UC BERKELEY FACULTY SALARY EQUITY STUDY, UPDATE, 2023

OFFICE OF THE VICE PROVOST FOR THE FACULTY

February 2024

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1. Summary of Latest Data Findings and Activities

The initial *Report on the Faculty Salary Equity Study* was developed by a joint Senate-Administration steering committee and was published on the Vice Provost's website in late January 2015. The current report, the seventh update to the initial study, provides updates using data pulled from faculty personnel records on April 30, 2023.

Like the initial 2015 study, this report draws on a rich campus dataset that allows investigation of information concerning salary, gender, and ethnicity, while controlling for other important factors, including career experience, field, and rank. The main analysis focuses on two key submodels: one that includes controls for experience, field, and rank, and a second that includes controls for experience and field but excludes rank. (Both of these submodels are presented to provide a broader perspective.)

New campus-level results. At the campus level, submodel 3 (which controls for field and experience) continues to suggest that women and Asian faculty earn somewhat lower salaries on average than white male faculty members, but the differences for women are smaller than those of eight years ago. Submodel 4 (which controls for field, experience, and rank) shows the gap for Asian faculty remains, but not for women faculty, relative to white male faculty. Both submodels show that faculty from underrepresented ethnic/racial groups (Black/African Americans, Hispanic/Latinx of any race, and American Indian/Alaska Natives) earn slightly more than white men. The significance of these differences is discussed below.

	Campus Level Salary Differences for Women, Asian, and URG (underrepresented ethnic/racial groups) Relative to White Men, Log Model			
	Submodel 3 (no rank)		Submodel 4 (with rank)	
	Dec. 2014	April 2023	Dec. 2014	April 2023
Women	-4.3%	-1.7%	-1.8%	+0.2%
Asian	-1.7%	-1.3%	-1.8%	-1.5%
URG	-1.2%	+0.4%	-1.0%	+1.4%

Additional comparisons between 2023, 2022, 2021, 2020, 2019, 2018, 2017, 2016, and 2015 are available below toward the end of subsection 2C and in subsection 2E.

Salary equity programs. While the nature of this salary study does not permit us to draw definite conclusions about what has caused the negative salary differences for women and URG faculty vis-à-vis white men to shrink, the 2015 Targeted Decoupling Initiative (TDI), 2016 TDI, and 2017 TDI programs are likely partly responsible.

Several aspects of the 2015, 2016, and 2017 TDI programs design drew upon findings of the 2015 salary study, and the program guidelines benefited from invaluable suggestions provided

by deans, chairs, and many faculty, as well as the Academic Senate Committee on Diversity, Equity, and Campus Climate (DECC) and its Budget and Interdepartmental Relations Committee (BC). A total of nearly $3 million was provided for TDI awards in 2015, $2.4 million in 2016, and $2.3 million in 2017. In total, 387 faculty received salary increases of $4,000, $8,000, $12,000, or $16,000 in 2015, 386 faculty received salary increases that typically ranged between $2,000 and $12,000 in 2016, and 367 faculty received salary increases up to $12,000 in 2017. Women, Asian, and URG faculty received 54% of the total funds in 2015, 52% of the total funds in 2016, and 48% of the total funds in 2017; with women, Asian, and URG faculty comprising roughly 46% of the total faculty population that was eligible for the programs.

Since 2018, because of the way the UC Office of the President's changed the mandate for cost-of-living increases (i.e., "range adjustments"), it was not financially feasible for UCB to offer TDI programs; rather, cost-of-living (non-merit) faculty salary increases were largely determined by UC Office of the President's mandated changes to the salary scales. (When the Office of the President issues such mandates, it expects the campuses to draw upon their own resources to find the funds with which to fulfill them.) The UCB campus did adopt policies that ensured that all faculty received at least a 3% cost-of-living increase with the exception of AY 2020-21, when financial pressures arising from the COVID-19 pandemic precluded an increase. The campus implemented "Targeted Off-Scale Programs" for 2021 and 2022, which resembled the 2017 TDI program. In addition, a $15,000 minimum off-scale component for assistant professors was introduced in 2017, and increased to $18,000 in 2021 and to $22,000 in 2022.

Limits of study. It is understood that salary equity studies that evaluate differences in salary by gender, race, and ethnicity, controlling for rank/years of experience, and field, reveal only one dimension on which to judge whether an institution is treating its employees equitably. By focusing on salary equity, this study does not mean to suggest that is the only dimension of concern when it comes to equity, inclusion, and belonging. Furthermore, the success the University has had with regard to greater salary equity does not mean that work does not remain in other areas with respect to achieving our goals with regard to equity, inclusion, and belonging.

Updated data and analysis. Section 2 of this 2023 update includes updated results at the levels of schools, divisions, and colleges. Some of these units show larger gaps for women and those from various ethnic/racial groups than those for the campus as a whole; some show smaller gaps; and some show those groups actually earning more than white men. Appendix C for 2023 provides regression tables for the study's findings.

Updates on earlier recommendations. Section 3 of this update includes information about how the campus is following up on the recommendations provided in section 5 of the 2015 Report.

Additional information. The 2015 Report provided information about salary policies at Berkeley and the evolving ideals of salary equity; those discussions are not repeated here but

can be found in section 2 of the initial study. Section 4 of the 2015 report provided information about understanding the possible causes of salary differences; again, those discussions are not repeated here.

This updated study is intended to continue a new era of thoughtful engagement with issues of faculty salary equity at Berkeley, and it should serve as a basis for fostering sustained and collective discussion and action.

2. Detailed Findings, 2023 Annual Update

This section of the report presents updates of relevant data and analyses, presenting them in the same order as they appeared in section 3 of the 2015 Report. (Section 2 of the 2015 Report described salary policies and practices and changing ideals of equity. It is not repeated here but is available in the 2015 Report.)

A basic presentation of data and methodology in subsection 2A is followed by four subsections discussing data and findings for the campus as a whole. Subsection 2B looks at baseline variables; subsection 2C describes the results of including controls for field and rank; subsection 2D compares the results of three different statistical models employed; subsection 2E explores time-series results; subsection 2F looks at unit-level results; and subsection 2G presents the results of sub-studies concerning rank and retention.

Additional information is available in several appendices. Appendix A from the 2015 Report describes the study's methodology in greater technical detail, while Appendix B from that same report provides a detailed description of the variables used in the regression analyses. Please note that a few details presented in Appendices A and B were particular to the 2015 study. The regression tables underlying the figures presented below are provided in a 2023 Appendix C.

2A: Data and basic methodology

UC Berkeley is fortunate in having complete salary data for ladder faculty as well as complete historical data going back to 1979.[1] This study does not include summer salary, administrative stipends, administrative salary, or other types of supplemental compensation. This report update includes all professorial-series (as defined by Section 220 of the Academic Personnel Manual) faculty (n=1509) for whom salary data are available as of April 30, 2023. In the interests of conducting a fully comprehensive study, no "outlier" salaries were omitted.[2] Some degree data were missing from campus records, but these have all been filled in using web searches. Some limited but useful data on faculty members' outside job offers and retentions are tied to these base data. For more information about the data for the study, please see Appendix B.

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[1] The data are drawn from the central-campus Human Capital Management system (HCM) and UCPath. The salary data are annualized at a 1.0 full time equivalency (FTE) rate to make them consistent across the campus, across different salary scales, and among full- and part-time faculty. Our historical data for Lecturers with Security of Employment (LSOE) faculty are less complete, dating back to 2002. As the size of this group has increased in recent years, we plan to investigate the feasibility of including this population in future salary studies.

[2] In the 2002 AAUP-sponsored report by Lois Haignere, "Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education Faculty," several methods for dropping outliers are discussed (pp. 95–96), along with the circumstances in which it could be useful to investigate the effects of dropping them.

Like the initial 2015 study, this 2023 update uses regression analysis, which permits an examination of the effects of multiple factors on faculty salaries simultaneously. It employs three different classes of regression models: (1) models fit to the logarithms of annual salaries of all faculty members ("log-salary models"); (2) models fit to the levels of annual salaries of all faculty members ("total population models"); and (3) models fit to the levels of salaries of white male faculty members only and then extrapolated to other populations of faculty ("white-male models").[3] In many of the figures below, results from log-salary models are displayed; please note that, in the 2015 study, the log model seemed to estimate slightly larger salary gaps for women and those from underrepresented groups (URGs) than did the other two models.

Within each of the three broad classes of models, a series of submodels was produced by successively introducing controls for demographic factors (gender and ethnicity), professional experience, field, and rank. Time-series analyses enable the study to examine change over time, and both campus-level and unit-level studies allow for additional insight. Case studies explore the relationship of rank and outside job offers with current salary.

The models used in the main body of this report include indicators for women faculty and for two main groups of faculty of color: Asians and URGs, the latter group consisting of Black/African Americans, Hispanic/Latinx (of any race), and American Indian/Alaska Natives. The structure of these models implies that the salary differential for female faculty of color relative to white men would be the sum of the gender and ethnicity differentials.

2B: Campus level—baseline variables (demography and experience)

The focus of this study is on the variation in faculty salaries by gender and ethnicity.[4] These basic demographic categories are, however, correlated with other factors that can be expected to affect salary. Among these are measures of training and career experience: years since hire, years since highest degree, and degree type. For example, Figure 1A (below) displays how men and women faculty at UCB are distributed by years since hire; Figure 1B (below) does the same for ethnicity.

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[3] These three types of models are recommended by Haignere (2002).

[4] Campus records concerning gender are complete. Ethnicity information is provided voluntarily by faculty members; all but 14 faculty members (12 males and 2 females) provided this information in 2023. Individuals with unknown ethnicity are treated as a separate group unless there are fewer than 10; in that case, they are grouped with white faculty in the particular regression model. Where possible, analysis is provided separately for Asian and under-represented group (URG) faculty. The race/ethnicity terminology is drawn from UCPath.

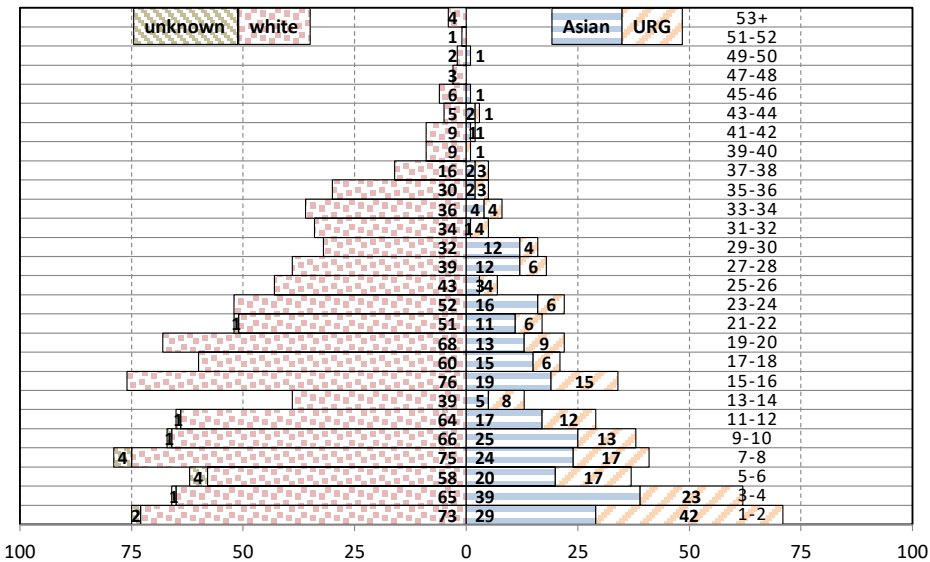# Figure 1A: faculty headcount, by years of service* and gender
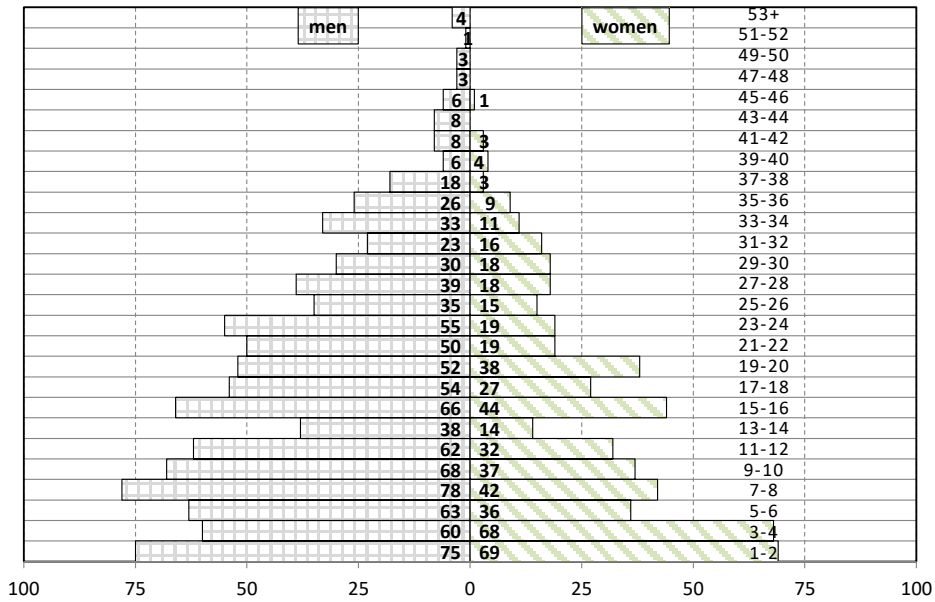
men	women	years of service
4		53+
1		51-52
3		49-50
3		47-48
6	1	45-46
8		43-44
8	3	41-42
6	4	39-40
18	3	37-38
26	9	35-36
33	11	33-34
23	16	31-32
30	18	29-30
39	18	27-28
35	15	25-26
55	19	23-24
50	19	21-22
52	38	19-20
54	27	17-18
66	44	15-16
38	14	13-14
62	32	11-12
68	37	9-10
78	42	7-8
63	36	5-6
60	68	3-4
75	69	1-2

Source: UC Berkeley Faculty Personnel Records, 4/30/2023.

*Years of service at Berkeley at end of academic year, calculated based on first year of faculty appointment.

Figure 1B: faculty headcount, by years of service* and ethnicity

unknown	white	Asian	URG	years of service
	4			53+
	1			51-52
	2	1		49-50
	3			47-48
	6	1		45-46
	5	2	1	43-44
	9	1	1	41-42
	9	1		39-40
	16	2	3	37-38
	30	2	3	35-36
	36	4	4	33-34
	34	1	4	31-32
	32	12	4	29-30
	39	12	6	27-28
	43	3	4	25-26
	52	16	6	23-24
1	51	11	6	21-22
	68	13	9	19-20
	60	15	6	17-18
	76	19	15	15-16
	39	5	8	13-14
1	64	17	12	11-12
1	66	25	13	9-10
4	75	24	17	7-8
4	58	20	17	5-6
1	65	39	23	3-4
2	73	29	42	1-2

URG includes Black/African Americans, Hispanic/Latinx of any race, and American Indian/Alaska Natives.

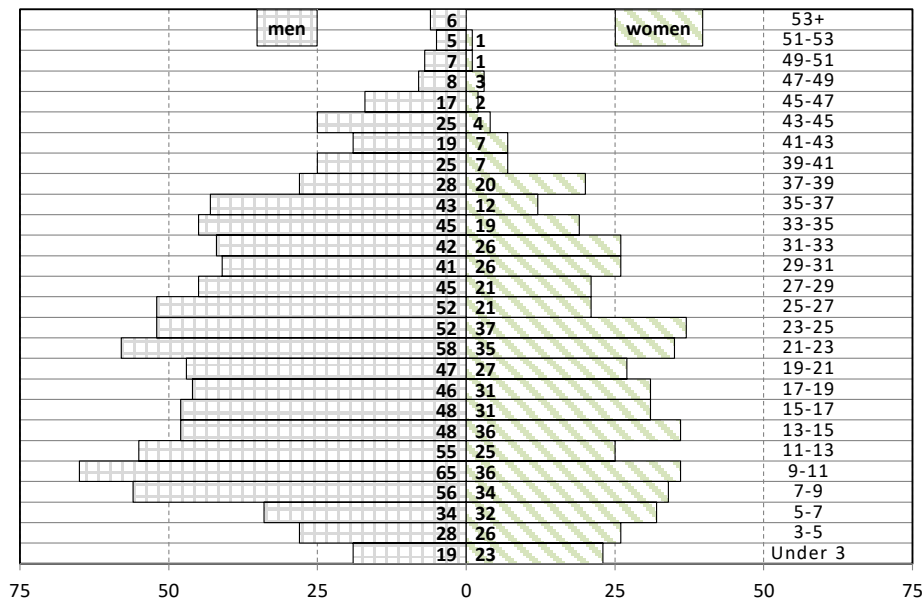Source: UC Berkeley Faculty Personnel Records, 4/30/2023.

