earnings. Interestingly, and unexpectedly, being female has a slight negative correlation with the percentage of nonprofits in industries. This indicates that, conditional on working in a nonprofit occupation, women are slightly less likely to work in industries that include a higher percentage of nonprofits. Particularly important for this analysis, the percentage of nonprofits in an industry and the percentage of females in an occupation have a very weak, negative correlation, making it unlikely that one variable completely explains the other.

[Table 2 Here]

Figure 1, below, graphically demonstrates the lack of correlation between the nonprofit-dominance of industries and the female-dominance of occupations. The figure demonstrates the mean percent nonprofit and the mean female composition of occupations for each major industry category. It is clear from the figure, as well as from the correlation above, that neither women nor female-dominated occupations are systematically grouped within industries with higher proportions of nonprofit workers.

[Figure 1 Here]

The base (fully unconditional) model in Table 3 shows that not controlling for any individual or industry-occupation variables, females on average earn around 24.8 percent less than males in the nonprofit sector. Though not reported in Table 3, the base model also indicates that there is significant between industry-occupation variance of the female earnings gap to explain with level-2 variables ($\tau_{01} = 0.088$, p<0.001).

The full level-one model, including all individual level controls, shows that much of the unexplained variance in the gender wage gap for nonprofit workers in the base model is explained by individual level characteristics. Controlling for individual characteristics, the female earnings gap variable is estimated to be around 14.2 percent. The τ_{01} variance statistic for the female earnings gap is still significant (p<0.001) but drops to 0.018, indicating that the full individual controls explain almost 80 percent of the variance in female earnings gaps across industry-occupation groups. This statistic also provides the base level-one variance τ_{01} to assess the proportional reduction in τ_{01} with the two-level models.

[Table 3 Here]

The partial 2-level model introduces the percent nonprofit of industry variables to explain the variance in the female earnings gap effect on expected earnings across industry-occupation cells. These cross-level interactions may be interpreted as interaction terms in standard OLS models. As shown in the Partial 2-level model in Table 3, we find support for the labor donation hypothesis (H1) but not the equity motivation hypothesis (H2). According to the labor donation hypothesis (H1), the stronger the nonprofit-dominance of an industry (*NP*), the lower the earnings of both men and women will be, holding their other characteristics constant. This shrinks the male-female earnings gap as *%NP* increases through men earning closer to a pay floor rather than through women earning more than women with comparable characteristics in other industries.

The percent nonprofit of an industry at the intercept is the sample mean of 25 percent. From this base, a ten percentage point increase in the percent nonprofit of one's industry decreases men's expected earnings by around 10.2 percent, holding individual characteristics constant and accounting for the squared term. When 25 percent of the industry is nonprofit,

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controlling for individual characteristics with mean work hours, weeks, and experience, women's

expected pay is around 16.8 percent lower than men's. A 10-point rise in *%NP* lowers men's

expected earnings by 10.2 percent but only lowers women's by 6.0 percent. Thus, the expected

male-female pay gap shrinks by 4.2 percentage points.

With a significant positive squared *NP* term, this effect is expected to be curvilinear with

a decreasing negative effect of *NP* through the range of the data. For women, expected earnings

are around 16.8 percent lower than the earnings of men with comparable characteristics in

industries with the sample mean of a 25 percent nonprofit workforce. With each ten percentage

point increase in the percent nonprofit, the earnings gap is expected to shrink at a decreasing rate

as *NP* increases. The combined male and female impacts on expected earnings from differences

in the percent nonprofit of their industry lead to a shrinking gender earnings gap across

industries, moving from industries with a low percentage of nonprofit to industries with higher

percentages.

The fully conditional 2-level model in Table 3 introduces the percent female of occupations

variable in addition to the percent nonprofit of industries to determine the

independent effects of these industry-occupation variables. This also allows us to determine if

the percent female of one's occupation explains any of the effect that the percent nonprofit of

one's industry has on his or her expected earnings in the nonprofit sector. The gendered jobs

hypothesis (H3) expects that percent female will have a negative association with male and

female earnings but that men's will drop more sharply than women's, which will lead to a lower

female earnings gap in "female" jobs. As shown in Table 3, these findings support this

expectation. Men are expected to receive around a 6.4 percent earnings penalty with every 10

percentage point increase in the percentage of females in their occupation, while women receive

