

Gender Salary Analysis

Academic year 2014-2015

Data

- Assistant Professor, Associate Professor, and Professor
 - Both tenure and non-tenure streams
 - Excludes clinical faculty in the School of Medicine
 - Physical Education and Athletics includes instructors.
- Analyses were conducted on base salary
 - Salaries for the School of Medicine and for the School of Dental Medicine are based on a 12-month appointment.
 - Salaries for all other schools are adjusted to a 9-month equivalent appointment and are adjusted to 100% effort.
- Data are for AY2014-2015. Changes made after November 1, 2014 are not reflected in this analysis.

Method

- Tables include descriptive statistics using the 9-month equivalent adjusted salary except for faculty in the School of Medicine and the School of Dental Medicine where numbers are based on a 12-month appointment.
- Cells where $N \leq 3$ were not included in the salary tables.

Calculating Residual Values

1. Regression analysis conducted *for each school*
 - Dependent variable = 9-month equivalent adjusted salary (12-month salary for MED and DENT).
 - Independent variables = age, rank, years in rank, tenure status, years since hire, highest degree, years since highest degree.
2. Using the regression analysis, a predicted value was calculated for *each faculty member*. Faculty members with standardized residuals above three were removed from analysis.
3. This predicted value was subtracted from the faculty member's *actual salary*, giving each faculty member a “residual” value.

Graphs

- Graphs were created by plotting the average residual for men and the average residual for women *in each school*.
 - Positive residual for women in a particular school means that, on average, women in that school are being paid more than the independent variables would predict.
 - Negative residual for women means that, on average, women are being paid less than the independent variables would predict.
- This description of methods explains the RTIN bars on each chart. The RTOUT bars were calculated in exactly the same way with one exception: rank and tenure were removed from the initial regression equation.

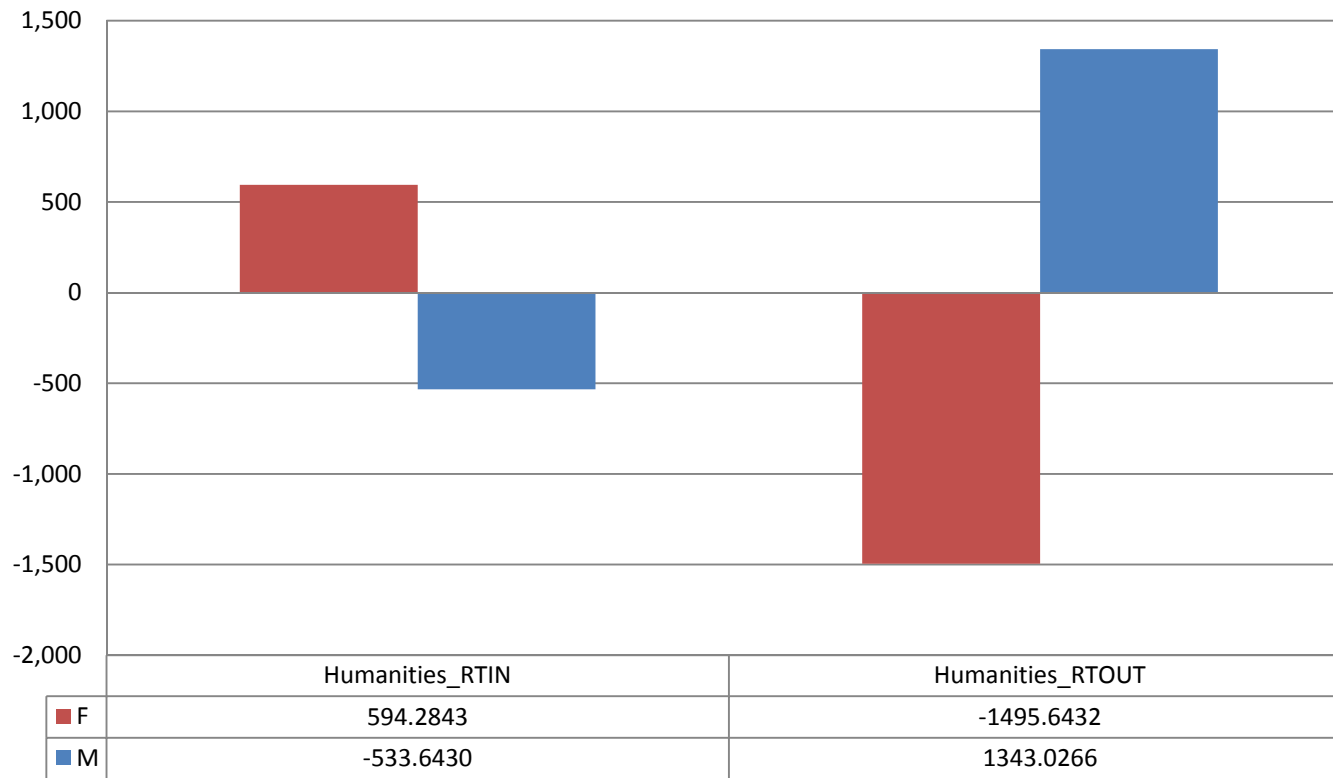
Limitations of the Analysis

- No measure of productivity in the regression analysis
- Examining residuals by group is a “broad brush” technique for highlighting where differences *might* exist.
- Analysis is *strongly* affected by extreme high/low values.

