

Final Report
on a Study of
Gender and Ethnic-Minority Equity in Faculty Salaries
at the University of Iowa, 2004-2005

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Executive Summary

In response to a recommendation from a 2001-02 salary equity committee report and a mandate from the Office of Equal Opportunity and Diversity (EOD), in order to comply with relevant federal requirements, a salary-equity analysis focused on gender and minority status in full-time faculty on the tenured or clinical track was conducted using 2004-05 data. This report presents the method and results of that study.

Based on the literature, six factors that have been shown to affect faculty salaries had been identified previously (in the 2001-02 report): college/department, type of terminal degree (e.g., master's, "PhD-type" doctorate, health-sciences doctorate), years since obtaining terminal degree (as a way of measuring seniority), tenure status, faculty rank, and administrative experience. In the current analyses, at the request of EOD, administrators were removed from the data set, necessitating that that factor be removed from the analyses. Moreover, also at the request of the Office of Equal Opportunity and Diversity (EOD), the data were analyzed in three groups: academic-year (9-month) tenured-and-tenure-track (AT) faculty, fiscal-year (12-month) tenured-and-tenure-track (FT) faculty, and fiscal-year (12-month) clinical-track faculty.

As was found in the earlier salary study, most faculty salary variation—regardless of track or whether the appointment is based on the academic or fiscal year—was due to the five factors that are known and expected to affect salary, specifically: *discipline* (college/department), *type of terminal academic degree* (e.g., masters' degree; health-science doctoral degree), *seniority* (number of years since obtaining terminal degree), *tenure status*, and *faculty rank*. These variables accounted for all but approximately 20% of faculty salary variation, and **when these five factors were taken into account, there were no overall statistically significant gender- or minority-status based salary differences in any of the three faculty groups.**

The bulk of salary variation was due to departmental differences in salaries (e.g., faculty in Finance earn more than those in Classics; faculty in Neurosurgery earn more than those in Preventive & Community Dentistry). When this departmental variation was not considered, some significant differences based on gender, and a few on minority status, were found, which suggests that, in particular, **women faculty are more likely to be in departments that have lower overall salaries.** Test of this hypothesis were strongly supported for gender. For example, in the academic tenure-track, broadly speaking, faculty in the Arts and Humanities were roughly 50% women and earned the least, those in the Social Sciences had one-third women and earned middle-range salaries, whereas those in Physical Sciences, Math, Law, Engineering, and Business had only about 15% women on average and earned the highest salaries. Similar results were obtained in the fiscal tenured-and-tenure-track faculty and clinical-track faculty groups.

Importantly, however, in only one case was it clearly reasonable not to consider departmental variation: **In the College of Public Health, there was a statistically significant difference (16.6%) between male and female salaries beyond that explained by the combination of tenure, faculty rank, type of degree, years since**

degree, and department. This discrepancy decreased to 11.7% in FY06, suggesting that the College is taking steps to remedy the situation. Moreover, across the 3 primary and 14 secondary comparisons made in which gender-based differences were not significant, only three favored women: (1) the primary comparison of the Full Model in the AT faculty; (2) the secondary comparison of the Full Model in just the College of Liberal Arts and Sciences (CLAS), and (3) the secondary comparison of the model omitting *department* in the College of Business. Thus, **although the differences did not reach statistical significance, there was a small but fairly consistent pattern of women receiving lower salaries:** 3.0% lower in the FT faculty and 4.3% lower in the CT faculty—with the exception of CLAS (and Business where men earned a trivial 0.06% more). In contrast, there was no clear pattern favoring minority or non-minority faculty in salaries.

Recommendations: (1) That central administration conduct a close examination of faculty salaries in the College of Public Health to determine whether the significant discrepancy between male and female faculty salaries in the college can be justified on appropriate grounds (e.g., differences in merit based on quality and quantity of publications, grants, etc.), and correct any inequities found.

(2) That the small but consistent pattern of lower salaries for women faculty (with the notable exceptions of the Colleges of Liberal Arts and Sciences and Business) be examined further to try to understand its causes. Only when we understand this persistent difference can we work effectively towards fully equitable work and salary distributions.

(3) That the University devise and implement both short- and long-term strategies to hire more women in departments that are (a) high salary and (b) low female. For example, incentives may need to be provided to encourage diverse hiring in these fields. Because there are relatively few women in these departments' candidate pools, the University may have to pay a premium to recruit those who do exist. That is, to recruit more women into these departments, they may have to be brought in at salaries that exceed the departments' current maximum salaries, but such "drastic" solutions may be necessary to break out of the current stalemate.