*Years of service at Berkeley at end of academic year, calculated based on first year of faculty appointment.

These figures illustrate the fact that male faculty members at Berkeley have substantially higher average years of service than female faculty, and that white faculty have substantially higher average years of service than Asian and URG (underrepresented ethnic/racial group) faculty. In other words, these data suggest Berkeley has increased the proportions of women, Asian, and URG faculty over time among those it hires.

Figures 1C and 1D (below) look at years since highest degree; again we see that the proportional representation of women and faculty of color is higher in the more junior cohorts.

Figure 1C: faculty headcount, by years since highest degree and gender

men	women	
6		53+
5	1	51-53
7	1	49-51
8	3	47-49
17	2	45-47
25	4	43-45
19	7	41-43
25	7	39-41
28	20	37-39
43	12	35-37
45	19	33-35
42	26	31-33
41	26	29-31
45	21	27-29
52	21	25-27
52	37	23-25
58	35	21-23
47	27	19-21
46	31	17-19
48	31	15-17
48	36	13-15
55	25	11-13
65	36	9-11
56	34	7-9
34	32	5-7
28	26	3-5
19	23	Under 3

75   50   25   0   25   50   75

Source: UC Berkeley Faculty Personnel Records, 4/30/2023.

Because academic salaries are on average higher for those with more professional experience (years of service and years since highest degree), it is not surprising to find that regression analyses taking experience into account reduce the salary differences that are found when considering demography alone. Figure 2 (below) shows this reduction in the case of women:

Figure 1D: faculty headcount, by years since highest degree and ethnicity
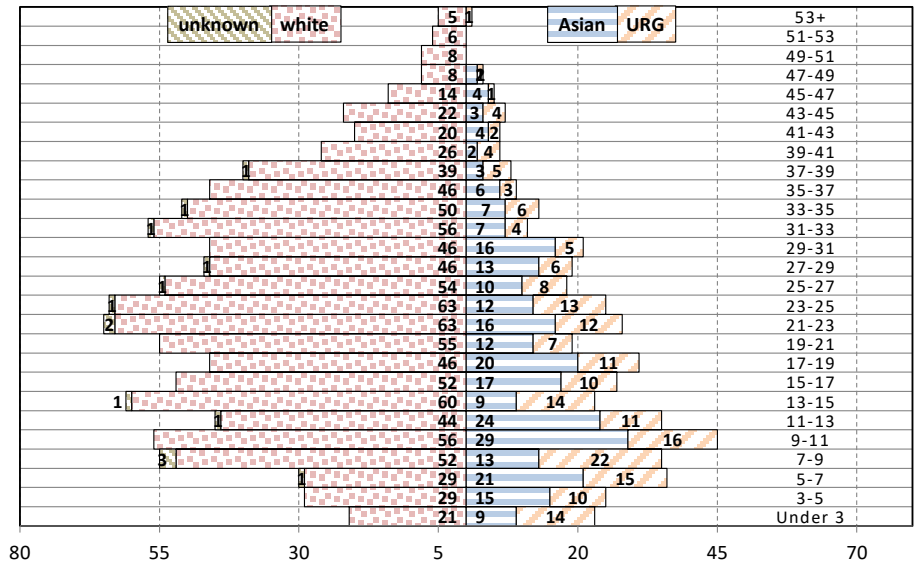
URG includes Black/African Americans, Hispanic/Latinx of any race,
and American Indian/Alaska Natives.

Source: UC Berkeley Faculty Personnel Records, 4/30/2023.

Figure 2 shows the effect of experience on observed salary differences by gender using the log-salary model. Submodel 1 includes demography only; submodel 2 includes demography and experience. When demography alone is considered, women relative to white men earn, on average, 12.7% less. Once experience is taken into account, that difference is reduced to 7.7%. The reduction is unsurprising in light of two facts: faculty members with more experience generally earn more than those with less experience, and current campus subpopulations reflect earlier years in which the proportion of women being hired was less than it is now. (For faculty of color, see Figures 4B and 4C below.)

Figure 2: women vs. white men
log salary submodels 1, 2
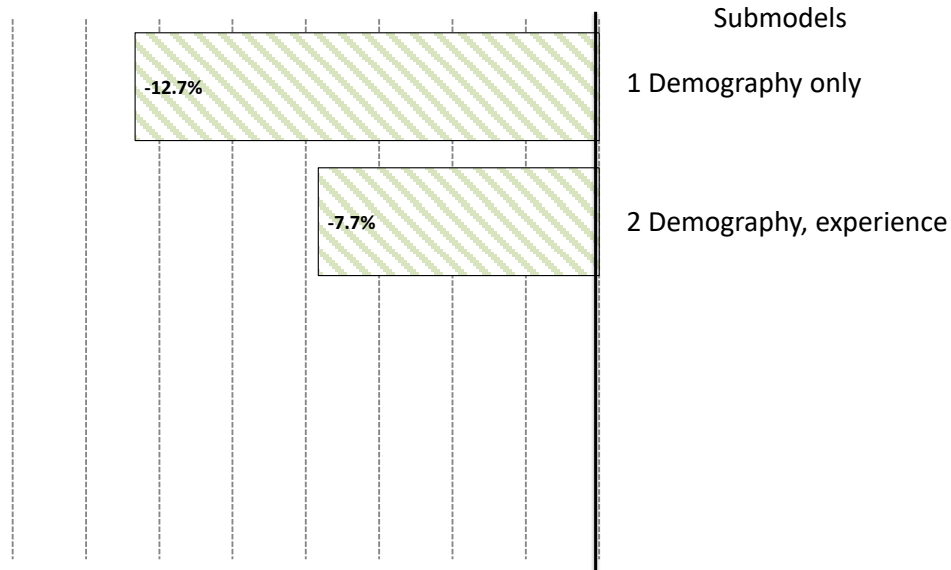
Submodels

1 Demography only

-12.7%

2 Demography, experience

-7.7%

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.

While these submodels serve as a baseline for this study, they do not by themselves provide an adequate analysis of salaries by gender and ethnicity. The reason is that they do not take into account additional variables that are generally expected to be associated with salary levels. We turn to those variables now.

2C: Campus level—variables for field and rank

Demographic patterns vary considerably by field. As Figure 3A (below) shows, although women comprise 36% of the total Berkeley faculty, they comprise a little over 15% of faculty in some departments and 70% or more in others.

Figure 3A: women as a percent of faculty by unit, in units with 10 or more faculty
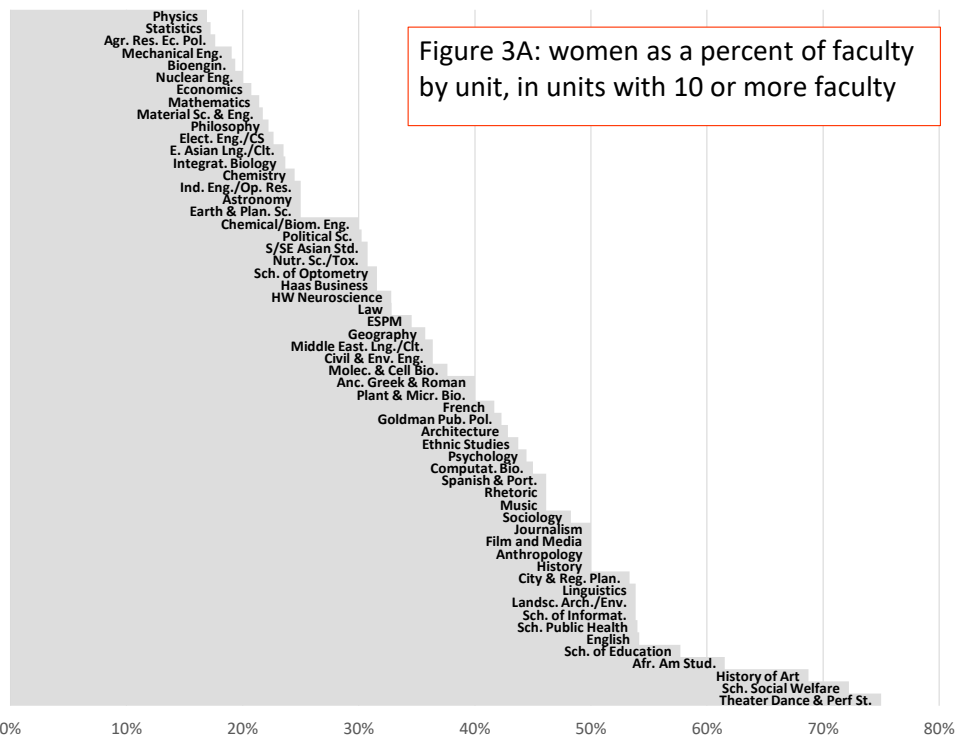
Source: UCB Faculty Personnel Records, 4/30/2023.

This pattern reflects well-documented national trends, with women and URG faculty more highly concentrated in humanities and some social science fields and substantially underrepresented in many STEM (sciences, technology, engineering, and mathematics) fields.

The reason this is relevant to a study of salaries is that average faculty salaries nationwide also vary considerably by field, with fields in the humanities and several other areas generally less well compensated. Figure 3B (below) presents this spread by field, comparing in percentage terms the mean full professor salaries by field at peer universities to the overall full professor mean salary at these same institutions. The average salary rate in the lowest paid fields is around 65% of the overall full professor mean salary, whereas in the highest paid fields the average rate is around 150%.[5]

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[5] The data are drawn from the Association of American Universities Data Exchange (AAUDE).

Figure 3B: percent of mean salary at peer universities by field for faculty at full professor rank, 2021-22 AAUDE data
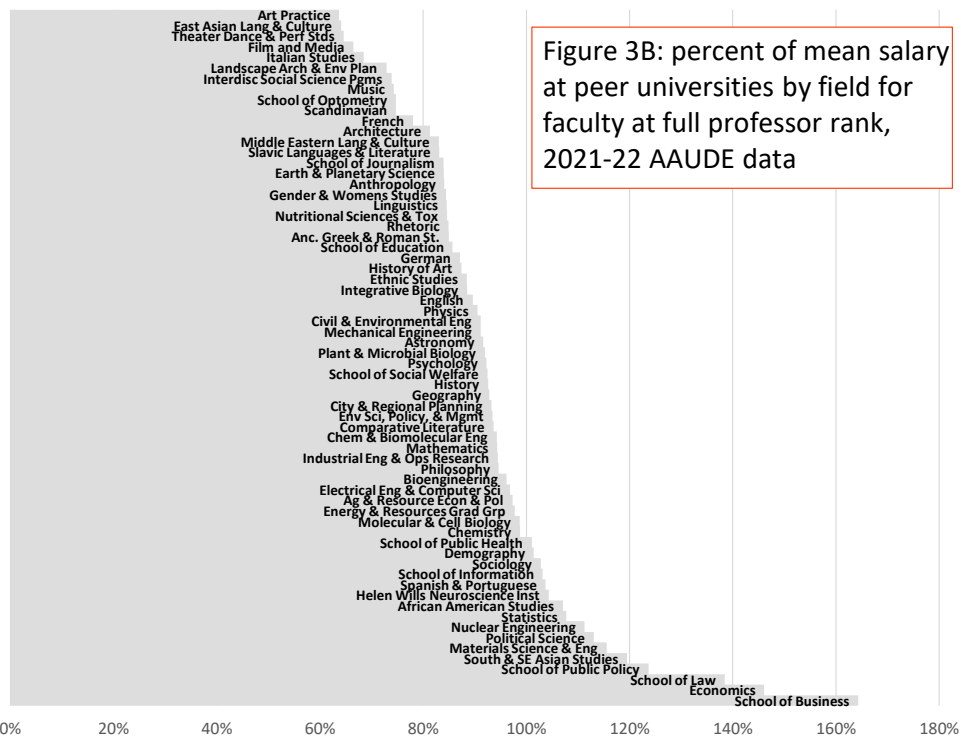
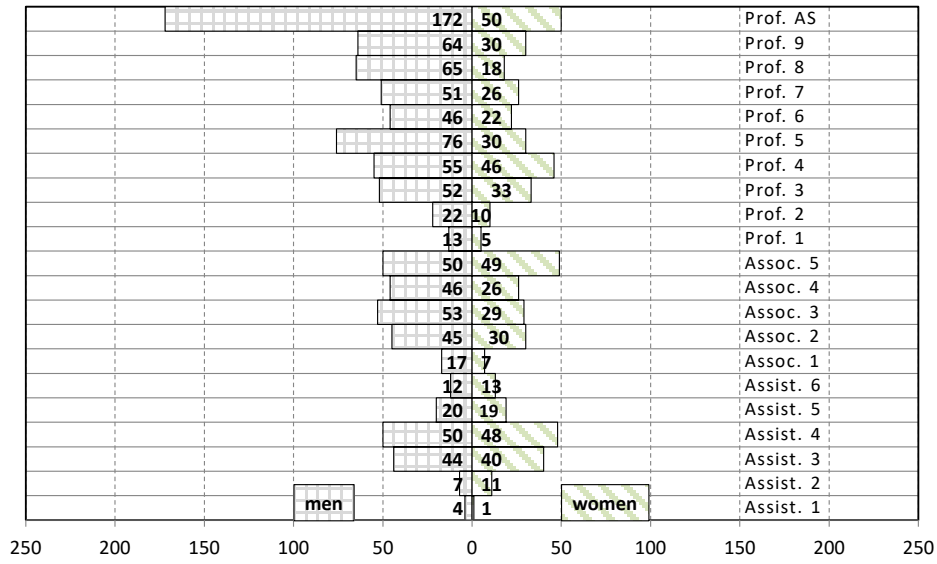Source: AAUDE via OPA, AY 2021-2022.

Clearly field is a significant factor in faculty salaries, and so controls for field are important to include in this study. (Appendix B describes these controls in greater detail.)
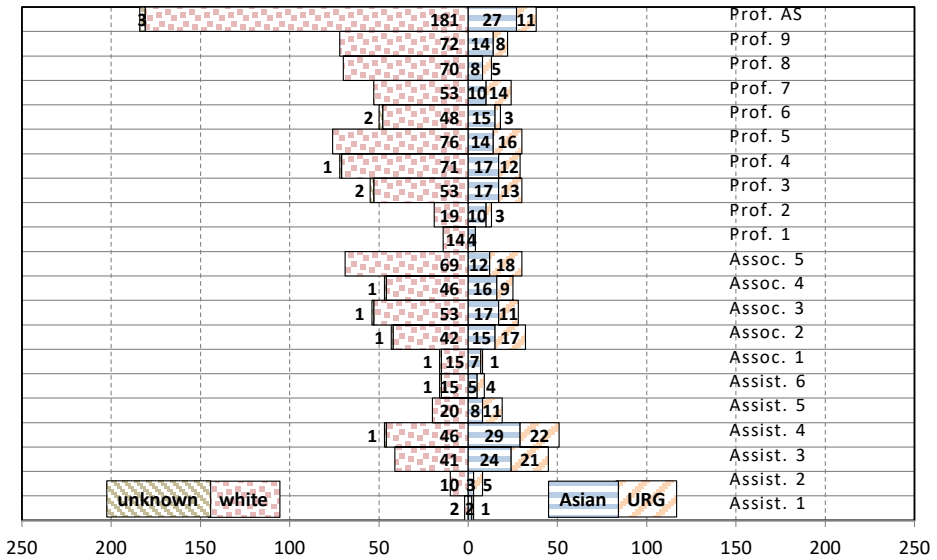
Rank and time in rank are also expected to be associated with salary. Gender and ethnicity patterns vary substantially by faculty rank and step, as Figures 3C and 3D (below) show.