College of Arts and Sciences – Arts and Humanities

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	9	\$62,805	\$3,654
Assistant Professor	Female	13	\$61,417	\$2,624
Associate Professor	Male	20	\$76,805	\$6,118
Associate Professor	Female	24	\$77,689	\$15,139
Professor	Male	20	\$100,621	\$15,809
Professor	Female	7	\$102,279	\$12,407
		93		

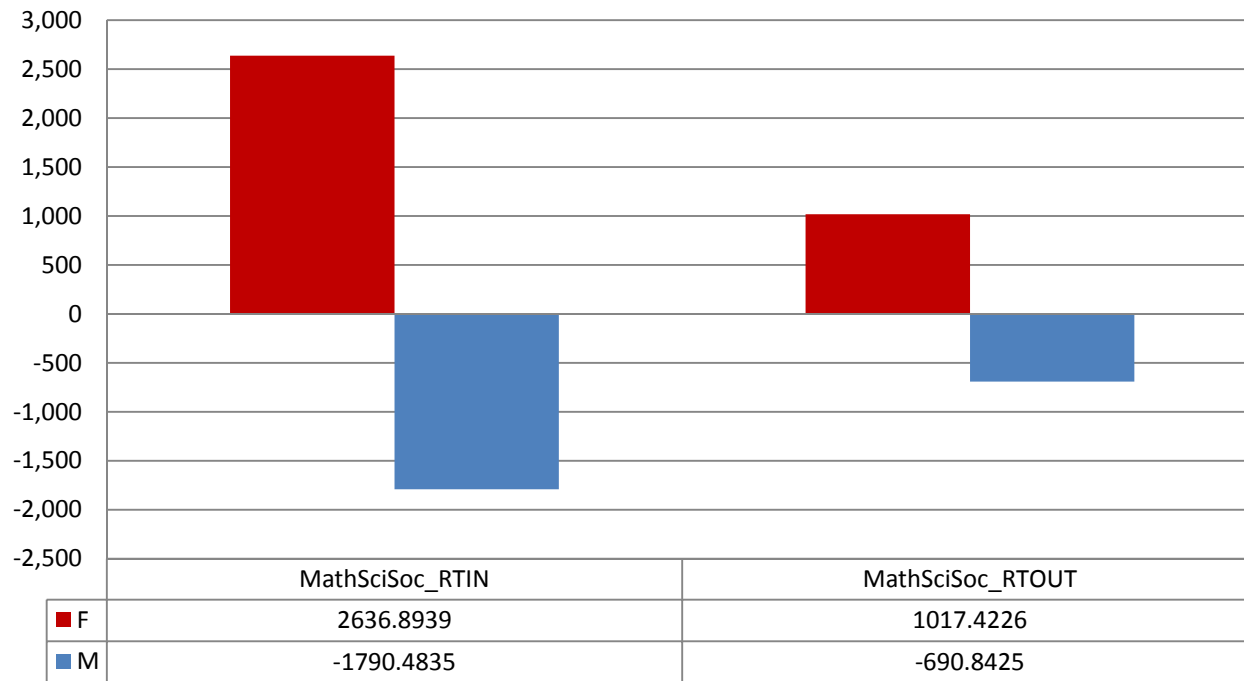
College of Arts and Sciences – Arts and Humanities



College of Arts and Sciences – Math, Natural Sciences, Social Sciences

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	11	\$73,249	\$5,027
Assistant Professor	Female	25	\$71,615	\$6,040
Associate Professor	Male	22	\$83,473	\$7,970
Associate Professor	Female	12	\$79,590	\$7,493
Professor	Male	48	\$110,806	\$22,115
Professor	Female	18	\$114,781	\$22,384
		136		

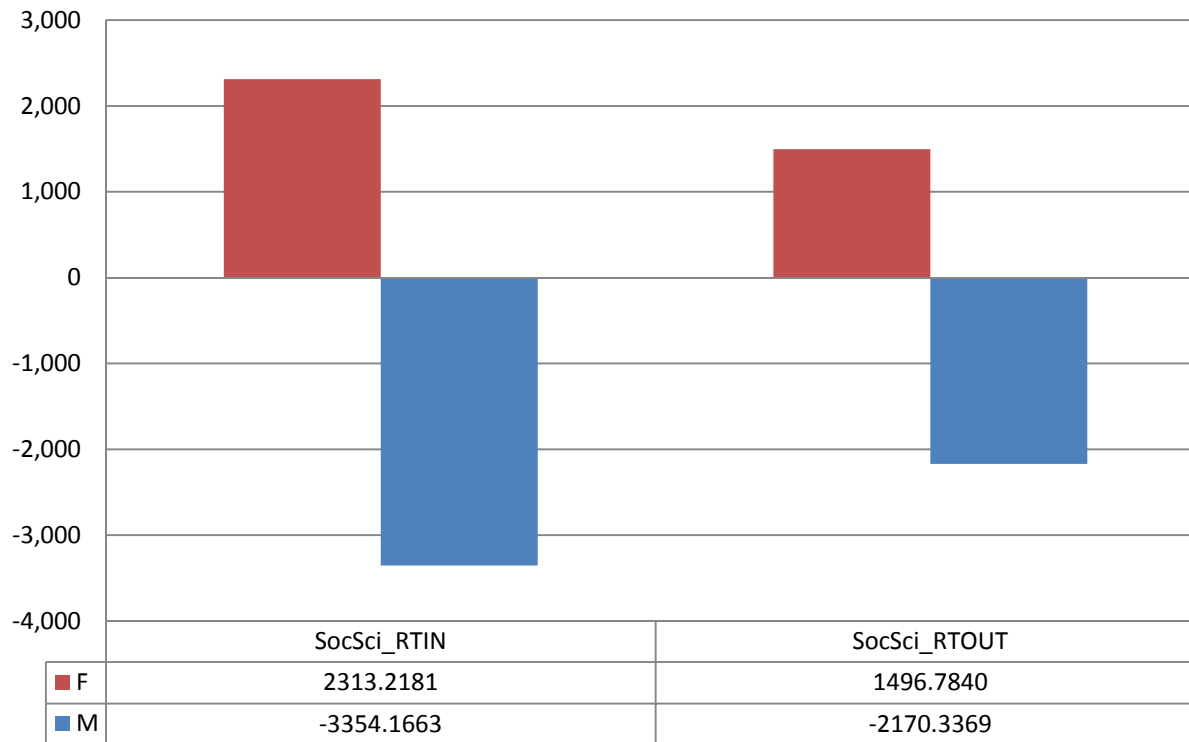
College of Arts and Sciences – Math, Natural Sciences, Social Sciences



