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Overview

A committee conducted and prepared the annual campus pay equity study of faculty salaries for Professors and Professors of Teaching. The analyses presented in this report focus on the regression models and rate of progression through the ranks, consistent with our campus practice 2015-present. Since 2020, Professors of Teaching are included in the analyses with faculty in the Professor series. This occurred with the transition of Lecturers with Security of Employment to Professors of Teaching titles and placement on the same rank/step system employed for the Professor series faculty. For analytical purposes, Professors and Professors of Teaching are treated as a single group. Analysis of salary data from October 2021 indicated no evidence of systemic disparity in pay associated with gender and/or ethnicity at the campus level when experience, discipline, and rank are included in the model.

## Methodology (see campus level report)

Results

1. Salary data for all ladder rank faculty plotted as a function of rank/step/gender and rank/step/ethnicity illustrated in Graphs 1 and 2.

Graph 1: The School of Pharmacy and Pharmaceutical Sciences, Salary by Rank/Step and Gender

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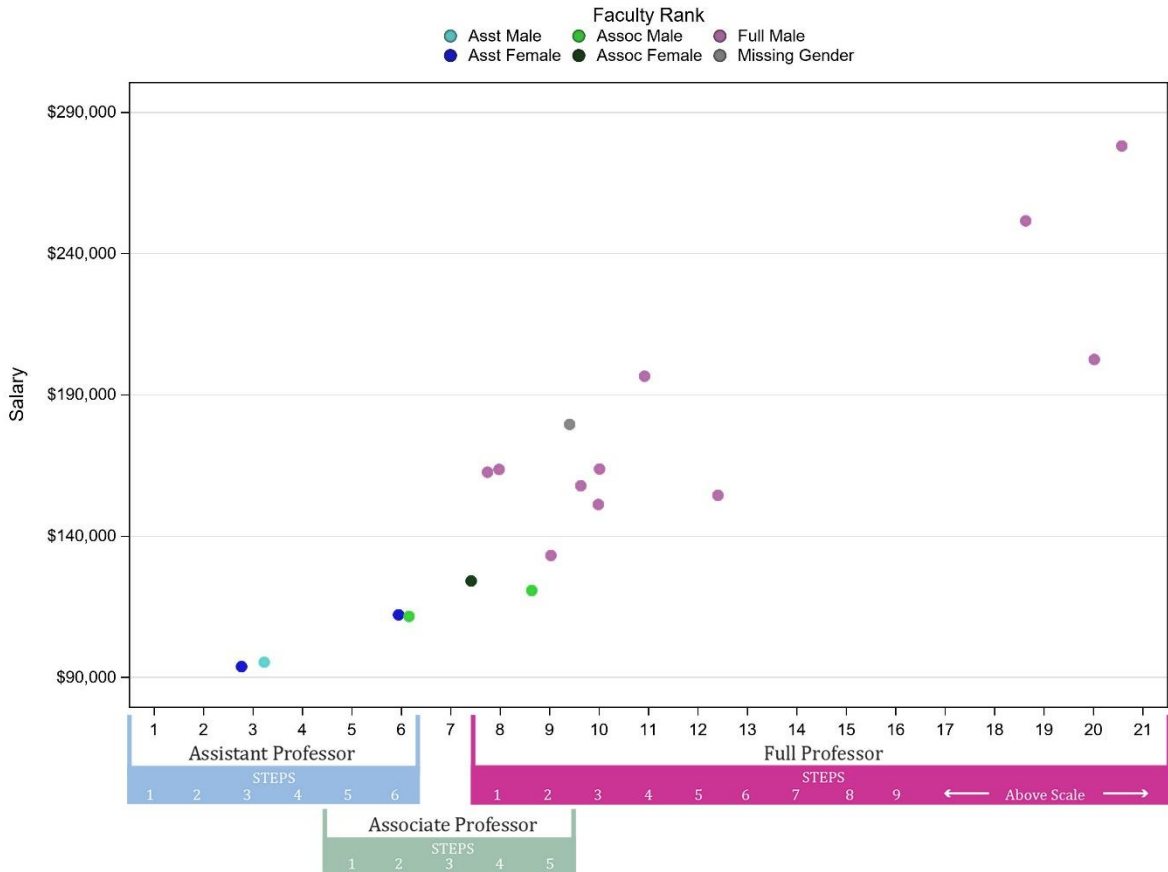
Graph 2: The School of Pharmacy and Pharmaceutical Sciences, Salary by Rank/Step and Ethnicity
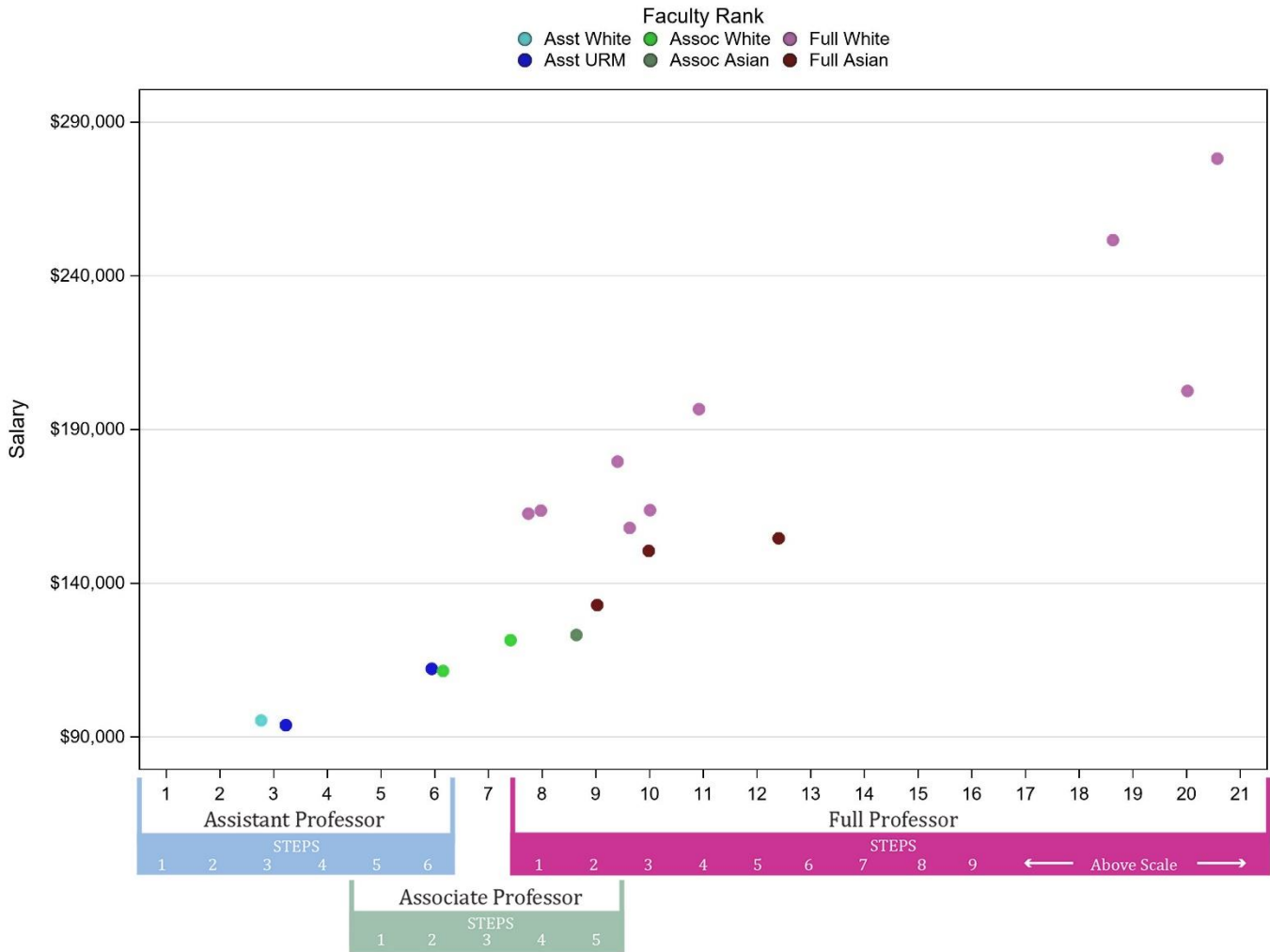
2. Multiple regression analysis of salary vs rank/step. As indicated in Table 1, the simplest model with only demographic variables shows that relative to white male faculty, women earn salaries that are about 29% lower, Asian faculty 21% lower, and URM faculty 29% lower. Only 42% of salary variation is explained by this model. After all control factors are added, 92% of salary variation is explained by a model with demographic, experience, field, and rank variables. After adjusting for covariates, relative to white male faculty, salaries are about 5% lower for faculty who are women, 12% lower for Asian, and 5% lower for URM faculty. This model also shows that demographic variables are not statistically significant determinants of faculty salary. The final model predicted salaries within plus or minus 26.2%. (For technically-minded readers, the RMSE on the log base 10 scale is 0.051.)