Introduction

In May, 2001, the Office of the Provost at the University of Iowa completed a report on an analysis examining salary equity by gender and minority status for the years 1993-1999. Based on the literature, six factors had been identified that have been shown to affect faculty salaries and for which data were available in the UI payroll system: *discipline* (department/college), type of terminal academic *degree*, *seniority* (years since obtaining the terminal degree), faculty *rank*, *tenure* status, and *administrative experience*. A primary finding of the study is that when these factors were taken into account, there were no gender- or minority-status based salary differences in any of the six study years.

In December, 2002, a supplemental report was completed that examined only the 1999 data divided into three collegiate groups—the College of Liberal Arts and Sciences, the College of Medicine, and all other colleges combined—because of concerns that the all-University analyses may have obscured important differences among colleges. The results largely paralleled those for the University as a whole, again finding **no** gender- or minority-based salary differences when all six factors were accounted for.

The previous committee made three recommendations:

1. Update the findings by conducting parallel analyses for 1999 through 2001.
2. Charge a faculty group, supported by the Office of the Provost, to investigate the underrepresentation of women among Full Professors.
3. Continue ongoing salary equity reviews in the Offices of the Provost and Affirmative Action.

Recommendation #1 was not followed at that time (nor has been since), because the administration thought it would be a better use of resources to look forward rather than back. Recommendation #2 was recently followed, with the appointment of a Gender Equity Task Force, chaired by Adrien Wing, Professor of Law. The current report stems both from Recommendation #3 and from a mandate from the Office of Equal Opportunity and Diversity to conduct a salary equity analysis in order comply with relevant federal requirements. It presents analyses regarding salary equity by gender and minority status for FY2004-05. It is being provided both to EOD and to the Gender Equity Task Force for their respective use.

Methods and Demographic Characteristics

Data Sets

At the request of the Office of Equal Opportunity and Diversity (EOD), in order to meet requirements of the federal government, UI full-time faculty salary data were analyzed in three groups: academic-year (9-month) tenured-and-tenure-track (AT) faculty ($N=764$), fiscal-year (12-month) tenured-and-tenure-track (FT) faculty ($N=614$), and fiscal-year (12-month) clinical-track faculty ($N=287$). Academic-year clinical-track (FC) faculty data were not analyzed because there were insufficient numbers ($N=19$). Per EOD requirement, departmental (DEOs), collegiate (Deans, Associate Deans), and central administrators were excluded. In addition, 14 faculty members were not included because their appointments were highly atypical for their college (e.g., a faculty member with a 9-month appointment in a college where all other faculty have 12-month appointments or vice versa).

Independent Variables (Demographic Characteristics)

Demographic characteristics of the three groups that were used in the analyses are shown in Table 1. *Women* comprised 31-32% of the AT and FC faculty, and 21% of the FT facultyⁱ. *Minority* faculty representation varied from 13% (FT) to 16% (AT). *Tenured* faculty comprised 72-73% of the AT and FT faculty; the FC faculty, by definition, are all non-tenured.

Rank. The AT and FT faculty had approximately one-quarter Assistant Professors, whereas the FC faculty had approximately one-half. The percentage of Associate Professors ranged from 28% (FT) to 35% (FC), whereas Full Professors represented 41 and 48% of the AT and FT faculty, respectively, but only 12% of the FC faculty.

College. The majority (66%) of AT faculty were in the College of Liberal Arts and Sciences (CLAS), 7 to 10% were in each of Business, Engineering, and Education, and 1—5% were in Law, Nursing, and the Graduate College. The majority of FT and FC faculty (78 and 83%, respectively) were in the Carver College of Medicine (CCOM), with Dentistry, CLAS, Nursing, Pharmacy, and Public Health also represented (1 to 9% each).

Highest Academic Degree. The UI faculty hold a wide variety of academic degrees which, for these analyses, were grouped into one of four categories: bachelors', masters', non-health science doctorates (e.g., PhD, JD, EDD, etc.), and health-sciences doctorates (e.g., MD, DDS). Most (90%) of AT faculty held non-health science doctorates, whereas most (83%) of the FC faculty had health-science doctorates. Almost all FT faculty held either health-science (55%) or non-health-science (43%) doctorates.

Seniority (Years Since Degree). The average number of years since the highest degree was obtained ranged from 16 (FC) to 21 (FT), with very wide ranges in each data set, from 0 or 1 up to 46 (FC), 49 (FT), and 53 (AT), respectively.

Dependent Variable (Salary)

Average salary was approximately \$150,000 in both the FT and CT faculty, and close to \$80,000 for AT faculty, with a wide range in each group. The low end was approximately \$50,000 to \$55,000 in the FT and CT faculty, and \$25,000 in the AT faculty, whereas the highest salaries ranged from approximately \$223,000 in the AT faculty, to \$323,500 in the CT faculty, and \$550,000 in the FT faculty.