College of Arts and Sciences – Social Sciences Only

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	0	*	*
Assistant Professor	Female	10	\$66,590	\$4,660
Associate Professor	Male	10	\$80,083	\$8,665
Associate Professor	Female	7	\$76,959	\$6,843
Professor	Male	10	\$108,546	\$23,328
Professor	Female	12	\$113,579	\$23,436
		49		

College of Arts and Sciences – Social Sciences Only

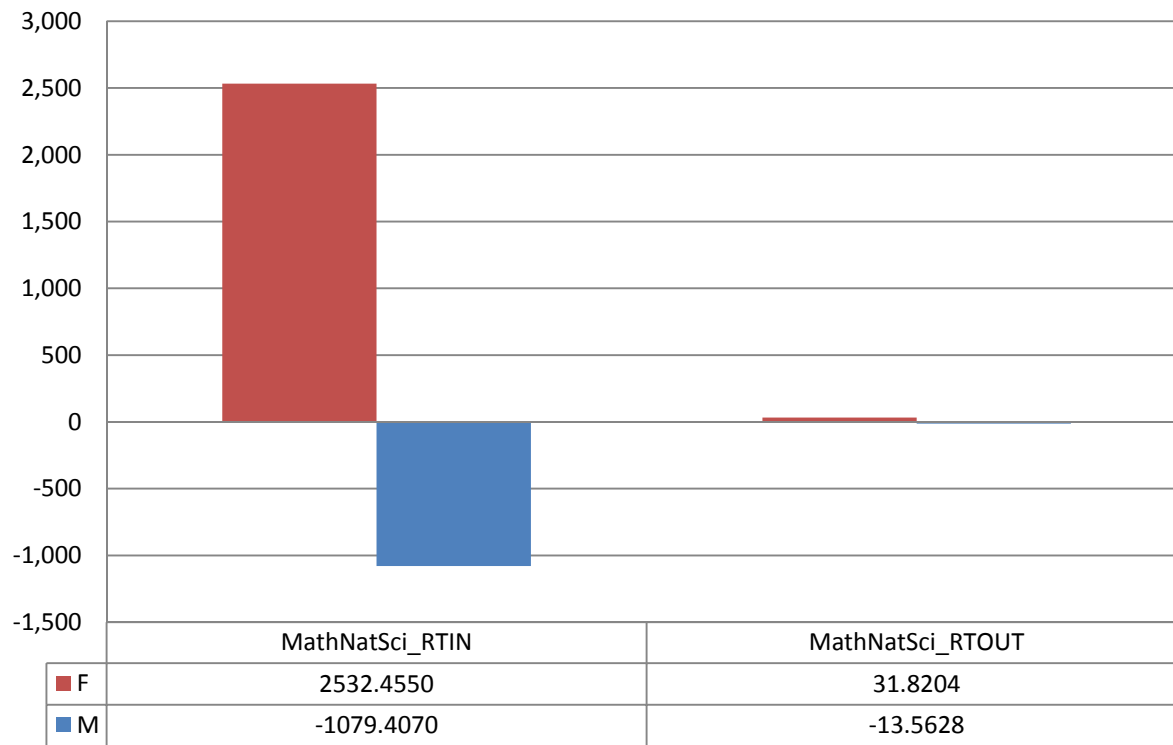


College of Arts and Sciences – Math & Natural Sciences Only

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	11	\$73,249	\$5,027
Assistant Professor	Female	15	\$74,964	\$4,305
Associate Professor	Male	12	\$86,299	\$6,379
Associate Professor	Female	5	\$83,273	\$7,423
Professor	Male	38	\$111,401	\$22,072
Professor	Female	6	\$117,185	\$22,019

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College of Arts and Sciences – Math & Natural Sciences Only

