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July 20, 2006

Nicole Ballenger
Associate Vice President
Academic Affairs
1000 E. University Ave.
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Dear Nicole,

At long last, I have completed my report, Assessment of Salary Differences for University of Wyoming Personnel. I am attaching the final draft of the study to this email, along with one appendix, and an invoice. The study has been very interesting to conduct, and I have enjoyed working with you. Please also convey my regards and thanks to Lisa Muller, Justin McDonald, Ned Feldbush, Myron Allen, and Sara Axelson. All were very helpful in the process of conducting the study.

My findings are summarized broadly starting on page 34 of the study. One area to consider for further analysis is the estimation of the rank and salary grade variables as functions of demographic characteristics. As we have discussed earlier (and as I highlight in my report), many researchers consider them endogenous in salary regressions. In addition, they appear to be playing an important role in the salary determination process, and there is some evidence of correlation between rank/salary grade and the demographics under study here.

If you have any questions regarding the study or need additional information, please feel free to call or email.

Sincerely,

Wendy
Wendy A. Stock, Ph.D.

Assessment of Salary Differences for University of Wyoming Personnel

July 17, 2006

I. Introduction

The goal of this study is to assess salary differences at the University of Wyoming, identifying differences in salary related to in sex, race/ethnicity, and age, while controlling for occupation, rank, years of service, discipline, performance and other variables important in explaining pay differences. The analysis will establish whether gaps in salary exist by race/ethnicity, sex, and age at the University of Wyoming, as well as highlight any differences in the overall salary structures across groups.

II. Previous Research on Salary Structures in Higher Education

Research on university salary structures has been recently reviewed by Barbezat (2002). Such research dates back to the 1970s, partly in response to changes in the legal environment (including affirmative action) and partly as a result of a plateau in university pay structures during that period. These studies have generally found that female faculty members earn less than their male counterparts with similar measurable characteristics (Toutkoushian, 2003; Barbezat, 1991; Ransom and Megdal, 1993).

There are several ways to measure salary differences among various demographic groups. For example, if there are two groups of workers (e.g., male and female), one could simply measure the difference between their average salaries:

$$(1) \qquad \Delta\bar{S} = \bar{S}_m - \bar{S}_f$$

Where $\bar{S}_m$ is the average wage of males in the study and $\bar{S}_f$ is the average wage of females in the study. There are several problems with this simple comparison, however, most importantly that simple differences in averages compare workers in different disciplines, with different educational levels, hours of work, and experience, and other factors generally thought to be legitimate determinants of salary.

A. Single Equation Models. A better measure than the comparison of mean salaries in equation (1) would be one that compares wages of similar workers by adjusting the raw mean differential for differences in seniority, discipline, and other factors. Early institution-level studies of university pay structures tended to regress salary on faculty rank and other characteristics, with an indicator variable for sex and/or race/ethnicity to capture differences in salary across those demographic groups. As Barbezat (2002) notes in her review, "by the end of the 1970s a consensus had developed regarding the use of multiple regression analysis as the preferred method of estimating pay equity." (p. 16).

Thus, if the focus is on differences in earnings by sex, for example, a typical early salary study would use a regression of the form:

$$(2) \qquad ln(S_i) = \beta_0 + \alpha M_i + \sum_{j=1}^{k} \beta_j X_{ij} + e_i$$

Where $ln(S_i)$ denotes the natural logarithm of salary[1] for individual i, M_i is a binary variable identifying males, and X_{ij} is a vector of characteristics related to salary (experience, educational attainment, discipline, tenure-track status, etc.). In this specification, the coefficients in β_j capture estimated differences in S that are associated with differences in the characteristics in X.

[1] The log-linear model is widely used to estimate salaries, as it allows for compounding of earnings over time (as would occur with percentage raises), and for non-linear returns to factors included in X_{ij}. See, for example, Becker and Chiswick (1966), Mincer (1958, 1974) for early presentations, Borjas (2005, p. 14) for a standard textbook presentation, and Ferber and Loeb (2002), Becker and Goodman (1991) for presentations in the context of university-equity studies. For completeness, regressions using a linear specification were also estimated. The results were qualitatively similar to those in the log-linear model.

For example, if X_j is equal to years of experience, $(100^*\beta_j)$ measures the percent change in salary per year of experience.

Finally, α in this specification captures differences in salary among males and females, after controlling for differences in characteristics in X. In particular, $100(e^{\alpha}-1)$ gives the estimated percent difference in S for males relative to females (Halvorsen and Palmquist, 1980).

Factors Appropriate to Include in *X*. Research on university salary structures includes extensive discussion regarding which characteristics are appropriate to include in regression estimates of salaries, since factors such as rank and tenure status may themselves result from unequal treatment across demographic groups (Becker and Toutkoushian, 2003).

Hoffman (1976), for example, argues that regressions should not control for academic rank, since it may be endogenous. The same argument might be made for the inclusion of salary grade in estimates of staff pay. That is, unequal treatment may generate differences in promotion rates across demographic groups. Research that includes rank tends to find smaller gaps in pay by group, but it can be argued that its inclusion generates downward biased estimates of the "true" extent of salary inequity because the rank variable itself results from differential treatment across groups (McNabb and Wass, 1997; Barbezat, 1991; Riggs, et al, 1986). Alternatively, however, the exclusion of rank from salary estimates may introduce other biases because salary can legitimately increase with faculty promotions (Becker and Toutkoushian, 2003).

It is important to keep such potential biases in mind when interpreting the regression coefficient estimates. One approach to deal with potential endogeneity of rank is to independently examine rank (and other potentially suspect variables like tenure status or salary grade) for potential bias. For example, rank can be regressed on other factors, such as experience, seniority, discipline, and sex and/or race/ethnicity to identify whether rank appears significantly related to sex or race/ethnicity. If so, its inclusion in the model may be suspect and the model should be estimated both with and without rank to compare the consistency of the outcomes (Riggs, et al, 1986; Becker and Toutkoushian, 2003; McLaughlin and McLaughlin, 2003).

B. Prediction Methods. One can also use the single-equation model to compare individuals' actual salaries against the salaries that the regression model would predict, while excluding race/ethnicity and sex variables from the equation. Under this strategy, expected salary is computed for each individual, and residual values calculated. Average residuals by various groups, including race/ethnicity, sex, or rank can also be computed in order to uncover systematic discrepancies. In the case that systematic discrepancies are not found, comparisons of individual salaries against their predicted salaries can be made to identify specific individuals earning below what would be expected based on the salary regression (McLaughlin and McLaughlin, 2003).

C. Multiple-Equation Models. Research that focuses on determining the sources of pay gaps by sex and race/ethnicity more generally includes Oaxaca (1973, 1994), Blinder (1973), and Neumark (1988), who use two-equation models to generate estimators that separate gaps in pay by group into a portion that can be explained by observable differences in levels of *characteristics* by group (e.g., different disciplines or levels of educational attainment), and a portion deriving from differences in the *returns* to such characteristics, which may reflect discrimination, unobserved heterogeneity between the groups, or other unmeasured differences in pay.

In examining differences in pay by sex, for example, the Oaxaca decomposition estimates earnings models for men and women, including in the regression observable characteristics. The decomposition uses the result from Ordinary Least Squares that, if $\overline{X}_m$ ($\overline{X}_f$) represents the mean characteristics of males (females) then their average salaries can be written as:

$$(3) \qquad \overline{S}_m = \alpha_m + \beta_m \overline{X}_m \text{ and } \overline{S}_f = \alpha_f + \beta_f \overline{X}_f .$$

This generates a difference in average salaries that can be computed as:

$$(4) \qquad \Delta\overline{S} = \overline{S}_m - \overline{S}_f = \alpha_m + \beta_m \overline{X}_m - \alpha_f - \beta_f \overline{X}_f .$$

By adding and subtracting the term ($\beta_m \overline{X}_f$) from this equation, one can then decompose the wage differential into a portion that arises if men and women have different characteristics (X) on average and a portion attributable to differences in the respective returns to those characteristics for men and women:

$$(5) \qquad \Delta\overline{S} = (\alpha_m - \alpha_f) + (\beta_m - \beta_f)\, \overline{X}_f + \beta_m (\overline{X}_m - \overline{X}_f)$$

The term $\beta_m (\overline{X}_m - \overline{X}_f)$ captures the difference in average earnings that arises from differences in the average levels of *X* among the two groups. The terms $(\alpha_m - \alpha_f) + (\beta_m - \beta_f)\, \overline{X}_f$ arise if men and women are treated differently either at the intercept $(\alpha_m - \alpha_f)$ and/or if the returns to the characteristics in *X* are different for men than for women $(\beta_m - \beta_f)$.

In similar spirit, models that include interaction terms between demographic and other variables can also be estimated:

$$(6) \qquad ln(S_i) = \beta_0 + \alpha M_i + \sum_{j=1}^{k} \beta_j X_{ij} + \sum_{j=1}^{k} \theta_j \left(X_{ij} * M_i\right) + e_i$$

In this model, the θ terms capture differences in the "returns" to characteristics in *X*. Systematic differences in the returns to experience or other factors by race/ethnicity, sex, or age would be suggestive of areas of concern for salary adjustments. Equation (6) is particularly valuable for estimating potential differential returns by age, since its continuous nature precludes an Oaxaca decomposition of salary differentials without ad hoc assumptions about the appropriate age groupings to compare against one another.

D. Differences in Pay for Staff. As noted by Toutkoushian (2003), most of the research that examines higher education salary structures has focused on faculty salaries. Exceptions do exist, however, including Looker (1993), Ferber and Westmiller (1976), Gordon and Morton (1976), who found statistically significant differences in pay among female and male university staff after controlling for job category, education, experience, and other demographic factors. Alternatively, Curran and Bach (1996) found no such differential after controlling for experience, seniority, and pay grade.

The basic concepts highlighted above for conducting examinations of faculty pay also apply to examining staff pay. In particular, it is important to determine a set of factors appropriate to include in the salary regression (for example, one's salary grade may suffer from the same type of endogeneity bias that that would arise by including rank in the faculty regression), and also available for each staff member. In addition, job categories and duties vary more widely than they do among faculty, making it difficult to generate a concise set of independent variables. Finally, while educational attainment is available in faculty data, it is not typically available in staff data. Nonetheless, using available information on differences in characteristics among staff will generate an improvement in comparing salaries relative to the simple comparison of means illustrated in equation (1) (Toutkoushian, 2003).

III. Data Description

With facilitation by Nicole Ballenger (Office of Academic Affairs), data for this study were compiled by Lisa Muller (Office of Institutional Analysis), Ned Feldbush (Department of

Human Resources), and Justin McDonald (Office of Academic Affairs). The data for faculty members, administrators, and academic professionals includes demographic, occupational, educational background, and experience variables, as listed in Table 1.[2] The data for staff is more limited in scope, but includes demographic, occupational, and experience variables, as listed in Table 2.

Data was also available to potentially measure marital status and dependents for each individual. The status of many individuals in the data set is unknown, however. In addition, this data comes primarily from individuals' enrollment status in the University's health insurance plan. Because some individuals may have alternate sources of insurance, using such data is likely to introduce substantial measurement error into the model. Therefore, marital status and dependents data will not be included in the salary models.

A. Faculty Summary Statistics. The faculty data are summarized in Tables 3 and 4. Table 3 presents summary statistics for the faculty as a whole, and separately for males and females. Table 4 presents the summary statistics separately by race/ethnicity. The tables also illustrate when variable means are statistically significantly different across each sex and race/ethnicity group.

i. Mean Differences by Sex. The overall mean salary among the faculty is $68,462. The mean for males is $72,171 and for females is $60,869, and the difference between the two is statistically significant at the 5 percent level in a two-tailed hypothesis test. As noted earlier, this difference likely arises from several factors. For example, other differences in mean variable values indicate that males have significantly more average years of seniority and years in rank than females, and are distributed among senior-ranked positions at higher rates than are females,

[2] Throughout this report, these data are referred to as "faculty data," even though they also include information on administrators and academic professionals.

all of which are associated with higher pay. A higher proportion of females are academic professionals, while a higher proportion of males are faculty. In terms of educational background, a smaller proportion of males have MA-level degrees, while a larger proportion has doctorate-level degrees than females. Finally, it appears that females have a larger proportion of their jobs allocated to advising and professional development, and a smaller proportion of their jobs allocated to research than do males. Other differences, including distribution across colleges and across fields/departments, are insignificant.[3]

ii. Mean Differences by Race/Ethnicity. Table 4 presents summary statistics by race/ethnicity. Unlike the salaries by sex, there are not statistically significant differences in mean salaries by race/ethnicity. There are other differences in the means, however, including much higher average years of seniority and years in rank among white than among Black/African American, Asian, or Hispanic/Latino faculty.[4] The proportion of white faculty in the assistant rank is lower than that of others, while their proportion in the full/senior rank is higher than that of others. A smaller proportion of whites are employed as faculty than among the other race/ethnicity categories; larger proportions are employed as academic professionals and administrators. A smaller proportion of white faculty is in tenure-track positions, while larger proportions are in either non-tenure-track positions or are tenured. A smaller proportion of whites have doctorate-level educational training, and a larger proportion has master's-level training, than among the other races. Finally, it appears that whites have job allocations with

[3] Also included in the tables is a summary of the distribution of faculty (overall, by sex, and by race/ethnicity) across fields/departments. In some regression specifications, these categorical variables (rather than the college indicator variables) are included. The estimated coefficients on the demographic variables were all qualitatively similar when field rather than college indicators were included in the regression.

[4] For each of the race/ethnicity categories, the test is for whether the mean of the variable for the group (e.g., Black/African American) differs from the mean for those outside the group (e.g., white, Asian, and Hispanic/Latino combined).

lower proportions assigned to teaching and research, and higher proportions to administration, than do the other race/ethnicity groups.

A final implication of Table 4 comes from the small absolute numbers of faculty in the non-white race/ethnicity categories. Among the 738 individuals in the faculty data, 685 (93 percent) are white, while only 10 are black/African American, 30 are Asian, and 13 are Hispanic/Latino (because there were fewer than 5 individuals who identified themselves American Indian/Akaka Native, the other race/ethnicity category available in the data, their numbers would be too few to list separately in any meaningful way). The small number of observations in the separate race/ethnicity categories would generate numerous multicollinearity and missing categorical variable problems (e.g., there are no Hispanic/Latino faculty in the colleges of Academic Affairs and Outreach; there are no Black/African American faculty in Academic Affairs, Business, or Engineering) if they were included separately in the regressions. In order to keep the regression analysis tractable and meaningful, regressions that separate results by race/ethnicity include only two race categories, white and non-white.

B. Staff Summary Statistics. The staff data are summarized in Tables 5 and 6. Table 5 presents summary statistics for the staff as a whole, and separately for males and females, while Table 6 presents the summary statistics separately by race/ethnicity groups. Again, bolded values in the tables indicate that variable means are statistically significantly different across each sex and race/ethnicity group.

i. Mean Differences by Sex. As with the faculty data, there is a statistically significant difference in the mean salaries of men and women staff members. The average salary among male staff is $35,679, while for female staff it is $31,656. It is likely that a large portion of this salary differential arises from differences in the salary grade distribution among male and female staff, with higher proportions of male staff among salary grades 21 to 27, and smaller proportions of male staff among the lower salary grades. Other differences in means by sex are generally insignificant, with the exception of the distribution by division. Higher proportions of male staff are employed by the administration & budget and information technology divisions; lower proportions are employed by the academic affairs, student affairs, research, and foundation divisions.[5]

ii. Mean Differences by Race/Ethnicity. Table 6 presents summary statistics by race/ethnicity for the staff data. Unlike the faculty data, mean differences in salary among the race/ethnicity categories are statistically significant, with whites earning higher mean salaries, and Asian and Hispanic/Latino staff earning lower mean salaries, than others. Hispanic/Latino and white staff also have higher average years of seniority than others. Differences in employment by salary grade are less obvious among the race/ethnicity groups than among the sexes, although there are higher proportions of whites in salary grades 16 and 19 and smaller proportions in salary grades 10, 11, and 13.