Analytic Strategy

The effect on salary of gender, minority status, and their interaction was analyzed using regression analyses. Depending on the analysis, independent variables (rank and/or tenure status, college or department, highest degree, and number of years since the highest degree was obtained) were controlled. The natural log of the salary was used, so resulting coefficients can be interpreted as the percentage effect on salary of a one unit change in the independent variable. For example, if the difference between male and female salaries was .08, there was an 8% difference in male and female salaries.

A priori model. Data were first analyzed using all variables expected to affect salary, determined in advance of conducting any analyses. This “Full Model” included the control variables of rank and tenure status (where applicable), highest degree and years since degree, and department. Variables that were not significant were removed one at a time, beginning with the “least significant” variable until all non-significant variables were removed. The effect on salary of gender, minority status, and their interaction was then examined (Full Model-Reduced).

Additional models. Additional models were then run to understand the data sets further. Gender, minority status and their interaction were always included. Regardless of data set and variables entered, rank always was significant and the interaction of rank with gender was never significant. Therefore, we included rank and not the rank-by-gender interaction in all final analyses reported here. Other results varied by faculty group, so we report on them separately, generalizing when possible and reporting separate results when necessary.

Supplemental analyses. Additional analyses (logistic regressions) were conducted to examine the potential *indirect* effect of gender and minority status on salary through their effects on rank and tenure. None of the results indicated that this was the case.

Results

Academic Tenured-and-tenure track Faculty

Full Model. In the initial “Full Model,” tenure status, followed by degree category were not significant and so were removed. Thus, in the final “Full Model-Reduced,” only rank, years since degree, and department significantly affected salary. Gender, minority status, and their interaction were not significant. In this final model, the salary difference between men and women was only 0.36%, with women’s salaries slightly higher than men’s (see Table 2). The 95% confidence interval (CI)—the range in which there is a 95% probability that the true average salary lies—was from 2.8% with men’s salaries higher to 3.5% with women’s salaries higher. The average difference between minority and non-minority salaries was only 0.21% with non-minority faculty salaries slightly higher than minority faculty salaries, with the 95% CI ranging from a difference of 2.8% with minority faculty salaries higher to one of 3.3% with non-minority faculty salaries higher. The final model explained 83% of the variation in salaries (see Table 5).

Additional models. When neither department nor college was included, all other control variables (rank, tenure status, degree category, and years since degree) were significantly related to salary. In addition, there were significant salary differences by both gender and minority status. The average gender difference in salaries was 7.8% (95% CI = 2.7% to 12.9%, with men’s salaries higher throughout the range), whereas the average difference related to minority status was 5.1%, with minority faculty salaries higher (95% CI = 0.12% to 10.1%). The interaction of gender and minority status was not significant. The final model explained 43% of the variation in salaries (see Table 5).

When *college* was added and control variables that became non-significant were removed, the final model included rank, degree category, and years since degree, in addition to college. Gender, minority, and their interaction were all not significant. The average difference in men’s and women’s salaries in this model was 2.7%, with men’s salaries higher (95% CI = 0.68% favoring women to 6.1% favoring men), whereas the average difference due to minority status was 1.1% with minority salaries higher (95% CI = -2.1% [i.e., favoring non-minority] to 4.4% favoring minority faculty). Again, the interaction of gender and minority status was not significant. The final model explained 76% of the variation in salaries (see Table 5).

These results suggest that most of the variation in academic tenure-track faculty salaries University-wide can be explained by salary variation between colleges and departments, by rank and type of terminal degree and by years since obtaining the terminal degree. Because the gender variable is significant in the models that do not control for department or college, this suggests that women are more likely to be in departments that have lower salaries. To explore this hypothesis, we “trichotomized” departments into high, middle, and low salary groups. A chi-square analysis of these salary categories with gender was significant ($p < .0001$), strongly supporting the hypothesis. An examination of the departments comprising the groups revealed that CLAS departments appear in all three groups (roughly speaking, Arts & Humanities, Social Science,

Physical Sciences & Math), Education and Graduate college departments appeared in the low and medium salary groups, whereas Law and departments from Engineering and Business all were in the top salary group. The lower salary departments had close to 50% each men and women faculty, whereas the medium-salary departments had approximately twice as many men as women faculty, and the highest salaried departments had an average of about 85% male faculty (see Table 5).

Analyses by College. We then ran, whenever possible, the same analyses separately for individual colleges (see Table 3). In CLAS ($N=505$) when all significant control variables other than department (i.e., rank, terminal degree category, and years since obtaining terminal degree) were included, gender was significant at the $<.10$ level, but not the $<.05$ level. The average male-female salary difference was 3.63%, with men receiving higher salaries (95% CI = 0.48% favoring women to 7.7% favoring men), and the average difference due to minority status was 1.52%, with minority faculty salaries higher (95% CI = -2.5% [i.e., favoring non-minority faculty] to 5.5% favoring minority faculty). When department was added, these average differences changed to 0.36% with women receiving the higher salaries (95% CI = -3.9% to 3.2%) and to 0.21% with non-minority faculty salaries averaging slightly higher (95% CI = -3.0% to 4.3%). Gender, minority status and the interaction of gender and minority status all were not significant. The full model (including department) explained 76% of the variation in salaries and the model without department explain 61% (see Table 5).