Figure 3C: faculty headcount, by rank/step and gender

	men	women	rank/step
	172	50	Prof. AS
	64	30	Prof. 9
	65	18	Prof. 8
	51	26	Prof. 7
	46	22	Prof. 6
	76	30	Prof. 5
	55	46	Prof. 4
	52	33	Prof. 3
	22	10	Prof. 2
	13	5	Prof. 1
	50	49	Assoc. 5
	46	26	Assoc. 4
	53	29	Assoc. 3
	45	30	Assoc. 2
	17	7	Assoc. 1
	12	13	Assist. 6
	20	19	Assist. 5
	50	48	Assist. 4
	44	40	Assist. 3
	7	11	Assist. 2
	4	1	Assist. 1

250 200 150 100 50 0 50 100 150 200 250

Figure 3D: faculty headcount, by rank/step and ethnicity

unknown	white	Asian	URG	rank/step
3	181	27	11	Prof. AS
	72	14	8	Prof. 9
	70	8	5	Prof. 8
	53	10	14	Prof. 7
2	48	15	3	Prof. 6
	76	14	16	Prof. 5
1	71	17	12	Prof. 4
2	53	17	13	Prof. 3
	19	10	3	Prof. 2
	14	4		Prof. 1
	69	12	18	Assoc. 5
1	46	16	9	Assoc. 4
1	53	17	11	Assoc. 3
1	42	15	17	Assoc. 2
1	15	7	1	Assoc. 1
1	15	5	4	Assist. 6
	20	8	11	Assist. 5
1	46	29	22	Assist. 4
	41	24	21	Assist. 3
	10	3	5	Assist. 2
	2	2	1	Assist. 1

250 200 150 100 50 0 50 100 150 200 250

URG includes Black/African Americans, Hispanic/Latinx of any race, and American Indian/Alaska Natives.

While to some extent these distributions reflect experience factors, they are not expected to map neatly onto distributions based on experience alone. Of particular note is the concentration of large numbers of faculty members in certain "threshold" steps, specifically associate professor, Step V, and professor, Steps V and IX.

Figure 4A (below) shows the effects of variables for field and rank on salary differences by gender.[6]

Figure 4A: campus level, women vs. white men
log salary submodels 1, 2, 3, 4

Submodels

1 Demography only — -12.7%

2 Demography, experience — -7.7%

3 Demography, experience, field — -1.7%

4 Demography, experience, field, rank — +0.2%

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicators.
4 Current rank (assistant or associate vs. full professor); years in current rank.

With the introduction of field, the observed gender salary difference, relative to white men, is reduced from -7.7% to -1.7%. Once rank variables are entered into the regressions, the difference becomes positive for women, to +0.2%.[7]
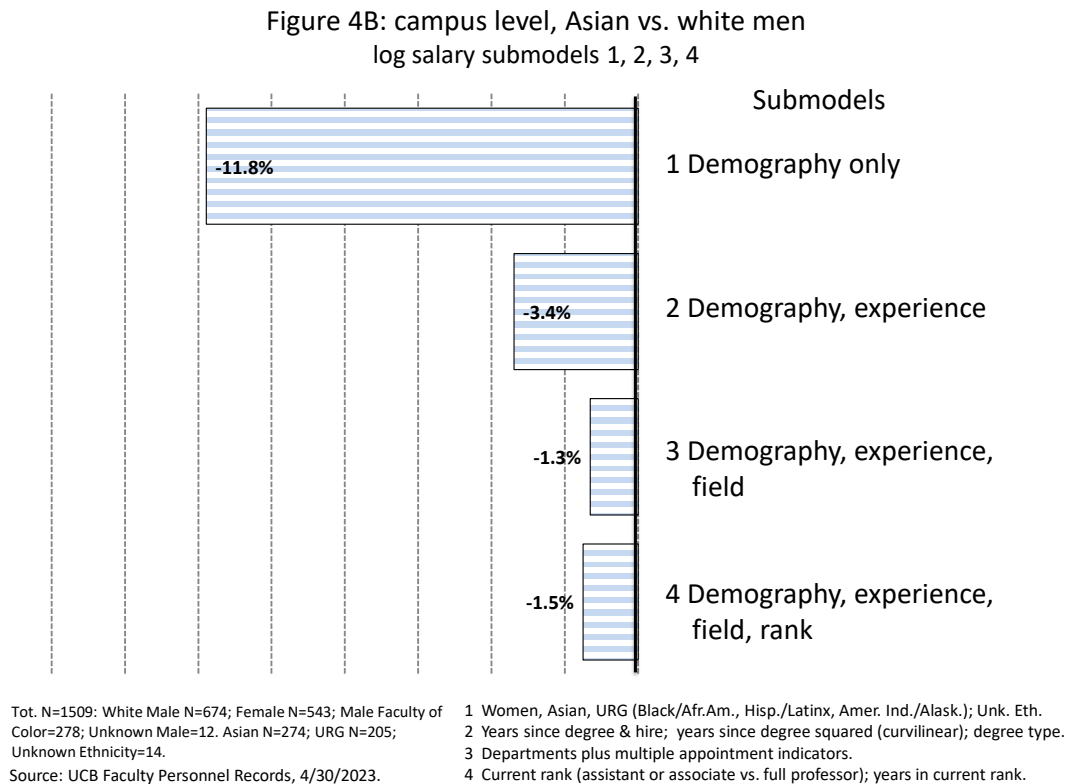
Given the systematic variation in salaries by experience and field, it seems advisable to consider both of these variables in any analysis of salary equity issues. It is also valuable to consider the results both of including and excluding rank variables, given that there is some debate about

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[6] For a detailed discussion of the construction of all regression variables, see Appendices A and B.
[7] Rank variables are for (a) assistant and associate versus full professor and (b) years at current rank (as recommended by Haignere, p. 22).

whether they ought to be included or not. (See section 4A: Interpreting the results of introducing rank as a variable of the 2015 Report for a detailed discussion.) Focusing, then, on submodels 3 and 4, the conclusion is that at the campus level, there is a salary difference between women and white male faculty as of April 30, 2023 that ranges between -1.7% and +0.2%.[8]

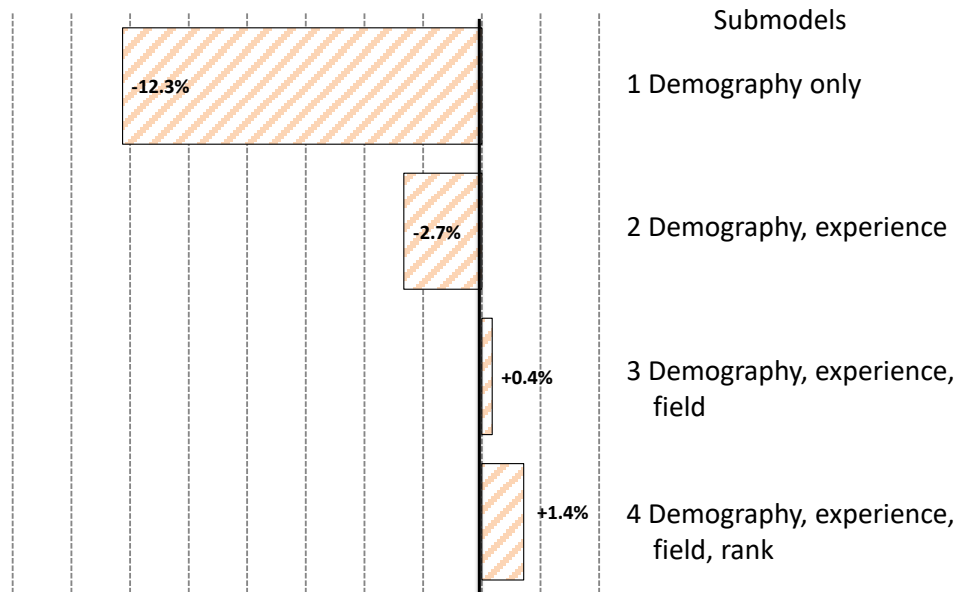As Figure 4B (below) shows, salary differences for Asian faculty relative to white male faculty are negative.[9]

Figure 4B: campus level, Asian vs. white men
log salary submodels 1, 2, 3, 4

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.); Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicators.
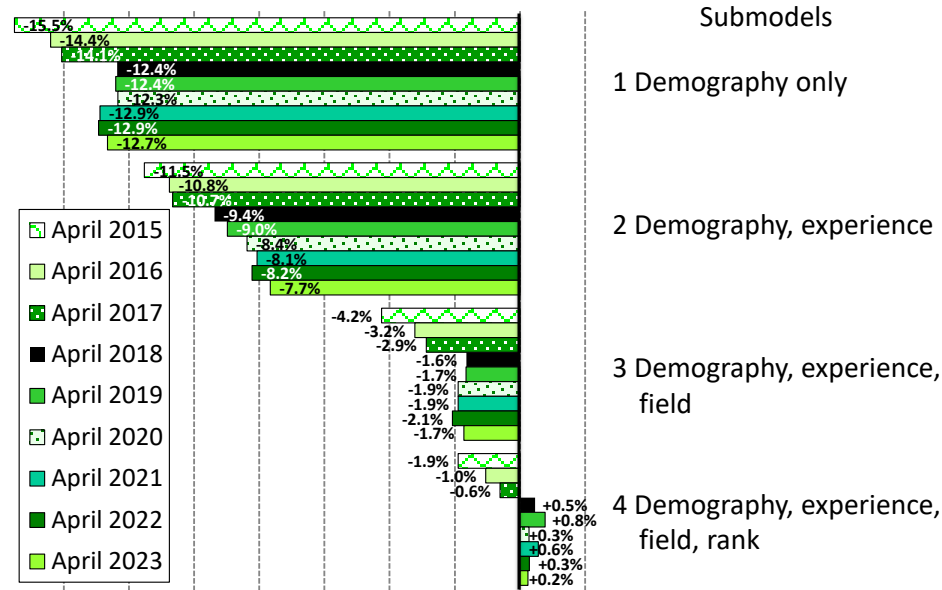4 Current rank (assistant or associate vs. full professor); years in current rank.

Submodels 3 and 4 both display negative salary differentials between Asian and white male faculty of -1.3% and -1.5%, respectively. Figure 4C (below) displays positive differentials of +0.4% and +1.4% for URG faculty relative to white male faculty.

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[8] For full regression output, see Appendix C, Table A1, which includes levels of statistical significance.
[9] See footnote 4 for information about ethnicity data.

Figure 4C: campus level, URG vs. white men
log salary submodels 1, 2, 3, 4

Submodels

-12.3% — 1 Demography only

-2.7% — 2 Demography, experience

+0.4% — 3 Demography, experience, field

+1.4% — 4 Demography, experience, field, rank

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicators.
4 Current rank (assistant or associate vs. full professor); years in current rank.

Although most of these differences for submodels 3 and 4 are not statistically significant, the difference for women faculty (relative to men) in submodel 3 is significant at the p<.10 level in the negative direction (-1.7% difference). For Asian faculty relative to white faculty, the differences for both submodel 3 and 4 are not significant, but both are in the negative direction (-1.3% and -1.5%). For URG faculty relative to white faculty, the differences for both submodel 3 and 4 are not significant, but both are in the positive direction (+0.4% and +1.4%). In general, statistical significance is less likely to be established for smaller groups, yet despite their size, the groups of women, URG, and Asian faculty are central to the questions this study is examining. In addition, the data provide a complete census of all salaries and not a sample, so measures of statistical significance may be somewhat less relevant than they would otherwise be.

To understand these differences, it may be helpful to express them relative to the rate of annual growth in earnings experienced by a typical faculty member. Interpreted in this way, the average salary difference between white male and female faculty members is equivalent to a little over a year of career experience in submodel 3, and the difference between white males and Asian faculty members is equivalent to about a year of career experience.[10]

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[10] Each year since hire is associated with a salary increase of approximately 1.4%.

Figures 4D, 4E, and 4F (below) compare the April 2023 salary differences to those observed annually from April 2015 to April 2022.[11]

Figure 4D: campus level, women vs. white men
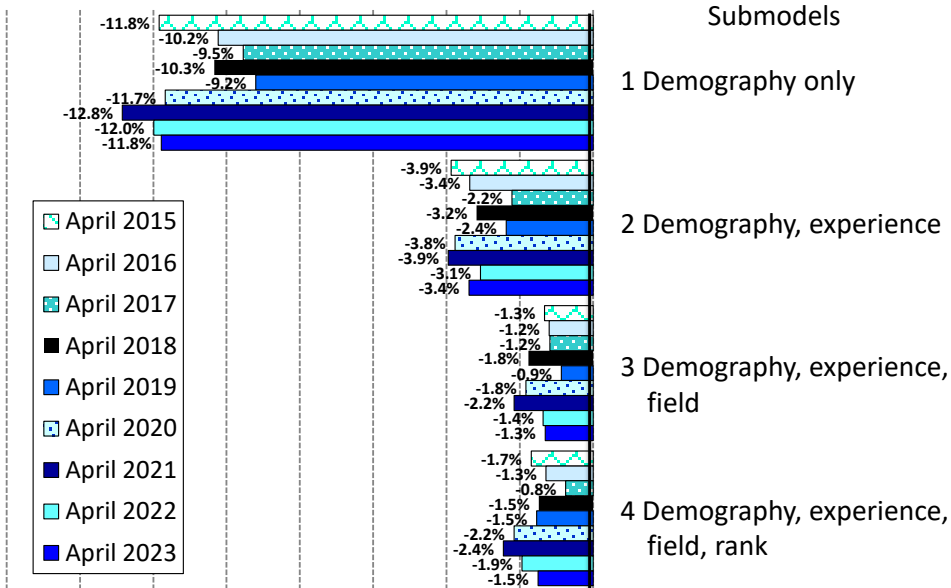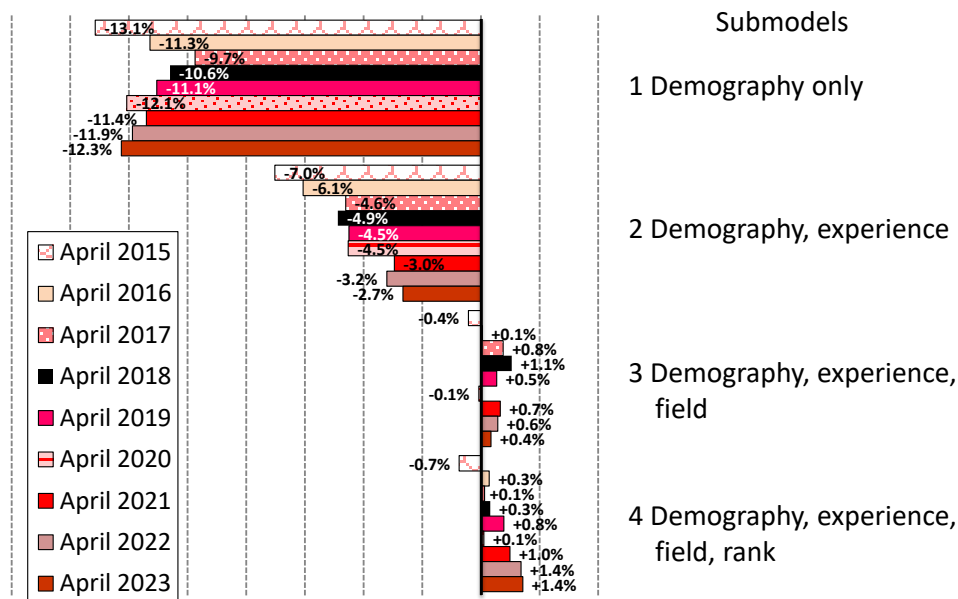log salary submodels 1, 2, 3, 4, April 2015 compared to April 2016-2023

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicators.
4 Current rank (assistant or associate vs. full professor); years in current rank.

The differences for women relative to white men are smaller now or even positive, +0.2% (with rank included, submodel 4) and -1.7% (no rank, submodel 3), than those observed earlier, particularly in April 2015, with values of -1.9% and -4.2%, respectively.

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[11] To facilitate analysis of change over time, these figures now feature consistent annual snapshots, April 30th of each successive year. Previous versions of this report featured the specific date of data pulled for the original study and subsequent follow-up studies, making it inconsistent across the years (December 2014, February 2016, March 2017, April 2018, April 2019, etc.). See footnote 14 for a detailed discussion of the impact of this approach on retrospective changes to the time-series data and associated regression models.