Finally, as with the faculty analysis, in the analysis below, the non-white race/ethnicity categories are combined together in the regressions in order to avoid multicollinearity and interpretation problems.

IV. Statistical Methodology/Salary Models.

Based on the review of the previous literature presented in section II, this study employs four estimation strategies, using the data described in Tables 1 - 6:

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[5] Also included in the tables is a summary of the distribution of staff (overall, by sex, and by race/ethnicity) by position title. In some regression specifications, these categorical variables (rather than the salary grade indicator variables) are included. The significant differences in the estimated coefficients in the remaining variables in the regression are noted in the text of section V, part B.

1. Estimates of equation (2), while also including indicators for race/ethnicity, to establish whether or not systematic differences in salaries exist by sex, race/ethnicity, or age after controlling for seniority, discipline, and other appropriate and available factors. These are presented in column 1 of Tables 7 and 8 (for faculty) and 11 and 12 (for staff).

2. Estimates of equation (2), while excluding the race/ethnicity and sex variables, to generate a file of actual versus predicted salaries by individual (again controlling for factors in Tables 1 and 2). These are discussed below. An appendix listing individuals for whom the difference between actual and predicted salaries falls two standard deviations from the mean is provided separately.

3. Estimates of equation (5), separately for sex and race/ethnicity, to identify portions of pay gaps by sex and race/ethnicity that are attributable to observable differences in characteristics and portions that are unexplained. These are presented in Tables 10 (for faculty) and 14 (for staff). As noted above, estimating the decomposition by age would require ad hoc assumptions about which age grouping to compare against one another. Given this, and the generally insignificant differentials in returns to age found in the regression estimates, equation (5) is not estimated separately by age.

4. Estimates of equation (6) to capture any significant differences in the returns to characteristics in X by sex, race/ethnicity, or age. These are presented in columns 2 and 3

of Tables 7 and 8 and in Table 9 (for faculty) and in columns 2 and 3 of Tables 11 and 12 and in Table 13 (for staff).

The models for faculty and staff both use the strategies listed above, but are estimated separately.

V. Empirical Results

A. Faculty Salary Differentials. Estimates of faculty salary differentials are presented in Tables 7 – 9, which present estimates of equations (2) and (6). Estimates of equation (5) are presented separately in Table 10.

i. Baseline Regression. Estimates of equation (2) are presented in column 1 of Table 7. The dependent variable is the natural logarithm of each faculty member's annualized salary (see Table 1 for description). This equation generates estimates of differences in log annual salary by demographic, seniority/experience, rank, employment class, tenure status, educational background, college, and job allocation variables (the "dy/dx" sub-columns). Also included in the table are the absolute values of t-statistics for each estimated coefficient (the "|t|" sub-columns). As shown at the bottom of the table, the regression explains 79 percent of the variation in log salary. The variables with estimated coefficients that are statistically significant at the 5-percent level (in two-tailed tests) are discussed in detail below.

In terms of demographics, although there were statistically significant differences in the raw mean salaries for males and females and for whites and non-whites, these differences disappear once other variables are included in the regression. The only significant demographic characteristics that are statistically significantly related to salaries in the regression are age and

U.S. citizenship. The estimates indicate that each additional year of age is associated with a 1.5 percent increase in predicted annual salary, and that U.S. citizen salaries are approximately 5 percent higher than their counterparts once other factors are controlled in the regression.[6] The insignificant coefficient on the age-squared variable indicates that there do not appear to be statistically significant decreases in the rate of return to age in the model.

With respect to seniority and experience, the negative estimate on the seniority variable indicates that, controlling for other factors in the model, an additional year of seniority is associated with an estimated 1.8 percent decrease in annual salary, which is consistent with the salary compression common in academe. It appears that years of more general post-degree experience and years in rank are not significantly associated with salary for the faculty sample overall.

The coefficients on the rank variables indicate that pay is significantly higher for those of higher rank. Relative to assistant–level faculty (the rank category omitted from the regression), salaries are 10 percent higher among associates, 34 percent higher among full/senior faculty, 65 percent higher among distinguished faculty, 20 percent higher among department heads, 35 percent higher among asst./assoc. dean/directors, and 29 percent higher among dean/directors. Similarly, academic professionals earn an estimated 19 percent less than administrators; for faculty, the estimated pay differential relative to administrators is negative 13 percent.

Those in non-tenure track positions are estimated to earn 21 percent less than tenured faculty, but there does not appear to be a statistically significant difference in the salaries of tenure-track versus tenured faculty once other factors are controlled in the regression.

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[6] As noted above, in semilogarithmic equations, coefficient estimates on continuous independent variables (e.g., age) are interpreted to indicate that a one-unit increase in the independent variable is associated with a $100^* \hat{\beta}$ increase in annual salary. The percentage value interpretations for estimated coefficients on binary variables in log-linear models are computed as $100[\exp(\hat{\beta})-1]$, following Halvorsen and Palmquist (1980).

Faculty holding Master's-level degrees are predicted to earn 12 percent less than those holding doctorate-level degrees, and there appears to be no significant difference in the salaries of those holding professional-level degrees relative to those holding doctorate-level degrees. The insignificant difference in predicted salaries for those holding Bachelor's-level degrees relative to those holding doctorate-level degrees is likely the result of the small numbers (only 2 percent) of faculty with this level of education.

Faculty working in Academic Affairs and in Outreach earn an estimated 17 and 12 percent less, respectively, than those in the Arts & Sciences, while those in the colleges of Business (34 percent), Engineering (24 percent), Health Sciences (6 percent), and Law (25 percent), earn more than those in the Arts & Sciences.

Finally, jobs with higher proportions allocated to research, professional development, and administration are estimated to have higher salaries than those with higher proportions allocated to teaching. For example, each percentage point increase in the job allocation to research is estimated to be associated with a 15 percent higher expected salary relative to a job with a higher teaching allocation.

ii. Regression with interactions by sex, race/ethnicity, and age. Columns 2 and 3 of Table 7 and column 1 of Table 9 present estimates of equation (6), which expands the baseline model of equation (2) to include interactions of each independent variable with sex, race/ethnicity, and age. As discussed above, the estimated coefficients on the interaction terms capture differences in the "returns" to the independent variables across sex, race/ethnicity, and age. In addition, although differences in raw mean salaries by age, sex, and race/ethnicity (such as those in Tables 3 and 4) may reflect differences in the underlying characteristics of those groups (differences in educational attainment, employment class, or tenure status, for example), systematic differences in the returns to those underlying characteristics would not be expected to occur if all age, sex, and race/ethnic groups were treated similarly in the salary allocation process. In light of this, and given the extensive discussion of the earlier estimates in the baseline regression, the discussion here will focus only on the coefficients on the interaction terms.

a. *Differential returns to characteristics for females and males.* Column 2 presents the estimates of equation (6) while interacting the *X* variables with an indicator variable for female. This regression explains a similar amount of the variation in log salary as does the baseline regression (80 percent). As shown in the table, the estimated coefficients on the *female * X* interaction variables are generally not statistically significant. The only exception is an estimated smaller coefficient on the years in rank-squared variable, which would indicate that any positive return to years in rank tapers off more quickly for females than for males. However, the coefficient is small (indicating a -.1 percentage point change per year in the estimated return to years in rank) and is somewhat offset by a larger (although not statistically different) coefficient on the linear *years in rank* term for females than for males. The generally insignificant coefficients on the interaction terms are consistent with an interpretation that there appears to be no systematically different treatment of female versus male faculty characteristics in the salary allocation process.

b. *Differential returns to characteristics for whites and non-whites.* Column 3 presents estimates of equation (6) while interacting the *X* variables with an indicator variable for white. As discussed above, the small numbers of faculty in the Black/African American, Asian, and Hispanic/Latino race/ethnic categories precludes estimating the equation to compare each of these groups separately. Here the estimates indicate that whites do have statistically significantly different returns than non-whites for several independent variables, the bulk of which indicate smaller relative returns to those characteristics for whites than for non-whites. For example, the estimated coefficient on the associate rank variable indicates that for non-whites, those in this rank have 21 percent higher estimated salaries than do assistants; for whites, the estimated return to associate versus assistant rank is much smaller than for non-whites (among whites, associates are estimated to have only 1 percent higher estimated salaries relative to assistants). Similarly, the return to department head status is smaller for whites than for non-whites, as is the difference in estimated salary for faculty relative to administrators and academic professionals (the estimate is positive and significant for non-whites, but negative for whites). Whites in non-tenure track and tenure-track positions are estimated to earn substantially less than those in tenured positions; this is not the case among non-whites. Finally, among the job allocation percentage variables, non-whites with higher allocations in professional development and administration are estimated to have higher earnings than those with higher allocations to teaching, but this is not the case among whites.

c. *Differential returns to characteristics by age.* Column 1 of Table 9 presents the estimates of equation (6) while including interaction terms between the *X* variables and *age*. As with the *white* interactions discussed above, the model does generate several statistically significant differences in the returns to characteristics by age. Because of the continuous nature of the age variable, the interpretation of the raw coefficients on the *X* variables are much less meaningful than in the binary sex and race/ethnicity models above, since they represent predicted intercept or slope shifts associated with age equal to zero. The significant estimates on the *age * X* interaction terms are small and imply smaller absolute differentials associated with various characteristics as age increases. For example, the estimates indicate that any salary differentials for Black/African American or Hispanic/Latino groups decline with age (i.e., the positive estimated return to Black/African American and the negative return to Hispanic/Latino move closer to zero with increases in age). Similarly, salary differentials associated with department head rank also move closer to zero with increases in age, as do differentials for faculty relative to administrators.

To summarize, the estimates presented in Tables 7 and 9 indicate that there do not appear to be significant differences in estimated salaries by demographics, with the exception of positive estimated returns to age. Although there also do not appear to be significant differences in the returns to characteristics among females and males, there are several estimated differences in the returns to characteristics among whites relative to non-whites, most of which indicate generally smaller returns to various characteristics among whites than among non-whites, and returns to various characteristics that move slightly closer to zero as age increases.

iii. Regressions excluding rank variables. Tables 8 and 9 present estimates of equation (2) while excluding the rank variables. Given the extensive interpretation of the baseline and regression results above, the discussion of these estimates will focus on differences that arise relative to the prior estimates.

As with the earlier estimates, there appear to be no differences in estimated salaries among the demographic and groups. The exceptions, as before, are the higher estimated salaries associated with age and U.S. citizenship. The negative return to seniority is smaller (closer to zero) in Table 8, which would be consistent with *seniority* and the excluded rank variables being positively correlated (making the estimated return biased upward toward zero in the regression that excludes rank). Other differences in the baseline regression are smaller and now insignificant estimated returns to those in Academic Affairs and Health Sciences, which would be expected if employment in those colleges is negatively correlated with the excluded rank variables, and a more negative and significant estimated impact on salary for jobs with higher allocations to advising, which would be consistent with those positions being negatively correlated with the rank variables (i.e., if those with higher advising allocations are not among the higher ranks).

a. *Differential returns to characteristics for females and males.* Where the earlier estimates of equation (6) that included interactions between *female* and the *X* variables had almost no significant estimated coefficients on the *female* X* interaction terms, the regression that omits rank indicates that although the estimated salaries of males who are U.S. citizens are higher than their non-citizen counterparts, this is not the case for females (the positive coefficient for males and the negative coefficient for females add to almost zero). In addition, the estimates indicate that although male academic professionals are estimated to earn less than their administrator counterparts, this is not the case for females. Finally, although it appears that there is no salary penalty for non-tenure track status relative to tenured status among males, there is a large negative impact on the salaries of females in non-tenure track positions.

b. *Differential returns to characteristics for whites and non-whites.* The estimates of equation (6) while including interaction terms between *white* and the *X* variables also differ from those that include the rank variables. Many of the earlier estimates on the interaction terms that were significant when rank was included are insignificant when rank is excluded from the model, including the differential returns to whites for faculty relative to administrator status, for non-tenure track and tenure track positions relative to tenured positions, for appointments outside the colleges listed in the table, and for jobs with higher allocations to administrative work. The only differences in returns to the independent variables in the regression that excludes the rank variables are a higher return to cooperative development job allocations, and a smaller return to professional development job allocations for whites relative to non-whites.

c. *Differential returns to characteristics by age.* Relative to the estimates in column 1 of Table 9, which include interactions between age and other *X* variables, those in column 2, which exclude rank, are generally similar. The estimated coefficients on the interaction terms *age * tenure-track* and *age * research allocation percentage* are slightly more negative and become statistically significant when rank is excluded (moving the estimated impacts of tenure-track and research allocation percentage closer to zero with increases in age), but these estimates are so small as to be economically meaningless.

Taken as a whole, the regressions in Tables 8 and 9 that exclude rank continue indicate that there do not appear to be significant differences in estimated salaries by demographics, with the exception of positive estimated returns to age. However, there do appear to be differential returns to several characteristics for females relative to males, most notably the much more negative return to non-tenure track status for females. As noted above, because of the potential endogeneity of the rank variables, their inclusion in the estimates presented in Table 7 may be generating downward biased estimates of the "true" extent of any salary inequity (McNabb and Wass, 1997; Barbezat, 1991; Riggs, et al, 1986).

iv. Salary Decompositions. Table 10 presents estimates of equation (5), which separates the "raw" mean log salary differentials among males and females and among whites and non-whites into portions that may be attributed to differences in characteristics among the groups (i.e., differences in their values of the independent variables in the models above, which is ($\bar{X}_m$ - $\bar{X}_f$) in equation (5)) and differences in returns to those characteristics among the groups (i.e., differences in the "returns" to those characteristics, which is (α_m - α_f) + (β_m - β_f) in equation (5)).

a. *Oaxaca decomposition of the male-female salary differential.* The log salary differential among males and females included in the regression sample totals 0.150. Using the Oaxaca decomposition, 0.159 of the differential is explained by or due to differences in the characteristics of the two groups, and the differences appear greatest in the rank, employment class, educational background, and college variables. Alternatively, -0.009 of the differential is explained by differences in the returns to those characteristics for the two groups. Thus, the Oaxaca decomposition implies that the difference in characteristics of males and females more than explains the salary gap between the two, and that differences in the returns to those characteristics actually narrow the gap (albeit by a very small amount). Put differently, the decomposition estimates a positive differential treatment for females relative to males, with the implication that if males and females had equal returns to their characteristics, the pay gap between the two groups would be slightly *larger* than it actually is. One caution with respect to this interpretation however, is that the largest part of the difference in characteristics between males and females occurs in the rank variables. If males and females moved through the ranks at similar levels, the pay gap would be much smaller.