In Business ($N=73$), there was no significant salary difference due to gender, minority status, or their interaction, regardless of whether or not department was included in the analysis. The average gender difference in salary without department was 0.03% favoring women (95% CI = 13.4% favoring men to 13.4% favoring women); with department included, the average difference was 0.06%, favoring men (95% CI = 13.9% favoring women to 14.1% favoring men). The average difference due to minority status was 1.4% favoring non-minority faculty when department was not included (95% CI = 10.9% favoring minority faculty to 13.7% favoring non-minority faculty) and 2.9% favoring minority faculty when it was (95% CI = 10.2% favoring non-minority faculty to 16.0% favoring minority faculty). The full model explained 52% of the salary variation and the model without department explained 35% of the variation (see Table 5).

In Education ($N=55$), there again was no significant salary difference due to gender, minority status, or their interaction, regardless of whether department was included in the model. Men's average salary was 1.51% higher than women's when not considering department (95% CI = 7.5% favoring women to 10.5% favoring men) and 4% higher when department was considered (95% CI = 4.6% favoring women to 12.6% favoring men). Non-minority faculty salaries averaged 2.01% higher without taking department into account (95% CI = 8.2% favoring minority faculty to 12.2% favoring non-minority faculty) and 0.86% higher when department was controlled (95% CI = 8.5% favoring minority faculty to 10.2% favoring non-minority faculty). The full model explained 81% of the salary variation and without department, the model explained only slightly less, 76% (see Table 5).

The other colleges were either too small (e.g., Law, Graduate College) or had too few women (Engineering), men (Nursing), and/or minority faculty to run the analyses.

Fiscal Tenured-and-tenure track Faculty

Full Model. In the initial “Full Model,” tenure status, followed by years since degree were not significant and so were removed. Thus, in the final “Full Model-Reduced,” only rank, degree category, and department significantly affected salary. Gender, minority status, and their interaction were not significant. As shown in Table 2, in this final model, the average salary difference between men and women was 2.98%, with men’s salaries slightly higher than women’s (95% CI = -3.4% to 9.2%). The average difference between minority and non-minority salaries was 2.16% with non-minority faculty salaries averaging higher (95% CI = -4.2% to 8.5%). The final model explained 76% of the variation in these faculty salaries (see Table 5).

Additional models. Even when department and college were not included, rank and degree category still were the only control variables significantly related to salary. Moreover, neither gender nor minority status (nor their interaction) were statistically significant. Without department or college in the model, the average gender difference in salaries was 6.2%, with men’s salaries higher (95% CI = -1.7% to 14.2%), whereas the average difference related to minority status was 3.3%, with minority faculty salaries higher (95% CI = -4.6% to 11.2%). The final model explained 59% of the variation in faculty salaries (see Table 5).

When *college* was added and control variables that became non-significant were removed, the final model still included rank and degree category, in addition to college. Gender, minority, and their interaction were all not significant. The average difference in men’s and women’s salaries in this model was 5.4%, with men’s salaries higher (95% CI = -2.2% to 13.0%), whereas the average difference due to minority status was 2.1% with minority faculty salaries higher (95% CI = 5.5% to 9.5%). The final model explained 63% of the variation in faculty salaries (see Table 5).

As with the academic-year tenured and tenure-track faculty, these results suggest that most of the variation in salaries can be explained by variation in salaries between departments and colleges, and also rank and type of terminal degree. However, salaries do not differ significantly by gender even in the models that do not control for department or college, so the remaining gender difference in salaries may not be due to uneven distribution of women across departments on different pay scales.

Nevertheless, we again “trichotomized” departments into high, middle, and low salary groups and, as before, a chi-square analysis of these salary categories with gender was significant ($p < .01$), suggesting that the effect we saw earlier may be present in the fiscal-year tenured and tenure-track faculty group as well. An examination of the departments comprising the high, medium and low salary groups revealed that CCOM departments appeared in all groups, with the basic science departments at the lower end, and various highly specialized departments (e.g., Neurosurgery, Orthopedics, Otolaryngology) at the

high end. About half the Dentistry departments appeared in the middle group, with the others divided between the low (Preventive & Community, and Operative) and high (Orthodontics, Hospital Dentistry, and Oral & Maxillofacial Surgery) groups. Public Health departments all appeared in the low and middle groups.

