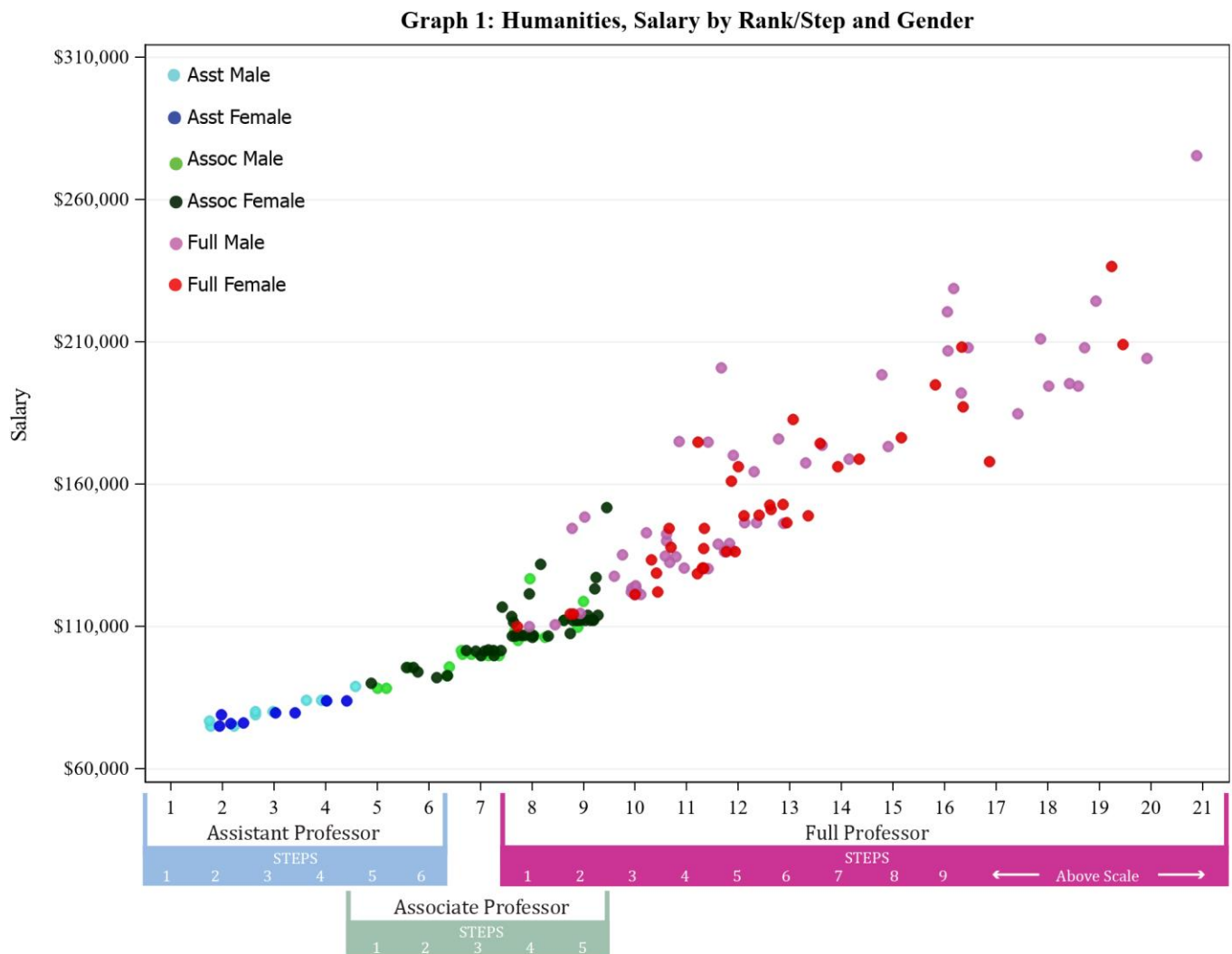UCI Office of Institutional Research

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.
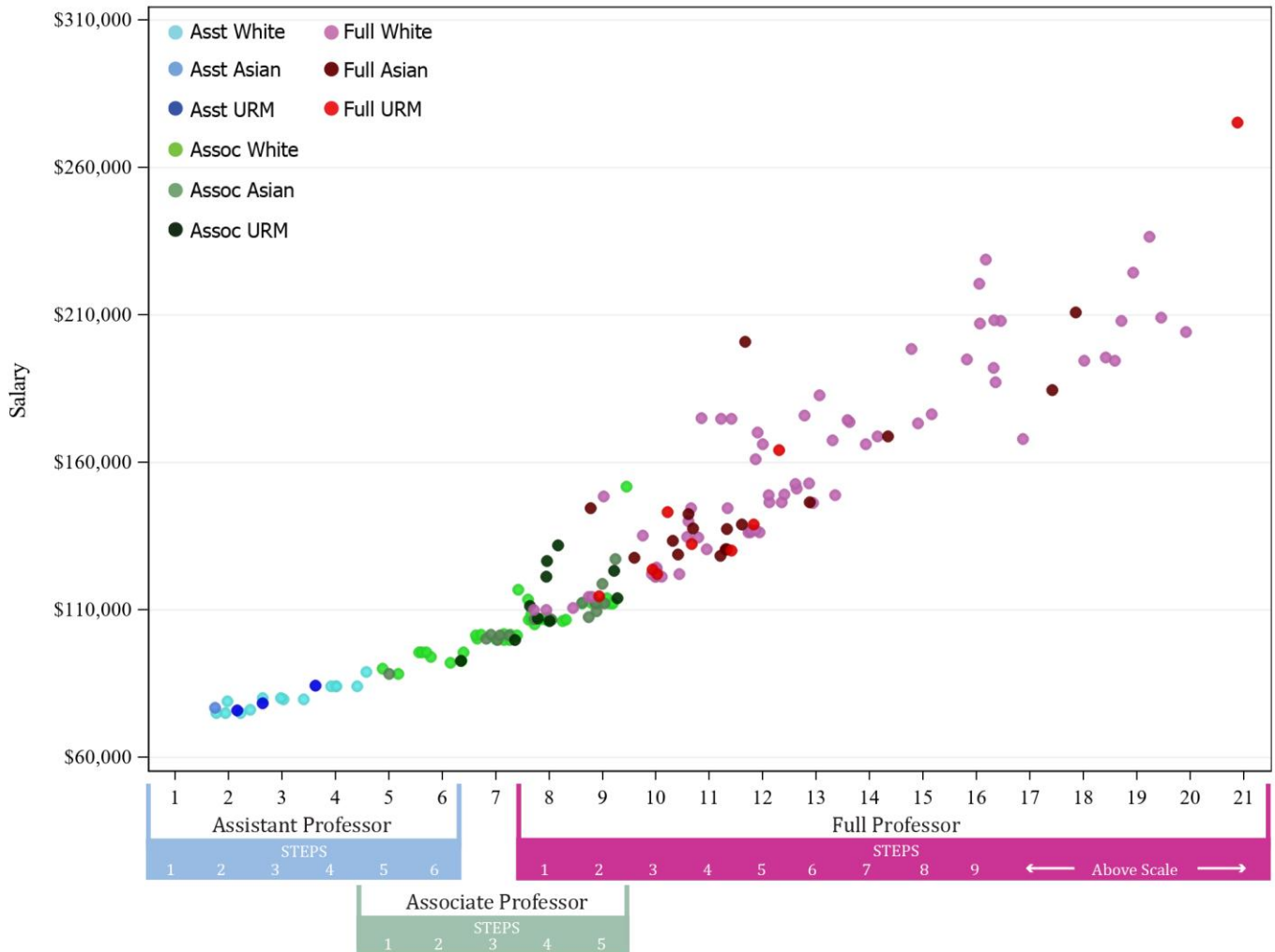
Methodology (see campus level report)

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: Humanities, Salary by Rank/Step and Gender

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Graph 2: Humanities, Salary by Rank/Step and Ethnicity

Legend:
- Asst White
- Asst Asian
- Asst URM
- Assoc White
- Assoc Asian
- Assoc URM
- Full White
- Full Asian
- Full URM