As noted above, a closer analysis of rank may be called for to examine whether there are differential returns to characteristics among males and females in the probability of attaining given levels of rank.

b. *Oaxaca decomposition of the white-non-white salary differential.* The log salary differential among whites and non-whites included in the regression sample totals 0.029. Using the Oaxaca decomposition, 0.056 of the differential is explained by or due to differences in the characteristics of the two groups. Again, the primary characteristics that contribute to the gap are the rank variables. Alternatively, -0.027 of the differential is explained by differences in the returns to those characteristics for the two groups. As with the male-female differential, the Oaxaca decomposition implies that the difference in characteristics of white and non-whites more than explains the salary gap between the two, and that differences in the returns to those characteristics actually narrow the gap. Having equal returns to characteristics among whites and non-whites would be predicted to approximately double the gap from 0.029 to 0.056, while the differential returns to characteristics among the two groups appears to narrow the gap substantially. The same caveat as above applies here with respect to the rank variable.

v. Predicted versus Actual Salaries by Individuals. For each individual in the faculty salary regression sample, equation (2) was estimated while controlling for factors in Table 1, but excluding the race/ethnicity and sex variables. This generated a predicted log salary for each individual that does not allow race and sex to play a direct role. For each individual, the difference between his/her actual log salary and this predicted log salary was then computed. Finally, the distribution of these salary residuals was determined, and those with residuals lying outside two standard deviations from the mean residual were identified as "outliers" with respect to their predicted versus actual salaries. Among the 738 individuals in the salary regression, there were 40 of these outliers, 18 of which had negative residuals (indicating that (1) the salary predicted by the model was higher than their actual salary, and (2) the absolute value of this negative difference was among the largest few of the sample). There were 22 individuals identified as outliers who had positive residuals (i.e., their actual salaries were above their predicted salaries and the positive difference was among the largest in the sample). The list of the employee id numbers of both types of outliers is provided in a separate appendix for privacy purposes. Although the list of the negative residual outliers would be useful for identifying individuals to consider for positive salary adjustments, it is important to keep in mind that variables excluded from the regression may be playing a large role in generating the residual estimates. For example, low annual performance evaluation scores, which are not included in the regression or data in this study, may be highly correlated with large negative salary residuals (and high scores with large positive salary residuals).

In order to determine whether there were systematic differences by age, sex, or race/ethnicity in the probability of being an outlier in the residuals described above, two probit models were estimated, one using an indicator for "positive residual outlier" as the dependent variable, and the other using an indicator for "negative residual outlier" as the dependent variable, and including age and indicators for male and white as regressors. In neither of the probit regressions did the estimated coefficients on these demographic characteristics attain statistical significance, indicating that the probability of being a positive or negative residual outlier does not appear related to age, sex, or race/ethnicity.

vi. Summary of Faculty Salary Estimates. The estimates provided in Tables 7 - 10, indicate generally robust positive salary returns associated with age among the faculty data, even after controlling for other factors included in the model. In addition, although there are differences in the mean annual salaries among males and females, these differences largely disappear once other factors expected to influence salary are controlled for in a regression. A similar result holds for differences in pay among whites and non-whites (although there also appears to be no statistically significant difference in the mean salaries of these two groups). Regressions that estimate differences in the returns to characteristics among males and females and whites and non-whites generate estimates that are largely insignificant, implying no differential returns to most characteristics. For the characteristics that do have statistically significant estimated differences in returns, most indicate smaller returns to characteristics for whites than for non-whites and estimated returns that move slightly toward zero with increases in age. In general, there do not appear to be significant differences in the returns to characteristics among females and males. One notable exception, however, is the much more negative return to non-tenure-track relative to tenured status for females than for males.

B. Staff Salary Differentials. Estimates of staff salary differentials are presented in Tables 11 - 13, which present estimates of equations (2) and (6). Estimates of equation (5) are presented separately in Table 14.

i. Baseline Regression. Estimates of equation (2) using the staff data are presented in column 1 of Table 11. The dependent variable is the natural logarithm of each staff member's annualized salary (see Table 2 for description). This equation generates estimates of differences in log annual salary by demographic, seniority, division, and salary grade variables (the "dy/dx" sub-columns). Also included in the table are the absolute values of t-statistics for each estimated coefficient (the "|t|" sub-columns). As shown at the bottom of the table, the regression explains 93 percent of the variation in log salary. The variables with estimated coefficients that are statistically significant at the 5-percent level (in two-tailed tests) are discussed in detail below.

The estimated coefficients on the demographic variables indicate statistically significant estimated salaries for males relative to females, and for American Indian/Alaska Natives and Blacks/African Americans relative to whites. The estimated coefficient on the *male* indicator variable implies that males earn 1.4 percent less than females after controlling for other factors included in the regression. American Indians/Alaska Natives are estimated to earn 5.1 percent less than whites, while Blacks/African Americans are estimated to earn 4.2 percent less than whites. The estimates also indicate that salaries increase with age and with seniority and are about 3.5 percent higher for U.S. citizens than for non-U.S. citizens.

The estimated coefficients on the division indicator variables imply that staff working in the Athletics and Administration & Budget divisions earn 6.9 percent and 2.3 percent less, respectively, than their counterparts in Academic Affairs, once other factors are controlled in the regression.

Finally, as would be expected, the estimated coefficients on the salary grade indicators are all highly statistically significant and imply monotonically smaller estimated salaries for those at lower salary grades relative to those in salary grades above 25.[7]

ii. Regressions with interactions by sex, race/ethnicity, and age. The estimates in column 1 of table 11 indicate significant differences in salary by age, among males and females, and among whites relative to non-whites. The estimates of equation (6), presented in columns 2 and 3 of Table 11 and in column 1 of Table 13 estimate any differences in the returns to the various factors included in the regression model.

a. *Differential returns to characteristics for females and males.* The statistically insignificant estimated coefficients on the American Indian/Alaska Native and Black/African American variables in the "female interaction" sub-column of column 2 of Table 11 indicate that the negative earnings differentials for these groups relative to whites are not statistically different among males and females. Similarly, it does not appear the earnings differentials for age, U.S. citizenship, and seniority differ among males and females. Alternatively, however, it does appear that females employed in the Student Affairs and Administration & Budget divisions have negative returns to those appointments, but their male counterparts do not. Females employed in the Administration & Budget division for example, are estimated to earn 3.1 percent less than their counterparts in Academic Affairs, but males in the

[7] In a regression that includes job title rather than salary grade, the more detailed controls (job title) generate smaller and insignificant estimated differentials among sex and most race/ethnicity categories. The estimated coefficients on the male, American Indian/Alaska native, Black/African American, and U.S. citizen variables are all insignificant. However, the estimated coefficient on the Hispanic/Latino variable is negative and statistically significant. The lack of robustness to including job title versus salary grade in the regression would be consistent with the demographics being correlated with both types of variables.

Administration & Budget division do not appear to experience a salary penalty relative to those in Academic Affairs.

Finally, there appear to be substantial differences in the returns to various salary grade levels among females relative to males. The negative and statistically significant estimates on the female interaction with salary grade 10, 12, 16, 17, 18, 21, and 25 indicate that, controlling for the other factors in the regression, women in these salary grades experience larger salary penalties relative to employment at salary grades above 16 than do their male counterparts. For example, males in salary grade 16 earn an estimated 60 percent less than do those in salary grades above 25 [60 % = 100 * exp (-0.918)-1]; for females, this negative differential is 68 percent [68 % = 100 * exp (-0.918-.233) -1]. Given the highly structured framework of the salary grade matrix, these differentials by sex once other factors are controlled are somewhat surprising.

b. *Differential returns to characteristics for whites and non-whites.* Column 3 of Table 11 presents estimates of equation (6) that allow for differential returns to the regression variables for whites relative to non-whites. In these estimates, there are only two (sets of) statistically significant coefficients on the interaction terms. The first, the interaction of white with male, indicates that the negative salary differential for males relative to females shown in column 1 tends to be concentrated among whites. Thus, for non-white males, there does not appear to be a salary penalty relative to females, but there is a roughly 2 percent estimated salary penalty for white males relative to females.

The second set of statistically significant estimated coefficients again appears on the salary grade variables. As was the case with the female interactions in column 2, the estimated coefficients on the white*salary grade indicators are large and statistically significant, implying that whites at various salary grade levels experience larger salary penalties relative to those in salary grades above 25 than do non-whites. Again this result is somewhat surprising given the controls in the regression and the highly structured nature of the salary grade matrix.

c. *Differential returns to characteristics by age.* Column 1 of Table 13 presents estimates that include *age*X* interactions to potentially identify differential returns to the *X* characteristics by age. As shown in the "Age Interaction" sub column, however, none of these interaction terms is statistically significant in the model. This implies that there are not systematic differences in the returns to any of the characteristics included in the model that by age.

To summarize, the estimates presented in Tables 11 and 13 indicate that are significant differences in estimated salaries by sex, race/ethnicity, and age among the staff data. The estimates imply slightly smaller estimated salaries for males (although this estimate is somewhat suspect given the changes in the estimates that occur when the salary grade variables are excluded, as I note below). The estimates also indicate smaller salaries for American Indian/Alaska Natives and for Black/African Americans in the data (again, however, these estimates may be biased by the inclusion of the potentially endogenous salary grade variables). As would be expected, the estimates indicate positive salary returns to age and seniority. Although there do not appear to be significant differences in the returns to most characteristics among the various groups, the larger salary "penalties" for females and whites in lower salary grades are striking.

iii. Regressions excluding salary grade variables. Tables 12 and 13 present estimates of equation (2) while excluding the salary grade variables. As before, the discussion of these estimates will focus on differences that arise relative to the prior estimates of equation (2) for the staff sample.

In the baseline regression, the estimates that exclude the salary grade variables differ in several regards from those that include salary grade. This would be expected if the salary grade variables are systematically related to the other independent variables in the regression, causing them to be biased in the regression presented in Table 12. Focusing on demographics, there are several changes in the estimated coefficients on the race/ethnicity variables between Tables 11 and 12. For example, the coefficient on the American Indian/Alaska Native variable is closer to zero and insignificant in Table 12, whereas in Table 11 it was larger in absolute value and statistically significant. One explanation for the change would be that the estimated coefficient in Table 11 is biased upward. Since the omitted salary grade variables are negatively related to salary (i.e., the omitted salary grade variable in Table 12 was the highest salary grade whereas in Table 11 the omitted values include the lower salary grades, which are be negatively related to salary), the upward bias on the coefficient in Table 12 would be consistent with the American Indian/Alaska Native variable being negatively related to the newly omitted salary grade variables (i.e., if *American Indian/Alaska Native* is negatively correlated with lower salary grades). Similarly, the more negative and statistically significant estimated coefficient on the Hispanic/Latino variable would be consistent with *Hispanic/Latino* being positively correlated with the omitted salary grade variables (i.e., with *Hispanic/Latino* being positively correlated with lower salary grades). Finally, the change in the estimated coefficient on male would imply a positive bias on that variable in the regression in Table 12, indicating a negative relationship between *male* and the lower salary grades.

a. *Differential returns to characteristics for females and males.* The earlier estimates of equation (6) that included interactions between *female* and the *X* variables had no significant estimated coefficients on the female interaction terms, with the exception of differences for the salary grade variables. The regression that omits the salary grade variables generates a similar result, implying no systematic difference in the relative returns to characteristics for females relative to males. Thus, whether or not salary grade is included in the regression, there do not appear to be differential returns to age, seniority, citizenship, or division assignment for females and males. As noted above, however, the regression results in Table 11 and Table 12 could be consistent with salary grade itself being systematically related to sex.

b. *Differential returns to characteristics for whites and non-whites.* The estimates of equation (6) that include interaction terms between *white* and the *X* variables, but exclude the salary grade variables, are generally consistent with those that exclude salary grade, with two exceptions. The first is that the estimated coefficient on *male* becomes positive but insignificant in Table 12. As noted above, this could reflect an upward bias on that coefficient when the salary grade variables are excluded, which would be consistent with *male* and low salary grades being negatively correlated. Second is the positive and significant estimate on the age variable for whites, which again would be consistent with *age* and low salary grades being negatively correlated.

c. *Differential returns to characteristics by age.* The estimates of equation (6) that include interaction terms between *age* and the *X* variables, but exclude salary grade, are presented in column 2 of Table 13. As was the case with the earlier *age* interaction terms, the estimates continue to indicate that there are no systematic differential returns to characteristics by age in the staff data.

Taken as a whole, the regressions in Tables 12 and 13 that exclude the salary grade variables indicate that although there appear to be significant differences in estimated salaries by demographics, although there do appear to be differential returns to characteristics by age, or for females relative to males or whites relative to non-whites. As noted above, however, the changes in the coefficients on the demographic variables in the models that do and do not include salary grade may be consistent with systematic relationships between demographics and salary grade. Particularly striking are the large changes in the coefficients on *male* and *Hispanic/Latino* across the two models. The former would be consistent with *male* being negatively correlated with low salary grades, the latter with *Hispanic/Latino* being positively correlated with low salary grades.

iv. Salary Decompositions. Table 14 presents estimates of equation (5) for the staff data. As with the faculty model, these estimates separate the "raw" mean log salary differentials among males and females and among whites and non-whites into portions that may be attributed to differences in characteristics among the groups (i.e., differences in their values of the independent variables in the models above, which is ($\overline{X}_m$ - $\overline{X}_f$) in equation (5)) and differences in returns to those characteristics among the groups (i.e., differences in the "returns" to those characteristics, which is (α_m - α_f) + (β_m - β_f) in equation (5)).

a. *Oaxaca decomposition of the male-female salary differential.* The log salary differential among males and females included in the regression sample totals 0.094. Using the Oaxaca decomposition, 0.113 of the differential is explained by or due to differences in the characteristics of the two groups, primarily due to differences in the salary grade variables. Alternatively, -0.019 of the differential is explained by differences in the returns to those characteristics for the two groups. As with the faculty model, the Oaxaca decomposition implies that the difference in characteristics of males and females more than explains the salary gap between the two, and that differences in the returns to those characteristics actually narrow the gap. It is important to be careful with this interpretation however, because the largest part of the difference in characteristics between males and females occurs in the salary grade variables. If males and females were assigned to salary grades in similar proportions, the pay gap would disappear. Although the analysis above that includes and then excludes the salary grade variables is consistent with differential assignment to salary grade by sex, a closer analysis may be called for to examine whether there are differential returns to characteristics among males and females in the probability of attaining given salary grade levels.

b. *Oaxaca decomposition of the white-non-white salary differential.* The log salary differential among whites and non-whites included in the regression sample totals 0.172. Using the Oaxaca decomposition, 0.167 of the differential is explained by or due to differences in the characteristics of the two groups. Again, this is primarily due to differences in the salary grade variables. Only, 0.005 of the differential is explained by differences in the returns to those characteristics for whites and non-whites. Noteworthy is the large negative impact on the salary gap of the differential coefficients on the salary grade variables for whites and non-whites. The large difference in the impact of the characteristics and coefficients values of the decomposition imply that although there appear to be substantial differences in salary grade by race/ethnicity that contribute to a pay gap between the two groups, the smaller negative returns to assignment to lower salary grades for non-whites relative to whites closes the gap substantially.

v. Predicted versus Actual Salaries by Individuals. As with the faculty salary regression sample, equation (2) was estimated using the staff data, while controlling for factors in Table 2, but excluding the race/ethnicity and sex variables. This generated a predicted log salary for each individual that does not allow race/ethnicity or sex to play a direct role. For each individual, the difference between his/her actual log salary and this predicted log salary was then computed. Finally, the distribution of these salary residuals was determined, and those with residuals lying outside two standard deviations from the mean residual were identified as "outliers" with respect to their predicted versus actual salaries. Among the 1534 individuals in the salary regression, there were 73 outliers, 21 of which had negative residuals (indicating that (1) the salary predicted by the model was higher than their actual salary, and (2) the absolute value of this negative difference was among the largest few of the sample). There were 52 individuals identified as outliers who had positive residuals (i.e., their actual salaries were above their predicted salaries and the positive difference was among the largest in the sample). The list of the employee id numbers of both types of outliers is provided in a separate appendix for privacy purposes. Again, as with the faculty model, although the list of the negative residual outliers would be useful for identifying individuals to consider for positive salary adjustments, it is important to keep in mind that variables excluded from the regression may be playing a large role in generating the residual estimates.

