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Overview

A joint Administration-Academic Senate Committee redesigned our annual campus pay equity study of ladder rank faculty salaries. The analyses presented in this report focus on regression models that go beyond the annual residual analysis conducted in the past (1997-2014) and include evaluation of rate of progression through the ranks. Analysis of salary data from October 2018 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.
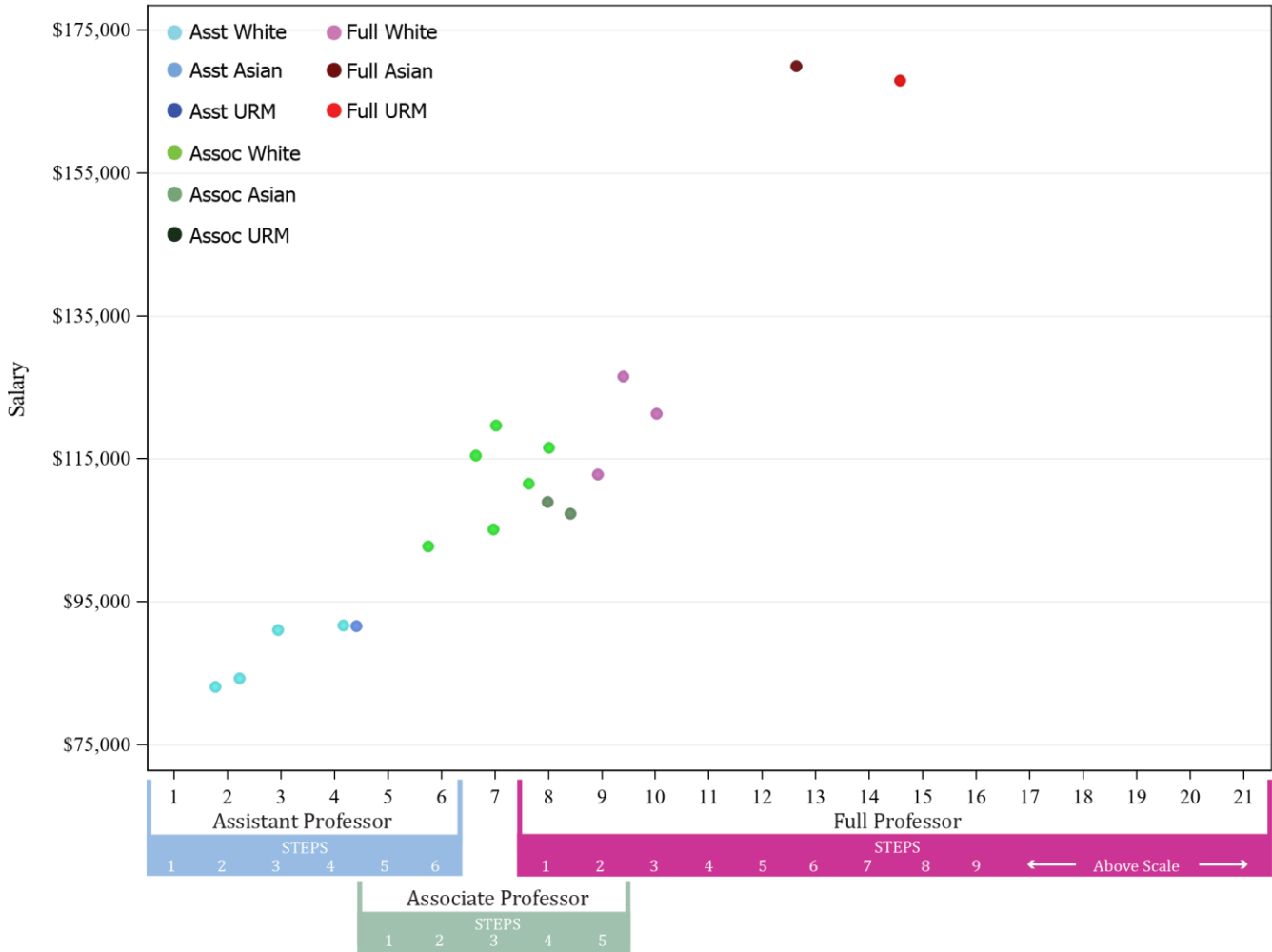
Methodology (see campus level report)

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: Program in Public Health, Salary by Rank/Step and Gender