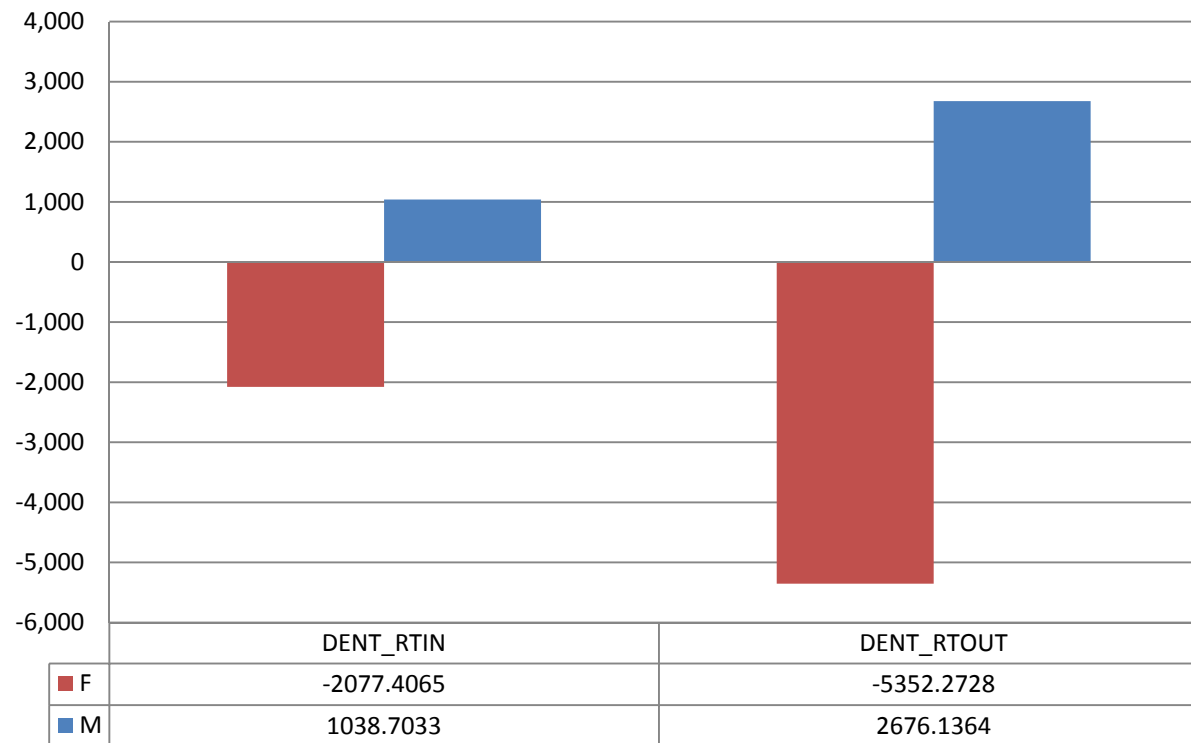


School of Dental Medicine

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	13	\$73,173	\$13,273
Assistant Professor	Female	12	\$77,190	\$10,951
Associate Professor	Male	20	\$95,468	\$22,653
Associate Professor	Female	6	\$94,084	\$20,646
Professor	Male	5	\$127,120	\$16,530
Professor	Female	1	*	*

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School of Dental Medicine

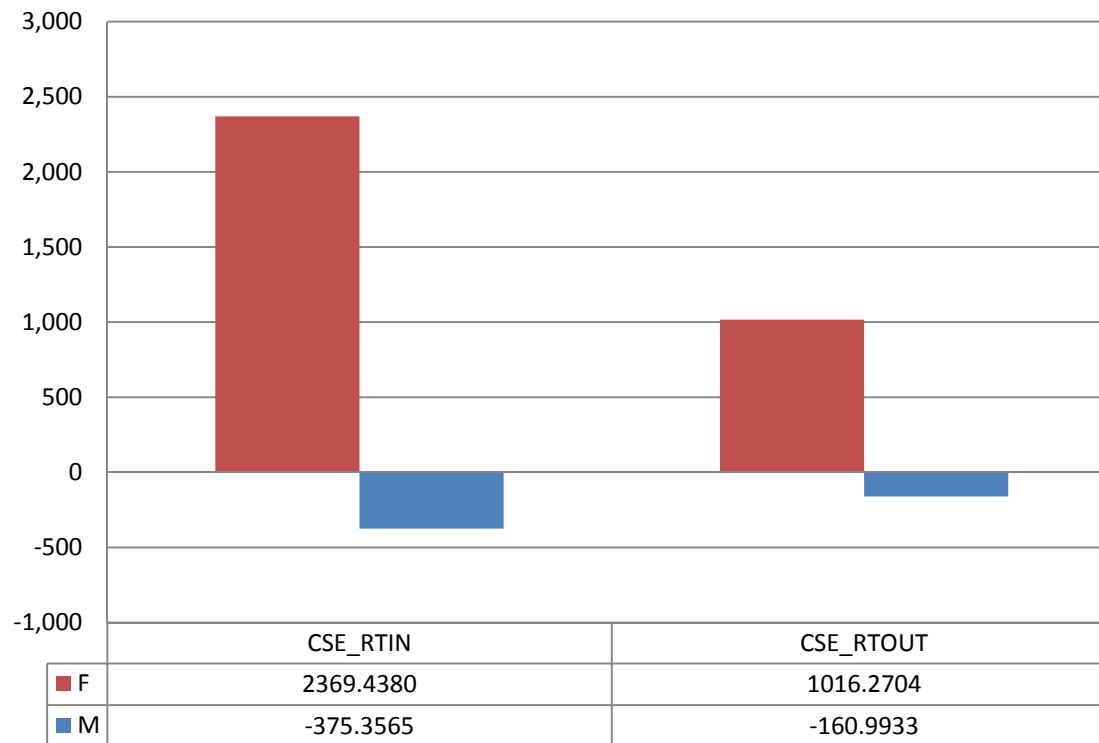


Case School of Engineering

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	16	\$85,586	\$7,670
Assistant Professor	Female	7	\$86,109	\$10,153
Associate Professor	Male	29	\$99,893	\$10,931
Associate Professor	Female	4	\$110,405	\$9,280
Professor	Male	56	\$132,470	\$23,296
Professor	Female	5	\$130,405	\$19,066