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Table 1

| Model[1]	R-sq	Significant Variables	Salary Difference		
			Women vs Men	Asian vs White	URM vs White
1 Demography	0.42		-29.2%	-20.6%	-28.8%
2 Demography, Experience	0.81		-15.0%	-19.1%	-17.6%
3 Demog, Exper, Field	0.81		-16.2%	-17.2%	-22.3%
4 Demog, Exper, Field, Rank	0.99	Rank*	-12.4%	-6.9%	-9.6%
5 Demog, Exper, Field, Rank[2]	0.92	Experience**, Rank**	-4.8%	-11.6%	-4.9%

*$p<0.05$, **$p<0.01$, ***$p<0.001$

[1]Experience includes years of services, years since degree, and decade of hire. Field includes department and the market ratio of salaries tied to the faculty member's department. Rank includes their starting rank at UCI, their current rank at UCI, and where they stand in relation to normal progress.
[2]Final model adjusted for collinearity and included demographics, years of service**, market salary ratio, progress*, and initial rank**.

3. Progress Rate plotted as a function of gender and ethnicity illustrated in Graphs 3 and 4

Graph 3: The School of Pharmacy and Pharmaceutical Sciences, Salary by Progress and Gender
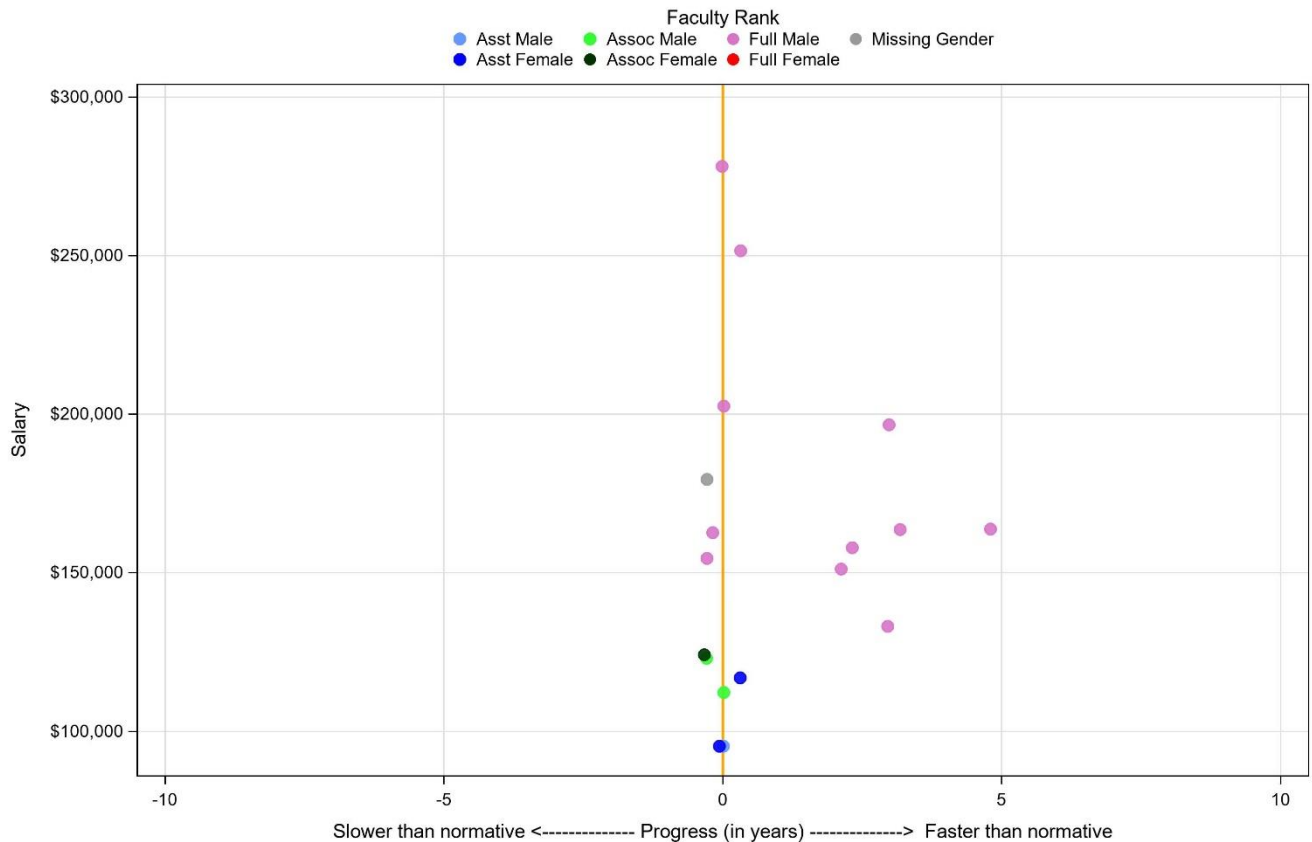
Graph 4: The School of Pharmacy and Pharmaceutical Sciences, Salary by Progress and Ethnicity
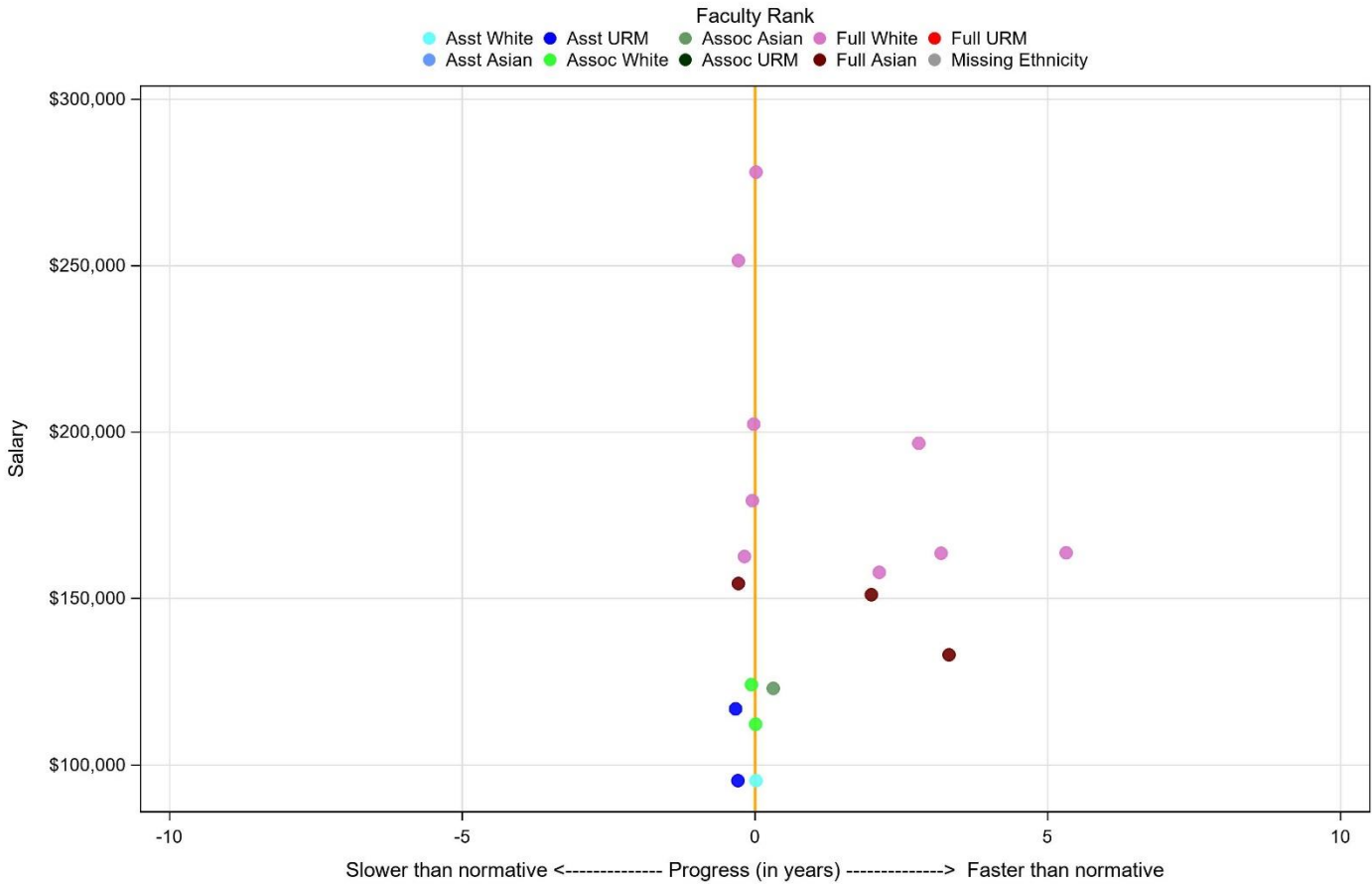
Progress Rate Analysis: Using a simple t-test, the results indicate that there is no statistically significant difference in progression rate means by either gender or ethnicity when compared to white male faculty.

Progress Rate (in years) Comparison

Comparison	n	Mean	t	df	p-value
White Male vs	10	1.30			
Women[a]	3	0.00	-2.25	9	0.051
URM[a]	2	0.00	-2.25	9.00	0.05
Asian	4	1.25	-0.05	12	0.962

[a]Homogeneity of variance assumption not met. Satterthwaite variance estimator used.