an earnings penalty that is around 1.7 percentage points smaller. These findings also show that the percentage of females in one's occupation indeed explains part of the effect that nonprofit-dominance of industries has on earnings. Controlling for occupations' gender composition and accounting for the squared term, the direct effect of a ten percentage point increase in the nonprofit makeup of an industry on men's expected earnings drops from a -10.2 percent to a -7.8 percent impact. For women, the cross level interaction between percent nonprofit and female lessens the negative effect of a ten percentage point increase in an industry's nonprofit composition on expected earnings by only 2.8 rather than 4.2 percentage points. Thus, instead of the gender pay gap shrinking by 6.0 percentage points with a 10-point increase in *%NP*, as in the partial two-level model, it shrinks by only 5.0 percentage points controlling for *%FM*. Therefore, the labor donation hypothesis (H1) is still supported, but we also find support for the gendered job hypothesis (H3).

The fully conditional (Full 2-Level) model explains 84 percent of the gender earnings gap variance from the fully unconditional model. Compared to the base of the full level 1 model, the industry and occupation variables explain 22 percent of the between industry-occupation cell variance in the female earnings gap and 7 percent of the male earnings intercept variance across industries and occupations. There is still a significant amount of between industry-occupation gender earnings gap variance ($\tau_{01} = 0.014$, p<0.001) left to explain, which could be approached with future research.

[Figure 2 Here]

For illustrative purposes, the graph in Figure 2 demonstrates the expected male-female earnings differences from the full 2-level model across the major industry categories that include U.S. nonprofit employees. These estimates are calculated for hypothetical full-time English

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proficient college graduates in 2006 without disability and with average experience working in

an occupation with the average percentage of females and in an industry with the average

percentage of nonprofit employees in each industry category. As shown, taking into account both

changes in the nonprofit composition of industries and occupations' gender composition across

industries, men and women with comparable characteristics are expected to have larger

unexplained gender wage discrepancies in industries that have lower shares of nonprofit workers

in the broader U.S. private industry labor market. In industries with greater proportions of

nonprofit employees, male and female earnings are expected to be more equitable, with women

expected to earn slightly more than men in nonprofit-dominated industries. However, as is clear

in the downward trend for both male and female earnings across industries, this equity comes at

a cost to both males and females who face drastic earnings penalties for working in those

industries.

Conclusion

We find evidence that labor donations are higher in industries with greater percentages of

nonprofits. We also find that occupations dominated by female employment pay less than

gender-neutral or traditionally male occupations. Instead of intentionally compensating women

more equitably in the nonprofit sector, relative gender pay equality appears to be a convenient

consequence of men accepting lower pay in traditionally nonprofit and female jobs.

Overall, this analysis demonstrates the importance of explaining pay differentials

between industries and occupations in the nonprofit sector. Findings show very different

outcomes and implications regarding industry earnings structures across the nonprofit sector than have been shown in previous studies (see Preston and Sacks, 2010) that only control for industry and occupation without allowing for and explaining randomly varying effects between industries and occupations. As shown above, both the proportion of nonprofit employees in individuals' industries and the proportion of female employees in individuals' occupations are related to workers' earnings in the U.S. nonprofit sector. Each of these variables has a negative relationship with overall pay levels and a simultaneous positive association with gender pay equity. So, even though previous research on pay gaps in the U.S. economy highlights how much more equitable the nonprofit sector is, this analysis identifies persistent inequalities within the sector.

Nonprofit employees' individual human capital characteristics, location, English ability, work status, experience, and hours and weeks worked explain a large portion of the gender pay gap variance across the nonprofit sector. Industry and occupation differences, however, play an important role in determining the overall pay return from those individual characteristics. Both male and female nonprofit employees in industries dominated by for-profit work and in male-dominated occupations receive the largest pay returns on their human capital and individual characteristics, even though the unexplained gender pay gap in these industries and occupations is greater than in industries and occupations with higher proportions of nonprofit and female workers. Restricting our analysis to white employees limits us from confidently generalizing these findings to minority workers, but we would expect these same general relationships to be present in the broader population employed in the U.S. nonprofit sector.[4]