In order to determine whether there were systematic differences by age, sex, or race/ethnicity in the probability of being an outlier in the residuals described above, two probit models were estimated, one using an indicator for "positive residual outlier" as the dependent variable, and the other using an indicator for "negative residual outlier" as the dependent variable, and including age and indicators for male and white as regressors. In neither of the probit regressions did the estimated coefficients on *male* or *white* attain statistical significance, indicating that the probability of being a positive or negative residual outlier does not appear related to sex or race/ethnicity. There was a statistically significant estimated coefficient on *age* in the negative residual outlier probit model, but its size was very small (0.0006), implying its direct influence on the probability is of little impact.

vi. Summary of Staff Salary Estimates. The estimates provided in Tables 11 - 14, indicate that there are several significant differences in estimated salaries by sex, race/ethnicity, and age among the staff data. As would be expected, the estimates indicate positive salary returns to age and seniority. Although there do not appear to be significant differences in the returns to most characteristics among the various groups, the larger salary "penalties" for females and whites in lower salary grades are striking. Changes in the coefficients on the demographic variables in the models that do and do not include salary grade are consistent with *male* being negatively correlated with low salary grades, the latter with *Hispanic/Latino* being positively correlated with low salary grades. Finally, although the Oaxaca decompositions imply that the gaps in pay by sex and race/ethnicity are primarily due to differences in the characteristics of these groups, the largest of these are the salary grade variables, raising the suspicion that differential assignment to salary grade may be driving much of the pay gap. Further analysis would be needed, however, to determine whether systematic differences in assignment to salary grade exist, once other factors are controlled in a regression model.

VI. Conclusions

This study examines salary differences among faculty and staff at the University of Wyoming, with particular emphasis on examining sizes and potential sources of differences in salary related to in sex, race/ethnicity, and age. Beyond simply comparing raw mean salaries by these demographic groups, the study incorporates controls various characteristics (apart from sex, age, or race/ethnicity) thought to legitimately generate salary differentials across individuals (e.g., years of service, years of experience, educational background).

For faculty, differences in the mean annual salaries among males and females and among whites and non-whites largely disappear once other factors expected to influence salary are controlled for in a regression model. In addition, estimates of any differences in the *returns* to characteristics among males and females and whites and non-whites are largely insignificant, implying no differential returns to most characteristics. For the characteristics that do have statistically significant estimated differences in returns, most indicate smaller returns to characteristics for whites than for non-whites. One notable exception, however, is the much more negative return to non-tenure-track relative to tenured status for females than for males. Finally, Oaxaca decompositions of the salary differentials imply that the vast majority of pay gaps across groups in the faculty data arise due to differences in the characteristics of the groups, and that differentials in the returns to the characteristics of the groups actually serve to narrow rather than increase the gaps. One concern however, is that the primary source of the differences in the characteristics of the groups comes in the rank variables, which many researchers argue are potentially endogenous in salary regressions.

For staff, there are several significant differences in estimated salaries by sex, race/ethnicity, and age in regression models that control for other factors that influence salary. The estimates indicate positive salary returns to age, but are somewhat mixed in their estimates of the impacts of sex and race/ethnicity, depending on whether or not salary grade variables are included in the model. The models tend to imply lower estimated salaries for American Indians/Alaska Natives, Blacks/African Americans, and Hispanics/Latinos relative to whites, although the estimates are not robust to excluding the salary grade variables from the model. Changes in the coefficients on the demographic variables in the models that do and do not include salary grade are consistent with *male* being negatively correlated with low salary grades, and with *Hispanic/Latino* being positively correlated with low salary grades. There are also statistically significantly larger salary "penalties" for females and whites in lower salary grades relative to higher salary grades. Finally, as with the faculty model, although the Oaxaca decompositions imply that the gaps in pay by sex and race/ethnicity are primarily due to differences in the characteristics of these groups, the largest of these are the salary grade variables, raising the suspicion that differential assignment to salary grade may be driving much of the pay gap. Further analysis would be needed, however, to determine whether systematic differences in assignment to salary grade (or rank for the faculty data) exist, once other factors are controlled in a regression model.

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Table 1
Faculty Data Variable Descriptions

Variable Name	Variable Description
Pay Characteristics	
Salary(S)	Annual Salary (AY value) ▪ values for individuals with FY appointments are adjusted by 9/11 ▪ values for individuals on sabbatical are adjusted by 1.67 ▪ values for individuals with <1 FTE are adjusted by 1/FTE
FTE	FTE value, salaries for those with <1 FTE will be adjusted reflect corresponding value for FTE = 1
FY employee	= 1 for FY employees = 0 for AY employees
Demographics	
Male(M)	= 1 for males = 0 for females
  Asian Black/African American Hispanic/Latino White Other race	Mutually exclusive race/ethnicity categorical variables: = 1 for Asian = 1 for Black/African American = 1 for Hispanic/Latino = 1 for White = 1 for other/not-specified/or <5 observations in category (e.g., American Indian/Alaska Native)
Age	Elapsed years from date of birth to 7/1/2006
US Citizen	= 1 for U.S. citizens = 0 for other citizenship

Table 1 (continued)

Variable Name	Variable Description
Seniority and Experience	
Years experience	Elapsed years from date degree issued to 7/1/2006
Years seniority	Elapsed years from date of hire into benefited position to 7/1/2006
Years in rank	Elapsed years from date or last rank change to 7/1/2006
Rank Variables	
	Mutually Exclusive Rank categories:
Assistant	= 1 for assistant professor/librarian, Asst. ETT
Associate	= 1 for associate professor/librarian, Assoc. ETT
Full/senior	= 1 for professor/librarian, Sr. ETT
Distinguished professor/chair	= 1 for distinguished professor, Wold Chair, centennial distinguished professor
Dept. Head	= 1 for department head/chair
Asst./Assoc. Dean/Director	= 1 for asst. or assoc. dean or director
Dean/Director	= 1 for dean or director
Other	= 1 for president, vice president, associate vice president
	*As noted in the text, these variables will be excluded from some specifications.
Employment Class	
	Mutually exclusive Employment Class categories:
Administrator	= 1 for administrators
Academic Professional	= 1 for academic professionals
Faculty	= 1 for faculty
Tenure Status	
	Mutually exclusive Tenure Status categories:
Non-tenure-track	= 1 for non-tenure track appointments
Tenure-track	= 1 for tenure-track appointments
Tenured	= 1 for tenured appointments

Table 1 (continued)

Variable Name	Variable Description
Educational Background	
  Doctorate Professional Masters Bachelors Other degree	Mutually exclusive degree accomplishment categories: =1 for doctorate-level degree (PHD,EDD) =1 for professional degree (MD, DVM, JD) =1 for Master's-level Degree (MA, MFA, MBA) =1 for Bachelor's-level Degree (BS, BA, BFA) =1 for other degree/not-specified
Field/Department	55 mutually exclusive binary category variables for field, based on department description
College	10 mutually exclusive binary category variables for college
Job Allocation	
 Teaching Advising Research Service Cooperative development Professional development Administration Other	Variables describing job appointment allocation in various categories (proportions)

Table 2
Staff Data Variable Descriptions

Variable Name	Variable Description
Pay Characteristics	
Salary(S)	Annual Compensation Rate ▪ values for those on different calendars are adjusted by multiplier to get at full-calendar equivalent ▪ values for individuals with <1 FTE are adjusted by 1/FTE
FTE	FTE value, salaries for those with <1 FTE will be adjusted reflect corresponding value for FTE = 1
Calendar	Multiplier to translate salaries of <12 month employees to annual values =1 for staff =1.53 for calendar A or D =1.40 for calendar B =1.33 for calendar C, E,F, or O =1.28 for calendar G =1.18 for calendar I or P =1.08 for calendar K =1.13 for calendar L =1.20 for calendar M,N
Demographics	
Male(M)	= 1 for males = 0 for females
  American Indian/Alaska Native Asian Black/African American Hispanic/Latino White Other race	Mutually exclusive race/ethnicity categorical variables: =1 for American Indian/Alaska Native = 1 for Asian = 1 for Black/African American = 1 for Hispanic/Latino = 1 for white = 1 for other/not-specified
Age	Elapsed years from date of birth to 7/1/2006
US Citizen	= 1 for U.S. citizens = 0 for other citizenship

Table 2 (continued)

Variable Name	Variable Description
Seniority and Experience	
Years Seniority	Elapsed years from date of hire into benefited position to 7/1/2006
Division	Mutually exclusive binary division categorical variables
Title	Mutually exclusive job description categorical variables for job titles with >5 observations; titles with 5 observations or less will be grouped together. *As noted in the text, these variables will be excluded from some specifications.
Salary grade	Mutually exclusive binary salary grade categories *As noted in the text, these variables will be excluded from some specifications.

Table 3
Summary Statistics for Faculty Data
Overall, and by Sex

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Pay Characteristics						
Salary	68,462	24,820	**72,171**[a]	25,711	**60,869**	20,974
ln(salary)	11.04	0.33	**11.09**	0.32	**10.93**	0.31
FTE	0.99	0.07	0.99	0.06	0.98	0.08
FY employee	0.30	0.46	0.29	0.46	0.32	0.47
Demographics						
Male	0.67	0.47				
Asian	0.04	0.19	0.04	0.20	0.03	0.17
Black/African American	0.01	0.11	0.01	0.11	0.02	0.12
Hispanic/Latino	0.02	0.13	0.01	0.10	0.03	0.17
White	0.89	0.32	0.90	0.30	0.85	0.35
Other race or race not specified	0.05	0.21	0.04	0.19	0.07	0.25
Age	50.00	9.69	50.41	9.86	49.16	9.28
U.S. Citizen	0.89	0.31	0.88	0.32	0.92	0.28
Seniority and Experience						
Years experience	17.90	10.04	17.89	10.06	17.92	10.03
Years seniority	12.80	9.58	**13.67**	10.08	**11.01**	8.18
Years in rank	6.06	7.05	**6.90**	7.68	**3.98**	4.96

Table 3 (continued)

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Rank Variables						
Assistant	0.30	0.46	**0.27**	0.45	**0.34**	0.48
Associate	0.29	0.45	**0.25**	0.43	**0.36**	0.48
Full/Senior	0.28	0.45	**0.34**	0.47	**0.17**	0.38
Distinguished Professor	0.01	0.10	0.01	0.12	0.00	0.06
Department Head	0.05	0.22	0.06	0.23	0.04	0.19
Asst./Assoc. Dean/Director	0.02	0.15	0.02	0.13	0.03	0.17
Dean/Director	0.04	0.21	0.04	0.20	0.05	0.21
Other	0.01	0.09	0.01	0.10	0.01	0.09
Employment Class						
Academic Professional	0.18	0.38	**0.15**	0.35	**0.24**	0.43
Administrator	0.11	0.32	0.11	0.32	0.11	0.32
Faculty	0.71	0.45	**0.74**	0.44	**0.65**	0.48
Tenure Status						
Non-Tenure-track	0.21	0.41	**0.17**	0.37	**0.31**	0.47
Tenure-track	0.23	0.42	0.22	0.41	0.27	0.44
Tenured	0.55	0.50	**0.62**	0.49	**0.42**	0.49

Table 3 (continued)

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Educational Background						
Bachelor's-Level	0.02	0.13	0.02	0.12	0.02	0.15
Master's-Level	0.20	0.40	**0.14**	0.35	**0.31**	0.46
Doctorate-Level	0.73	0.44	**0.79**	0.41	**0.60**	0.49
Professional	0.05	0.21	0.04	0.20	0.06	0.24
Other or missing	0.01	0.08	0.01	0.08	0.01	0.09
College						
Other/NA	0.04	0.19	0.02	0.14	0.07	0.26
Academic Affairs	0.03	0.16	0.02	0.14	0.04	0.19
Agriculture	0.19	0.40	0.22	0.41	0.14	0.35
Arts & Sciences	0.39	0.49	0.40	0.49	0.37	0.48
Business	0.05	0.22	0.06	0.24	0.03	0.17
Education	0.07	0.26	0.05	0.21	0.12	0.33
Engineering	0.11	0.31	0.15	0.36	0.03	0.17
Health Sciences	0.08	0.27	0.05	0.22	0.13	0.34
Law	0.02	0.15	0.02	0.14	0.03	0.17
Outreach	0.02	0.14	0.01	0.12	0.04	0.19

Table 3 (continued)

Variable	Overall		Males		Females	
	Mean	**St. Dev**	**Mean**	**St. Dev**	**Mean**	**St. Dev**
Job Allocation						
Teaching	0.43	0.25	0.42	0.24	0.44	0.26
Advising	0.03	0.04	**0.03**	0.03	**0.04**	0.04
Research	0.27	0.20	**0.30**	0.21	**0.20**	0.17
Service	0.07	0.08	0.07	0.08	0.06	0.07
Cooperative development	0.07	0.24	0.07	0.24	0.08	0.26
Professional development	0.01	0.05	**0.01**	0.03	**0.02**	0.07
Administration	0.09	0.21	0.08	0.20	0.11	0.22
Other	0.02	0.13	**0.01**	0.09	**0.05**	0.18

Table 3 (continued)

Variable Field/Department	Overall		Males		Females	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
AHC/American Heritage Center	0.01	0.11	0.01	0.09	0.02	0.15
Anthropology	0.02	0.13	0.02	0.12	0.02	0.15
Art	0.01	0.10	0.01	0.08	0.02	0.14
Botany	0.02	0.13	0.02	0.14	0.01	0.11
Chemistry	0.02	0.14	0.03	0.16	0.01	0.09
Communication & Journalism	0.02	0.12	0.01	0.12	0.02	0.14
English	0.04	0.20	0.03	0.18	0.06	0.24
Geography	0.01	0.11	0.01	0.12	0.01	0.09
Geology & Geophysics	0.02	0.15	0.03	0.16	0.02	0.15
History	0.01	0.11	0.01	0.12	0.01	0.11
Mathematics	0.03	0.17	0.03	0.18	0.02	0.14
Modern & Classical Languages	0.02	0.13	0.02	0.13	0.02	0.12
Music	0.02	0.14	0.02	0.15	0.02	0.12
Physics & Astronomy	0.01	0.11	0.02	0.13	0.00	0.00
Political Science	0.01	0.11	0.01	0.12	0.01	0.11
Psychology	0.02	0.14	0.02	0.15	0.02	0.12
Sociology	0.02	0.14	0.02	0.12	0.03	0.16
Theatre & Dance	0.02	0.13	0.02	0.13	0.02	0.14

Table 3 (continued)

Variable Field/Department	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Zoology & Physiology	0.03	0.17	0.04	0.19	0.02	0.12
Criminal Justice	0.01	0.08	0.01	0.08	0.01	0.09
Statistics	0.01	0.09	0.01	0.11	0.00	0.06
Agricultural & Applied Econ	0.02	0.14	0.03	0.16	0.01	0.09
Animal Science	0.02	0.15	0.03	0.18	0.01	0.09
Molecular Biology	0.02	0.13	0.02	0.14	0.02	0.12
Family & Consumer Sciences	0.02	0.13	0.01	0.10	0.04	0.19
Veterinary Science	0.01	0.11	0.02	0.13	0.00	0.00
Plant Sciences	0.02	0.13	0.02	0.15	0.01	0.09
Renewable Resources	0.03	0.17	0.04	0.20	0.01	0.09
CES/4-H Youth Programs	0.05	0.22	0.04	0.21	0.06	0.24
Accounting Department	0.01	0.10	0.01	0.09	0.02	0.12
Management & Marketing	0.02	0.14	0.02	0.15	0.02	0.12
Economics & Finance	0.02	0.13	0.03	0.16	0.00	0.00
Atmospheric Sciences	0.01	0.12	0.02	0.14	0.00	0.00
Electrical & Computer Engr	0.02	0.14	0.03	0.16	0.01	0.09
Mechanical Engineering	0.02	0.13	0.02	0.15	0.00	0.06
Civil/Arch Engineering	0.03	0.17	0.04	0.19	0.01	0.11
Chemical/Petroleum Engineering	0.01	0.11	0.02	0.14	0.00	0.00
Computer Science	0.02	0.12	0.02	0.14	0.01	0.09

Table 3 (continued)

Variable	Overall		Males		Females	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Field/Department						
School of Pharmacy	0.02	0.13	0.02	0.12	0.02	0.15
School of Nursing	0.01	0.12	0.00	0.00	0.04	0.20
Kinesiology and Health	0.01	0.11	0.02	0.12	0.01	0.09
Social Work	0.01	0.10	0.00	0.06	0.02	0.15
Communication Disorders	0.01	0.12	0.01	0.09	0.03	0.16
Law	0.02	0.15	0.02	0.14	0.03	0.17
Educational Studies	0.01	0.10	0.01	0.09	0.02	0.12
Adult Learning & Technology	0.01	0.09	0.01	0.08	0.01	0.11
Counselor Education	0.01	0.09	0.01	0.08	0.01	0.11
Educational Leadership	0.01	0.09	0.01	0.08	0.01	0.11
Elementary & Early Childhood	0.02	0.14	0.01	0.12	0.04	0.19
Secondary Education	0.01	0.09	0.00	0.06	0.02	0.14
Special Education	0.01	0.08	0.00	0.06	0.01	0.11
Outreach	0.01	0.12	0.01	0.10	0.02	0.15
Library/Access Services	0.03	0.18	0.02	0.13	0.07	0.25
Other	0.06	0.24	0.06	0.24	0.06	0.24
Number of observations	774[b]		520		254	

[a] Numbers in bold indicate that the means are statistically different between males and females at the 5 percent signifiance level (two-tailed tests).

