

ANALYSIS OF RECENT SALARY INCREASES FOR FACULTY AND  
PROFESSIONAL AND ADMINISTRATIVE STAFF  
AT THE UNIVERSITY OF MINNESOTA

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Abstract

This report examines the salary increases for faculty and professional and administrative staff members at the University of Minnesota for the academic year 1992-93, as well as average salary changes from 1989-90 to 1992-93. Specific attention is directed towards determining if there are any differentials in salary increases for male and female staff members.

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This report examines the salary increases for faculty and professional and administrative staff members at the University of Minnesota for the academic year 1992-93, as well as average salary changes from 1989-90 to 1992-93. Specific attention is directed towards determining if there are any differentials in salary increases for male and female staff members.

The dataset used in this analysis contains information on all staff members (faculty and P&A) at the University of Minnesota who were here in both academic years 1991-92 and 1992-93. For the purpose of comparison, staff members who have changed their percentage time appointment from 1991-92 to 1992-93 have been omitted from the analysis.

The following tables examine the mean salary increases, expressed in percentage terms, for staff members broken out by several categories.

**A. SALARY INCREASES FROM 1991-92 TO 1992-93**

Table 1: Average Salary Increases for All Staff Members

The first table presents the average salary increases for 1992-93 for all staff members combined, and broken out separately by gender:

Table 1: Average Salary Increases (All Staff)		
CATEGORY	MEAN PERCENTAGE SALARY INCREASE	NUMBER OF OBSERVATIONS
MALE ONLY	5.82%	3,409
FEMALE ONLY	5.93%	1,535
COMBINED	5.85%	4,944

On an aggregate basis, there does not appear to be any differential in average salary increases for male and female faculty during the 1992-93 academic year.

Table 2: Average Salary Increases for Faculty and P&A Staff

The second table presents the average salary increases for 1992-93, broken out separately for faculty and professional and administrative (P&A), and then broken out separately by gender:

Table 2: Average Salary Increases for Faculty and P&A Staff			
CATEGORY	GENDER	MEAN SALARY INCREASE	NUMBER OF OBSERVATIONS
FACULTY	MALE ONLY	5.74%	2,561
	FEMALE ONLY	5.78%	697
	COMBINED	5.75%	3,258
PROFESSIONAL AND ADMINISTRATIVE	MALE ONLY	6.06%	848
	FEMALE ONLY	6.05%	838
	COMBINED	6.06%	1,686

As in Table 1, the average salary increases for male and female faculty are very similar. Any differences shown in the average salary increase for males and females were found to be statistically insignificant.

Table 3: Average Salary Increases By Faculty Rank

The third table examines the average salary increases for male and female faculty, broken out by separate ranks (Assistant, Associate, Full):

Table 3: Average Salary Increases By Faculty Rank			
CATEGORY	GENDER	MEAN SALARY INCREASE	NUMBER OF OBSERVATIONS
ASSISTANT PROFESSORS	MALE ONLY	6.18%	496
	FEMALE ONLY	5.77%	252
	COMBINED	6.04%	748
ASSOCIATE PROFESSORS	MALE ONLY	5.72%	700
	FEMALE ONLY	6.05%	267
	COMBINED	5.81%	967
FULL PROFESSORS	MALE ONLY	5.52%	1,268
	FEMALE ONLY	5.12%	147
	COMBINED	5.48%	1,415

It can be seen from these tables that (1) the average salary increases for faculty declines slightly with rank, and (2) within each rank there is no clear pattern of differences in average salary increases for male and female faculty. There were no statistically significant differences found in the average salary increases for male and female faculty.

Tables 4 and 5: Average Salary Increases Excluding Job Changes

Table 4 examines the average salary increase for all staff members who did not experience a change in job classification from 1991-92 to 1992-93. Table 5 considers the same group of staff members, breaking out by faculty versus non-faculty. These tables may be useful in determining whether salary increases due to promotions for the 1992-93 academic year have an effect on the results presented above:

Table 4: Average Salary Increases (All Staff w/same job)		
CATEGORY	MEAN PERCENTAGE SALARY INCREASE	NUMBER OF OBSERVATIONS
MALE ONLY	5.33%	3,192
FEMALE ONLY	5.44%	1,400
COMBINED	5.36%	4,592

Table 5: Average Salary Increases for Faculty and P&A Staff (w/same job classification)			
CATEGORY	GENDER	MEAN SALARY INCREASE	NUMBER OF OBSERVATIONS
FACULTY	MALE ONLY	5.20%	2,406
	FEMALE ONLY	5.16%	621
	COMBINED	5.20%	3,027
PROFESSIONAL AND ADMINISTRATIVE	MALE ONLY	5.71%	786
	FEMALE ONLY	5.66%	779
	COMBINED	5.68%	1,565

Taken together, these results do not present evidence that differences in salary increases due to promotion have a considerable effect on the difference in overall salary increases for male and female staff members. There were no statistically significant differences in the average salary increases for males and females.

**B. ANALYSIS OF RAJENDER COHORT**

**Table 6: Average Salary Increases for Rajender Cohort**

Table 6 presents the average salary increases for current male and female faculty who were present during the settlement of the Rajender sex discrimination suit as of 1986-87.