This analysis raises some important issues in terms of equal pay in the nonprofit sector. Primarily, individual employees of similar characteristics do not earn equal pay for their human capital across the sector. Furthermore, this pay penalty for both men and women systematically

increases as the nonprofit-dominance of industries increases, even controlling for the alternative explanation regarding the impact of female dominated occupations. As discussed above, this supports the labor donation hypothesis. However, this still raises important implications for nonprofit managers, leaders, and funders in nonprofit-concentrated industries. These results imply that organizations' compensation of human capital in these industries may not allow them to fully compete for labor in the market. With higher mobility of employees between sectors and industries, increasing turnover in traditionally nonprofit and female jobs, and the increasing entry of women into professions across the economy, relying on labor donations to fill traditionally nonprofit positions may be increasingly untenable for attracting and maintaining a highly satisfied and productive workforce. Employers may find themselves better off by breaking away from dependence on short-term labor donations and instead focusing on the comparable worth of their employees, not just in terms of equal gender pay but between-industry pay equity as well.

While female workers in industries that are highly saturated with nonprofit employment earn more equitable pay, this equity comes at a high cost in terms of expected pay for both male and female nonprofit employees compared to their peers in industries with fewer nonprofits. Even if low pay structures ensure a highly altruistic workforce in industries with greater public or collective outputs, is it worth a constant turnover from lack of pay advancement in these industries? From a sector- or society-wide perspective, do we value work in these industries less than work in industries with greater for-profit dominance? Again, in terms of attracting high quality employees across the sector, what are the implications of maintaining these industry earnings patterns? If the positive motivational effect of equal pay in low paying industries is overcome by the negative motivational effect of being paid less than employees in other industries, higher levels of funding in nonprofit-dominated industries to encourage higher, more

competitive earnings may be warranted. From an empirical standpoint, we cannot answer these

questions with these data, but we raise them for future research.

End Notes

[1] The data and other information on the American Community Survey are publicly available from the Census Bureau's website (www.census.gov/acs). Like previous studies using Census data, there are some limitations to using these data. Primarily, the nature of census data limits us from making strongly defensible arguments regarding the causal relationships between variables in our models. We are unable to track individuals across time, and we cannot randomly assign individuals into jobs and industries. We also lack data on potentially important organizational variables.

[2] We center all interval level-1 variables (e.g., experience) at their industry-occupation means (level-2 group) since group-mean centering yields more consistent and reliable estimates in multilevel models with cross-level interactions as is done in this analysis (Enders and Tofighi, 2007; Hofmann and Gavin, 1998; Kreft, de Leeuw and Aiken, 1995). Centering at the sample means results in estimates that are comparable to those shown in this analysis. All level-1 dummy variables are uncentered, and all level-2 variables are grand-mean centered on the sample mean.

[3] The proportional reduction in the variances (formally, τ_{00} and τ_{01}) of these parameter estimates between groups is calculated by subtracting the final variance from the initial variance and dividing by the initial variance (Raudenbush and Bryk, 2002). For example, ($\tau_{00\text{-unconditional}}$ - $\tau_{00\text{-conditional}}$) / ($\tau_{00\text{-unconditional}}$) gives the proportional reduction in τ_{00} from the unconditional to the conditional model.

[4] We do not include minority workers due to the additional complexity including those variables would add to the models. Previous studies (e.g., Leete, 2000) indicate that race would also explain some pay variation in the larger population of nonprofit workers, although it is unclear how race would interact with the second level variables in our models. Leete (2000) finds that minorities in addition to women are paid more equitably in the nonprofit sector, so similar relationships between minority pay equity and percent nonprofit may exist.

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Table 1: Descriptive Statistics on Key Variables

	Level-1 (Individual Level) Variables (N=313,670)					
Variable Name		*Mean*		*SD*	*Min.*	*Max.*
	Male	*Female*	*All*			
Ln(Earnings)	10.26	9.92	10.03	1.2	1.4	13.8
Female	0.00	1.00	0.67	0.5	0.0	1.0
Part-Time	0.36	0.54	0.48	0.5	0.0	1.0
Hours	40.81	35.49	37.2	13.3	1.0	99.0
Weeks	45.98	45.17	45.4	12.8	1.0	52.0
Limited English	0.01	0.01	0.01	0.1	0.0	1.0
Disability	0.10	0.08	0.09	0.3	0.0	1.0
Experience	23.75	23.45	23.6	14.0	0.0	83.0
Experience Squared	773.5	737.6	749.3	729.6	0.0	6,889.0
High School Degree	0.38	0.50	0.46	0.5	0.0	1.0
College Degree	0.24	0.28	0.27	0.4	0.0	1.0
Masters Degree	0.18	0.14	0.16	0.4	0.0	1.0
Professional Degree	0.06	0.02	0.03	0.2	0.0	1.0
Doctoral Degree	0.07	0.02	0.03	0.2	0.0	1.0