[b] For the the job allocation proportions, 27 individuals were missing information; for the experience variable, 5 individuals were missing information on date of degree; for the educational background variables, 4 individuals were missing information on level of degree. Thus, complete information is available for 738 individuals.

Table 4
Summary Statistics for Faculty Data
By Race

Variable	White Mean	White St. Dev	Black/African American Mean	Black/African American St. Dev	Asian Mean	Asian St. Dev	Hispanic/Latino Mean	Hispanic/Latino St. Dev
Pay Characteristics								
Salary	69,231	25,796	61,127	11,271	62,480	12,767	66,922	15,718
ln(salary)	11.04	0.34	10.99	0.16	11.02	0.20	11.05	0.30
FTE	0.99	0.07	1.00	0.00	1.00	0.00	1.00	0.00
FY employee	**0.32**[a]	0.47	0.10	0.32	**0.10**	0.31	0.15	0.38
Demographics								
Male	0.68	0.47	0.60	0.52	0.73	0.45	**0.38**	0.51
Age	**50.66**	9.48	47.15	10.54	**46.29**	9.76	**44.21**	5.16
U.S. Citizen	**0.93**	0.25	**0.50**	0.53	**0.17**	0.38	0.77	0.44
Seniority and Experience								
Years experience	17.74	10.00	21.00	10.49	20.95	10.27	24.26	11.73
Years seniority	**13.68**	9.56	**6.21**	4.62	**9.42**	8.14	**6.49**	5.80
Years in rank	**6.33**	7.21	2.96	4.80	4.42	5.99	2.54	2.87

Table 4 (continued)

Variable	White Mean	White St. Dev	Black/African American Mean	Black/African American St. Dev	Asian Mean	Asian St. Dev	Hispanic/Latino Mean	Hispanic/Latino St. Dev
Rank Variables								
Assistant	**0.25**	0.44	0.50	0.53	**0.50**	0.51	0.54	0.52
Associate	0.30	0.46	0.30	0.48	0.27	0.45	0.15	0.38
Full/Senior	**0.31**	0.46	**0.00**	0.00	0.23	0.43	0.23	0.44
Distinguished Professor	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Department Head	0.05	0.22	0.10	0.32	0.00	0.00	0.08	0.28
Asst./Assoc. Dean/Director	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Dean/Director	0.05	0.21	0.10	0.32	0.00	0.00	0.00	0.00
Other	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Employment Class								
Academic Professional	0.19	0.39	0.00	0.00	0.13	0.35	0.08	0.28
Administrator	0.12	0.32	0.20	0.42	**0.00**	0.00	0.08	0.28
Faculty	**0.69**	0.46	0.80	0.42	0.87	0.35	0.85	0.38
Tenure Status								
Non-Tenure-track	**0.22**	0.42	0.00	0.00	0.13	0.35	0.15	0.38
Tenure-track	**0.19**	0.39	**0.70**	0.48	**0.43**	0.50	**0.46**	0.52
Tenured	**0.59**	0.49	0.30	0.48	0.43	0.50	0.38	0.51

Table 4 (continued)

Variable	White Mean	White St. Dev	Black/African American Mean	Black/African American St. Dev	Asian Mean	Asian St. Dev	Hispanic/Latino Mean	Hispanic/Latino St. Dev
Educational Background								
Bachelor's-Level	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Master's-Level	**0.21**	0.41	0.00	0.00	**0.03**	0.18	0.08	0.28
Doctorate-Level	**0.72**	0.45	0.90	0.32	**0.93**	0.25	0.77	0.44
Professional	0.05	0.21	0.10	0.32	0.03	0.18	0.08	0.28
Other or missing	0.01	0.08	0.00	0.00	0.00	0.00	**0.08**	0.28
College								
Other/NA	0.04	0.20	0.00	0.00	0.00	0.00	0.08	0.28
Academic Affairs	0.03	0.17	0.00	0.00	0.00	0.00	0.00	0.00
Agriculture	0.20	0.40	0.10	0.32	0.10	0.31	0.08	0.28
Arts & Sciences	0.39	0.49	0.30	0.48	0.33	0.48	0.46	0.52
Business	0.05	0.23	0.00	0.00	0.03	0.18	0.08	0.28
Education	0.07	0.25	0.20	0.42	0.07	0.25	0.08	0.28
Engineering	0.10	0.31	0.00	0.00	0.23	0.43	0.08	0.28
Health Sciences	0.07	0.25	0.10	0.32	0.23	0.43	0.08	0.28
Law	0.02	0.15	0.10	0.32	0.00	0.00	0.08	0.28
Outreach	0.02	0.14	0.20	0.42	0.00	0.00	0.00	0.00

Table 4 (continued)

Variable	White		Black/African American		Asian		Hispanic/Latino	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Job Allocation								
Teaching	**0.42**	0.25	0.57	0.17	0.51	0.17	0.52	0.16
Advising	0.03	0.04	0.03	0.03	0.03	0.02	0.04	0.02
Research	**0.26**	0.20	0.28	0.11	**0.34**	0.17	0.32	0.12
Service	0.07	0.07	0.05	0.03	0.09	0.09	0.07	0.02
Cooperative development	0.08	0.25	0.00	0.00	0.01	0.03	0.00	0.00
Professional development	0.01	0.05	0.00	0.00	0.01	0.02	0.00	0.00
Administration	**0.10**	0.21	0.08	0.17	**0.01**	0.05	0.05	0.12
Other	0.03	0.14	0.00	0.00	0.00	0.00	0.00	0.00

Table 4 (continued)

Variable	White Mean	White St. Dev	Black/African American Mean	Black/African American St. Dev	Asian Mean	Asian St. Dev	Hispanic/Latino Mean	Hispanic/Latino St. Dev
Field/Department								
AHC/American Heritage Center	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Anthropology	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Art	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Botany	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Chemistry	0.02	0.15	0.00	0.00	0.03	0.18	0.00	0.00
Communication & Journalism	0.01	0.12	0.10	0.32	0.03	0.18	0.00	0.00
English	0.05	0.21	0.00	0.00	0.00	0.00	0.00	0.00
Geography	0.01	0.11	0.00	0.00	0.00	0.00	0.08	0.28
Geology & Geophysics	0.03	0.16	0.00	0.00	0.00	0.00	0.00	0.00
History	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Mathematics	0.02	0.15	0.00	0.00	0.10	0.31	0.00	0.00
Modern & Classical Languages	0.02	0.13	0.10	0.32	0.00	0.00	0.00	0.00
Music	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Physics & Astronomy	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Political Science	0.01	0.11	0.00	0.00	0.03	0.18	0.00	0.00
Psychology	0.02	0.15	0.00	0.00	0.00	0.00	0.08	0.28
Sociology	0.01	0.12	0.10	0.32	0.07	0.25	0.08	0.28
Theatre & Dance	0.02	0.14	0.00	0.00	0.00	0.00	0.08	0.28

Table 4 (continued)

Variable	White Mean	White St. Dev	Black/African American Mean	Black/African American St. Dev	Asian Mean	Asian St. Dev	Hispanic/Latino Mean	Hispanic/Latino St. Dev
Zoology & Physiology	0.03	0.17	0.00	0.00	0.07	0.25	0.08	0.28
Criminal Justice	0.01	0.08	0.00	0.00	0.00	0.00	0.08	0.28
Statistics	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural & Applied Econ	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Animal Science	0.02	0.16	0.10	0.32	0.03	0.18	0.00	0.00
Molecular Biology	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00
Family & Consumer Sciences	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Veterinary Science	0.01	0.10	0.00	0.00	0.03	0.18	0.00	0.00
Plant Sciences	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Renewable Resources	0.03	0.17	0.00	0.00	0.03	0.18	0.00	0.00
CES/4-H Youth Programs	0.05	0.22	0.00	0.00	0.00	0.00	0.08	0.28
Accounting Department	0.01	0.10	0.00	0.00	0.03	0.18	0.00	0.00
Management & Marketing	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.00
Economics & Finance	0.02	0.14	0.00	0.00	0.00	0.00	0.08	0.28
Atmospheric Sciences	0.01	0.12	0.00	0.00	0.03	0.18	0.00	0.00
Electrical & Computer Engr	0.02	0.13	0.00	0.00	0.07	0.25	0.08	0.28
Mechanical Engineering	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Civil/Arch Engineering	0.02	0.16	0.00	0.00	0.03	0.18	0.00	0.00
Chemical/Petroleum Engineering	0.01	0.10	0.00	0.00	0.07	0.25	0.00	0.00
Computer Science	0.01	0.12	0.00	0.00	0.03	0.18	0.00	0.00

Table 4 (continued)

Variable	White		Black/African American		Asian		Hispanic/Latino	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
School of Pharmacy	0.01	0.11	0.00	0.00	0.13	0.35	0.08	0.28
School of Nursing	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Kinesiology and Health	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00
Social Work	0.01	0.08	0.10	0.32	0.00	0.00	0.00	0.00
Communication Disorders	0.01	0.11	0.00	0.00	0.10	0.31	0.00	0.00
Law	0.02	0.15	0.10	0.32	0.00	0.00	0.08	0.28
Educational Studies	0.01	0.08	0.10	0.32	0.03	0.18	0.08	0.28
Adult Learning & Technology	0.01	0.08	0.10	0.32	0.03	0.18	0.00	0.00
Counselor Education	0.01	0.08	0.10	0.32	0.00	0.00	0.00	0.00
Educational Leadership	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00
Elementary & Early Childhood	0.02	0.14	0.10	0.32	0.00	0.00	0.00	0.00
Secondary Education	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Special Education	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00
Outreach	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00
Library/Access Services	0.04	0.19	0.00	0.00	0.00	0.00	0.08	0.28
Other	0.07	0.25	0.00	0.00	0.00	0.00	0.00	0.00
Number of observations	685		10		30		13	

See notes to Table 3.

[a] Numbers in bold indicate that the mean for the group is statistically different than for those outside the group at the 5 percent significance level (two-tailed tests).

Table 5
Summary Statistics for Staff Data
Overall, and by sex

Variable	Overall		Males		Females	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Pay Characteristics						
Salary	33,277	12,075	**35,679**	13,880	**31,656**	10,385
ln(salary)	10.35	0.33	**10.41**	0.38	**10.32**	0.30
FTE	0.97	0.11	**0.97**	0.10	**0.96**	0.12
Demographics						
Male	0.40	0.49	1.00	0.00	0.00	0.00
American Indian/Alaska Native	0.01	0.11	0.01	0.10	0.02	0.12
Asian	0.01	0.12	**0.01**	0.08	**0.02**	0.14
Black/African American	0.01	0.08	0.01	0.09	0.00	0.07
Hispanic/Latino	0.07	0.25	0.05	0.23	0.08	0.27
White	0.85	0.36	**0.88**	0.33	**0.83**	0.37
Other race or race not specified	0.05	0.22	0.05	0.21	0.05	0.22
Age	45.28	11.64	44.93	11.74	45.52	11.57
U.S. Citizen	0.99	0.10	0.99	0.10	0.99	0.10
Seniority and Experience						
Years seniority	9.71	8.49	9.56	8.65	9.82	8.38

Table 5 (continued)

Variable	Overall		Males		Females	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Division						
Athletics	0.03	0.16	0.03	0.18	0.02	0.15
Academic affairs	0.39	0.49	**0.24**	0.43	**0.50**	0.50
Student affairs	0.21	0.41	**0.17**	0.38	**0.24**	0.43
Administration & budget	0.26	0.44	**0.43**	0.50	**0.15**	0.36
Research	0.03	0.16	**0.01**	0.11	**0.03**	0.18
Foundation	0.01	0.12	**0.01**	0.08	**0.02**	0.14
Govt. & legal affairs	0.01	0.11	0.01	0.12	0.01	0.11
Information technology	0.05	0.23	**0.10**	0.29	**0.03**	0.16

Table 5 (continued)

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Salary Grade						
Salary Grade 10	0.014	0.12	0.01	0.11	0.02	0.12
Salary Grade 11	0.048	0.21	0.06	0.23	0.04	0.20
Salary Grade 12	0.040	0.20	**0.06**	0.24	**0.03**	0.16
Salary Grade 13	0.133	0.34	**0.09**	0.28	**0.16**	0.37
Salary Grade 14	0.018	0.13	**0.04**	0.19	**0.00**	0.07
Salary Grade 15	0.054	0.23	**0.04**	0.19	**0.07**	0.25
Salary Grade 16	0.034	0.18	**0.05**	0.22	**0.02**	0.15
Salary Grade 17	0.162	0.37	**0.07**	0.25	**0.22**	0.42
Salary Grade 18	0.085	0.28	**0.06**	0.25	**0.10**	0.30
Salary Grade 19	0.101	0.30	**0.08**	0.28	**0.11**	0.32
Salary Grade 20	0.085	0.28	0.07	0.26	0.09	0.29
Salary Grade 21	0.078	0.27	**0.12**	0.32	**0.05**	0.22
Salary Grade 22	0.039	0.19	**0.06**	0.24	**0.02**	0.15
Salary Grade 23	0.052	0.22	**0.08**	0.28	**0.03**	0.17
Salary Grade 24	0.021	0.14	**0.04**	0.19	**0.01**	0.09
Salary Grade 25	0.018	0.13	**0.03**	0.17	**0.01**	0.10
Salary Grade 26	0.010	0.10	**0.02**	0.13	**0.00**	0.07
Salary Grade 27	0.007	0.08	**0.02**	0.13	**0.00**	0.00
Salary Grade 30	0.002	0.04	0.00	0.04	0.00	0.05

Table 5 (continued)