Table 6: Average Salary Increases for Faculty in the Rajender Cohort		
CATEGORY	MEAN PERCENTAGE SALARY INCREASE	NUMBER OF OBSERVATIONS
MALE ONLY	5.55%	944
FEMALE ONLY	5.35%	193
COMBINED	5.51%	1,137

It should be noted that the average salary increases for faculty in this cohort, 5.51%, is below the average salary increases for all faculty, 5.75%. This difference may be attributable to the higher average experience levels of faculty in this cohort, relative to the entire set of faculty at the University of Minnesota.

## Regression Results

Since the salary redistribution scheme used in the Rajender settlement was designed to remove any unexplained pay discrepancy between male and female faculty, it is useful to determine if there is currently any evidence of an unexplained pay discrepancy between male and female faculty.

In order to accomplish this, the regression model used in the settlement is reestimated over the cohort of faculty who are still at the University of Minnesota as of academic year 1992-93. The dependent variable in this model is the logarithm of annual salary. The following is a list of the explanatory variables used in the model:

### Educational Attainment:

BAMADEG	=	1 if highest degree is MA or BA
DOCTDEG	=	1 if highest degree is PhD or equivalent
PROFDEG	=	1 if highest degree is professional degree

### Experience Level:

ASSTTIME	=	Experience for Assistant Professors (days)
FULASSX	=	Experience for Tenured Professors (days)
NPLEAVE	=	Days of non-professional leave
PREVEXP	=	Years of previous experience
PASTADMX	=	1 if past administrative experience

### Other Variables:

TENURE	=	1 if tenured
NEWMKT	=	Average salary for professors at subset of institutions as of 1986-87
RETENTN	=	1 if received retention funding as of 1986-87
GENDER	=	1 if male
NINE12	=	1 if 9-month appointment
DD1-DD110	=	Dummy variables for departmental affiliation

Table 7: Regression Results for Rajender Cohort		
Explanatory Variable	Estimated Coefficient	Calculated T-Statistic
BAMADEG	-0.029958	-0.86
DOCTDEG	-0.008799	-0.38
PROFDEG	-0.034874	-0.67
ASSTTIME	-1.24 E-05	-0.77
FULASSX	-2.75 E-06	-1.04
NPLEAVE	+5.53 E-05	+1.45
PREVEXP	+6.11 E-06	+1.86
PASTADMX	+0.109608	+6.13
TENURE	+0.144168	+1.69
NEWMKT	+1.19 E-05	+9.32
RETENTN	+0.193908	+8.92
NINE12	+0.013983	+0.42
GENDER	+0.001979	+0.11

The estimated coefficient for the variable GENDER, +0.001979, is statistically insignificant; therefore, there is no evidence of an unexplained salary differential in favor of male faculty for this cohort.



**C. SALARY INCREASES FROM 1989-90 TO 1992-93**

An analysis similar to that shown in Section A was also performed for the cohort of staff members who were employed at the University of Minnesota from 1989-90 to 1992-93. This cohort is of particular interest since this represents the end of the settlement period from the Rajender sex discrimination suit. The objective of this section is to determine if merit increases since this time have been different for males and females.

This sample group includes all University of Minnesota staff members who were employed by the university in both 1989-90 and 1992-93, and have not changed their percentage time appointment (N=3518). In order to separate merit salary increases from salary increases through the Rajender settlement, the Rajender salary increment in 1991 is removed from each female's base salary for 1992-93.

**Table 8: Average Three-Year Salary Increases for Faculty and P&A**

Table 8 presents the average salary increases from 1989-90 to 1992-93, broken out separately for faculty and professional and administrative (P&A), and then broken out separately by gender. For comparison purposes, only those staff members who have the same job classification in both 1989-90 and 1992-93 are considered:

Table 8: Average Three-Year Salary Increases for Faculty and P&A Staff			
CATEGORY	GENDER	MEAN SALARY INCREASE	NUMBER OF OBSERVATIONS
FACULTY	MALE ONLY	12.33%	1,653
	FEMALE ONLY	12.80%	351
	COMBINED	12.41%	2,004
PROFESSIONAL AND ADMINISTRATIVE	MALE ONLY	13.34%	413
	FEMALE ONLY	13.93%	365
	COMBINED	13.62%	778

From Table 8, it can be seen that there is no evidence that male staff members have received larger average salary increases than female staff members over the post-Rajender time period.

**Table 9: Average Three-Year Salary Increases By Faculty Rank**

Table 9 examines the average salary increases from 1989-90 to 1992-93 for male and female faculty, broken out by separate ranks (Assistant, Associate, Full). For comparison purposes, this table includes only those faculty who have the same academic rank in both 1989-90 and 1992-93:

Table 9: Average Three-Year Salary Increases By Faculty Rank			
CATEGORY	GENDER	MEAN SALARY INCREASE	NUMBER OF OBSERVATIONS
ASSISTANT PROFESSORS	MALE ONLY	12.13%	255
	FEMALE ONLY	11.40%	120
	COMBINED	11.90%	375
ASSOCIATE PROFESSORS	MALE ONLY	11.80%	409
	FEMALE ONLY	13.36%	129
	COMBINED	12.17%	538
FULL PROFESSORS	MALE ONLY	12.62%	974
	FEMALE ONLY	13.58%	100
	COMBINED	12.71%	1,074

It should be noted that the average salary increase for male professors at the Assistant level are not statistically greater than the average salary increase for female Assistant professors.