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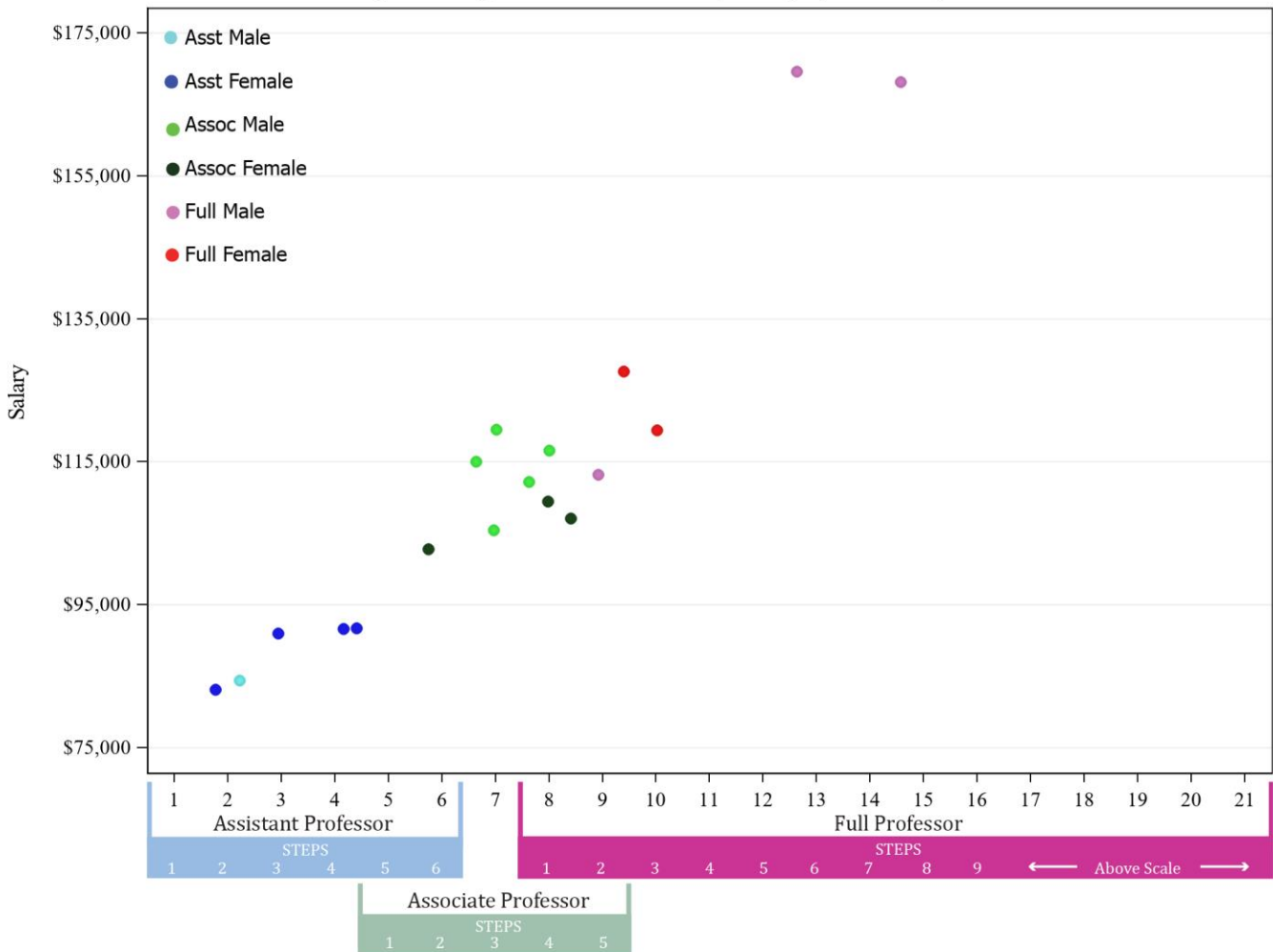
Graph 2: Program in Public Health, Salary by Rank/Step and Ethnicity

2. Multiple regression analysis of salary vs rank/step. As indicated in Table 1, simplest model with only demographic variables shows that relative to white male faculty, women earn salaries that are 14% lower, Asian faculty 15% and URM faculty 49% more. Only 45% of salary variation is explained by this model. After all control factors are added, 91% 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 3% lower for faculty who are women, 4% higher for Asian, and 42% higher for URM faculty. Whereas the final model indicates that there is a significant difference in salary between White and URM faculty, this result is based on one URM faculty member.