An examination of the gender-composition of these departments showed less difference than among the academic-year tenured and tenure-track faculty. The low and medium salary groups each had 70-75 % male faculty, a higher percentage of men than among the low and medium salary groups in academic-year departments, whereas the highest salaried departments had about 85% male faculty, which was the same as in the highest salaried academic-year departments.

Analyses by College. We again, whenever possible, ran the same analyses separately in the two individual colleges (Medicine and Public Health) that were large enough to do so (see Table 4). In the Full Model in the College of Medicine ($N=479$), rank and type of terminal degree were significant regardless of whether department was or was not included in the model. In neither case was gender or minority status, or their interaction statistically significant. The average difference in salaries due to gender in the full model was 3.2%, favoring men (95% CI = -4.1% to 10.4%), and 7.1% in the model without department, again with men's salaries higher (95% CI = -1.8% to 16.0%). The average difference in salaries due to minority status was 1.9% in the full model, with non-minority faculty salaries higher (95% CI = -5.5% to 9.3%) and 4.7% in the model without department, with *minority* faculty salaries higher (95% CI = -4.2% to 13.7%). The full model explained 76% of the variation in faculty salaries, whereas the model without department explained 59% (see Table 5).

In the College of Public Health ($N = 52$), only a single model emerged, with rank, degree category, and years since degree as significant variables; department was not a significant source of salary variation in this college. In this analysis, the male faculty salaries averaged 16.6% higher than female faculty salaries, which was statistically significant at the $p < .01$ level (95% CI = 5.3% to 27.9% with male faculty salaries higher throughout the range). There was not a significant salary difference due to minority status. Non-minority faculty salaries averaged 1.02% higher than minority faculty salaries (95% CI = 10.0 favoring minority faculty salaries to 12.1% favoring non-minority faculty salaries). The model explained 86% of the salary variation in the college (see Table 5).

The College of Public Health made some significant salary adjustment for FY06, so the analysis was re-run on the new data. As before, rank, degree category, and years since degree emerged as significant variables, and department was not a significant source of salary variation in this college. The salary adjustments made clearly had a positive effect. Specifically, the male faculty salary advantage decreased almost 5 percentage points to 11.7% higher than female faculty salaries, statistically significant at the $p < .05$ level (95% CI = 2.7% to 23.2% difference with male faculty salaries higher throughout the range). Again, there was no significant salary difference due to minority status. Indeed, minority faculty salaries now averaged 1.02% *higher* than non-minority faculty

salaries (95% CI = -9.7% to 12.1%). The model explained 86% of the salary variation in the college (see Table 5).

Fiscal Clinical-track Faculty

Full Model. In the initial “Full Model,” only years since degree was not significant and was removed. Thus, in the final “Full Model-Reduced,” only rank, degree category, and department significantly affected salary. Gender, minority status, and their interaction were not significant. In the final model, the average salary difference between men and women was 4.26%, with men’s salaries higher than women’s (95% CI = 5% favoring women to 13.5% favoring men; see Table 2). The average difference between minority and non-minority salaries was 1.36% with non-minority faculty salaries averaging higher (95% CI = -8.1% to 10.8%). The final model explained 82% of the variation in these faculty salaries (see Table 5).

Additional models. Regardless of whether department and college were included in the model, rank and degree category were the only control variables significantly related to salary. When neither department nor college was included, the effect of gender on salaries was statistically significant, but that of minority status and the interaction of gender and minority status were not. Without department or college in the model, the average gender difference in salaries was 15.9%, with men’s salaries higher (CI = 3.7% to 28.1%, with men’s salaries higher throughout the range), whereas the average difference related to minority status was 1.1%, with minority faculty salaries higher (95% CI = -11.1% to 13.3%). This model explained 48% of the variation in faculty salaries (see Table 5).

When college was added to the model, neither gender nor minority status nor their interaction remained significant. The average male-female salary difference was 6.48%, favoring men (95% CI = -4.7% to 17.6%), whereas the average salary difference due to minority status was 7.3, favoring minority faculty (95% CI = -3.9% to 18.4%). This model accounted for 60% of the variation in clinical-track faculty salaries (see Table 5).

These results again suggest that most of the variation in salaries can be explained by variation in salaries between departments and colleges, and also rank and type of terminal degree. Moreover, as in the academic tenured and tenure-track faculty group, that gender has a significant effect on salary when department is not controlled suggests an uneven distribution of women across departments of differing salary levels.

Therefore, we again “trichotomized” departments into high, middle, and low salary groups and, again, a chi-square analysis of these salary categories with gender was significant ($p < .01$), supporting the hypothesis. An examination of the departments comprising the high, medium and low salary groups revealed that departments in CLAS and Public Health all were in the lower salary group as were Nursing and Pharmacy. Departments in the College of Dentistry were largely in the medium salary group, with one or two in the lower and higher groups. Finally, departments in the College of Medicine were all in the higher group or the upper half of the middle group. The lower

salary group was approximately 55% female faculty, whereas the middle and upper salary groups had 25-30% female faculty. Thus, it does appear that the distribution of women faculty is weighted towards lower salary departments.