	Level-2 (Industry-Occupation Cells) Variables (N=16,538)			
Variable Name	*Mean*	*SD*	*Min.*	*Max.*
% Nonprofit in Industry	25.4	32.0	0.4	100.0
% Nonprofit Squared	1,673.0	3,020.0	0.2	10,000.0
% Female in Occupation	47.5	27.6	0.0	98.3

Table 2: Correlation Matrix of Key Variables

	Earnings	Female	% Nonprofit	% Female
Earnings	1.0000			
Female	-0.2089	1.0000		
% Nonprofit	-0.0677	-0.0380	1.0000	
% Female	-0.1602	0.5100	-0.0469	1.0000

(obs=313670)
All correlations are significant at p<0.001

Table 3: Multilevel Earnings Gap Analysis

	Base Model	Level 1	Partial 2-Level	Full 2-Level
Female Earnings Gap	-0.248***	-0.142***	-0.168***	-0.157***
	(0.008)	(0.005)	(0.007)	(0.007)
% Nonprofit*Female			0.046***	0.031***
			(0.005)	(0.005)
% Nonprofit Squared*Female			-0.004***	-0.003***
			(0.000)	(0.000)
% Female*Female				0.017***
				(0.002)
Male Earnings (Intercept)	10.115***	9.573***	9.597***	9.586***
	(0.009)	(0.035)	(0.035)	(0.035)
% Nonprofit			-0.109***	-0.083***
			(0.009)	(0.009)
% Nonprofit Squared			0.007***	0.005***
			(0.001)	(0.001)
% Female				-0.064***
				(0.003)
Includes Controls	No	Yes	Yes	Yes

Dep. Var. = ln(earnings)
***p<0.001
 **p<0.01
* p<0.05
Robust Standard Errors in parentheses
%NP and %FM variables are measured in 10% increments
Individual control variables are centered around each industry-occupation mean
Industry-Occupation variables are centered around the grand mean