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Title						
Accountant	0.010	0.10	0.00	0.04	0.02	0.12
Accounting Associate	0.022	0.15	0.00	0.00	0.04	0.19
Accounting Associate, Senior	0.023	0.15	0.00	0.06	0.04	0.19
Asst Manager, Dining Services	0.005	0.07	0.00	0.07	0.00	0.07
Bus Driver	0.007	0.08	0.01	0.11	0.00	0.06
Business Manager	0.008	0.09	0.00	0.06	0.01	0.10
Business Manager, Executive	0.006	0.08	0.00	0.04	0.01	0.09
Carpenter	0.005	0.07	0.01	0.11	0.00	0.00
Computer Support Spec, Executive	0.007	0.08	0.01	0.10	0.00	0.07
Computer Support Spec, Senior	0.012	0.11	0.03	0.16	0.00	0.06
Computer Support Specialist	0.004	0.06	0.01	0.08	0.00	0.05
Cook	0.005	0.07	0.00	0.06	0.01	0.07
Coord, Area Public Relations	0.004	0.06	0.00	0.04	0.01	0.07
Coord, College Affairs	0.004	0.06	0.00	0.00	0.01	0.08
Coord, Marketing	0.004	0.06	0.00	0.04	0.01	0.07
Coord, Student Advising	0.012	0.11	0.00	0.07	0.02	0.13
Cred Analyst/Academic Advisor	0.007	0.08	0.00	0.06	0.01	0.10
Electrician	0.007	0.08	0.02	0.13	0.00	0.00
Engineer, Senior	0.005	0.07	0.01	0.11	0.00	0.00
Facilities/Grnds Attendant II	0.026	0.16	0.04	0.20	0.02	0.12
Facilities/Grounds Assistant	0.023	0.15	0.04	0.20	0.01	0.10

Table 5 (continued)

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Title						
Facilities/Grounds Attend, Sr	0.007	0.08	0.01	0.10	0.00	0.07
Facilities/Grounds Attendant	0.025	0.16	0.04	0.19	0.02	0.12
Financial Aid Specialist	0.006	0.08	0.00	0.00	0.01	0.10
Food Service Attendant	0.010	0.10	0.01	0.11	0.01	0.10
Food Service Attendant, Sr	0.004	0.06	0.00	0.06	0.00	0.07
Information Specialist	0.004	0.06	0.00	0.04	0.01	0.07
Laboratory Technician I	0.004	0.06	0.00	0.06	0.00	0.07
Laboratory Technician II	0.006	0.08	0.01	0.08	0.01	0.07
Library Assistant	0.005	0.07	0.00	0.04	0.01	0.08
Library Assistant, Senior	0.014	0.12	0.01	0.08	0.02	0.14
Library Specialist	0.008	0.09	0.00	0.04	0.01	0.11
Materials Handler, Senior	0.005	0.07	0.01	0.11	0.00	0.03
Nurse, Licensed Practical	0.004	0.06	0.00	0.00	0.01	0.08
Nutrition Educator	0.005	0.07	0.00	0.00	0.01	0.09
Office Assistant	0.016	0.13	0.00	0.07	0.02	0.15
Office Assistant, Senior	0.089	0.29	0.02	0.13	0.14	0.34
Office Associate	0.080	0.27	0.01	0.08	0.13	0.34
Office Associate, Senior	0.033	0.18	0.00	0.07	0.05	0.22
Painter	0.006	0.08	0.01	0.11	0.00	0.03
Plumber/Pipefitter	0.006	0.08	0.01	0.12	0.00	0.00
Police Officer	0.005	0.07	0.01	0.11	0.00	0.00
Preventive Mt Technician	0.005	0.07	0.01	0.11	0.00	0.00

Table 5 (continued)

Variable	Overall Mean	Overall St. Dev	Males Mean	Males St. Dev	Females Mean	Females St. Dev
Title						
Program Associate I	0.005	0.07	0.00	0.04	0.01	0.08
Program Associate II	0.004	0.06	0.00	0.00	0.01	0.08
Programmer Analyst, Executive	0.007	0.08	0.02	0.13	0.00	0.00
Programmer Analyst, Senior	0.006	0.08	0.01	0.10	0.00	0.06
Project Coordinator	0.029	0.17	0.01	0.11	0.04	0.20
Project Coordinator, Assistant	0.014	0.12	0.00	0.07	0.02	0.14
Project Coordinator, Senior	0.008	0.09	0.01	0.10	0.01	0.08
Staff Assistant	0.014	0.12	0.00	0.00	0.02	0.15
Supervisor, Library Services	0.006	0.08	0.00	0.00	0.01	0.10
Supv, Facilities/Grounds	0.010	0.10	0.01	0.11	0.01	0.09
Systems Programmer	0.004	0.06	0.01	0.09	0.00	0.03
Systems Programmer, Senior	0.005	0.07	0.01	0.10	0.00	0.03
Systems Specialist	0.006	0.08	0.01	0.11	0.00	0.05
Technician, Master	0.006	0.08	0.01	0.12	0.00	0.00
Technician, Senior	0.007	0.08	0.02	0.13	0.00	0.03
Number of observations	1534		618		916	

See notes to Table 3.

Table 6
Summary Statistics for Staff Data
by race/ethnicity

Variable	White		American Indian/Alaska Native		Black/African American		Asian		Hispanic/Latino	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Pay Characteristics										
Salary	**34,125**	12,286	33,068	10,807	29,908	14,830	**26,939**	9,596	**29,447**	8,745
ln(salary)	**10.38**	0.33	10.36	0.33	10.23	0.39	**10.14**	0.34	**10.25**	0.27
FTE	0.97	0.11	0.98	0.11	0.94	0.17	0.92	0.16	0.97	0.11
Demographics										
Male	**0.42**	0.49	0.30	0.47	0.56	0.53	**0.19**	0.40	0.31	0.47
Age	**45.69**	11.46	48.11	12.56	48.33	11.85	47.42	11.48	45.44	10.59
U.S. Citizen	**0.99**	0.07	1.00	0.00	1.00	0.00	**0.71**	0.46	0.98	0.14
Seniority and Experience										
Years seniority	**10.05**	8.40	11.04	8.55	8.61	9.52	7.47	8.00	**11.73**	9.46

Table 6 (continued)

Variable	White		American Indian/Alaska Native		Black/African American		Asian		Hispanic/Latino	
	Mean	**St. Dev**	**Mean**	**St. Dev**	**Mean**	**St. Dev**	**Mean**	**St. Dev**	**Mean**	**St. Dev**
Division										
Athletics	**0.02**	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17
Academic affairs	**0.41**	0.49	0.30	0.47	0.56	0.53	0.43	0.51	**0.26**	0.44
Student affairs	**0.19**	0.39	0.35	0.49	0.22	0.44	0.38	0.50	**0.39**	0.49
Administration & budget	0.27	0.44	0.30	0.47	0.22	0.44	0.10	0.30	0.28	0.45
Research	0.03	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Foundation	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Govt. & legal affairs	0.01	0.12	0.00	0.00	0.00	0.00	0.05	0.22	0.01	0.10
Information technology	0.06	0.23	0.05	0.22	0.00	0.00	0.05	0.22	0.03	0.17

Table 6 (continued)

Variable	White Mean	White St. Dev	American Indian/Alaska Native Mean	American Indian/Alaska Native St. Dev	Black/African American Mean	Black/African American St. Dev	Asian Mean	Asian St. Dev	Hispanic/Latino Mean	Hispanic/Latino St. Dev
Salary Grade										
Salary Grade 10	**0.01**	0.10	0.00	0.00	0.00	0.00	**0.19**	0.40	0.00	0.00
Salary Grade 11	**0.04**	0.19	0.00	0.00	0.00	0.00	**0.19**	0.40	0.08	0.27
Salary Grade 12	0.04	0.19	0.10	0.31	0.11	0.33	0.05	0.22	0.05	0.21
Salary Grade 13	**0.12**	0.33	0.15	0.37	0.33	0.50	0.14	0.36	0.17	0.38
Salary Grade 14	0.02	0.13	0.05	0.22	**0.11**	0.33	0.00	0.00	0.03	0.17
Salary Grade 15	0.05	0.22	0.00	0.00	0.11	0.33	0.05	0.22	0.05	0.21
Salary Grade 16	**0.03**	0.17	0.00	0.00	0.00	0.00	0.05	0.22	**0.11**	0.32
Salary Grade 17	0.16	0.37	0.15	0.37	0.00	0.00	0.05	0.22	0.21	0.41
Salary Grade 18	0.09	0.28	0.05	0.22	0.11	0.33	0.10	0.30	0.09	0.28
Salary Grade 19	**0.11**	0.31	0.10	0.31	0.00	0.00	0.00	0.00	0.05	0.21
Salary Grade 20	0.09	0.28	0.20	0.41	0.00	0.00	0.10	0.30	0.10	0.29
Salary Grade 21	**0.09**	0.28	0.00	0.00	0.11	0.33	0.05	0.22	**0.01**	0.10
Salary Grade 22	0.04	0.20	0.00	0.00	0.00	0.00	0.05	0.22	0.02	0.14
Salary Grade 23	0.06	0.23	0.10	0.31	0.00	0.00	0.00	0.00	0.04	0.19
Salary Grade 24	0.02	0.15	0.05	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Salary Grade 25	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salary Grade 26	0.01	0.10	0.05	0.22	0.00	0.00	0.00	0.00	0.01	0.10
Salary Grade 27	0.01	0.08	0.00	0.00	**0.11**	0.33	0.00	0.00	0.00	0.00
Salary Grade 30	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 6 (continued)

Variable	White		American Indian/Alaska Native		Black/African American		Asian		Hispanic/Latino	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Title										
Accountant	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounting Associate	0.02	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17
Accounting Associate, Senior	0.02	0.15	0.00	0.00	0.00	0.00	0.05	0.22	0.03	0.17
Asst Manager, Dining Services	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus Driver	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Business Manager	0.01	0.09	0.00	0.00	0.00	0.00	0.05	0.22	0.00	0.00
Business Manager, Executive	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carpenter	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Computer Support Spec, Executive	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Computer Support Spec, Senior	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Computer Support Specialist	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook	0.00	0.06	0.00	0.00	0.00	0.00	0.14	0.36	0.00	0.00
Coord, Area Public Relations	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Coord, College Affairs	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coord, Marketing	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Coord, Student Advising	0.01	0.11	0.00	0.00	0.00	0.00	0.05	0.22	0.01	0.10
Cred Analyst/Academic Advisor	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.14
Electrician	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Engineer, Senior	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities/Grnds Attendant II	0.02	0.15	0.00	0.00	0.00	0.00	0.05	0.22	0.07	0.25
Facilities/Grounds Assistant	0.02	0.13	0.00	0.00	0.00	0.00	0.05	0.22	0.04	0.19

Table 6 (continued)

Variable	White		American Indian/Alaska Native		Black/African American		Asian		Hispanic/Latino	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Title										
Facilities/Grounds Attend, Sr	0.00	0.07	0.05	0.22	0.11	0.33	0.00	0.00	0.02	0.14
Facilities/Grounds Attendant	0.02	0.15	0.05	0.22	0.11	0.33	0.00	0.00	0.05	0.21
Financial Aid Specialist	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Food Service Attendant	0.01	0.08	0.00	0.00	0.00	0.00	0.19	0.40	0.00	0.00
Food Service Attendant, Sr	0.00	0.06	0.05	0.22	0.00	0.00	0.00	0.00	0.01	0.10
Information Specialist	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Laboratory Technician I	0.00	0.06	0.00	0.00	0.00	0.00	0.05	0.22	0.00	0.00
Laboratory Technician II	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Library Assistant	0.00	0.06	0.05	0.22	0.00	0.00	0.00	0.00	0.01	0.10
Library Assistant, Senior	0.01	0.12	0.00	0.00	0.11	0.33	0.05	0.22	0.00	0.00
Library Specialist	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Materials Handler, Senior	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nurse, Licensed Practical	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Nutrition Educator	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office Assistant	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office Assistant, Senior	0.08	0.28	0.10	0.31	0.33	0.50	0.05	0.22	0.08	0.27
Office Associate	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.31
Office Associate, Senior	0.03	0.18	0.00	0.00	0.00	0.00	0.05	0.22	0.03	0.17
Painter	0.00	0.07	0.05	0.22	0.00	0.00	0.00	0.00	0.01	0.10
Plumber/Pipefitter	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Police Officer	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Preventive Mt Technician	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 6 (continued)

Variable	White		American Indian/Alaska Native		Black/African American		Asian		Hispanic/Latino	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
Title										
Program Associate I	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Program Associate II	0.00	0.06	0.05	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Programmer Analyst, Executive	0.01	0.08	0.05	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Programmer Analyst, Senior	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Project Coordinator	0.03	0.17	0.05	0.22	0.00	0.00	0.00	0.00	0.04	0.19
Project Coordinator, Assistant	0.01	0.11	0.05	0.22	0.00	0.00	0.00	0.00	0.03	0.17
Project Coordinator, Senior	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Staff Assistant	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Supervisor, Library Services	0.01	0.08	0.05	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Supv, Facilities/Grounds	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.29
Systems Programmer	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Systems Programmer, Senior	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10
Systems Specialist	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Technician, Master	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Technician, Senior	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of observations	1304		20		9		21		105	

See notes to Table 4.

Table 7
Faculty Salary Regression
Dependent Variable: ln(salary)

	1		**2[a]**				**3[a]**			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Demographics										
Male	-0.003	0.25	-0.394	1.22	-	-	-0.008	0.31	0.009	0.30
Asian	0.026	0.86	0.035	0.95	-0.046	0.67	-	-	-	-
Black/African American	0.008	0.13	0.022	0.31	0.001	0.01	-	-	-	-
Hispanic/Latino	0.030	1.00	0.066	1.94	-0.057	1.00	-	-	-	-
White	-	-	-	-	-	-	-	-	0.222	0.59
Other race or race not specified	0.007	0.26	0.017	0.57	-0.017	0.32	-	-	-	-
Age	**0.015**[b]	2.52	**0.017**	2.27	-0.012	0.91	0.005	0.36	0.012	0.79
Age^2	0.000	2.14	0.000	2.02	0.000	1.01	0.000	0.51	0.000	0.40
U.S. Citizen	**0.050**	2.48	**0.069**	2.72	-0.073	1.66	0.050	1.51	0.015	0.37
Seniority and Experience										
Years experience	0.000	0.10	0.001	0.20	-0.003	0.64	-0.002	0.37	0.002	0.27
Years $experience^2$	0.000	0.47	0.000	0.34	0.000	0.57	0.000	0.22	0.000	0.27
Years seniority	**-0.018**	4.89	**-0.017**	4.01	-0.007	0.92	0.002	0.28	-0.018	2.08
Years $seniority^2$	**0.000**	4.18	**0.000**	2.96	0.000	2.08	0.000	0.55	0.000	1.68
Years in rank	0.007	1.97	0.004	0.81	0.014	1.81	-0.016	1.51	0.024	2.20
Years in $rank^2$	0.000	1.12	0.000	0.30	**-0.001**	2.97	0.001	1.48	-0.001	1.80

Table 7 (continued)