Figure 4E: campus level, Asian vs. white men
log salary submodels 1, 2, 3, 4, April 2014 compared to April 2016-2023

Submodels

1 Demography only

2 Demography, experience

3 Demography, experience, field

4 Demography, experience, field, rank

Legend:
- April 2015
- April 2016
- April 2017
- April 2018
- April 2019
- April 2020
- April 2021
- April 2022
- April 2023

Submodel 1 values: -11.8%, -10.2%, -9.5%, -10.3%, -9.2%, -11.7%, -12.8%, -12.0%, -11.8%

Submodel 2 values: -3.9%, -3.4%, -2.2%, -3.2%, -2.4%, -3.8%, -3.9%, -3.1%, -3.4%

Submodel 3 values: -1.3%, -1.2%, -1.2%, -1.8%, -0.9%, -1.8%, -2.2%, -1.4%, -1.3%

Submodel 4 values: -1.7%, -1.3%, -0.8%, -1.5%, -1.5%, -2.2%, -2.4%, -1.9%, -1.5%

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.); Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicators.
4 Current rank (assistant or associate vs. full professor); years in current rank.

For Asians relative to white men, the submodels now show a difference of -1.5% (with rank) and -1.3% (no rank), a similar gap to April 2015, with values ranging from -1.7% to -1.3%.

Figure 4F: campus level, URG vs. white men
log salary submodels 1, 2, 3, 4, April 2015 compared to April 2016-2023

Submodels

1 Demography only

2 Demography, experience

3 Demography, experience, field

4 Demography, experience, field, rank

Legend: April 2015, April 2016, April 2017, April 2018, April 2019, April 2020, April 2021, April 2022, April 2023

Submodel 1 values: -13.1%, -11.3%, -9.7%, -10.6%, -11.1%, -12.1%, -11.4%, -11.9%, -12.3%

Submodel 2 values: -7.0%, -6.1%, -4.6%, -4.9%, -4.5%, -4.5%, -3.0%, -3.2%, -2.7%

Submodel 3 values: -0.4%, +0.1%, +0.8%, +1.1%, +0.5%, -0.1%, +0.7%, +0.6%, +0.4%

Submodel 4 values: -0.7%, +0.3%, +0.1%, +0.3%, +0.8%, +0.1%, +1.0%, +1.4%, +1.4%

Tot. N=1509; White Male N=674; Female N=543; Male Faculty of Color=278; Unknown Male=12. Asian N=274; URG N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicators.
4 Current rank (assistant or associate vs. full professor); years in current rank.

For URGs, the 2023 submodels show a positive difference of +1.4% (with rank) and +0.4% (no rank). In the past, these differences were negative in April 2015, standing at -0.7% and -0.4%, respectively. The decreases in negative salary differences for women and URG are encouraging, suggesting ongoing personnel actions may have had a beneficial effect.

2D: Campus-level—the three regression models

So far, campus-level findings have been presented using the log-salary model. In subsection 2E below, the presentation of time-series analysis will bring out one distinct advantage of the log-salary model: trends over time can be seen without the introduction of adjustments for economic inflation or deflation. Given the consistency of Berkeley's faculty dataset, the value of longer-trend historic analysis seems clear, as it allows us to examine observed salary differences over time and to consider them in light of administrative and historic changes.

In this subsection, results from the log-salary model are compared with those from the white-male and total-population models. In contrast to the log-salary models, which estimate percentage salary differences, these models estimate the average salary difference between

groups in dollars. The implied differences are similar, suggesting that the basic conclusions of this study are unaffected by choice of specific model.[12]

The white-male model (see Appendix C, Table A2) shows negative salary differences of -$5,206 (submodel 3) and -$448 (submodel 4) for female faculty relative to white male faculty. Using the mean salary of white male faculty as a benchmark, these dollar differences represent percentage differences of -2.4% (submodel 3) and -0.2% (submodel 4)—fairly similar differences when compared to the log-salary models. Similarly, the total-population model (Appendix C, Table A3) shows a negative salary difference for women of -$3,967 for submodel 3 and -$7 for submodel 4, when comparing women to white men—fairly close to the differences shown by the white-male models. Again, using the mean salaries of white men as a benchmark, these translate to percentage differentials of -1.8% for submodel 3 and +0.0% for submodel 4— quite similar to the log-salary models.

Turning to the results for Asian and URG faculty, again the alternative models give similar results. For example, the total population models (Appendix C, Table A3) show estimated salary differences for Asians relative to white males of -$3,433 (submodel 3) and -$4,112 (submodel 4), corresponding to percentage differences of -1.6% for submodel 3 and -1.9% for submodel 4. These differences are similar to those observed using the log-salary models. Likewise, for URG faculty these models show estimated salary differences relative to white males of +$484 (submodel 3) and +$2,246 (submodel 4), corresponding to percentage differences of +0.2% and +1.0%—quite close results to the values shown in Figure 4C from the log-salary models.   The implied differences for Asian and URG faculty from the white-male models (Appendix C, Table A2) are a little more variable across specifications, but overall they are fairly similar to the differences from the other two sets of models.
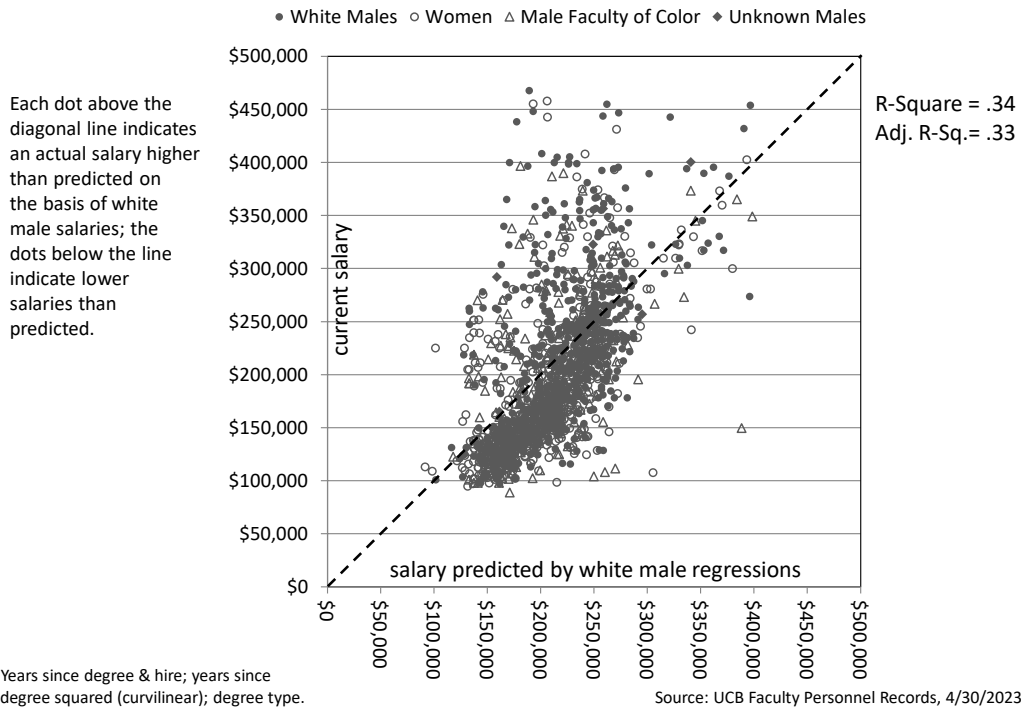
Of the three different regression model types, the white-male approach is substantially different from the other two. Specifically, the white-male model provides a regression based solely on the white male population (n=674), and then actual salaries are compared to the salaries predicted on the hypothesis that salaries for all faculty will be the same as those for white men who have similar descriptors for the introduced variables concerning experience, field, and rank. The differences between predicted and actual salaries for individuals—called "residuals"—are then used to calculate mean salary differences between expected and actual salaries for different groups. A scatter-plot can thus be constructed with predicted salaries for individuals marked along the X-axis, actual salaries for individuals marked along the Y-axis, and a plotted white-male regression line.

Figure 5A (below) shows a scatter plot for submodel 2, which includes only experience-related variables.

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[12] Per Haignere, pp. 41-43.

Figure 5A: current salary vs. salary predicted by regression
white male submodel 2 (experience)

● White Males   ○ Women   △ Male Faculty of Color   ◆ Unknown Males

Each dot above the diagonal line indicates an actual salary higher than predicted on the basis of white male salaries; the dots below the line indicate lower salaries than predicted.

R-Square = .34
Adj. R-Sq.= .33

current salary

salary predicted by white male regressions

*Years since degree & hire; years since degree squared (curvilinear); degree type.

Source: UCB Faculty Personnel Records, 4/30/2023.

Given the limitations of submodel 2, which includes experience-variables only, it is not surprising to see considerable scatter around the white-male linear regression line. The R-squared value and adjusted R-squared values for this submodel are relatively low, with just 33% (adjusted R-squared) to 34% (R-squared) of the salary variance described by those two values.[13]

As figure 5B (below) shows, once field is included in the regressions (submodel 3), there is markedly less scatter, and the percentage of variance that is explained increases to 71% (adjusted R-squared) to 72% (R-squared).

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[13] Adjusted R-squared is a modification of R-squared that adjusts for the number of controls (predictors) in the model.

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Figure 5B: current salary vs. salary predicted by regression
white male submodel 3 (experience and field)

• White Males   ○ Women   △ Male Faculty of Color   ◆ Unknown Males

Each dot above the diagonal line indicates an actual salary higher than predicted on the basis of white male salaries; the dots below the line indicate lower salaries than predicted.

R-Square = .72
Adj. R-Sq.= .71

current salary

salary predicted by white male regressions

*Experience; & Departments plus multiple appointment indicators.

Source: UCB Faculty Personnel Records, 4/30/2023.

Figure 5C (below) shows the introduction of rank variables, which further reduces scatter and yields an adjusted R-squared value of .76 and an R-squared of .77.

Figure 5C: current salary vs. salary predicted by regression
white male submodel 4 (experience, field, rank)

● White Males   ○ Women   △ Male Faculty of Color   ◆ Unknown Males

Each dot above the diagonal line indicates an actual salary higher than predicted on the basis of white male salaries; the dots below the line indicate lower salaries than predicted.

R-Square =.77
Adj. R-Sq.=.76

current salary

salary predicted by white male regressions

*Experience; Field; & Current rank (assistant or associate vs. full professor); years in current rank.

Source: UCB Faculty Personnel Records, 4/30/2023.

Two points are worth noting here. First, we can see that submodel 3, which takes field into account, provides much better fit than submodel 2 does. Second, even with the inclusion of rank and years in rank in submodel 4, almost 25% of salary variance remains undescribed. Still, the adjusted R-squared values are relatively high for submodels 3 and 4, and they are at levels that provide support to the findings of this study.

2E: Time-series regression analysis

As mentioned above, the log-salary model simplifies historical analysis. Figure 6 (below), for example, shows changes over the past decade in salary differences based on Spring semester data, using submodel 4, which controls for experience, field, and rank.[14]

Figure 6: campus time-series (AY 2004-05—2022-23)
women vs. white men, Asian vs. white men, URG vs. white men
log salary submodel 4 (demography, experience, field, rank)

Tot. N=1509 (2022-23): White Male N=674; Female N=543; Male
Faculty of Color=278; Unknown Male=12. Asian N=274; URG
N=205; Unknown Ethnicity=14.

Source: UCB Faculty Personnel Records, 4/30/2023.

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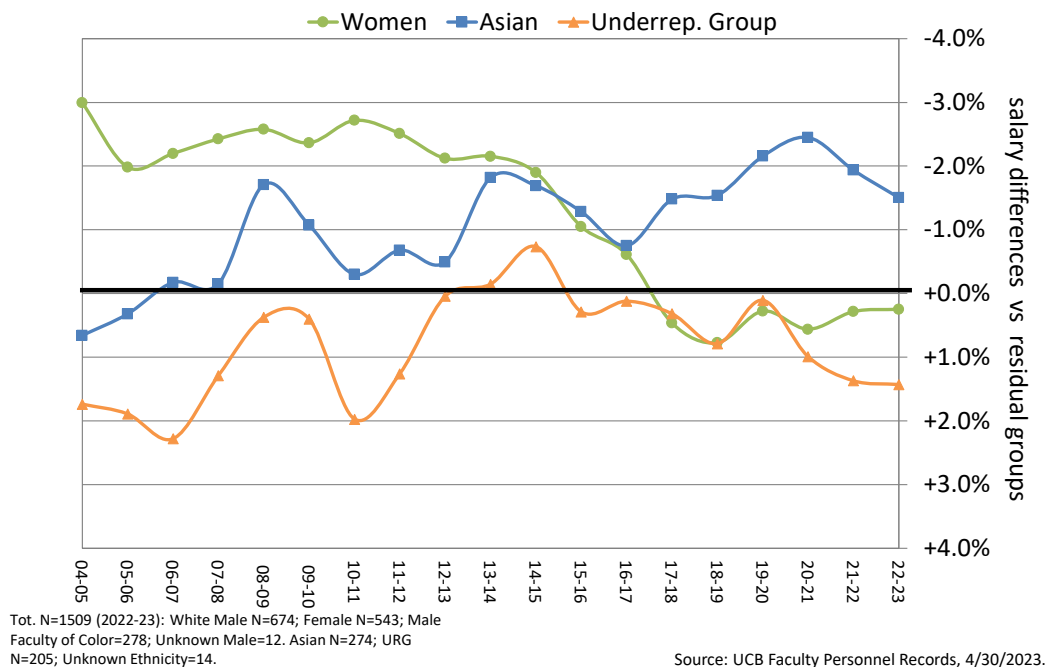
[14] Note: A small degree of variability between the time-series regression runs reported in the January 2015 report; the 2016, 2017, 2018, 2019, 2020, and 2021 updates; and this current 2023 update report exist due to any of the following reasons: (1) The inclusion of departmental variables in specific regression runs, including time-series runs, depends on having N>=10 faculty in the most recent academic year; since departmental populations vary over time, the inclusion of specific field variables can vary with each iteration of this report; (2) On an annual basis we re-poll faculty with missing race/ethnicity data, and this updated data is included in all current regression runs, including time-series data runs; (3) A small number of retroactive salary actions can alter the salary values of a few individuals for past years; and (4) To be more consistent, all time-series data will depend on data from the Spring semester of the academic year. The first year, the 2014-2015 data was drawn based on December 2014 due to the time constraints of having to deliver the initial salary study to UCOP by a January 2015 deadline. To provide more consistent trend data, the release of updated salary reports have been pushed further into the Spring semester and summer, providing the necessary time to secure the most recent Spring salary data (April 30th of each year), and to minimize the likely number of future retroactive salary actions. This delay was particularly important for years with TDI awards.

Year-to-year volatility for Asian and URG faculty probably reflects their relatively small numbers: the timing of just a few hires, separations, or salary increases can have a notable effect. For women, negative salary differences in earlier years generally hovered between -2.5% and -3% but have decreased since 2011. Of possible relevance is the fact that a Targeted Decoupling Initiative provided salary increases effective in 2012, 2013, 2014; and larger 2015–16, 2016–17, and 2017–18 TDIs were recently implemented, using new guidelines informed by the 2015 salary study, which may have, in part, reduced the negative salary differences for women and URG relative to white men.

Tables B1a, B2a, B3a, and B4a in Appendix C provide fuller information about time-series analyses that use each of the four submodels. Table B1a tracks results for submodel 1 over time. (Recall that submodel 1 uses demographic data only.) Table B1a makes clear that demography on its own has described relatively little salary variance in each of the past seventeen years, with adjusted R-squared values ranging from .05 to .09 (meaning that only 5-9% of variance is explained by demography alone). Table B2 tracks the results for submodel 2 over time; here experience variables are included along with demographic variables. The adjusted R-squared values are greater but are not large, and they declined over time from .50 in 2004 to between .38 and .44 since 2010. Thus the capacity of demography and experience variables to describe salary variance is not substantial and has declined some over the last decade. Table B3 tracks the results for submodel 3 over time, showing the results of using demographic, experience, and field variables. With the addition of field variables, the adjusted R-squared values rise considerably, and they do not exhibit a decline over time, moving slightly up and down between .68 and .77. Table B4, whose results are plotted in Figure 6, shows adjusted R-squared values that are higher still, consistently between .76 and .83.

One possible way to think about these patterns is that the role of market has become increasingly powerful in recent years, just as the importance of the experience-related terms seems to have declined. This shift may be related to the fact that certain departments and or fields have experienced unusually large increases in their salaries relative to other fields. Figure 7 (below) shows rapid escalation in salaries over the last decade in five fields: business, economics, law, agricultural and resource economics, and public policy.

