

**DATA ANALYSIS  
FACULTY SALARIES  
USC COLUMBIA  
FALL 2006 SALARY DATA**

Report of the  
Faculty Salary Equity Oversight Committee

Prepared by the Office of the Provost

September 19, 2007

The Faculty Salary Equity Committee was created in 1996 to be advisory to the Provost regarding matters of salary equity for faculty, and in 2005 the scope was extended to librarians. On an annual basis the Office of Institutional Assessment and Compliance performs a statistical analysis to support the Committee's review process. The Committee uses the results of the analysis to identify tenured and tenure-track faculty including librarians whose salaries appear to be below those expected for individuals of similar rank, discipline, time in service and other characteristics. Respective deans are then asked to explain these cases. The Committee then submits a report to the Provost who in turn reports to the faculty of the University summarizing the findings.

The Committee consists of seven members; three are administrators selected by the President, and four are faculty members selected by the Provost from recommendations of the Faculty Advisory and Faculty Welfare Committees.

## **I. PROCEDURE**

In March 2007, the Office of Institutional Assessment and Compliance conducted statistical analyses of salaries of tenure-track and tenured faculty members including librarians at USC Columbia for Fall 2006. The regression model used for non-librarian faculty is a modified version of that from a 1994 study directed by Dr. Lori Thombs, Department of Statistics. For librarians a similar model was developed. Salary data were sent to the academic deans and the dean of libraries for verification and were updated accordingly.

A residual is defined as the difference between the predicted salary and the actual salary (expressed in natural logarithms). A Studentized residual is calculated by estimating the model with the  $i^{\text{th}}$  observation deleted, then predicting that observation and forming the residual. For statistical analysis, the residual is divided by the estimated standard deviation to form the Studentized residual. The Committee then screened all observations to identify those with Studentized residuals of -1.5 or lower. Based on this analysis, 41 non-librarian faculty and 3 librarians were identified. Of the 44 in this group, 20 had been reviewed recently and the Committee determined that no further analysis was required at this time. The names of the 20 reviewed recently were noted and will be monitored.

The 3 librarians and 21 non-librarian faculty members identified with salaries below prediction were included in the Selected Group for analysis. The respective deans then were asked to explain the salaries for the 24 individuals in the Selected Group. To support their explanations, deans were asked to supply written annual evaluations for the previous 2 years.

Note that non-librarian faculty salaries are 9-month salaries or equivalent, whereas librarian salaries are 12-month. In June 2007 the deans' explanations for salaries of the Selected Group were examined by the Committee.

### Characteristics of Selected Group

The Fall 2006 analysis of 963 full-time ranked non-librarian faculty members and 50 librarians yielded a total of 21 faculty and 3 librarians in the Selected Group.

	Category	Selected Group		Population	
		N	%	N	%
Race	African American	2	8.33	44	4.34
	Other	22	91.67	969	95.66
Sex	Female	6	25.00	338	33.37
	Male	18	75.00	675	66.63
Rank	Professor	14	58.33	355	35.04
	Associate Prof	5	20.84	306	30.21
	Assistant Prof	2	8.33	302	29.81
	Librarian	3	12.50	50	4.94

Unit affiliations of members of the Selected Group are reported below.

Unit	Selected Group			Population		
	N	Female	Male	N	Female	Male
Arts & Sciences	6	1	5	440	138	302
Business	5	0	5	83	16	67
Education	0	0	0	71	43	28
Engineering	2	1	1	86	7	79
HRSM	1	0	1	32	11	21
Law	2	0	2	36	9	27
Libraries	3	2	1	50	27	23
Mass Comm	1	0	1	38	19	19
Medicine	2	1	1	43	14	29
Music	1	1	0	41	13	28
Nursing	0	0	0	10	10	0
Pharmacy	0	0	0	17	2	15
Public Health	1	0	1	47	18	29
Social Work	0	0	0	19	11	8
Total	24	6	18	1013	338	675

## II. SUMMARY AND CONCLUSIONS

- A. Out of a total of 1013 faculty including librarians, 24 (2.4%) were identified for further review (the Selected Group).
- B. Detailed explanations regarding the Selected Group of 24 are contained in the Committee's records. In brief, of the 24 included in the Selected Group, two were due to low beginning salaries and steps are being taken to make adjustments. One had not completed the first year of duty, thus an annual appraisal was not available. One was incorrectly coded as an associate professor (in fact an assistant), and one was incorrectly categorized as tenure-track (in fact non-tenure-track and should not be included in this study). Two of those identified had excellent performance and the dean has taken steps to correct the salaries. One member identified in the Selected Group has significant salary income from the Medical School Practice Plan, thus his base salary understates his true compensation. Two of those identified are clinical faculty (with tenure) with different performance expectations than those on tenure track. In two other cases the dean made the case that the salaries were commensurate with performance. In the remaining cases, performance was cited as the reason for low salaries, either in research (9 instances), teaching (6) and/or service (2). Note that the reasons summarized above do not sum to 24 given that more than one reason was given in some cases.
- C. As in previous years, a dichotomous gender variable was included in the model, as well as control variables for race. The gender variable was found to be statistically significant at the 0.05 level, while the race controls were not significant at the 0.05 level. The estimated regression coefficient for the gender variable was negative indicating that salaries for females after controlling for the model's factors are below those of males. The Committee has been charged by the Provost with formulating a proposal to address the issue. The Committee is continuing its work as of this writing.