	1		2				3			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Rank Variables										
Assistant	-	-	-	-	-	-	-	-	-	-
Associate	**0.099**	3.97	0.073	1.94	0.072	1.44	**0.192**	3.66	**-0.180**	2.98
Full/Senior	**0.294**	10.20	**0.294**	7.68	0.000	0.00	**0.313**	5.19	-0.111	1.58
Distinguished Professor	**0.498**	7.02	**0.499**	5.76	-0.103	0.88	-[c]	-	-[c]	-
Department Head	**0.185**	3.07	**0.223**	2.63	-0.095	0.95	**0.674**	6.04	**-0.524**	4.10
Asst./Assoc. Dean/Director	**0.299**	3.81	**0.319**	3.05	-0.055	0.36	**0.426**	3.49	-0.117	0.82
Dean/Director	**0.253**	3.40	**0.299**	3.08	-0.130	0.97	0.193	2.05	0.063	0.51
Other	0.145	0.98	0.012	0.12	0.205	0.95	-[c]	-	-[c]	-
Employment Class										
Academic Professional	**-0.207**	2.46	**-0.401**	2.92	0.214	1.29	-[c]	-	-[c]	-
Administrator	-	-	-	-	-	-	-	-	-	-
Faculty	**-0.136**	2.26	-0.085	1.02	-0.112	1.00	**0.362**	4.94	**-0.429**	4.90
Tenure Status										
Non-Tenure-track	**-0.232**	3.68	0.007	0.06	-0.274	2.05	-0.106	1.01	**-0.290**	2.47
Tenure-track	-0.048	1.76	-0.061	1.56	0.015	0.28	0.030	0.56	**-0.166**	2.67
Tenured	-	-	-	-	-	-	-	-	-	-

Table 7 (continued)

	1		2				3			
	Overall		Males		Female Interaction		Non-white		White Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Educational Background										
Bachelor's-Level	-0.024	0.37	0.001	0.02	-0.083	0.59	-[c]	-	-[c]	-
Master's-Level	**-0.125**	4.71	**-0.122**	3.58	0.000	0.00	-0.038	0.50	-0.102	1.26
Doctorate-Level	-	-	-	-	-	-	-	-	-	-
Professional	0.028	0.69	0.009	0.17	0.034	0.40	-0.003	0.03	0.040	0.31
College										
Other/NA	-0.085	1.37	-0.263	2.16	0.214	1.51	**-0.351**	3.13	**0.428**	3.43
Academic Affairs	**-0.183**	2.93	**-0.207**	2.51	-0.002	0.02	-[c]	-	-[c]	-
Agriculture	-0.028	1.17	-0.010	0.36	-0.043	0.85	0.050	0.98	-0.095	1.65
Arts & Sciences	-	-	-	-	-	-	-	-	-	-
Business	**0.296**	11.61	**0.286**	9.61	0.076	1.50	**0.403**	11.56	-0.085	1.78
Education	-0.038	1.74	-0.067	2.04	0.058	1.36	-0.014	0.41	-0.017	0.38
Engineering	**0.213**	11.07	**0.213**	10.62	0.038	0.50	**0.196**	4.60	0.024	0.50
Health Sciences	**0.061**	2.55	0.060	1.67	-0.003	0.07	0.063	1.36	0.013	0.23
Law	**0.221**	3.81	**0.237**	3.15	-0.001	0.01	**0.300**	2.47	0.089	0.65
Outreach	**-0.124**	2.65	-0.166	1.99	0.067	0.63	-0.029	0.61	-0.123	1.63

Table 7 (continued)

	1		2				3			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Job Allocation										
Teaching	-	-	-	-	-	-	-	-	-	-
Advising	-0.140	0.71	-0.039	0.15	-0.076	0.19	-0.569	0.86	0.488	0.70
Research	**0.147**	2.65	0.139	2.04	-0.010	0.08	**0.384**	3.59	-0.204	1.65
Service	0.203	2.12	0.200	1.88	0.083	0.45	0.214	1.01	-0.057	0.24
Cooperative development	0.082	1.62	0.051	0.81	0.012	0.12	-0.166	1.43	0.279	2.18
Professional development	**0.423**	2.39	0.356	1.12	-0.098	0.25	**2.935**	4.53	**-2.428**	3.57
Administration	**0.140**	2.65	**0.209**	3.30	-0.141	1.30	**0.545**	2.93	**-0.436**	2.25
Other	0.027	0.40	-0.167	1.29	0.225	1.47	-[c]		-[c]	
Constant	**10.647**	68.84	**10.951**	42.80	-	-	**10.324**	31.28		
R-squared	0.79		0.80				0.78			

[a] Column presents estimates of equation (6) in the text.

[b] Numbers in bold indicate coefficients statistically significant at the 5 percent level (two-tailed tests).

[c] Too few observations to include this variable in regression. For binary variables, this expands the comparison group to also include the variables excluded from the regression.

Table 8
Faculty Salary Regression – Excluding Rank Variables
Dependent Variable: ln(salary)

	1		2[a]				3[a]			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Demographics										
Male	0.007	0.48	-0.187	0.54	-	-	-0.009	0.34	0.020	0.62
Asian	0.029	0.90	0.035	0.90	-0.043	0.59	-	-	-	-
Black/African American	0.002	0.03	-0.015	0.18	0.087	0.71	-	-	-	-
Hispanic/Latino	0.030	0.98	0.089	1.54	-0.099	1.48	-	-	-	-
White									-0.453	1.27
Other race or race not specified	0.010	0.37	0.017	0.53	-0.012	0.20	-	-	-	-
Age	**0.016**[b]	2.50	0.016	1.99	-0.006	0.44	-0.002	0.20	0.021	1.44
Age^2	0.000	1.67	0.000	1.27	0.000	0.39	0.000	0.16	0.000	0.97
U.S. Citizen	**0.073**	3.28	**0.098**	3.53	**-0.101**	2.25	0.056	1.66	0.029	0.68
Seniority and Experience										
Years experience	0.000	0.07	0.001	0.19	-0.002	0.34	0.004	0.75	-0.005	0.77
Years $experience^2$	0.000	0.44	0.000	0.38	0.000	0.39	0.000	0.75	0.000	0.68
Years seniority	-0.006	2.00	**-0.009**	2.36	0.005	0.70	-0.001	0.07	-0.006	0.67
Years $seniority^2$	**0.000**	2.48	**0.000**	2.35	0.000	0.19	0.000	0.10	0.000	0.80

Table 8 (continued)

	1		2				3			
	Overall		Males		Female Interaction		Non-white		White Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Employment Class										
Academic Professional	**-0.206**	3.05	**-0.435**	4.61	**0.316**	2.72	-0.198	1.96	0.053	0.43
Administrator	-	-	-	-	-	-	-	-	-	-
Faculty	**-0.181**	5.22	**-0.156**	4.03	-0.009	0.13	-0.049	0.42	-0.142	1.15
Tenure Status										
Non-Tenure-track	**-0.331**	5.48	-0.081	0.87	**-0.292**	2.65	**-0.456**	3.42	0.059	0.40
Tenure-track	**-0.150**	7.36	**-0.168**	6.51	0.028	0.69	**-0.187**	4.18	0.017	0.35
Tenured	-	-	-	-	-	-	-	-	-	-
Educational Background										
Bachelor's-Level	-0.025	0.32	-0.012	0.12	-0.037	0.23	-[c]	-	-[c]	-
Master's-Level	**-0.135**	5.15	**-0.126**	3.41	-0.010	0.17	0.017	0.24	-0.172	2.22
Doctorate-Level	-	-	-	-	-	-	-	-	-	-
Professional	0.027	0.62	-0.022	0.41	0.070	0.83	-0.049	0.54	0.070	0.70

Table 8 (continued)

	1		2				3			
	Overall		Males		Female Interaction		Non-white		White Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
College										
Other/NA	-0.087	1.26	**-0.299**	2.84	0.261	1.92	-0.295	2.07	0.299	1.90
Academic Affairs	-0.160	2.18	-0.138	1.67	-0.109	1.00	-[c]	-	-[c]	-
Agriculture	-0.047	1.70	-0.032	0.97	-0.027	0.48	0.075	1.23	-0.129	1.90
Arts & Sciences	-	-	-	-	-	-	-	-	-	-
Business	**0.305**	9.90	**0.287**	7.97	0.103	1.63	**0.380**	10.61	-0.080	1.64
Education	-0.051	2.13	**-0.085**	2.31	0.066	1.34	-0.031	0.75	-0.023	0.46
Engineering	**0.223**	10.28	**0.221**	9.45	0.037	0.48	**0.191**	4.24	0.030	0.58
Health Sciences	0.053	2.17	0.058	1.63	-0.011	0.22	0.074	1.48	-0.001	0.03
Law	**0.347**	5.68	**0.427**	6.19	-0.149	1.35	**0.398**	3.99	-0.029	0.25
Outreach	**-0.133**	3.03	**-0.179**	2.53	0.043	0.47	-0.055	1.14	-0.098	1.30

Table 8 (continued)

	1		2				3			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Job Allocation										
Teaching	-	-	-	-	-	-	-	-	-	-
Advising	**-0.475**	2.23	-0.377	1.22	-0.236	0.58	-1.133	1.66	0.779	1.08
Research	**0.225**	3.67	**0.225**	2.98	-0.017	0.14	**0.378**	2.89	-0.146	1.00
Service	0.194	1.63	0.171	1.19	0.191	0.87	0.256	1.46	-0.091	0.40
Cooperative development	0.115	2.16	0.079	1.17	0.040	0.36	-0.348	2.20	**0.481**	2.88
Professional development	**0.383**	2.45	0.225	0.60	0.179	0.45	**2.493**	2.93	**-2.126**	2.44
Administration	**0.148**	2.64	**0.207**	2.96	-0.063	0.55	0.303	1.25	-0.182	0.73
Other	-0.010	0.12	-0.236	1.69	0.280	1.65	-[c]	-	-[c]	-
Constant	**10.650**	65.95	**10.818**	38.64	-	-	**11.044**	35.86	-	-
R-squared	0.72		0.74				0.73			

[a] Column presents estimates of equation (6) in the text.

[b] Numbers in bold indicate coefficients statistically significant at the 5 percent level (two-tailed tests).

[c] Too few observations to include this variable in regression. For binary variables, this expands the comparison group to also include the variables excluded from the regression.

Table 9
Faculty Salary Regression
with differential returns to characteristics by age
Dependent Variable: ln(salary)

	1				2			
	Includes Rank Variables				**Excludes Rank Variables**			
			Age Interaction				**Age Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Demographics								
Male	0.134	2.15	-0.003	2.05	0.140	2.07	-0.003	1.92
Asian	0.157	1.15	-0.003	0.97	0.128	1.05	-0.002	0.85
Black/African American	**0.595**[a]	4.55	**-0.012**	4.17	**0.674**	5.42	**-0.014**	5.23
Hispanic/Latino	-0.454	2.17	**0.011**	2.39	**-0.575**	2.57	**0.014**	2.77
White	-	-	-	-	-	-	-	-
Other race or race not specified	0.197	1.65	-0.005	1.70	0.226	2.07	-0.005	2.11
Age	-0.011	1.00	-	-	-0.005	0.36	-	-
Age^2	0.000	1.17	-	-	0.000	0.17	-	-
U.S. Citizen	-0.138	1.20	0.004	1.77	-0.185	1.50	0.005	2.10
Seniority and Experience								
Years experience	-0.010	1.18	0.000	1.25	-0.007	0.80	0.000	0.75
Years experience^2	0.000	0.55	0.000	0.68	0.000	0.34	0.000	0.33
Years seniority	-0.005	0.31	0.000	1.25	0.013	0.83	-0.001	1.73
Years seniority^2	**0.001**	2.35	0.000	1.28	0.001	1.06	0.000	0.08
Years in rank	0.033	1.58	0.000	0.88	-	-	-	-
Years in rank^2	**-0.003**	2.99	**0.000**	2.78	-	-	-	-

Table 9 (continued)

	1 Includes Rank Variables				2 Excludes Rank Variables			
			Age Interaction				Age Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Rank Variables								
Assistant	-	-	-	-	-	-	-	-
Associate	0.115	0.91	-0.001	0.19	-	-	-	-
Full/Senior	-0.043	0.27	0.006	2.00	-	-	-	-
Distinguished Professor	-0.350	0.87	0.015	2.02	-	-	-	-
Department Head	**-1.112**	4.33	**0.024**	4.92	-	-	-	-
Asst./Assoc. Dean/Director	-0.573	1.18	0.016	1.79	-	-	-	-
Dean/Director	-0.245	0.46	0.009	0.90	-	-	-	-
Other	**4.943**	3.25	**-0.074**	3.17	-	-	-	-
Employment Class								
Academic Professional	**-1.297**	2.74	0.020	2.21	-0.803	1.56	0.011	1.20
Administrator	-	-	-	-	-	-	-	-
Faculty	**-1.264**	3.69	**0.021**	3.32	-0.708	2.12	0.010	1.67
Tenure Status								
Non-Tenure-track	-0.232	0.65	0.000	0.07	-0.260	0.70	-0.001	0.20
Tenure-track	0.046	0.28	-0.003	0.74	0.166	1.20	**-0.007**	2.35
Tenured	-	-	-	-	-	-	-	-

Table 9 (continued)

	1 Includes Rank Variables				2 Excludes Rank Varialbes			
			Age Interaction				Age Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Educational Background								
Bachelor's-Level	0.196	0.60	-0.004	0.71	0.389	1.21	-0.008	1.35
Master's-Level	-0.141	0.98	0.001	0.23	0.018	0.14	-0.003	1.06
Doctorate-Level	-	-	-	-	-	-	-	-
Professional	-0.118	0.77	0.003	0.88	-0.156	0.99	0.004	1.13
College								
Other/NA	-0.010	0.03	-0.002	0.32	0.111	0.31	-0.004	0.62
Academic Affairs	-0.089	0.35	-0.001	0.30	-0.077	0.23	-0.001	0.24
Agriculture	0.113	0.89	-0.003	1.09	0.185	1.30	-0.004	1.57
Arts & Sciences	-	-	-	-	-	-	-	-
Business	**0.704**	4.95	**-0.008**	2.65	**0.808**	5.24	**-0.010**	3.10
Education	-0.091	0.89	0.001	0.52	-0.089	0.76	0.000	0.19
Engineering	**0.392**	4.22	-0.004	2.01	**0.387**	3.82	-0.003	1.64
Health Sciences	0.050	0.43	0.000	0.08	0.137	1.14	-0.002	0.78
Law	0.483	2.04	-0.005	1.02	0.424	1.70	-0.003	0.62
Outreach	0.078	0.28	-0.004	0.64	0.361	1.21	-0.010	1.53

Table 9 (continued)

	1 Includes Rank Variables				2 Excludes Rank Variables			
			Age Interaction				Age Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Job Allocation								
Teaching	-	-	-	-	-	-	-	-
Advising	0.067	0.06	-0.001	0.05	0.046	0.04	-0.006	0.25
Research	-0.295	1.12	0.008	1.59	-0.480	1.67	**0.013**	2.31
Service	0.970	1.85	-0.014	1.34	1.403	2.01	-0.023	1.60
Cooperative development	-0.399	1.50	0.009	1.74	-0.360	1.26	0.009	1.60
Professional development	1.887	1.64	-0.030	1.39	0.990	0.78	-0.009	0.39
Administration	**-0.979**	3.01	**0.021**	3.45	-0.647	1.83	**0.015**	2.25
Other	-0.646	1.57	0.013	1.59	-0.624	1.30	0.012	1.27
Constant	**11.946**	29.62	-	-	**11.421**	24.43	-	-
R-squared	0.82				0.76			

[a] Numbers in bold indicate coefficients statistically significant at the 5 percent level (two-tailed tests).