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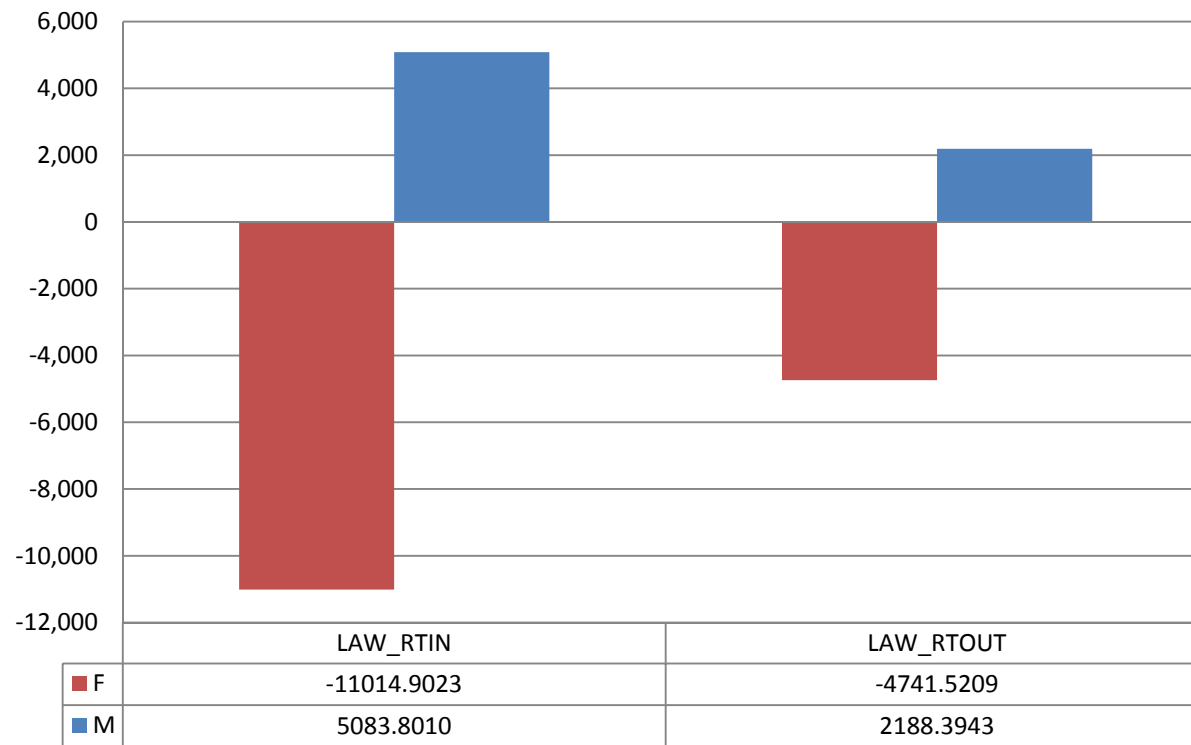
Case School of Engineering



School of Law

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	4	\$109,177	\$35,392
Assistant Professor	Female	2	*	*
Associate Professor	Male	2	*	*
Associate Professor	Female	0	*	*
Professor	Male	20	\$178,660	\$52,365
Professor	Female	10	\$136,283	\$45,580
		38		

School of Law



School of Medicine - Basic Sciences

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	46	\$91,774	\$12,322
Assistant Professor	Female	23	\$89,795	\$9,970
Associate Professor	Male	44	\$117,160	\$29,989
Associate Professor	Female	18	\$102,661	\$19,898
Professor	Male	45	\$164,881	\$44,229
Professor	Female	20	\$149,965	\$30,696
Chair	Male	6	\$202,110	\$44,412
Chair*	Female	1	*	*

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School of Medicine - Basic Sciences