Analyses by College. Only the College of Medicine had a sufficient number of clinical-track faculty ($N=237$) to run separate analyses for the college, and even in that college, there were too many departments with only one or two clinical-track faculty to be able estimate salary levels by gender or minority status. Thus, the only model that could be tested included only the control variables rank and degree type. In neither case was gender or minority status, or their interaction statistically significant (see Table 4). The average difference in salaries due to gender in this model was 5.75%, favoring men (95% CI = -9.5% to 21.0%), and the average difference in salaries due to minority status was 8.1%, with minority faculty salaries higher (95% CI = -7.2% to 23.4%). The model explained 42% of the faculty salary variation in the college (see Table 5).

Summary and Conclusions

It appears that most faculty salary variation, regardless of track or whether the appointment is based on the academic or fiscal year, is due to factors that are known—and expected—to affect salary: college and department, faculty rank, type of degree (e.g., master's, “PhD-type” doctorate, health-sciences doctorate), and the number of years since obtaining that degree, as a way of measuring seniority. These variables account for all but approximately 20% of faculty salary variation (see Table 5). When individual colleges are examined, the extent to which rank, degree type, and seniority explain the salary variation generally ranges from about one-third to three-quarters, although it was as high as 86% in Public Health, where the departmental variation in salary was not significant.

It is only when departmental variation is *not* considered that we find significant differences based on gender or minority status, and in only one of these cases—that of Public Health—is it clearly *reasonable not* to consider departmental variation. That having been said, over the 17 comparisons made in which gender-based differences were not significant, only three favored women—in the academic tenure-track faculty as a whole, in CLAS, which comprises about two-thirds of that faculty group, and in the College of Business, when department was not included. Thus, although the differences do not reach statistical significance, there is a small but fairly consistent pattern of women receiving lower salaries.

As for minority status, two comparisons were significant: when both department and college, and when college but not department, were *omitted* from the model examining the academic tenured and tenure-track faculty. Both comparisons favored minority faculty. Of the 18 non-significant comparisons, 9 favored minority faculty. Further, additional analyses (logistic regressions) revealed that, even with all other control variables in the model, minority status was associated with rank in the fiscal tenure-track faculty, and also showed a non-significant trend towards association with tenure status. Therefore, we re-ran the salary analyses for that collegiate group omitting rank and/or tenure from the analysis to examine the potential *indirect* effect of gender and minority status on salary through their effects on rank and tenure. None of the results indicated that this was the case. Thus, it appears that there is no clear pattern favoring minority or non-minority faculty in salaries.

Recommendations

1. In the College of Public Health, the analysis revealed a 16.6% difference between male and female salaries that was not explained by the combination of faculty rank, type of degree, years since degree, and department. The discrepancy decreased to 11.7% in FY06, suggesting that the College is taking steps to remedy the situation. Nevertheless, we recommend that central administration conduct a close examination of faculty salaries in the college to determine whether the discrepancy can be justified on appropriate grounds (e.g., differences in merit based on quality and quantity of publications, grants, etc.), and correct any inequities found.
2. We recommend that the small but consistent pattern of lower salaries for female faculty in all colleges examined separately except Liberal Arts and Sciences, and Business, be examined further to try to understand its causes. Only when we understand this persistent difference can we work effectively towards fully equitable work and salary distributions.
3. The issue of disproportionately fewer women in higher paying departments is, in large part, an economic issue with, perhaps, an economic solution. In many such fields (e.g., Neurosurgery), the quantity of people from which the department can draw is small so, by the law of supply and demand, faculty in these departments command higher salaries. Because these fields tend to be male dominated nationwide, there are few female role models and mentors for female students, which contributes to the very low growth of women in such fields. We recommend that the University devise and implement strategies to combat these secular trends. For example, the University could provide incentives to encourage diverse hiring in departments that are (1) high salary and (2) low female. Because there are relatively few women in the candidate pools, the University may have to pay a premium to recruit those who do exist in those fields. That is, to recruit these women, they may have to be brought in at salaries that exceed the current maximum salaries in those departments, but such “drastic” solutions may be necessary in order to break out of the current stalemate.