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 7.5% lower, Asian faculty 3% and URM faculty 8% lower. Only 3% of salary variation is explained by this model. After all control factors are added, 93% 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 1% lower for faculty who are women, 0.4% lower for Asian, and 5% higher for URM faculty. This model also shows demographic variables are not statistically significant.
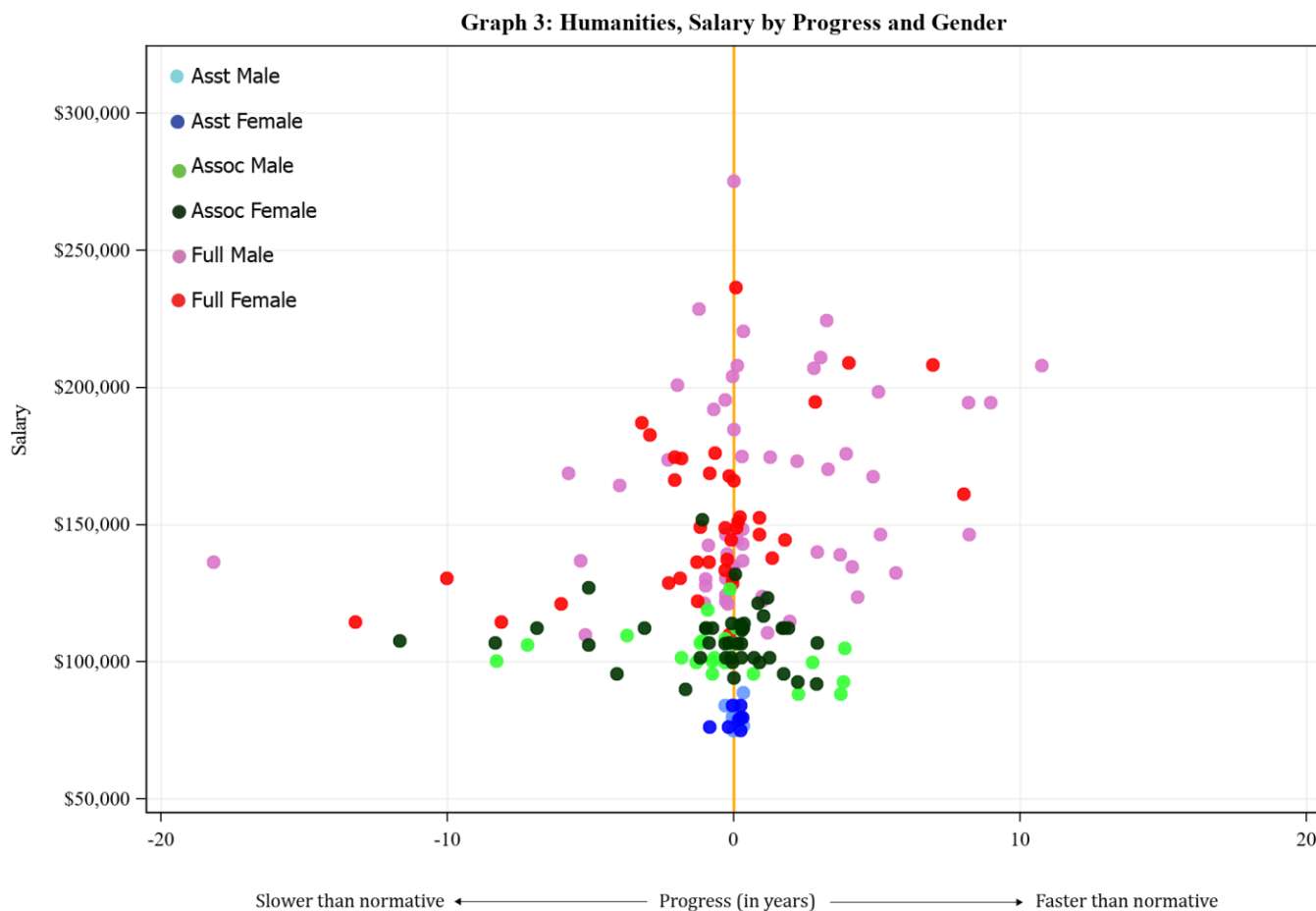
Table 1