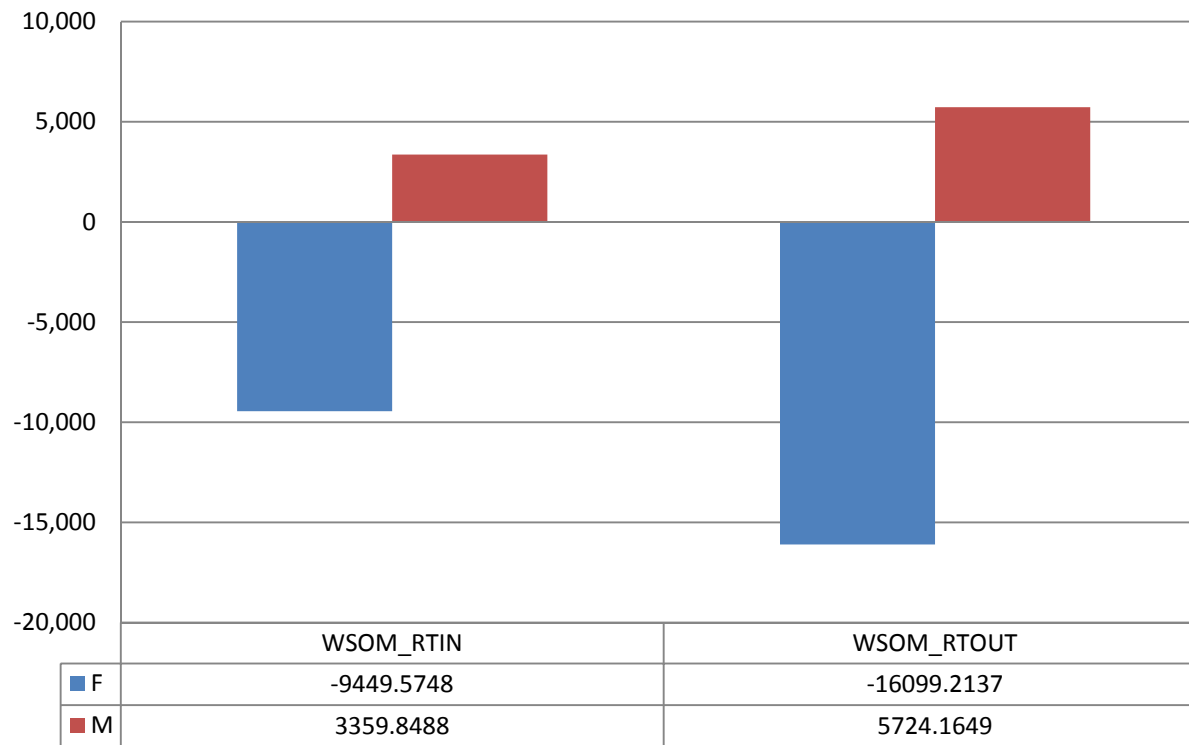


*Salaries based on 12-month appointment

Weatherhead School of Management

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	6	\$138,059	\$28,782
Assistant Professor	Female	6	\$139,277	\$31,169
Associate Professor	Male	12	\$127,588	\$31,535
Associate Professor	Female	7	\$121,758	\$30,109
Professor	Male	27	\$181,685	\$48,347
Professor	Female	3	*	*
		61		

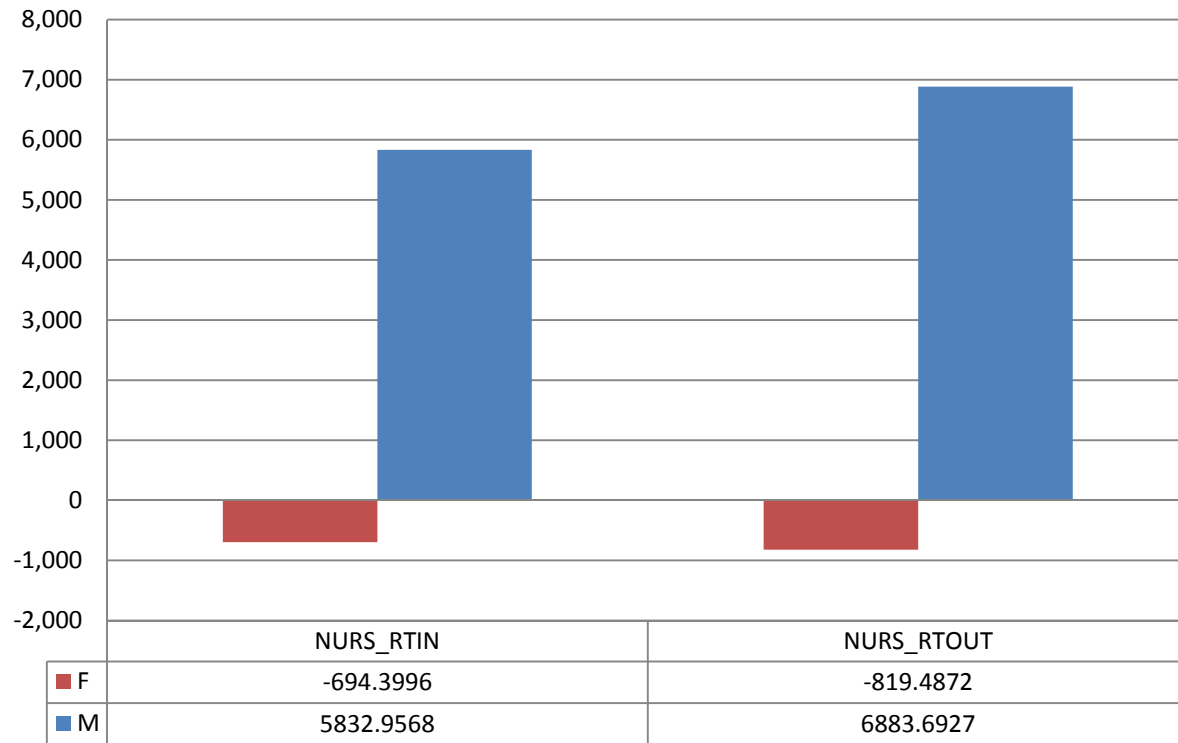
Weatherhead School of Management



Frances Payne Bolton School of Nursing

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	3	\$78,214	\$11,107
Assistant Professor	Female	19	\$73,692	\$11,383
Associate Professor	Male	2	\$136,977	\$18,417
Associate Professor	Female	15	\$86,746	\$10,261
Professor	Male	0	*	*
Professor	Female	8	\$139,435	\$18,693
		47		