Figure 7: selected units with high and rapidly increasing salaries
log salary submodel 3 (demography, experience, & field)
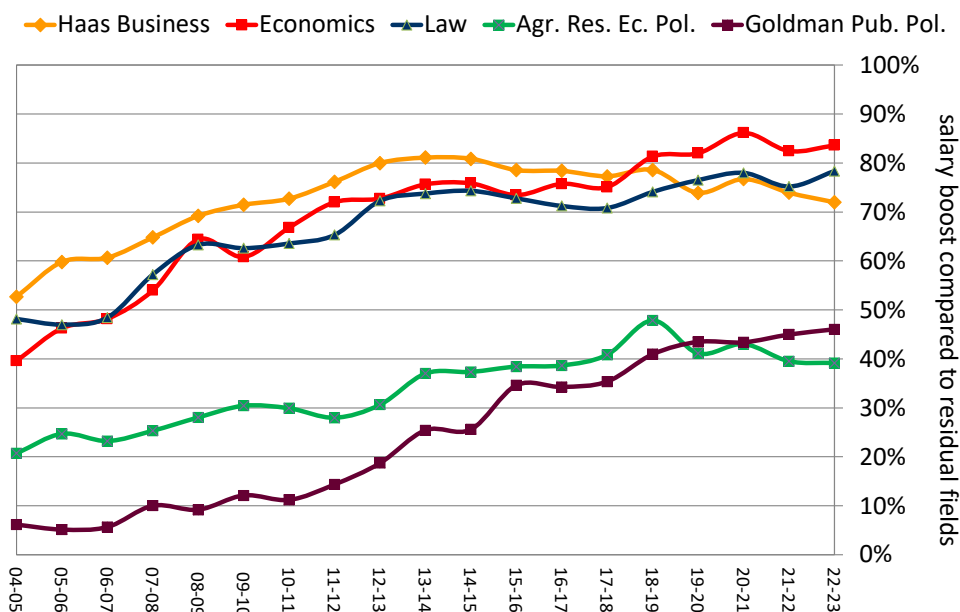
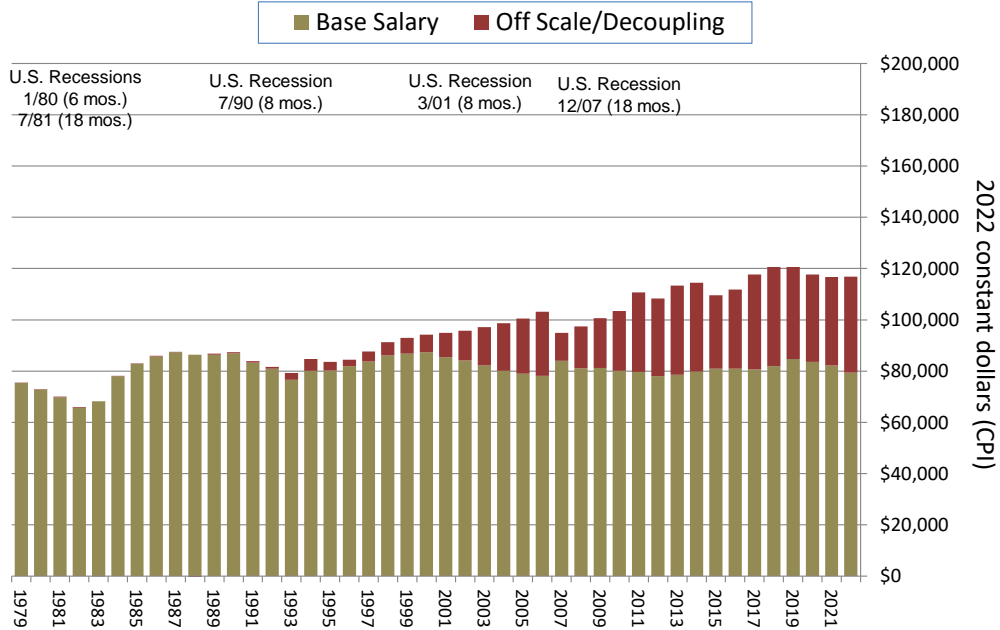Source: UCB Faculty Personnel Records, 4/30/2023.

Demography; experience; departments plus multiple appointment indicators.

Market forces seem to be at work here, as the AAUDE data displayed in Figure 3B above depict a similar grouping of high-paid fields.

Other time-series descriptive data drawn from the UCB personnel records suggest that market forces are altering the composition of salaries on our campus, given long-term stagnation in UC's salary scales (although very recent adjustments to those scales have been more significant). Figure 8 (below) looks back over the years since 1979, showing mean base salaries and off-scale increments for academic-year salaries for assistant professors who are at Step III on the regular professorial scale.[15] Because the official professorial pay scales are below the markets in which UCB competes and, moreover, have declined over time in real terms due to inflation, the addition of off-scale increments have proved necessary to keep UCB competitive.

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[15] These data use a Consumer Price Index deflator in order to provide constant dollar amounts in 2022 dollars. What are now called off-scale increments were, until recently, referred to as decoupled increments.

Figure 8: mean base salary and off-scale/ decoupling
assistant professors at Step III, regular scale

*Includes 3.5 fractional step faculty in recent years. Mean salaries are provided for academic-year appointees.
Source: UCB Faculty Personnel Records, AY1979-80—2022-23 (as of 4/30/2023).

Similar analysis shows that market forces have pushed off-scale amounts upwards more quickly for assistant professors (Step III) than for full professors (Step VII) and for faculty on the Business, Engineering, and Economics scale than for faculty on the regular professorial scale. In short, major market changes are clearly affecting patterns of UCB faculty compensation.

2F: Unit-level regression analyses

In addition to carrying out studies at the campus level, we segmented the faculty to discover whether observed salary differences tend to be unit-specific or not. As much as possible, this segmentation is by decanal unit. This is in part because deans play a role in determining faculty salaries and advancement, and in part because we would like the results of these unit-level studies to support any administrative actions that may be appropriate. Also, although many decanal units include faculty members with diverse disciplinary training and interests, studies by decanal unit generally group together sub-units that may be affected by similar market and academic forces.

To support analytical rigor, however, we do not provide separate results for the smaller decanal units, whose ladder-faculty sizes are too small to provide meaningful results. Thus we have grouped the following decanal units together: Graduate School of Education, College of Environmental Design, School of Information, School of Journalism, School of Optometry, School of Public Health, the Goldman School of Public Policy, and the School of Social Welfare. We also note that, for smaller units at least, time-series fluctuations suggest that relatively little weight should be given to a single year's snapshot. When the number of URG or Asian faculty within a unit is less than 10, faculty in the two categories are combined as "non-white."

For each unit or group of units below, Appendix C contains four detailed tables: (1) log-salary 4/30/2023, with submodels 1-4; (2) white-male 4/30/2023, with submodels 2-4;[16] (3) log-salary time-series, submodel 3, 2004-05—2022-23 (Spring semester); and (4) log-salary time-series, submodel 4, 2004-05—2022-23 (Spring semester). Tables for total population models are not included; this model shed little additional light on the observed salary patterns. Please note that faculty with multiple appointments appear in the analysis of all units in which they have an appointment; Appendix B includes a discussion of coding for multiple appointments.

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[16] Submodel 1 is not possible given the construction of the white-male model.

L&S Arts and Humanities. Figure 9A (below) shows that in submodel 4, which includes rank, the salary difference for women is positive, at +1.3%. In submodel 3, which does not include rank, the difference is negative, at -4.4%. Tables C1c and C1d show that during the past several years, negative and positive differences for women have been fairly stable, vacillating somewhat from year-to-year. Salary differences for Asian and URG faculty vary considerably depending on the selected model, and time-series results are somewhat volatile year to year. For example, in the ten most recent years, submodel 4 shows salary differences for Asian faculty were -0.0%, -2.0%, -1.6%, -0.9%, -1.7%, -1.6%, -1.2%, -0.1%, +1.3%, and -0.0%. The statistical significance of these results is low. The variation and volatility probably arise from the fact that the numbers of Asian and URG faculty are relatively small, meaning that a few appointments, separations, promotions, or salary increases can have a relatively large effect.

Figure 9A: Arts & Humanities
women vs. white men, Asian vs. white men, URG vs. white men
log salary submodels 1, 2, 3, 4
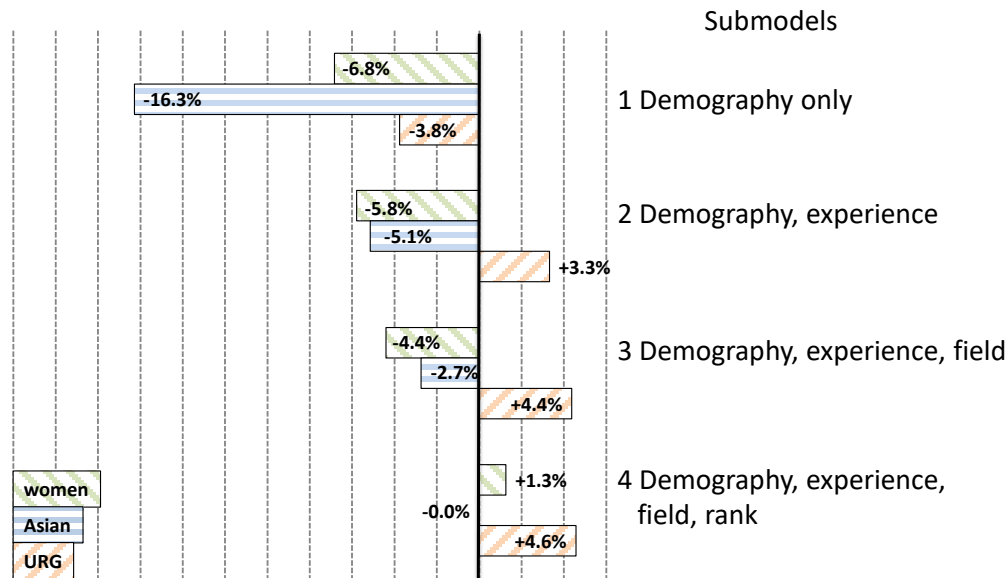
Tot. N=232: White Male N=90; Female N=109; Male Faculty of Color*=32; Unknown Male=0. Asian N=39; URG* N=24.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

L&S Biological Sciences. For women in the Division of Biological Sciences, Figure 9B (below) shows salary differences of +0.2% and +0.7% in submodels 3 and 4. Salary differences for Asian faculty are mixed, at +0.5% (submodel 3) and -1.6% (submodel 4). For URG, the differences are variable, at +2.0% (submodel 3) and -0.7% (submodel 4). The time-series studies suggest that negative differences for women may have increased and then decreased over time, but given the relatively small numbers of women, Asian, and URG faculty in this unit, neither positive nor negative differences are statistically significant. A sub-study of the Department of Molecular and Cell Biology that included citation rates may be relevant to the discussion of this Division; it can be found in the 2015 Report, subsection 3G.

Figure 9B: Biological Sciences
women vs. white men, Asian vs. white men, URG vs. white men
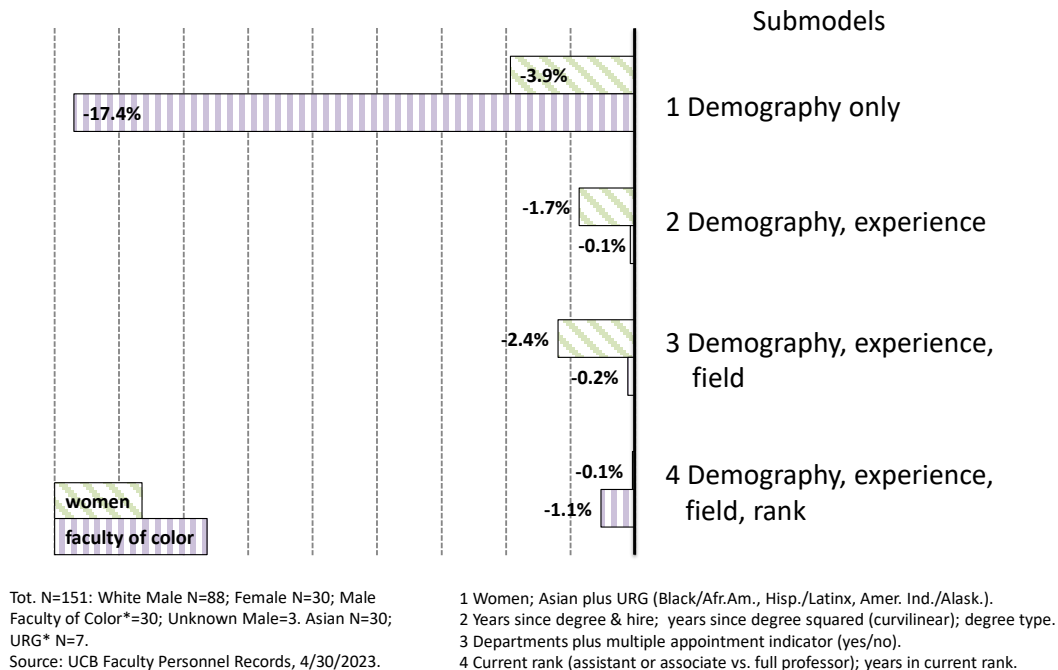log salary submodels 1, 2, 3, 4
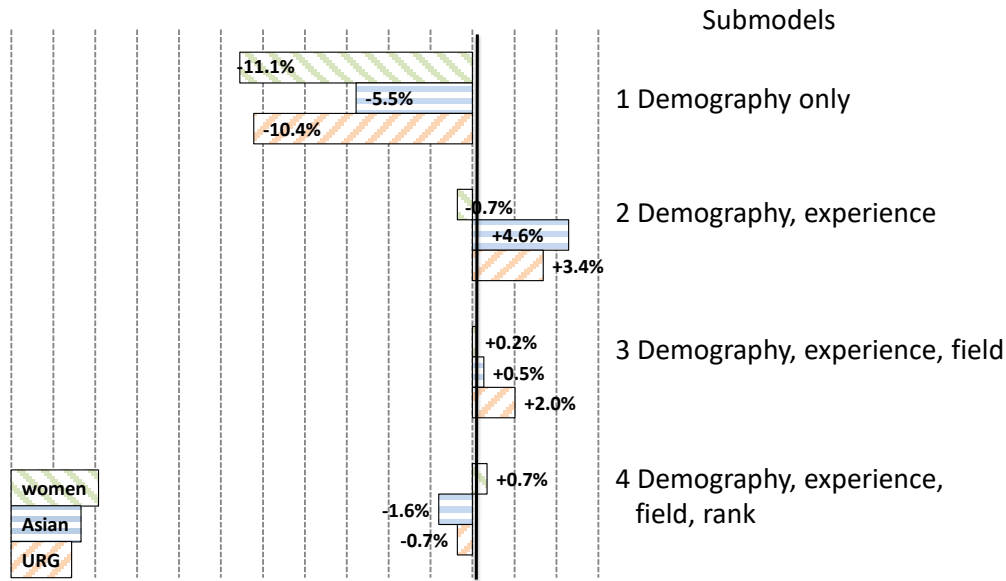
Tot. N=129: White Male N=67; Female N=44; Male Faculty of Color*=17; Unknown Male=1. Asian N=24; URG* N=11.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

L&S Mathematical and Physical Sciences. As Figure 9C (below) indicates, salary differences for women in the MPS Division are variable, with differences for women ranging from -2.4% (submodel 3) to -0.1% (submodel 4). Similarly, the differences for faculty of color are also variable, with difference ranging from -0.2% (submodel 3) to -1.1% (submodel 4). The times-series results for submodel 3 and submodel 4 suggest negative difference for women have declined somewhat in recent years. Beyond this general trend, the results display a fairly high degree of volatility from year-to-year which is unsurprising given the small number of women in the Division. Adjusted R-square values are relatively low for submodel 3 (ranging from .47 to .66 through the years). Since AY 2007-08, none of the differences by gender and ethnicity have been statistically significant for either submodel 3 or submodel 4. Note: The department of Statistics now resides in the College of Computing, Data Science, and Society (see Figure 9K). The current-year and time-series analyses have been updated to reflect this reorganization.