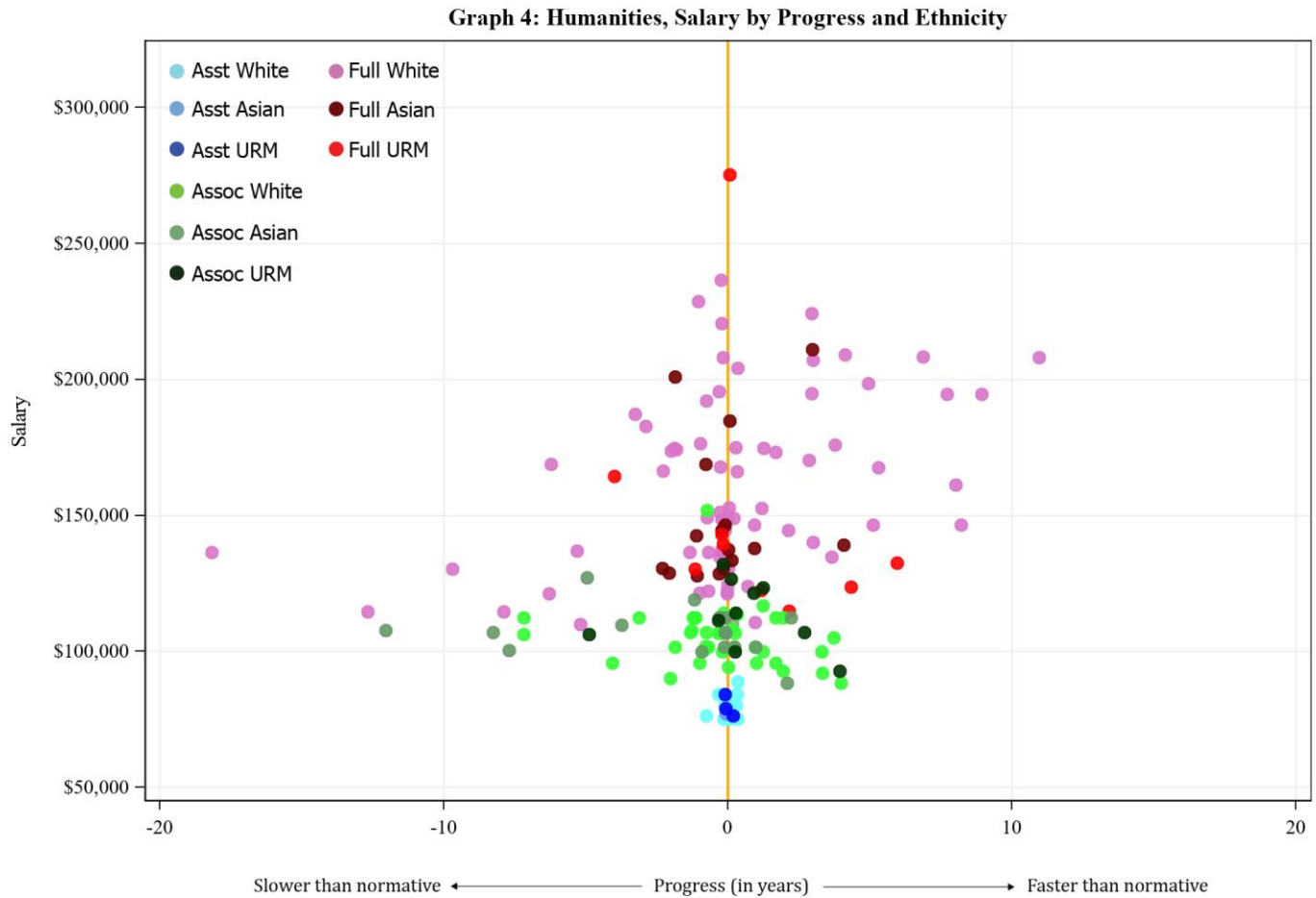| Submodel[1]	R-sq	Significant Variables	Salary Difference		
			Women vs Men	Asian vs White	URM vs White
1 Demography	0.03		-7.5%	-3.4%	-8.0%
2 Demography, Experience	0.70	Experience***	-4.0%	-3.2%	0.4%
3 Demog, Exper, Field	0.75	Experience***, Field***	-2.8%	-2.2%	4.5%
4 Demog, Exper, Field, Rank	0.94	Rank***	-1.1%	-1.0%	3.7%
5 Demog, Exper, Field, Rank[2]	0.93	Field*, Rank***	-0.9%	-0.4%	5.0%

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

[1]Experience includes years of service, 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, department*, years since degree, market salary ratio, progress, and current rank***.

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

Graph 3: Humanities, Salary by Progress and Gender

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Graph 4: Humanities, Salary by Progress and Ethnicity

Legend:
- Asst White
- Asst Asian
- Asst URM
- Assoc White
- Assoc Asian
- Assoc URM
- Full White
- Full Asian
- Full URM

Y-axis: Salary ($50,000 – $300,000)
X-axis: Progress (in years) (-20 to 20)

Slower than normative ← Progress (in years) → Faster than normative

4. <u>Progress Rate Analysis</u>: Using a simple t-test, results indicate that there is no statistically significant difference in progression rate means between URM or Asian with white male faculty. However, female progress 1.3 years more slowly than white males.

Progress Rate (in years) Comparison

Comparison	n	Mean	t	df	p-value
White Male vs	58	0.60			
Women[a]	89	-0.71	-2.05	100	0.043
URM[a]	22	0.55	-0.08	65	0.938
Asian	34	-1.03	-1.99	90	0.050

Note. Multivariate regression was conducted estimating rates of progression adjusting for experience, discipline, and initial rank. These analyses showed no significant differences between White men and Women, URM, or Asian faculty.

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