Table 1

| Submodel[1]	R-sq	Significant Variables	Salary Difference		
			Women vs Men	Asian vs White	URM vs White
1 Demography	0.45	URM*	-14.0%	15.1%	48.5%
2 Demography, Experience	0.83	Experience**	-9.9%	6.3%	6.5%
3 Demog, Exper, Field	0.87		-8.0%	8.3%	18.1%
4 Demog, Exper, Field, Rank	0.98		-3.5%	-4.8%	-25.6%
5 Demog, Exper, Field, Rank[2]	0.88	URM**, Field**	-3.4%	4.0%	42.4%

*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.
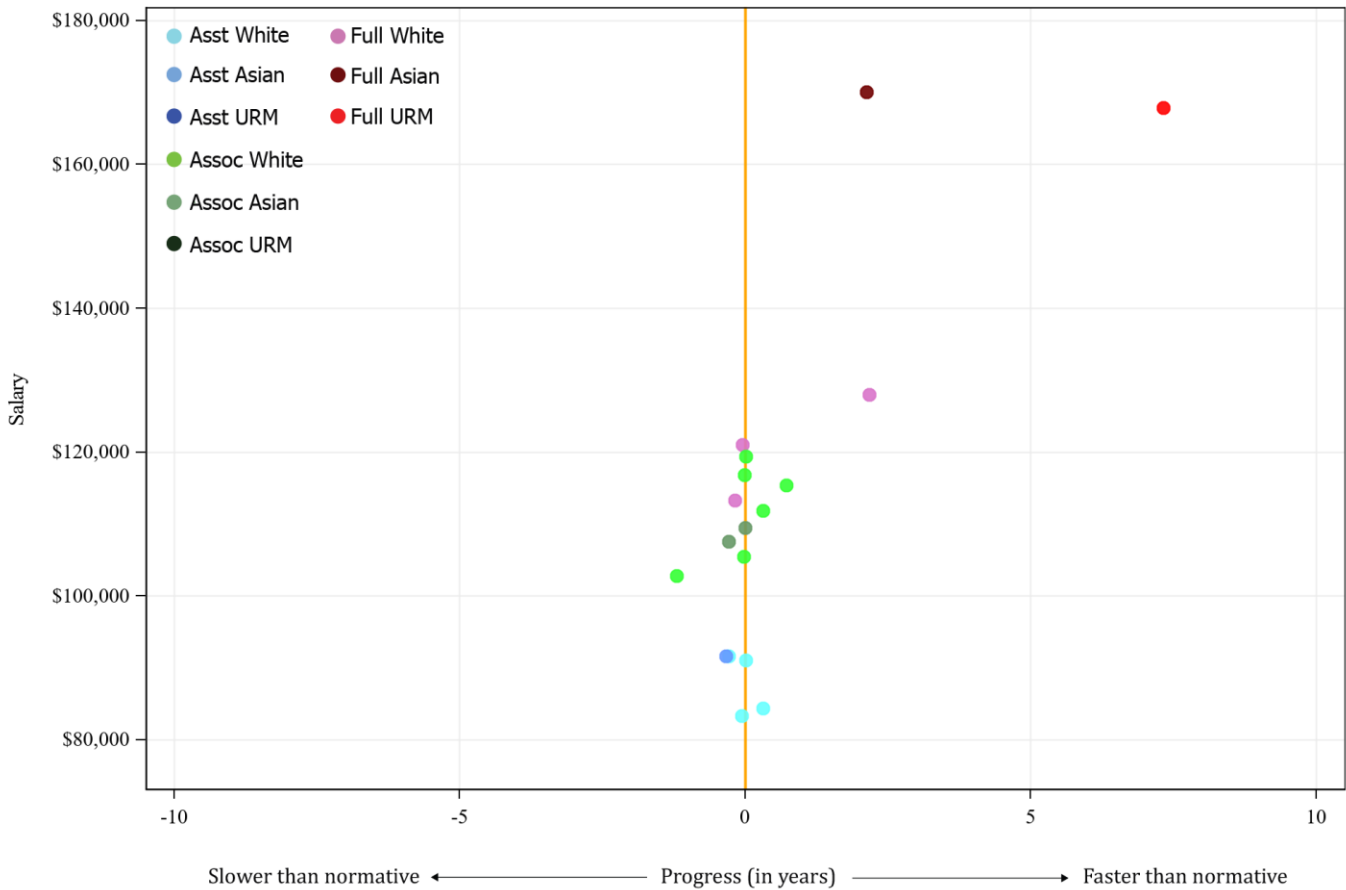
[2]Final model corrected for collinearity and included demographics, decade of hire, market salary ratio**, and initial rank.