Table 1. Demographic Characteristics of the Three Faculty Groups Analyzed

Demographic	Academic T&T-trk (N=764)	Fiscal T&T-trk (N=613)	Fiscal Clin-trk (N=287)
Female	31.8 %	21.2 %	31.4 %
Minority	16.9 %	12.7 %	14.6 %
Tenured	72.1 %	73.4 %	0.0 %
RANK			
Assistant Professors	25.4 %	24.3 %	51.6 %
Associate Professors	33.6 %	28.0 %	35.9 %
Full Professors	41.0 %	47.7 %	12.5 %
COLLEGE			
Business	9.6 %	0.0 %	0.0 %
Dentistry	0.0 %	7.0 %	7.7 %
Education	7.2 %	0.0 %	0.0 %
Engineering	8.6 %	0.0 %	0.0 %
Graduate	1.2 %	0.0 %	0.0 %
Law	4.7 %	0.0 %	0.0 %
Liberal Arts & Sciences	66.2 %	0.0 %	3.5 %
Medicine	0.0 %	78.1 %	82.6 %
Nursing	2.5 %	0.0 %	1.4 %
Pharmacy	0.0 %	4.1 %	2.8 %
Public Health	0.0 %	8.5 %	2.1 %
HIGHEST DEGREE			
Bachelors	1.3 %	0.0 %	0.0 %
Masters	8.4 %	1.0 %	5.6 %
Non-HS Doctoral	90.3 %	42.6 %	10.1 %
Health-Sciences Doctoral	0.0 %	55.1 %	82.9 %
Post-HSD Masters	0.0 %	1.3 %	1.4 %
YEARS SINCE DEGREE			
Mean	17.6	20.6	16.3
Standard Deviation	11.0	9.9	7.9
Range	0 – 53	0 – 49	1 – 46
SALARY			
Mean	\$77,791	\$152,158	\$145,808
Standard Deviation	\$28,181	\$ 69,582	\$53,150
Range	\$26,318 - \$222,768	\$56,900 - \$550,000	\$51,540 - \$323,480

Note. Academic T&T-trk = Academic-year (9-month) tenured and tenure-track faculty; Fiscal T&T-trk = Fiscal-year (12-month) tenured and tenure-track faculty; Fiscal Clin-trk = Fiscal-year clinical-track faculty.

Table 2. Summary of Models in Three Faculty Groups University-wide

Model (R^2)	Academic-year Tenured & Tenure-track (N=764)				Fiscal-year Tenured & Tenure-track (N=613)				Fiscal-year Clinical-track (N=287)						
	Add'l Sig. Controls	Gender		Minority		Add'l Sig. Controls	Gender		Minority		Add'l Sig. Controls	Gender		Minority	
		Sig?	%	(^)	Sig?		%	(^)	Sig?	%		(^)	Sig?	%	(^)
Full Model (incl. Dept.) 95% confidence intervals*	Yrsdegr	N	0.36% (W)	N	0.21% (Wh)	Degrat	N	2.98% (M)	N	2.16% (Wh)	Degrat	N	4.26% (M)	N	1.36% (Mn)
			-2.8% to 3.5%		-2.8% to 3.3%			-3.4% to 9.3%		-4.2% to 8.5%			-5.0% to 13.5%		-8.1% to 10.8%
Without Dept/College 95% confidence intervals*	Tenure Degrat Yrsdegr	Y	7.80% (M)	Y	5.10% (Mn)	Degrat	N	6.24% (M)	N	3.29% (Mn)	Degrat	Y	15.9% (M)	N	1.12% (Mn)
			2.7% to 12.9%		0.12% to 10.1%			-1.7% to 14.2%		-4.6% to 11.2%			3.7% to 28.1%		-11.1% to 13.3%
With College, not Dept. 95% confidence intervals*	Degrat Yrsdegr	N	2.70% (M)	Y	1.10% (Mn)	Degrat	N	5.38% (M)	N	2.14% (Mn)	Degrat	N	6.48% (M)	N	7.27% (Mn)
			-0.68% to 6.1%		-2.1% to 4.4%			-2.2% to 13.0%		-5.5% to 9.7%			-4.7% to 17.6%		-3.9% to 18.4%

Notes. Rank was significant and is included in all models; the rank-by-gender interaction was never significant and is not included in any models. All other non-significant control variables were removed in a stepwise fashion until only significant variables remained in addition to the test variables (gender, minority status, and their interaction). **Bold** = either a statistically significant difference **OR** a non-significant difference in which women or minority faculty had the higher salary. *There is a 95% probability that the true difference between groups falls within this range

Sig = Significance level, $p < .05$. % = percent average salary difference between groups; ^ = group with higher salary: for gender, M = men, W = women; for minority status, Mn = minority, Wh = white, non-Hispanic (non-minority). Degrat = Degree category (see text for an explanation). Yrsdegr = Years since terminal degree was obtained.