Figure 9C: Mathematical & Physical Sciences
women vs. white men, faculty of color vs. white men
log salary submodels 1, 2, 3, 4

Submodels

-3.9%
-17.4%
1 Demography only

-1.7%
-0.1%
2 Demography, experience

-2.4%
-0.2%
3 Demography, experience, field

-0.1%
-1.1%
4 Demography, experience, field, rank

women
faculty of color

Tot. N=151: White Male N=88; Female N=30; Male
Faculty of Color*=30; Unknown Male=3. Asian N=30;
URG* N=7.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian plus URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

L&S Social Sciences. Figure 9D (below) shows a large negative salary differences for women, Asian, and URG in the baseline submodels (1 and 2), and then a marked reduction in the size of those negative differences in the key submodel that introduces field (submodel 3).   These findings probably reflect the fact that the Department of Economics, compared to other departments in the Division, is both less demographically diverse and more highly compensated. For the key submodels (3 and 4), which introduce field and rank variables, salary differences for women are -0.8% and -0.0%, respectively. Over time, salary differences for Asian and URG faculty tend to be volatile in submodel 3 and 4 (C4c-d), whereas negative salary differences for women have decreased somewhat. The departments of Sociology and Psychology were both included in a sub-study introducing variables for citation rates in the 2015 Report, subsection 3G, that may be relevant to this discussion.

Figure 9D: Social Sciences
women vs. white men, Asian vs. white men, URG vs. white men
log salary submodels 1, 2, 3, 4
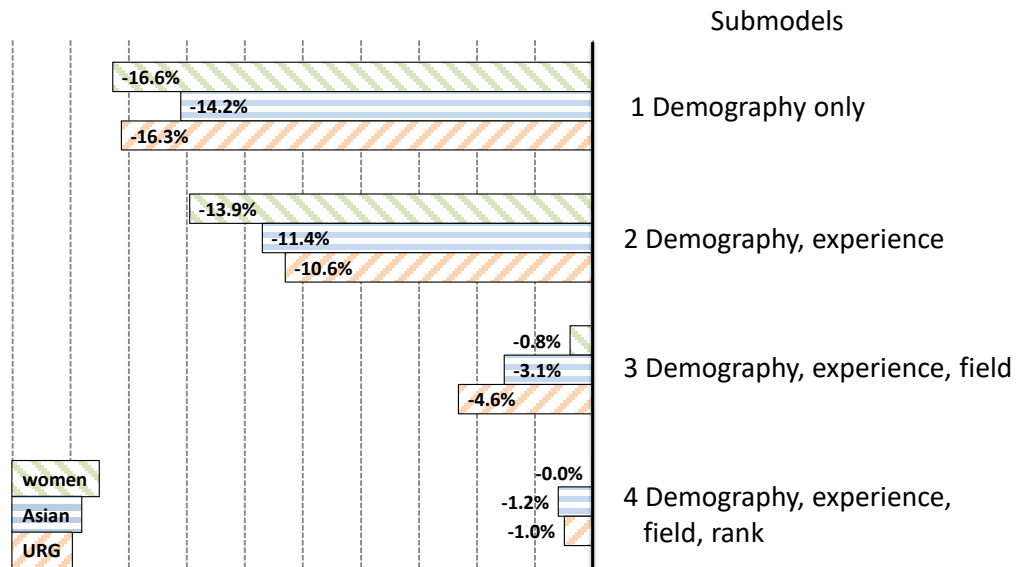
Tot. N=302: White Male N=120; Female N=127; Male Faculty of Color*=51; Unknown Male=4; Asian N=39; URG* N=61.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

College of Engineering. Figure 9E (below) indicates that in the College of Engineering, there is a modest positive salary difference for women and URG faculty in key submodels 3 and 4; and a negative salary difference of -0.8% for Asian faculty in both submodels. The time-series tables for both submodels 3 and 4 (C5c-d) indicate that any negative differences for women, Asian, and URG faculty relative to white males have historically been variable but not statistically significant. Because the department of Electrical Engineering and Computer Science resides in both the College of Engineering and the College of Computing, Data Science, and Society (see Figure 9K), the department is included in both regression models. The current-year and time-series analyses reflect this reorganization.

Figure 9E: Engineering
women vs. white men, Asian vs. white men, URG vs. white men
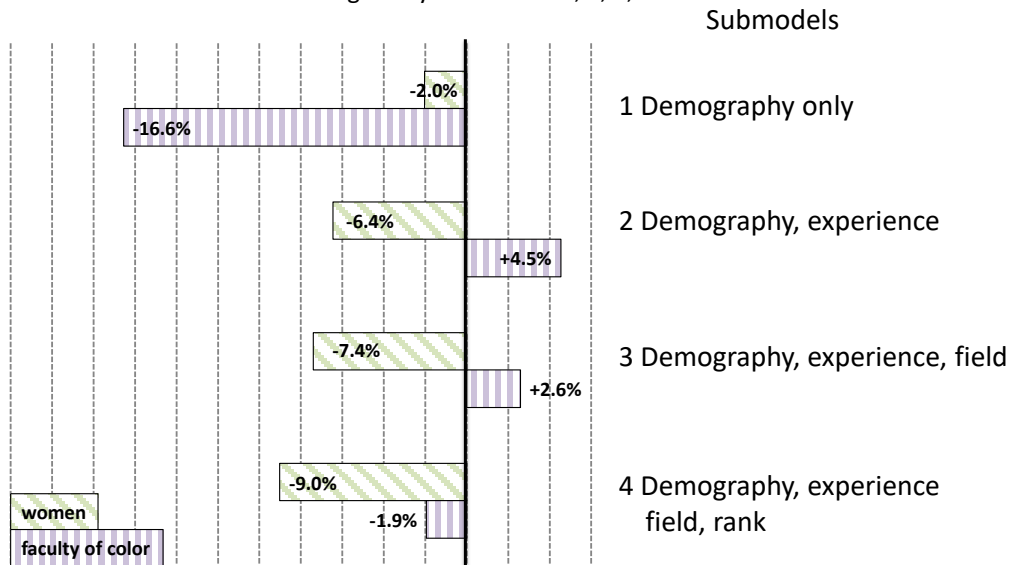log salary submodels 1, 2, 3, 4
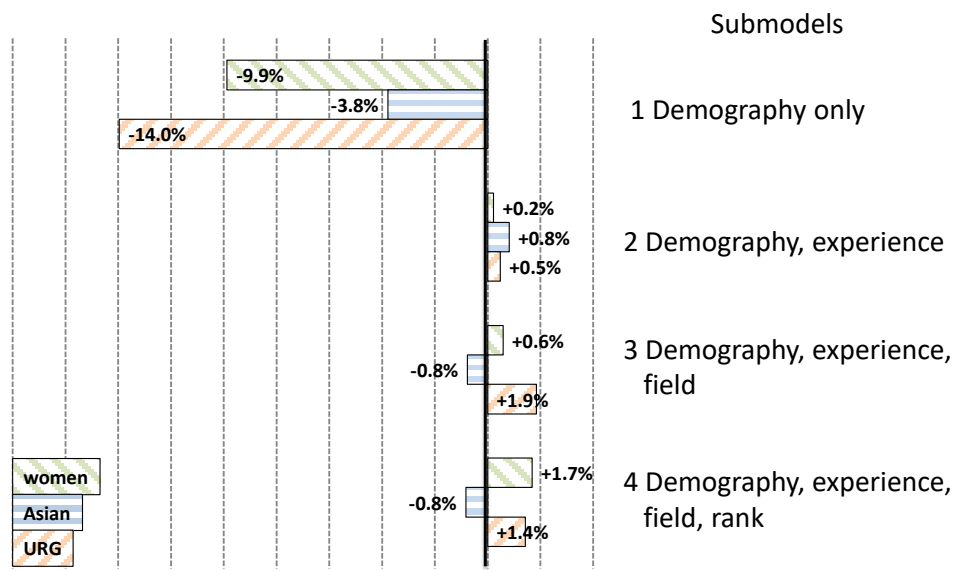
Tot. N=254: White Male N=126; Female N=64; Male Faculty of Color*=63; Unknown Male=1. Asian N=61; URG* N=25.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

College of Chemistry. Figure 9F (below) shows that for women in the College of Chemistry, there is a relatively large negative salary difference of -7.4% in submodel 3 and -9.0% in submodel 4, which is larger than that for the campus as a whole. Faculty of color members have positive salary differences relative to white male faculty members in submodel 3 but not in submodel 4, though the time-series slides indicate considerable fluctuation over the years. For women, too, there is considerable year-to-year volatility, though there appears to have been a trend toward larger negative differences. Considerable fluctuation is unsurprising given the fact that there are only 16 women and 20 faculty of color (some of them women) in the College.

Figure 9F: College of Chemistry
women vs. white men, faculty of color vs. white men
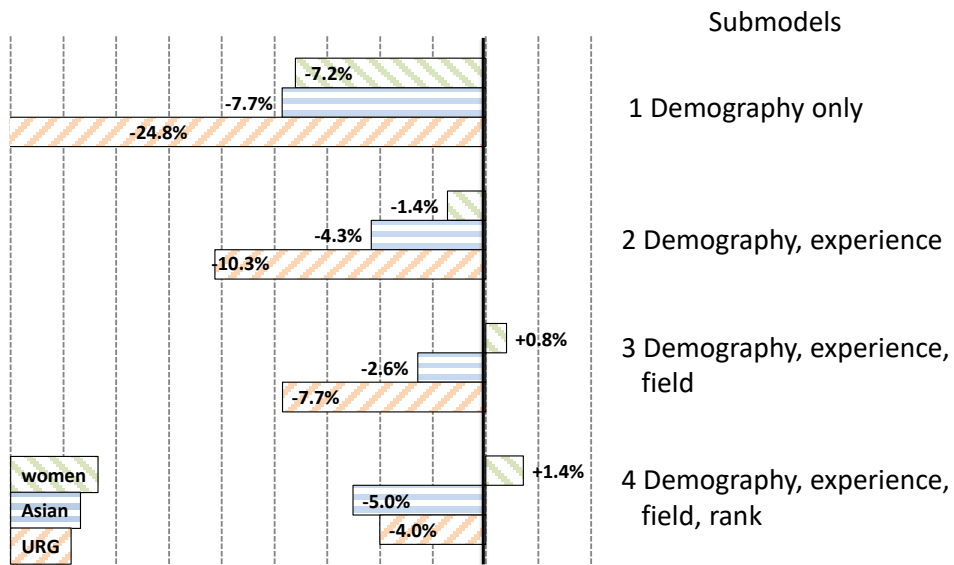log salary submodels 1, 2, 3, 4

Submodels

1 Demography only
  -2.0%
  -16.6%

2 Demography, experience
  -6.4%
  +4.5%

3 Demography, experience, field
  -7.4%
  +2.6%

4 Demography, experience
  field, rank
  -9.0%
  -1.9%

women
faculty of color

Tot. N=66: White Male N=33; Female N=16; Male Faculty of Color*=16; Unknown Male=1. Asian N=15; URG* N=5.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian plus URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

College of Natural Resources. Figure 9G (below) shows positive salary differences for women of +0.8% in submodel 3 and +1.4% in submodel 4. Negative differences for Asian and URG are larger than those found at the campus level. The time-series tables (C7c-d) show a recent decrease in negative salary differences for women. Subfield variability within the College's largest department may contribute to findings for this unit, although the present study has not explored that possibility.

Figure 9G: Natural Resources
women vs. white men, Asian vs. white men, URG vs. white men
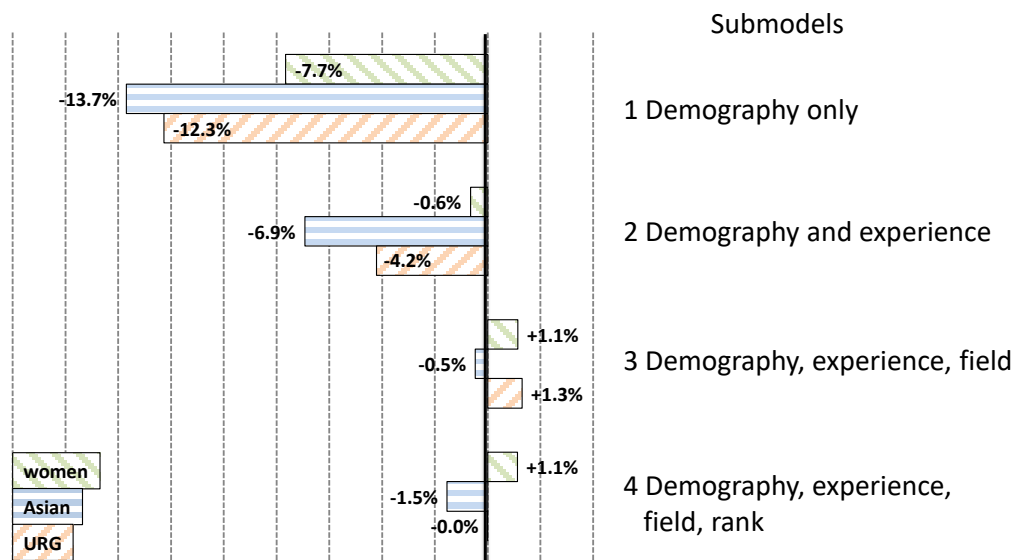log salary submodels 1, 2, 3, 4

Submodels

1 Demography only

-7.2%
-7.7%
-24.8%

2 Demography, experience

-1.4%
-4.3%
-10.3%

3 Demography, experience, field

+0.8%
-2.6%
-7.7%

4 Demography, experience, field, rank

+1.4%
-5.0%
-4.0%

women
Asian
URG

Tot. N=115: White Male N=52; Female N=38; Male Faculty of Color*=24; Unknown Male=1. Asian N=21; URG* N=17.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

Haas School of Business. Figure 9H (below) shows positive salary difference for women of +1.1% in both key submodels 3 and 4. Differences for Asian faculty are negative in submodel 3 (-0.5%) and submodel 4 (-1.5%), similar to the campus-wide findings. For URG faculty, they are positive in submodel 3 (+1.3%) and at -0.0% in submodel 4. Note that Figure 9H displays results that reflect the inclusion of information about the affiliation of each faculty member with a defined research group (accounting, finance, etc.). This is because Haas's self-funded salary program[17] uses national business-school data pegged to these research subfields. Without inclusion of these subfields, the differences for women are slightly negative in submodels 3 and 4.[18] The time-series tables[19] suggest that negative salary differences for women in comparison to white men increased over time up to 2015, whereupon they have noticeably dropped in both submodel 3 and submodel 4. A sub-study of Haas faculty looking at the impact of citation counts was included in subsection 3G of the 2015 Report.

Figure 9H: Haas School of Business
women vs. white men, Asian vs. white men, URG vs. white men
log salary submodels 1, 2, 3, 4

Submodels

1 Demography only

2 Demography and experience

3 Demography, experience, field

4 Demography, experience, field, rank

-7.7%
-13.7%
-12.3%
-0.6%
-6.9%
-4.2%
+1.1%
-0.5%
+1.3%
+1.1%
-1.5%
-0.0%

women
Asian
URG

Tot. N=95: White Male N=48; Female N=30; Male Faculty of Color*=17; Unknown Male=0. Asian N=16; URG N=10.
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Haas subfields plus multiple appointment indicator (yes/no).
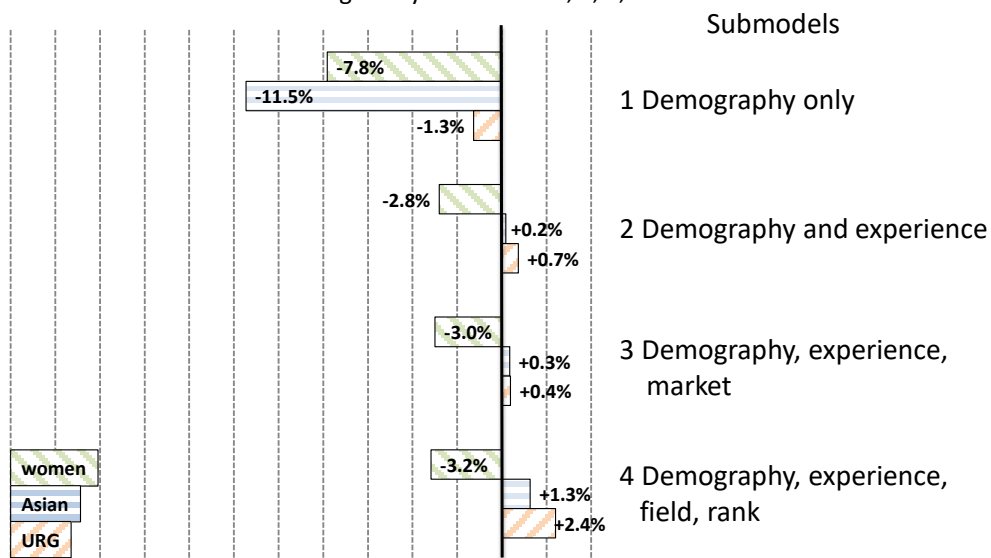4 Current rank (assistant or associate vs. full professor); years in current rank.