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

Graph 3: Program in Public Health, Salary by Progress and Gender
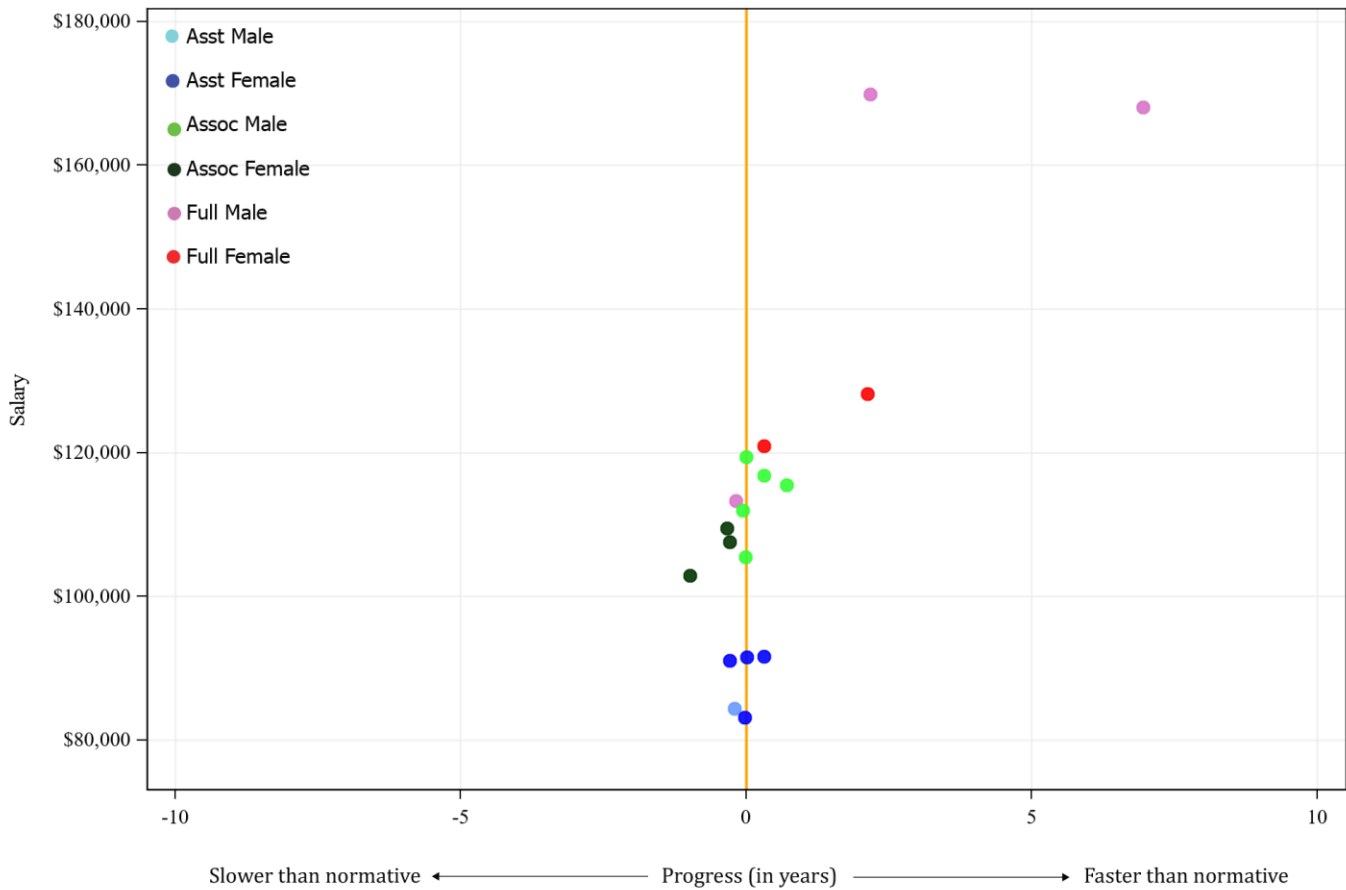
Graph 4: Program in Public Health, Salary by Progress and Ethnicity

4. <u>Progress Rate Analysis</u>: Using a simple t-test, results indicate that there is no statistically significant difference in progression rate means by gender when compared to white male faculty.

Progress Rate (in years) Comparison

Comparison	n	Mean	t	df	p-value
White Male vs	7	0.14			
Women	9	0.11	-0.10	14	0.923
URM[a]	1	7.00	--	--	--
Asian[a]	4	0.50	0.69	3	0.535

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