Table 3. Summary of Models in Three Faculty Groups In Two Health-Science Colleges

Model (R^2)	Fiscal-year Tenured and Tenure-track					Fiscal-year Clinical-track						
	Add'l Sig. Controls	Gender			Minority		Add'l Sig. Controls	Gender			Minority	
		Sig?	%	(^)	Sig?	%		(^)	Sig?	%	(^)	Sig?
<u>College of Medicine (N=479, FTT; 237, FCT)</u>												
Full Model (incl. Dept.) 95% confidence intervals*	Degrat	No	3.17% (M)	No	1.92% (Wh)	Degrat	No	NA	No	NA	No	NA
Without Departments 95% confidence intervals*	Degrat	No	7.10% (M)	No	4.72% (Mn)	Degrat	No	5.75% (M)	No	8.07% (Mn)	No	8.07% (Mn)
<u>College of Public Health (N=52)</u>												
Without Departments 95% confidence intervals*	Degrat, Yrsdegr	Y	16.6% (M)	No	1.02% (Wh)	Could not be tested						
			5.3% to 27.9%		-10.0% to 12.1%							

Notes. Rank was significant and is included in all models; the rank-by-gender interaction was never significant and is not included in any models. All other non-significant control variables were removed in a stepwise fashion until only significant variables remained in addition to the test variables (gender, minority status, and their interaction). **Bold** = either a statistically significant difference **OR** a non-significant difference in which women or minority faculty had the higher salary. *There is a 95% probability that the true difference between groups falls within this range

Sig = Significance level, $p < .05$. % = percent average salary difference between groups; ^ = group with higher salary: for gender, M = men, W = women; for minority status, Mn = minority, Wh = white, non-Hispanic (non-minority). Degrat = Degree category (see text for an explanation). Yrsdegr = Years since terminal degree was obtained. NA = group differences could not be calculated.

Faculty numbers in other Health Science colleges were too small to analyze. The Full Model with departments was not run for the College of Public Health, as that variable was not significant when the other control variables were included.

Table 4. Summary of Models in Three Academic-year Colleges, Tenure and Tenure-track Faculty

Model (R^2)	Add'l Sig. Controls	Gender			Minority		
		Sig?	%	(^)	Sig?	%	(^)
<u>College of Liberal Arts and Sciences (N=505)</u>							
Full Model (incl. Dept.)	Degrat, Yrsdegr	No	0.36%	(W)	No	0.21%	(Wh)
	95% confidence intervals*		-3.9% to 3.2%			-3.0% to 4.3%	
Without Departments	Degrat, Yrsdegr	No	3.63%	(M)	No	1.52%	(Mn)
	95% confidence intervals*		-0.48% to 7.7%			-2.5% to 5.5%	
<u>College of Business (N=73)</u>							
Full Model (incl. Dept.)	--	No	0.06%	(M)	No	2.90%	(Mn)
	95% confidence intervals*		-13.9% to 14.1%			-10.2% to 16.0%	
Without Departments	--	No	0.03%	(W)	No	1.40%	(Wh)
	95% confidence intervals*		-13.4% to 13.4%			-13.7% to 10.9%	
<u>College of Education (N=55)</u>							
Full Model (incl. Dept.)	--	No	4.00%	(M)	No	0.86%	(Wh)
	95% confidence intervals*		-4.6% to 12.6%			-8.5% to 10.2%	
Without Departments	--	No	1.51%	(M)	No	2.01%	(Wh)
	95% confidence intervals*		-7.5% to 10.5%			-12.2% to 8.2%	

Notes. Rank was significant and is included in all models; the rank-by-gender interaction was never significant and is not included in any models. All other non-significant control variables were removed in a stepwise fashion until only significant variables remained in addition to the test variables (gender, minority status, and their interaction). **Bold** = a non-significant difference in which women or minority faculty had the higher salary. *There is a 95% probability that the true difference between groups falls within this range

Sig = Significance level, $p < .05$. % = percent average salary difference between groups; ^ = group with higher salary: for gender, M = men, W = women; for minority status, Mn = minority, Wh = white, non-Hispanic (non-minority). Degrat = Degree category (see text for an explanation). Yrsdegr = Years since terminal degree was obtained.

Table 5 Percent of Faculty Salary Variation Accounted for (R^2 s) for Models Shown in Tables 2-4.

Model	ATT	FTT	FCT
University-wide			
Full Model (includes department)	83%	78%	82%
With college (but not department)	76%	63%	60%
Without department or college	43%	59%	48%
College of Liberal Arts & Sciences			
Full model (includes department)	76%	--	--
Without departments	61%	--	--
College of Business			
Full model (includes department)	52%	--	--
Without departments	35%	--	--
College of Education			
Full model (includes department)	81%	--	--
Without departments	76%	--	--
College of Medicine			
Full model (includes department)	--	76%	--
Without department	--	59%	42%
College of Public Health			
Without departments	--	86%	--

Note. ATT = Academic-year (9-month) tenured and tenure-track faculty; FTT = Fiscal-year (12-month) tenured and tenure-track faculty; FCT = Fiscal-year clinical-track faculty.

ⁱ Percents are rounded to the nearest integer for ease in reporting and reading.