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[17] The Faculty Excellence Program (FEP) provides merit-based salary increases whose size is calculated for each group based upon national salary data. The FEP program was reviewed and supported by the Senate's Budget Committee and approved by the central administration; the funding is provided through the School's revenue-generating programs. Faculty are eligible to benefit from the FEP only if their rank/step advancement is normal. The first version of the FEP was introduced in 2003.
[18] See C8e and C8a in Appendix C.
[19] These are based on log runs without subfields, C8c-d.

Berkeley Law. As shown in Figure 9I (below), salary differences for women are -3.0% in submodel 3 and -3.2% in submodel 4, larger than the campus gaps. Salary differences for Asian faculty are +0.3% in submodel 3 and +1.3% in submodel 4; and for URG faculty are +0.4% in submodel 3 and +2.4% in submodel 4. Time-series studies show fluctuation, which is unsurprising for a fairly small unit with relatively small subpopulations of women and faculty of color. We note that Law, like the Haas School of Business, has a special salary program for eligible faculty.[20]

Figure 9I: Law
women vs. white men, Asian vs. white men, URG vs. white men
log salary submodels 1, 2, 3, 4

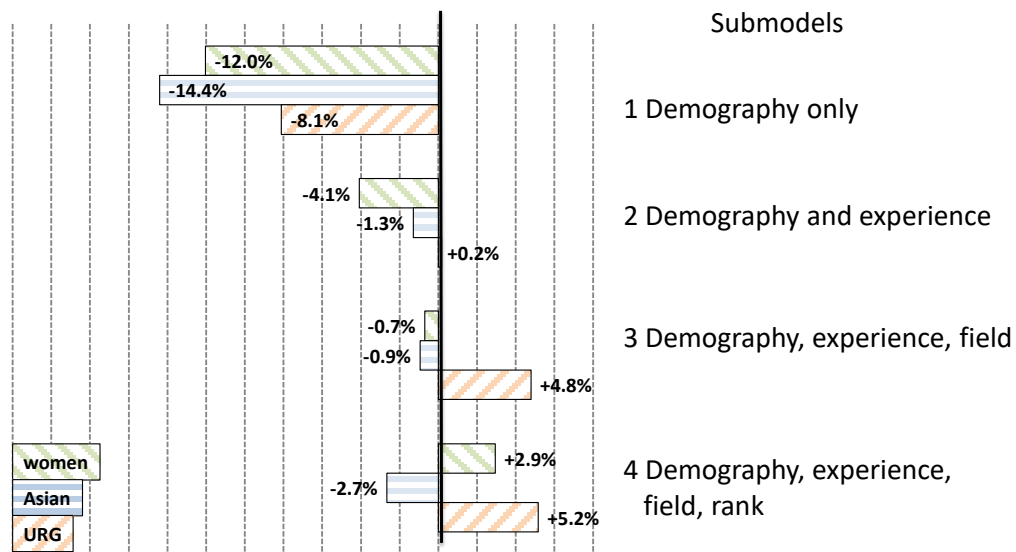Tot. N=67: White Male N=30; Female N=22; Male Faculty of Color*=13; Unknown Male=2. Asian N=11; URG* N=11.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Multiple appointment indicator (yes/no); AAUDE market factor for mult. appoint.
4 Current Rank (assistant or associate vs. full professor); years in current rank.

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[20] The Competitive Compensation Initiative (CCI) provides merit-based salary increases on a special scale that is pegged to national salary data for law schools. The CCI was supported by the Senate's Budget Committee and approved by the central administration; the funding is provided through Law's revenue-generating programs. The CCI was instituted in 2008.

Other units. As Figure 9J (below) indicates, within this group of smaller decanal units, salary differences for women are -0.7% in submodel 3 and +2.9% in submodel 4. Salary differences for Asian faculty are negative and somewhat larger in submodel 4 (-2.7%) than the differences found at the campus level. For URG faculty, they are positive for both models. Time-series studies suggest that negative differences for women have become smaller over the past decade; while negative differences for Asian faculty have been somewhat volatile but persistent.

Figure 9J: other units*
women vs. white men, Asian vs. white men, URG vs. white men
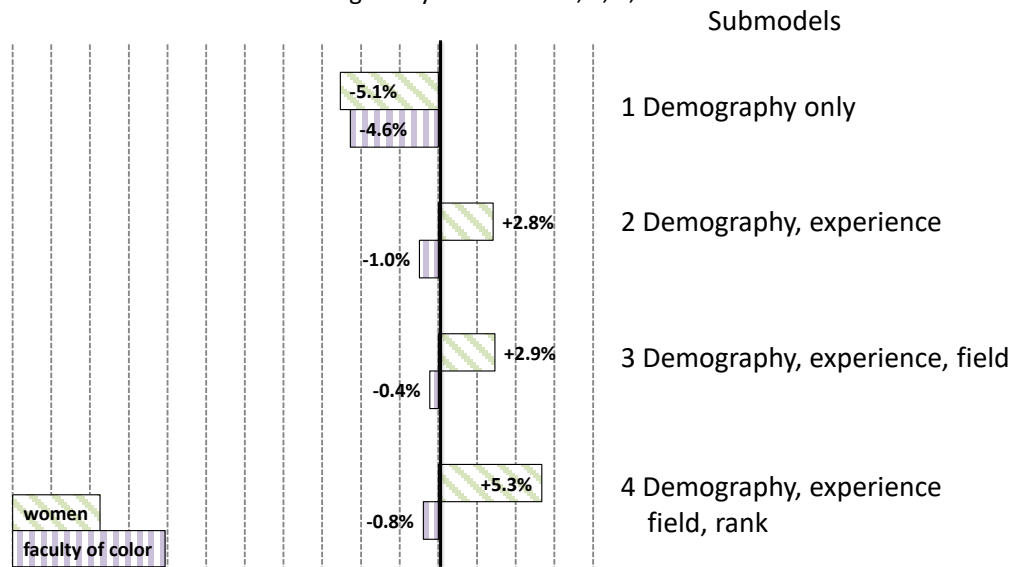log salary submodels 1, 2, 3, 4

Tot. N=205: White Male N=66; Female N=105; Male Faculty of Color*=33; Unknown Male=0. Asian N=34; URG* N=48.

*Coll Env Design, Education, Pub Policy, Information, Journalism, Optometry, Pub Health, Soc Welfare.

Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian; URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

College of Computing, Data Science, and Society. As Figure 9K (below) indicates, within the newly created College of Computing, Data Science, and Society, salary differences for women are +2.9% in submodel 3 and +5.3% in submodel 4. Salary differences for faculty of color are negative, -0.4% in submodel 3 and -0.8% in submodel 4. Time-series studies suggest that positive differences for women have been fairly consistent in recent years; whereas the small negative differences for faculty of color have emerged in the last two years. Note: The College of Computing, Data Science, and Society was formed this academic year and includes the departments of Electrical Engineering and Computer Science, Statistics, Computational Biology, and Computational Precision Health. The current-year and time-series analyses have been updated to reflect this reorganization.

Figure 9K: College of Computing, Data Science, and Society
women vs. white men, faculty of color vs. white men
log salary submodels 1, 2, 3, 4

Submodels

-5.1%
-4.6%

1 Demography only

+2.8%
-1.0%

2 Demography, experience

+2.9%
-0.4%

3 Demography, experience, field

+5.3%
-0.8%

4 Demography, experience
field, rank

women
faculty of color

Tot. N=130: White Male N=63; Female N=28; Male Faculty of Color*=37; Unknown Male=2. Asian N=38; URG* N=9.
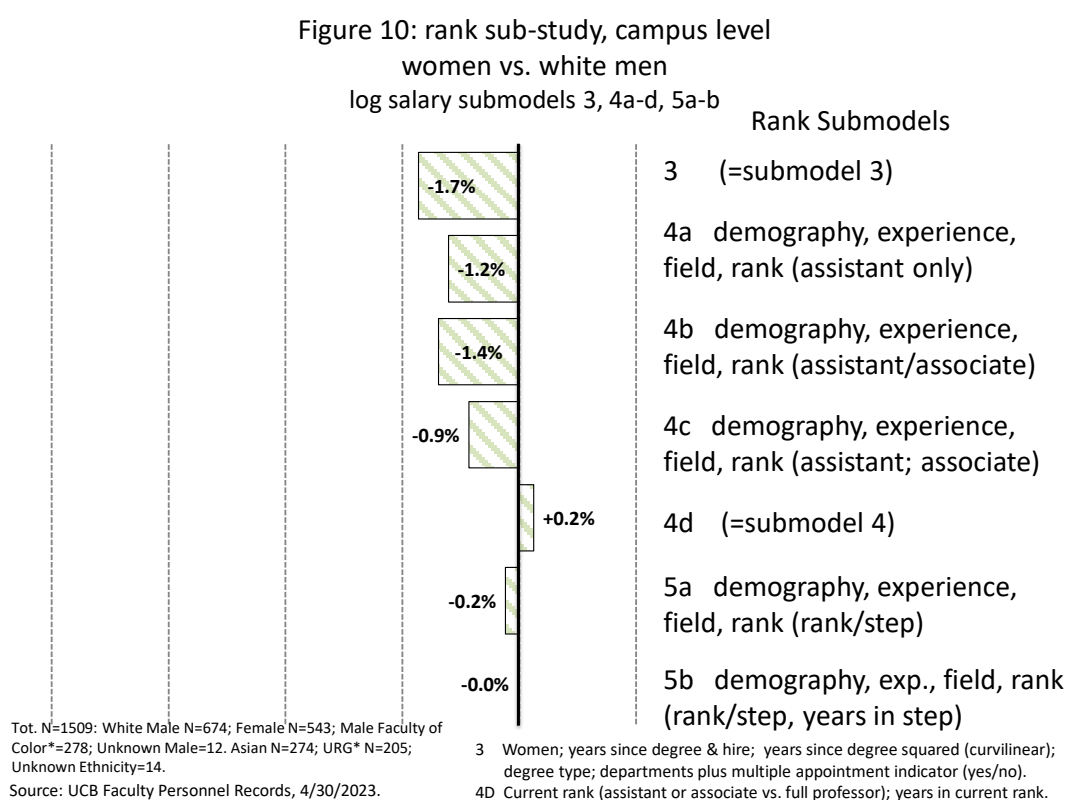
Source: UCB Faculty Personnel Records, 4/30/2023.

1 Women; Asian plus URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.).
2 Years since degree & hire; years since degree squared (curvilinear); degree type.
3 Departments plus multiple appointment indicator (yes/no).
4 Current rank (assistant or associate vs. full professor); years in current rank.

2G: Sub-studies of special topics—rank and retention

(Section 3G of the 2015 Report included several sub-studies concerning citation counts as well as the use of data concerning h-indices in a sub-study concerning the School of Public Health. The present report has not attempted to update those earlier sub-studies, because they were quite labor-intensive.)

Rank. To explore the effects of introducing rank variables in submodel 4, more detailed rank runs were conducted.[21] Figure 10 (below) displays some of the updated findings from this sub-study:

Figure 10: rank sub-study, campus level
women vs. white men
log salary submodels 3, 4a-d, 5a-b

Rank Submodels

3   (=submodel 3)

4a   demography, experience, field, rank (assistant only)

4b   demography, experience, field, rank (assistant/associate)

4c   demography, experience, field, rank (assistant; associate)

4d   (=submodel 4)

5a   demography, experience, field, rank (rank/step)

5b   demography, exp., field, rank (rank/step, years in step)

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color*=278; Unknown Male=12. Asian N=274; URG* N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

3   Women; years since degree & hire; years since degree squared (curvilinear); degree type; departments plus multiple appointment indicator (yes/no).
4D Current rank (assistant or associate vs. full professor); years in current rank.

This finer-grained approach to rank and step starts with submodel 3, which includes the usual demography, experience, and field variables, but not rank. Here, where results for women are presented, we see the negative salary difference of -1.7% for submodel 3 displayed in the top bar. Submodel 4a introduces a single categorical variable for assistant professors (vs. the residual category of associate and full professors), with a noticeable drop in the gap to -1.2%.

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[21] The runs may be found in Appendix C, Tables E1-E6.

Submodel 4b combines assistants and associates into a single categorical variable, which is run against the residual category of full professor. This increases the negative salary difference a little from model 4a. Submodel 4c includes separate categorical variables for assistants and for associates, running each against full professors; this produces a negative salary difference of -0.9%. Finally, submodel 4d is identical with submodel 4 in the campus level log-salary runs, where the salary difference for women is +0.2%. (See Figure 4A.) Submodel 4d includes a continuous variable for years in rank (this variable is absent in submodels 4a, 4b, and 4c).[22]

Submodel 5a takes a different approach, one that has been used in older studies of faculty salaries at Berkeley. It introduces rank and step as categorical variables, and as Figure 10 indicates, this produces a somewhat more negative salary estimate to those obtained by using variables for rank and years in rank, as has been done throughout this study. Finally, submodel 5b goes one step further, including rank-and-step categorical variables and years at step. The effect is not great, showing a salary difference for women of -0.0% (somewhat similar to campus submodel 4d). In submodels 5a and 5b, the negative salary difference for Asian faculty relative to white male faculty is -0.8% and -0.7%, respectively, and a little bit positive for URG faculty, +1.8% and +1.9% for the submodels.

Tables E2-E6 in Appendix C show log-salary runs for the campus for individuals in selected rank/step bands: assistant professors, associate professors, full professors below Step VI, full professors at Steps VI to IX, and full professors above scale. In aggregate, these runs indicate that negative salary differences for women at associate and full professor (Step VI to IX) rank have somewhat larger negative differences than those seen for all women; whereas the differences for women associate professors and full professors at lower steps (under Step VI) and full professors above scale are somewhat more positive than those for all women. Because the number of Asian and URG faculty in each of these rank-step bands is small, the observed salary differences are volatile, moving from negative to positive and back again in no easily discernable pattern.

Retention. There can be no question that salary increases provided by Berkeley in response to outside offers create salary disparities between equally accomplished faculty members within the same discipline. This does not, however, settle the question whether these disparities differ significantly with respect to gender or race/ethnicity.

The campus records that are currently available permit only a fairly crude approach to answering this important question.[23] Figure 11 (below) shows the results of introducing a single categorical variable (yes/no) indicating whether a particular current faculty member has
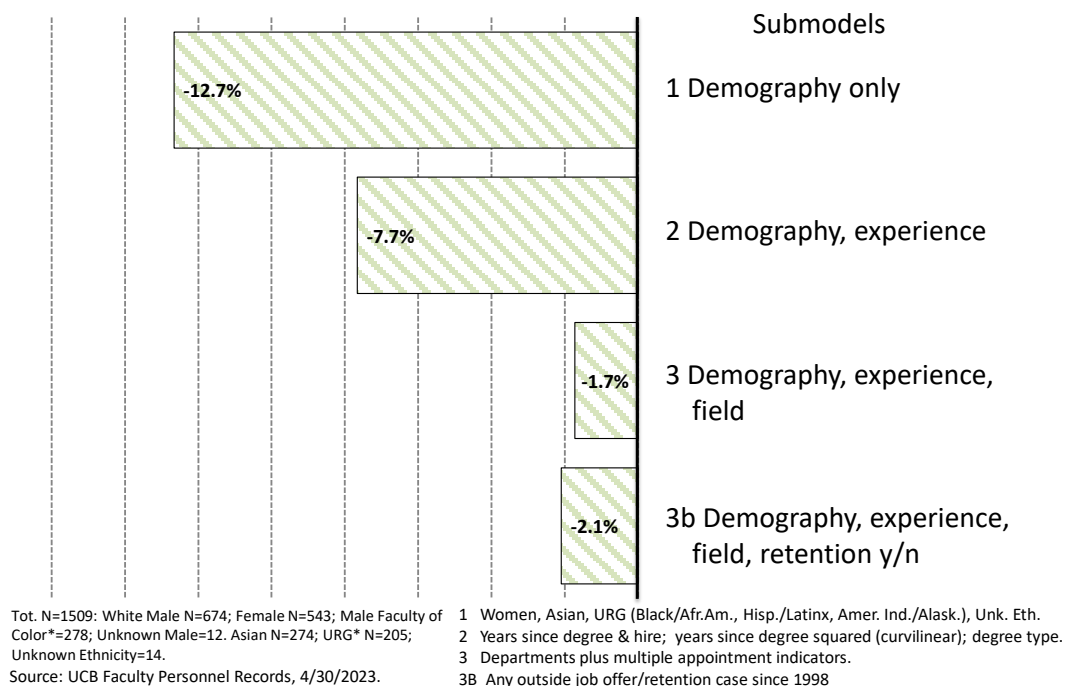
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[22] This is suggested by Haignere in *Paychecks*.
[23] Tables for the retention sub-studies may be found in Appendix C, Tables F1-F2.

ever, since 1998, been a "retention case."[24] This variable is introduced in turn after the usual demography, experience, and field variables; rank variables are not introduced here.