Table 10
Faculty Salary Decompositions

	1		2	
	Male - Female		**White - Non-white**	
Overall differential:	0.150		0.029	
Differential due to:	**Characteristics**	**Coefficients**	**Characteristics**	**Coefficients**
Demographics	-0.004	0.313	0.048	0.422
Seniority and Experience	-0.012	0.019	-0.054	-0.055
Rank	0.057	-0.034	0.069	-0.028
Employment Class	0.029	0.023	0.008	-0.355
Tenure Status	0.002	0.080	0.015	-0.132
Educational Background	0.021	0.000	-0.016	-0.008
College	0.054	-0.022	-0.018	-0.006
Job Allocation	0.011	0.005	0.003	-0.086
Intercept	-	-0.394	-	0.222
Totals	0.159	-0.009	0.056	-0.027

Table 11
Staff Salary Regression
Dependent Variable: ln(salary)

	1		2[a]				3[a]			
	Overall		Males		Female Interaction		Non-white		White Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Demographics										
Male	**-0.014**[b]	2.68	-0.113	1.04	-	-	0.011	0.99	**-0.030**	2.32
American Indian/Alaska Native	**-0.050**	2.50	**-0.103**	4.12	0.077	2.18	-	-	-	-
Asian	0.030	1.44	0.086	1.61	-0.065	1.12	-	-	-	-
Black/African American	**-0.041**	3.39	**-0.057**	3.61	0.015	0.58	-	-	-	-
Hispanic/Latino	-0.008	0.79	0.006	0.35	-0.023	1.02	-	-	-	-
White	-	-	-	-	-	-	-	-	0.074	0.79
Other race or race not specified	0.006	0.66	0.003	0.20	0.002	0.12	-	-	-	-
Age	**0.006**	3.89	0.004	1.37	0.005	1.47	0.003	0.76	0.004	1.08
Age^2	**0.000**	3.33	0.000	1.04	0.000	1.42	0.000	0.42	0.000	1.12
U.S. Citizen	**0.034**	2.38	0.040	1.68	-0.006	0.19	0.019	1.18	0.017	0.76
Seniority										
Years seniority	**0.004**	3.90	0.002	1.50	0.003	1.35	0.003	1.04	0.001	0.24
Years $seniority^2$	0.000	0.33	0.000	1.04	0.000	0.97	0.000	0.46	0.000	0.37

Table 11 (continued)

	1		2				3			
	Overall		Males		Female Interaction		Non-white		White Interaction	
Division	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Athletics	**-0.067**	3.55	-0.041	1.18	-0.044	1.14	-0.068	1.17	-0.001	0.01
Academic affairs	-	-	-	-	-	-	-	-	-	-
Student affairs	-0.011	1.58	0.021	1.66	**-0.047**	3.09	-0.027	1.71	0.017	0.98
Administration & budget	**-0.023**	3.81	0.000	0.01	**-0.031**	2.32	**-0.053**	3.36	0.033	1.92
Research	0.009	0.66	-0.019	0.63	0.036	1.04	-0.025	0.73	0.038	1.04
Foundation	-0.021	0.97	0.031	1.75	-0.065	2.02	0.012	0.34	-0.038	0.88
Govt. & legal affairs	-0.027	1.63	-0.016	0.58	-0.010	0.28	-0.022	0.38	-0.003	0.05
Information technology	0.004	0.42	0.018	1.29	-0.021	0.87	-0.017	0.62	0.023	0.75

Table 11 (continued)

	1		2				3			
	Overall		Males		Female Interaction		Non-white		White Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Salary Grade										
Salary Grade 10	**-1.359**	38.37	**-1.320**	36.61	**-0.196**	2.25	**-1.191**	27.92	**-0.175**	3.03
Salary Grade 11	**-1.306**	38.60	**-1.284**	41.62	-0.178	2.09	**-1.132**	26.29	**-0.193**	3.40
Salary Grade 12	**-1.255**	36.74	**-1.223**	38.44	**-0.201**	2.34	**-1.115**	26.14	**-0.154**	2.71
Salary Grade 13	**-1.177**	35.20	**-1.172**	40.18	-0.150	1.79	**-1.024**	23.64	**-0.167**	2.95
Salary Grade 14	**-1.104**	31.55	**-1.083**	33.19	-0.194	2.15	**-0.947**	22.15	**-0.174**	3.02
Salary Grade 15	**-1.043**	30.74	**-1.020**	32.63	-0.179	2.11	**-0.868**	18.54	**-0.192**	3.23
Salary Grade 16	**-0.970**	27.93	**-0.918**	28.17	**-0.233**	2.69	**-0.802**	18.59	**-0.182**	3.14
Salary Grade 17	**-0.918**	27.52	**-0.869**	28.80	**-0.210**	2.49	**-0.765**	18.14	**-0.168**	3.01
Salary Grade 18	**-0.822**	24.25	**-0.765**	24.58	**-0.225**	2.66	**-0.643**	12.01	**-0.196**	3.02
Salary Grade 19	**-0.722**	21.38	**-0.707**	23.22	-0.165	1.95	**-0.550**	11.44	**-0.189**	3.13
Salary Grade 20	**-0.669**	19.62	**-0.638**	20.91	-0.183	2.16	**-0.515**	11.78	**-0.169**	2.95
Salary Grade 21	**-0.569**	16.80	**-0.521**	17.00	**-0.222**	2.61	**-0.413**	8.68	**-0.169**	2.81
Salary Grade 22	**-0.480**	13.95	**-0.455**	14.54	-0.164	1.90	**-0.347**	5.67	-0.146	2.04
Salary Grade 23	**-0.377**	11.06	**-0.339**	11.03	-0.188	2.20	**-0.246**	5.42	**-0.141**	2.40
Salary Grade 24	**-0.301**	8.61	**-0.264**	8.12	-0.182	2.05	**-0.225**	5.57	-0.088	1.59
Salary Grade 25	**-0.194**	5.38	**-0.150**	4.01	**-0.209**	2.41	0.037	0.74	**-0.248**	3.92
Salary Grade >25	-	-	-	-	-	-	-	-	-	-
Constant	**10.981**	229.62	**11.092**	123.15	-	-	**10.907**	139.96	-	-
R-squared	0.93		0.93				0.89			

[a] Column presents estimates of equation (6) in the text.

[b] Numbers in bold indicate coefficients statistically significant at the 5 percent level (two-tailed tests).

Table 12
Staff Salary Regression – Excluding Salary Grade Variables
Dependent Variable: ln(salary)

	1		**2**[a]				**3**[a]			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Demographics										
Male	**0.107**[b]	6.28	-0.193	0.76	-	-	0.078	1.78	0.031	0.65
American Indian/Alaska Native	-0.008	0.11	0.047	0.35	-0.087	0.56	-	-	-	-
Asian	-0.153	2.18	-0.100	0.90	-0.095	0.67	-	-	-	-
Black/African American	-0.123	1.13	0.037	0.23	-0.304	1.85	-	-	-	-
Hispanic/Latino	**-0.128**	4.83	**-0.169**	3.36	0.068	1.17	-	-	-	-
White									-0.466	1.52
Other race or race not specified	-0.068	2.04	-0.011	0.20	-0.085	1.24	-	-	-	-
Age	**0.029**	6.55	**0.033**	4.40	-0.006	0.70	0.000	0.04	**0.033**	2.54
Age^2	**0.000**	6.64	**0.000**	4.01	0.000	0.24	0.000	0.05	**0.000**	2.56
U.S. Citizen	0.096	1.05	0.167	1.21	-0.122	0.68	0.169	2.17	-0.084	0.50
Seniority										
Years seniority	**0.024**	6.92	**0.026**	4.36	-0.003	0.42	**0.033**	4.71	-0.010	1.30
Years $seniority^2$	**0.000**	3.09	0.000	2.06	0.000	0.12	**-0.001**	3.12	0.000	1.63

Table 12 (continued)

	1		2				3			
	Overall		**Males**		**Female Interaction**		**Non-white**		**White Interaction**	
	dy/dx	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Division										
Athletics	**-0.127**	3.10	**-0.249**	3.81	**0.194**	2.42	-0.044	0.44	-0.102	0.93
Academic affairs	-	-	-	-	-	-	-	-	-	-
Student affairs	-0.021	0.99	**-0.125**	2.95	**0.145**	2.97	-0.071	1.52	0.063	1.20
Administration & budget	**-0.103**	4.96	**-0.192**	6.20	**0.148**	3.48	**-0.129**	2.50	0.030	0.53
Research	**0.102**	3.43	0.083	1.09	0.039	0.48	0.117	1.63	-0.017	0.22
Foundation	0.103	1.78	**0.298**	8.69	**-0.252**	3.55	0.059	0.64	0.045	0.40
Govt. & legal affairs	0.062	0.94	-0.007	0.08	0.073	0.55	-0.083	0.58	0.155	0.97
Information technology	**0.292**	8.95	**0.235**	5.39	0.064	0.92	**0.384**	2.53	-0.098	0.63
Constant	**9.474**	72.74	**9.615**	60.38	-	-	**9.873**	39.53	-	-
R-squared	0.28		0.31				0.29			

[a] Column presents estimates of equation (6) in the text.
[b] Numbers in bold indicate coefficients statistically significant at the 5 percent level (two-tailed tests).

Table 13
Staff Salary Regression
with differential returns to characteristics by age
Dependent Variable: ln(salary)

	1				2			
	Includes Salary Grade				Excludes Salary Grade			
			Age Interaction				Age Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Demographics								
Male	0.001	0.04	0.000	0.76	-0.114	1.91	**0.005**	3.68
American Indian/Alaska Native	-0.101	0.92	0.001	0.47	-0.118	0.34	0.002	0.28
Asian	0.109	1.31	-0.002	0.89	-0.052	0.15	-0.002	0.33
Black/African American	-0.056	1.01	0.000	0.22	0.623	1.52	-0.015	2.23
Hispanic/Latino	-0.059	1.38	0.001	1.13	-0.145	1.20	0.000	0.16
White	-	-	-	-	-	-	-	-
Other race or race not specified	0.035	1.29	-0.001	1.03	-0.135	1.31	0.002	0.79
Age	0.003	0.61	-	-	**0.025**	2.65	-	-
Age^2	0.000	1.04	-	-	**0.000**	4.02	-	-
U.S. Citizen	0.130	2.22	-0.002	1.67	0.082	0.25	0.000	0.06
Seniority								
Years seniority	**0.014**[a]	2.75	0.000	2.15	**0.060**	4.06	-0.001	2.23
Years seniority^2	0.000	0.88	0.000	1.23	**-0.002**	3.48	**0.000**	2.80

Table 13 (continued)

	1 Includes Salary Grade				2 Excludes Salary Grade			
			Age Interaction				Age Interaction	
Division	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**	**dy/dx**	**|t|**
Athletics	-0.080	1.15	0.000	0.12	-0.129	0.97	0.000	0.07
Academic affairs	-	-	-	-	-	-	-	-
Student affairs	0.005	0.19	0.000	0.56	0.016	0.21	-0.001	0.48
Administration & budget	0.003	0.13	-0.001	1.07	-0.084	1.10	0.000	0.25
Research	-0.061	1.30	0.002	1.46	0.042	0.40	0.002	0.73
Foundation	-0.018	0.34	0.000	0.03	0.200	1.33	-0.003	0.72
Govt. & legal affairs	0.014	0.16	-0.001	0.46	0.259	1.25	-0.005	1.04
Information technology	0.012	0.31	0.000	0.29	0.240	2.05	0.001	0.40

Table 13 (continued)

	1 Includes Salary Grade				2 Excludes Salary Grade			
			Age Interaction				Age Interaction	
	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|	dy/dx	|t|
Salary Grade								
Salary Grade 10	**-1.566**	8.11	0.004	1.10	-	-	-	-
Salary Grade 11	**-1.510**	7.93	0.004	1.10	-	-	-	-
Salary Grade 12	**-1.454**	7.33	0.004	1.01	-	-	-	-
Salary Grade 13	**-1.368**	7.17	0.004	1.05	-	-	-	-
Salary Grade 14	**-1.302**	6.77	0.004	1.07	-	-	-	-
Salary Grade 15	**-1.238**	6.47	0.004	1.06	-	-	-	-
Salary Grade 16	**-1.094**	5.49	0.002	0.59	-	-	-	-
Salary Grade 17	**-1.111**	5.84	0.004	1.06	-	-	-	-
Salary Grade 18	**-1.079**	5.66	0.005	1.46	-	-	-	-
Salary Grade 19	**-0.926**	4.82	0.004	1.12	-	-	-	-
Salary Grade 20	**-0.871**	4.50	0.004	1.09	-	-	-	-
Salary Grade 21	**-0.750**	3.92	0.003	0.97	-	-	-	-
Salary Grade 22	**-0.548**	2.84	0.001	0.28	-	-	-	-
Salary Grade 23	**-0.473**	2.38	0.002	0.48	-	-	-	-
Salary Grade 24	**-0.569**	2.80	0.005	1.40	-	-	-	-
Salary Grade 25	-0.336	1.62	0.003	0.68	-	-	-	-
Salary Grade >25	-	-	-	-	-	-	-	-
Constant	**11.095**	54.45	-	-	**9.542**	28.17	-	-
R-squared	0.93				0.30			

[a] Numbers in bold indicate coefficients statistically significant at the 5 percent level (two-tailed tests).

Table 14
Staff Salary Decompositions

	1		**2**	
	Male - Female		**White - Non-white**	
Overall differential:	0.094		0.172	
Differential due to:	**Characteristics**	**Coefficients**	**Characteristics**	**Coefficients**
Demographics	-0.001	-0.094	0.003	0.089
Seniority	-0.001	-0.017	0.009	0.000
Division	-0.001	0.018	0.002	0.015
Salary grade	0.116	0.188	0.152	-0.172
Intercept	-	-0.113	-	0.074
Totals	0.113	-0.019	0.167	0.005

Assessment of Salary Equity

Study objective: Assess salary differences related to gender, race/ethnicity, and age, while controlling for legitimate employment-related variables important to explaining pay differences. The study was conducted by Dr. Wendy Stock, professor of economics at Montana State University.

Methodology: The analysis rested on three statistical models:

- Model 1 regresses salaries on gender, ethnicity/race, age, and a set of employment-relevant variables (seniority and experience, rank, employment class, tenure status, educational background, and college/unit). The model is used to determine if gender, ethnicity/race, and age are statistically significant determinants of salaries once legitimate employment-related factors are controlled for. A variant of model 1 is used to predict salaries for individual employees based only on their employment-related characteristics, i.e., not their gender, ethnicity/race, or age, and to compare those predictions against actual salaries. Employees with salaries that appear to be "outliers" were identified.
- Model 2 regresses observed salary separately for men and women, and for whites and non-whites, on in employment-related characteristics of men and women, and of whites and non-whites. The model is used to decompose the salary differences into an explainable component, for example, average salaries for men are lower because their average level of educational attainment is lower, and an unexplained component.
- Model 3 assesses whether or not there are statistically significant different rates of return to employment-related variables, e.g. years of experience, for men versus women and for whites versus non-whites.

Key findings for faculty:

- Differences in the salaries of men and women and of whites and non-whites largely disappear once employment-relevant factors are controlled for.
- The majority of pay gaps in the faculty data can be explained by differences in legitimate employment-related characteristics.
- Differences in rank are the most important sources of differences in employment-related characteristics of men v. women and whites v. non-whites
- A non-tenure track position carries larger negative returns for women than for men.

Key findings for staff:

- Differences in the salaries of men and women and of whites and non-whites are statistically significant (once employment-relevant factors are controlled for); however, the model is not statistically robust as evidenced by the fact that the coefficients on gender and ethnicity/race change when salary grade is excluded from the model. Most likely, the model suffers from endogeneity bias in that salary grade is itself affected by gender or race/ethnicity.
- Differences in salaries by gender and race/ethnicity are primarily due to differences in employment-relevant characteristics of the groups.
- The salary grade variable is the most important sources of differences in employment-related characteristics of men v. women and white v. non-whites in staff positions.

- Women (and also whites) in lower salary grades experience larger negative salary penalties associated with being in lower-level positions than do men (and non-whites) in those lower salary grades.