Frances Payne Bolton School of Nursing

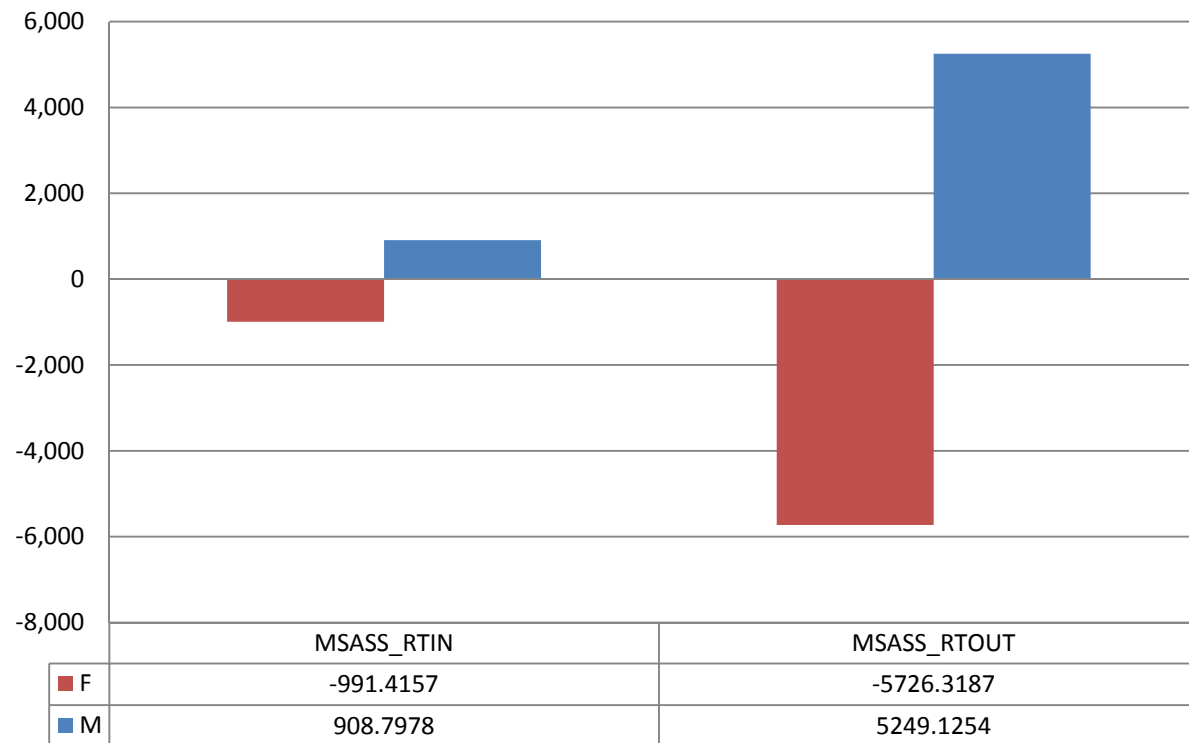


Mandel School of Applied Social Sciences

Rank	Gender	N	Mean	Std. Deviation
Assistant Professor	Male	2	*	*
Assistant Professor	Female	4	\$71,136	\$8,363
Associate Professor	Male	4	\$101,766	\$23,684
Associate Professor	Female	3	\$103,957	\$15,685
Professor	Male	6	\$168,919	\$35,755
Professor	Female	4	\$140,340	\$41,995

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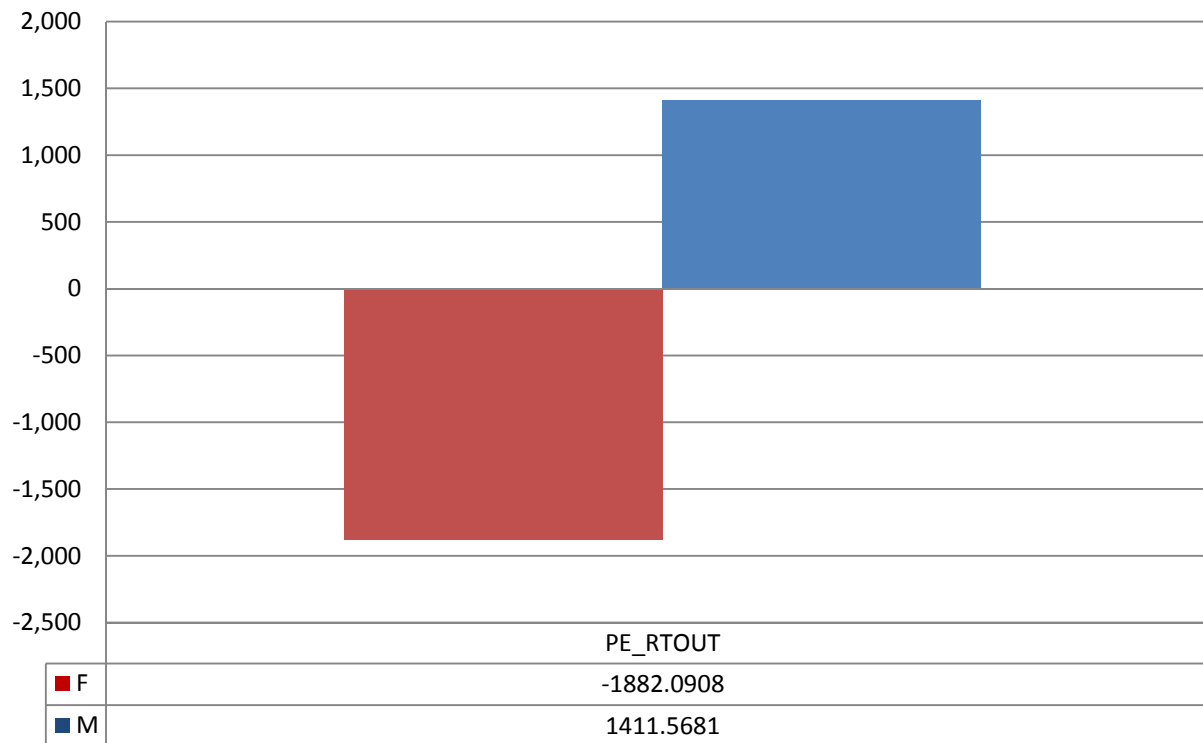
Mandel School of Applied Social Sciences



Physical Education and Athletics

Rank	Gender	N	Mean	Std. Deviation
Assistant Coach/Trainer	Male	5	\$45,712	\$5,852
Assistant Coach/Trainer	Female	3	\$36,091	\$7,621
Head Coach/Trainer	Male	9	\$60,748	\$14,238
Head Coach/Trainer	Female	5	\$55,122	\$11,250
Director Intramurals	Male	1	*	*
Director Intramurals	Female	0	*	*
		21		

Physical Education and Athletics*



**For PHED Faculty, coaching/trainer status was used in place of faculty appointment status*

Summary – Gender Salary Study

All FTE except clinical departments of the School of Medicine.