Figure 11: retention sub-study, campus level
women vs. white men
log salary submodels 1, 2, 3, 3b

Submodels

-12.7%   1 Demography only

-7.7%   2 Demography, experience

-1.7%   3 Demography, experience,
         field

-2.1%   3b Demography, experience,
         field, retention y/n

Tot. N=1509: White Male N=674; Female N=543; Male Faculty of Color*=278; Unknown Male=12. Asian N=274; URG* N=205; Unknown Ethnicity=14.
Source: UCB Faculty Personnel Records, 4/30/2023.

1   Women, Asian, URG (Black/Afr.Am., Hisp./Latinx, Amer. Ind./Alask.), Unk. Eth.
2   Years since degree & hire; years since degree squared (curvilinear); degree type.
3   Departments plus multiple appointment indicators.
3B Any outside job offer/retention case since 1998

Introducing this retention variable increases the negative salary difference for women from -1.7% to -2.1%. The differences for Asian faculty decreases slightly from -1.3% to -0.9% with the addition of the retention variable, and for URG faculty it moves from +0.4% to -0.5%. While these changes are not dramatic, their direction suggests that this area of inquiry calls for additional investigation, particularly in regard to women and men.

With additional data-collection now under way, future updates should be able to provide more fine-grained analysis of retention effects.

Gender by Ethnicity. In Appendix A: *Methodology* (January 2015) of the original salary report, an alternative campus-level log salary model was conducted that included gender by ethnicity interactions (see section *c. Specification of Demographic Effects*) that included additional demographic indicators for Asian Female and URG Female. Based on the "lack of significant

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[24] The designation draws upon records kept by Vice Provost for the Faculty (formerly Vice Provost for Academic Affairs & Faculty Welfare).

interaction effects," we concluded that the "two specifications are quite similar" and the "additive specification provides an adequate model for the wage gaps for female faculty in each of the non-white ethnicity groups." For this updated report, we have provided additional tables in Appendix C that include log models with the above gender by ethnicity interactions, both current year (see Table A1b) and time-series (see Tables B1b, B2b, B3b, B4b). The current year table reveals that the URG women term is now significant at the p<.05 level in both submodel 3 and submodel 4, with URG women more likely to have a positive salary gap relative to white men. The time-series tables for submodel 3 and 4 (Tables B3b, B4b) show that this pattern has largely developed in the last two years, subsequent to the data included in the last report update. Given this recent development, we will continue to monitor this pattern and include campus-wide models without and with the gender by ethnicity interaction terms.

Asian Sub-Groups. At the request of UCB's [Asian American and Pacific Islander Standing Committee](), we have conducted additional analysis to better understand the salary gap between Asian and white male faculty. Using detailed data from UC Path regarding self-identified Asian heritage, we are able to break out the broader demographic category of Asian into subgroups: East Asian, South Asian, and Other Asian. Table A1c in Appendix C shows the campus gaps for each of these groups relative to white men, with South Asian having the largest gaps in submodels 3 and 4, -2.8% and -2.0% relative to white men, and Other Asian having the least, -0.6% and -0.3%. The gap for East Asian falls between these two groups at -0.7% and -1.6% compared to white men.

We also conducted analysis on generation status, specifically whether faculty of Asian ancestry were US citizens or internationals at the time of hire at UCB and whether this affected their salary gap relative to white male faculty. Table A1e in Appendix C displays interaction effects between international status at time of hire and ethnicity (Asian, URG, and unknown ethnicity*international). The results indicate that the negative salary gaps for Asian faculty with international status at the time of hire internationals are a little bit larger than those of Asian U.S. citizens relative to white male U.S. citizens in key submodel 3 (-2.1% vs. -1.1%). They are quite similar in submodel 4 (-2.0% vs. -1.9%). In both submodels, the Asian by international interaction is non-significant, however, and would be dropped from a well-specified regression model. When these interaction terms are not included, as shown in Table A1d, faculty who were international at time of hire (of all ethnicities) display a salary gap relative to white male U.S. citizens of -1.8% in submodel 3 and -1.7% in submodel 4. Also of note, Asian U.S. citizens show a salary gap relative to white male U.S. citizens of -1.0% and -1.2% in submodels 3 and 4.

Although the salary gap between Asian faculty and white male faculty dropped the last two years in submodels 3 and 4 (see figures 4E and 6), the persistence of a negative gap in both key submodels since the initial salary report suggests the need for continued scrutiny. As seen in Table E5 in Appendix C, the largest salary gap for Asians relative to white men occurs among full professors, Steps VI to Step IX, a -3.4% salary gap in submodel 4b, substantially larger than the

-1.5% overall campus gap in submodel 4. Detailed faculty rank-step analysis that includes current step and years in step (see Table E1) for all faculty reduces the salary gap from -1.5% in submodel 4 to -0.07% in submodel 5b (which includes rank-step, & years in step covariates). Additionally, the introduction of the outside offer variable in Table F1 cuts the -1.3% salary gap in submodel 3 to -0.9% in submodel 3 (with the outside offer term included). More than likely, a host of factors are at work and the need to continue to monitor these patterns in future study updates is clear.

3. Recommendations

Below are short descriptions of the recommendations made in section 5 of the 2015 Report, followed by information about steps taken.

3A: Additional studies and data-collection

Regular updates of this study.

> *2023*: This seventh update of the salary equity study provides an opportunity to monitor changes that have occurred after the report of the initial findings to the campus. This update is being made available to the faculty, chairs, and deans in an effort to foster continuing awareness of the issues and to assess the effectiveness of recent interventions.

Retention data.

> *2023*: The Office of the Vice Provost for the Faculty is continuing to collect data on the amount of each outside offer, the amount of Berkeley's response that is attributable to retention (rather than to a simultaneous merit increase), and (where possible) the standing of the program or institution making the offer. These data will be analyzed when there are enough cases to support a rigorous study.

Advancement studies.

The 2015 Report recommended that additional studies of advancement rates and of "headroom" issues should be conducted to determine whether Berkeley's way of using the step system enables accomplished faculty in all disciplines to advance at similar rates. Particular attention should be given to understanding rates of advancement in the "book-based" disciplines.

> *2023*: We have carried out some advancement studies, but plan to do more in the future. (Because the studies are complex, we need to undertake them when we can foresee the availability of adequate staff time.) We are, however, in the process of analyzing data on faculty merit reviews and associated salary changes.

Leave and "clock" data.

2023: The Academic Personnel Office is collecting data about time off the tenure clock for new parents. Eventually we will be able analyze the data by gender and ethnicity, and can determine whether current "family-responsive" policies are equally helpful to all eligible faculty.

Faculty climate survey.

2023: The 2015 Report recommended that an updated survey be conducted within the next one to two years, with the survey questions informed by the salary report, the 2014 UC climate survey, and other pertinent studies. We had been slated to conduct a new faculty climate survey during the 2017–18 academic year, but we learned that another major campus survey has been scheduled during that period. Spring of 2019 we were finally able to conduct a new survey of UCB faculty and released the report to the campus. We anticipate conducting an updated UCB faculty climate survey in the next two years.

3B: Salary enhancement programs

Revision to the Career Equity Review (CER) guidelines.

2023:   The previous guidelines stated: *For faculty whose salaries are decoupled, a CER resulting in step advancement may not cause the salary to rise. Instead, the decoupled portion of his/her salary will decrease.*

Effective July 1, 2015, the guidelines were modified to read: *For faculty members whose salaries are decoupled, a CER resulting in step advancement may result in a salary increase under certain circumstances: the decoupled increment will be preserved and not reduced when the decoupling had been provided before the introduction of inequity into the faculty member's advancement history.*

Since the initial salary study, the Associate Vice Provost for the Faculty reviewed prior CER cases and found none calling for remedial action under the revised guidelines. All new CER cases are governed by the revised guidelines.

New Targeted Decoupling Initiatives.

2016–17, 2017–18: The design of the 2015 TDI program was informed in part by the results of the 2015 Report. In addition, broad input resulted in guidelines that shifted focus from preemptive retention or market-related factors. Instead, the focus was on internal salary equity, especially for faculty who "work effectively to build and sustain

Berkeley as a strong institution. For example, Berkeley is strong when it supports academic excellence through faculty leadership; promotes a diverse range of scholarly inquiries; and creates equal opportunities for faculty colleagues and students."

A total of nearly $3 million was provided for TDI awards during the 2015–16 academic year, and 387 faculty received salary increases of $4,000, $8,000, $12,000, or $16,000. These recipients were approximately 28% of the eligible faculty. Those who were women or faculty of color (Asian and URG) received 54% of the total funds; this is a population that comprises 46% of the eligible faculty population.

A similar TDI program was undertaken during the 2016–17 academic year. In total, 386 faculty received salary increases that typically ranged between $2,000 and $12,000. Faculty who were women or faculty of color received 52% of the total funds, with women faculty and faculty of color comprising around 46% of the total faculty population that was eligible for this program.

Another TDI program was undertaken during the 2017–18 academic year. In total, 367 faculty received salary increases up to $12,000. Women faculty or faculty of color (Asian and URG) received 48% of the total funds in 2017-18; with women faculty and faculty of color comprising roughly 46% of the total faculty population who were eligible for the program. Due to changes in the way in which the UC Office of the President mandated cost-of-living increases, it was no longer financially feasible to continue TDI programs after this one. A new TDI (TOP) program was undertaken in AY2021-22 and AY2022-23 and the impact of its implementation is reflected in the current study.

3C: Additional programs

2016: The online Berkeley Manual of Academic Personnel, launched in 2016, provides greater transparency for faculty concerning issues of advancement and salary. It also offers encouragement to faculty, chairs, and deans to describe and assess informal teaching, mentoring, and service.

The annual series of seminars now being held for department chairs includes a session with the Vice Chancellor for Equity and Inclusion about the ways in which departmental cultures can become more inclusive and supportive for all faculty members and students.

2019-2023: The Berkeley Faculty Leadership Academy seeks to create a diverse pipeline of faculty well prepared for administrative leadership roles on the Berkeley campus. The program is for tenured faculty who are interested in developing skills and knowledge in this area, and who seek to deepen connections to colleagues from across the campus, and be part of a growing network of emerging leaders. The program is based on the

conviction that individuals are well positioned to create systemic and cultural change when they are provided with a broad array of tools, methodologies, and experiences. The program emphasizes collaborative and results-oriented skills, and includes opportunities to interact with a variety of senior leaders on campus.

2019-2023: OFEW website with professional development resources provides a curated list of professional development opportunities for faculty to enhance their knowledge and skills in advancing the university's mission of diversity and equal opportunity. Some of the programs are Berkeley specific, while others are available through UC Office of the President or external organizations. Topics include inclusive classrooms, gender equity, anti-racism, conflict resolution, microaggressions, and more.

2020-2023: Faculty Link Program is a pilot program for Berkeley faculty, funded by the UC Office of the President. The program's goals are to promote the satisfaction, success, and overall sense of belonging by providing access to information, advising, and networks for all faculty members, and especially those from underrepresented or minoritized groups. Drawing from common elements of traditional mentoring programs, faculty professional development workshops, and affinity groups, Faculty Link includes regular faculty-led formal and informal events and faculty who are available for one-on-one advising.

To help sustain continuing campus awareness of the work we must do collectively, we repeat here the concluding paragraphs of the 2015 Report:

> We recommend sustaining and strengthening practices and programs that help to provide equal access for all faculty members to the requisites of academic success and to ensure that all faculty members are advanced appropriately. In implementing these recommendations, the particular circumstances of women faculty who are members of ethnic minority groups should be considered with care.
>
> (a) It is vital to sustain and enhance Berkeley's family-friendly policies, child-care initiatives, and back-up care program. Professor Emerita Mary Ann Mason, Dr. Marc Goulden (director of faculty data initiatives at Berkeley), and their co-author Nicholas Wolfinger have identified "family-friendly" policies concerning dependent care, dual careers, and childbirth and parenting as among the measures that are especially important in supporting women faculty in academia.[25] Berkeley is among the institutions that offer new parents time off

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[25] M. A. Mason, N. H. Wolfinger, M. Goulden, *Do Babies Matter?: Gender and Family in the Ivory Tower* (Rutgers University Press, 2013).

the "tenure clock" and modification of duties as entitlements, along with paid childbearing leave for birth mothers. Berkeley also now offers back-up care services to help faculty members care for family members, and the campus's Early Childhood Education programs have some slots for infant and preschool care and education for the children of faculty members.

These measures support decisions about life/work balance; at the same time, if they are used differently by men and women, then they may result in some differences in rates of advancement during family formation. Thus these options may need to be considered further in light of newly gathered data about how they are used.

(b) Each year, workshops are offered for assistant professors and associate professors to help them understand relevant academic review processes, general campus expectations for promotion, and ways to prepare effective presentations of their accomplishments. While these should certainly be continued, they must be supplemented through close and effective mentoring[26] at the department level.

In recent years, Berkeley's Vice Chancellor for Equity and Inclusion piloted a program aimed at developing such mentoring efforts. All faculty members can benefit from effective mentoring, and studies suggest that the needs of women and members of ethnic minority groups, who may have fewer points of entry into valuable networks of information and support, should be considered with care.

Particular attention should be given to the question how to support faculty members who are working toward the completion of a book project. The campus is also funding participation in an on-line peer support program for those who choose that option. The effectiveness of these measure should be carefully tracked, and additional measures should be developed in consultation with book-writing faculty members, along with cognizant deans and chairs.

(c) Berkeley has long offered chairs and deans workshops concerning the preparation of academic personnel cases. Information and recommendations from this study should be presented to the participants at these workshops, and all participants should be asked to read this report.

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[26] Ying, C., Ross, N., Kulashekar, M., Maisel, M., Webb, E., & Crosby, F. J. (2011). *A bibliography of the empirically-driven literature on mentoring. Technical report #7.* This can be obtained from Crosby at fjcrosby@ucsc.edu.

(d) In the fall of 2013, Berkeley began offering new department chairs a series of "seminars" to help them provide effective leadership. Chairs can have positive and lasting effects on their departments through fostering inclusive climates for faculty, students, and staff, by ensuring that faculty members receive appropriate mentoring, and by helping departments to develop and follow explicit policies about internal governance. Future new-chair seminar series should include background reading and practical advice for chairs so that they can succeed in this broad arena.

(e) As additional data shed further light on patterns of advancement and promotion, candidates, chairs, and deans should focus carefully on ensuring that all faculty members are reviewed in a timely fashion and are recommended for appropriate merit increases. The cumulative salary effects over time of several decelerations can be significant. All faculty members should be encouraged and supported in coming forward for timely review; in light of some social-science findings, this may be especially beneficial to women and members of ethnic minority groups.

(f) In assigning service, chairs should check to make sure that assignments are distributed appropriately and equitably. Chairs should bear in mind that faculty members are expected to make greater service contributions as they advance through the rank/step system. Assistant professors should have opportunities to gain service experience, but they should also be able to dedicate most of their time to developing their research and teaching records. Full professors are expected to contribute more service than associate professors, and expectations are highest for Above Scale faculty. Service assignments for faculty members who do large amounts of valuable but unassigned mentoring should be calibrated with particular care.

(g) Transparency can help to assure all concerned that the burdens of teaching and service are fairly distributed. Written policies concerning teaching load should be created if they do not already exist, and they should be discussed by the entire faculty. The development and use of appropriate metrics may help to ensure clarity and fairness. Chairs are responsible for the department's adherence to such policies. Chairs should provide all faculty members with information about course and service assignments, and they should also be advised to consult regularly with the departmental equity advisor about course and service assignments.

 (h) This report should provide a springboard for debate and discussion in many arenas, including departmental meetings, Senate committees, and administrative policy-making. The Vice Provost for the Faculty, the Associate

Vice Provost for the Faculty, and the Director of Data Initiatives should make themselves available in a variety of forums across the campus to discuss the study and the report. The fruits of campus dialogue should be harvested in as many ways as possible.