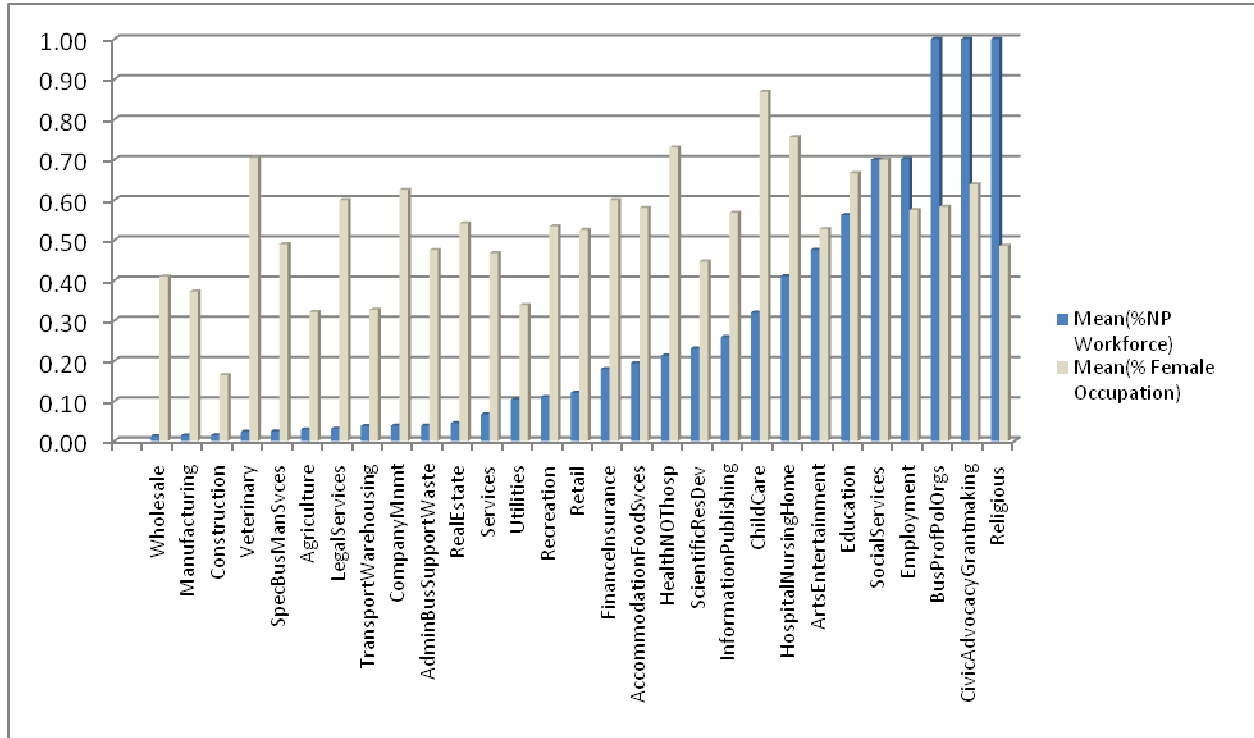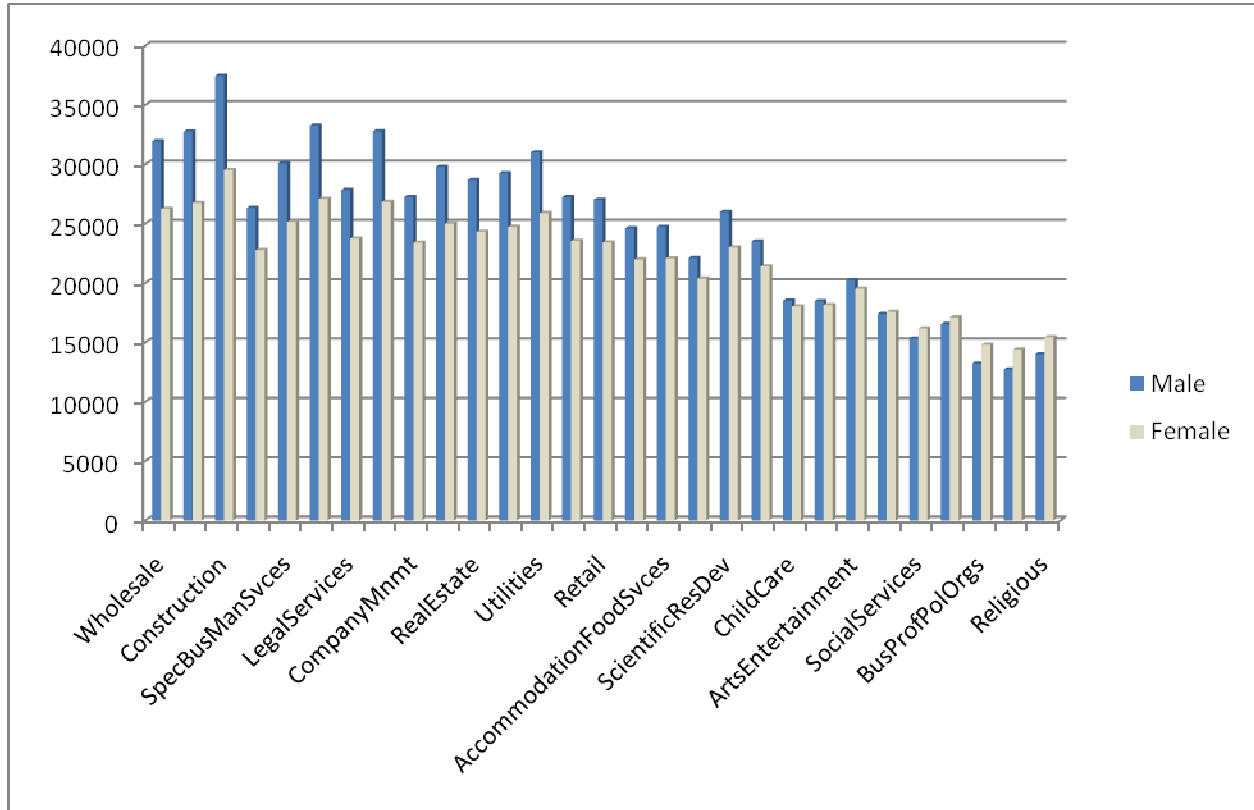Figure 1: Industries by Proportion Nonprofit and Proportion Female

Figure 2: Expected Earnings by Industry Category*

*for full-time, English proficient college graduates in 2006 without disability and with average experience, hours and weeks worked, and based on average values of %NP and %Female (occ.) by industry category