School	Discrepancy of residual values 2009-2010	Discrepancy of residual values 2010-2011	Discrepancy of residual values 2011-2012	Discrepancy of residual values 2012-2013	Discrepancy of residual values 2013-14	Discrepancy of residual values 2014-15
A&S – Arts and Humanities	\$359 M	\$474 M	\$1,146 M	\$209W	\$1,173 W	\$1,128 W
A&S – Math, Natural Sciences and Social Sciences	\$1,861 W	\$1,448 W	\$4,148 W	\$4,105W	\$4,177 W	\$4,427 W
A&S – Social Sciences	\$1,661 M	\$72 M	\$3,493 W	\$5,162W	\$5,215 W	\$5,667 W
A&S – Math and Natural Sciences	\$902 W	\$1,737 W	\$3,533 W	\$4,041 W	\$3,792 W	\$3,612 W
Engineering	\$1,071 M	\$1,339 M	\$2262 W	\$2,615W	\$3,818 W	\$2,745 W
Management	\$5,512 M	\$11,917 M	\$7,051 M	\$4,334M	\$8,726 M	\$12,809 M
Nursing	N/A	N/A	N/A	N/A	N/A	\$6,527 M
Dental Medicine	\$4,934 M	\$8,990 M	\$1,080 W	\$1,635W	\$244 M	\$3,116 M
Law	\$2,544 M	\$4,998 M	\$6,609 M	\$5,484 M*	\$15,415 M	\$16,099 M
Medicine	\$6,755 M	\$5,488 M	\$2,432 M	\$3,809M	\$6,751 M	\$5,508 M
MSASS	\$3,990 W	\$2,753 W	\$2,241 M	\$257M	\$1,878 W	\$1,900 M
Physical Education**	-	-	-	\$2,151 M	\$2,759 W	\$3,294 M

*Does not reflect changes made after November 1, 2013

**In 2013-2014, residuals for physical education were calculated using coaching status instead of faculty appointment

Summer Salary

School	Gender	% With Salary	Mean	Std. Dev.
A&S – Arts and Humanities	M	27%	\$9,237	\$4,887
	F	16%	\$5,040	\$3,336
A&S - Math and Natural Sciences	M	59%	\$19,867	\$9,034
	F	85%	\$13,959	\$5,798
A&S - Social Sciences	M	40%	\$15,594	\$6,640
	F	59%	\$14,805	\$9,693
A&S - Math, Nat'l Sci. and Social Sci.	M	54%	\$19,090	\$8,739
	F	71%	\$14,328	\$7,636
Engineering	M	68%	\$25,009	\$13,988
	F	81%	\$19,481	\$11,415
Law	M	62%	\$7,828	\$1,762
	F	42%	\$7,333	\$1,329
Management	M	42%	\$19,766	\$12,746
	F	56%	\$27,332	\$7,181
Nursing	M	*	*	*
	F	21%	\$14,556	\$7,508
MSASS	M	67%	\$30,385	\$23,438
	F	72%	\$19,9325	\$11,948

Faculty in Medicine and Dental Medicine are on 12 month contracts and, thus do not receive summer salaries

Supplemental Salary

	Gender	% With Supp	Mean	St. Dev.
A&S – Arts and Humanities	M	10%	\$9,143	\$2,968
	F	14%	\$9,274	\$4,455
A&S - Math & Natural Sciences	M	15%	\$13,287	\$6,607
	F	8%	*	*
A&S - Social Sciences	M	20%	\$10,216	\$1,431
	F	14%	\$9,265	\$5,951
A&S - Math, Nat'l Sci. and Social Sci.	M	16%	\$12,342	\$5,683
	F	11%	\$10,120	\$4,797
Engineering	M	20%	\$22,115	\$17,801
	F	13%	\$24,232	\$15,741
Dental Medicine	M	34%	\$18,856	\$15,713
	F	36%	\$17,563	\$14,987
Law	M	31%	\$13,937	\$11,768
	F	42%	\$14,472	\$12,848
Management	M	24%	\$13,479	\$10,642
	F	6%	*	*
Nursing	M	0%	*	*
	F	33%	\$13,840	\$10,265
MSASS	M	17%	*	*
	F	27%	*	*
Medicine	M	15%	\$38,653	\$38,578
	F	19%	\$19,920	\$16,740

* < 3 supplements. Removed to protect confidentiality

Results

- The largest differences reside in law, management, and nursing.
- The smallest differences reside in Arts and Humanities and Engineering
- Women have seen some gains over time in specific schools.

Recommendations

- The following efforts are recommended for the advancement of women faculty:
 - Enhance mentoring for female faculty to increase the likelihood that women faculty will achieve tenure and promotion to full professor in a timely manner. This will assure that salary increases will occur earlier in female faculty careers.

Recommendations (Cont.)

- Currently, few female professors of higher rank are hired. Actively recruiting female faculty at senior ranks would reduce gender differences in salary where they exist.
- More women faculty need to be promoted to leadership positions. For example, within the School of Medicine, only one department chair is female.