

Task Force to Study Faculty Salary Distribution

Final Recommendations

The Task Force to Study Faculty Salary Distribution was created by the Faculty Senate through SD 0403F. Its members are:

Gwen Ashburn, Literature and Language
Dee Eggers, Environmental Studies
Archer Gravely, Director of Institutional Research
Steve Honeycutt, University Budget Officer
Gregg Kormanik, Biology
Bruce Larson (Chair), Economics
Betsy Mayes, Management and Accountancy
Dwight Mullen, Director of Diversity and Multicultural Affairs
Scott Walters, Drama

Dwight Mullen was on administrative leave during Spring 2005.

The Task Force was charged with making recommendations that include guidelines for:

- equity adjustments,
- allocating merit,
- allocation of future salary increases into merit, cost of living and equity adjustments,
- starting salary offers,
- compensation for department chairs [and program directors] and
- compensation for faculty members coming from or partially in UNCA administrative positions.

This is the second report of the Task Force. Its first report (attached) was presented to the Faculty Senate on 29 April 2004 and indicated that the Task Force would work in steps, namely:

Step 1. Address academic years 2001-02, 2002-03 and 2003-04 during which there were no meaningful across-the-board salary increases and no merit increases. These years are central to decisions on how to allocate funds from (a) the Campus Based Tuition Increase (CBTI) and (b) the budgetary actions of the State of North Carolina.

Step 2. Address the broader charges of the Task Force, in particular *equity adjustments*.

The first report addressed **Step 1**. This report addresses **Step 2**. In particular it makes recommendations regarding: equity adjustments, starting salary offers, compensation for department chairs and program directors, compensation for faculty members coming from or partially in administrative positions and additional recommendations. The recommendations for equity adjustments emerged from a statistical analysis (attached) of the salaries of full-time faculty who were initially hired to be faculty at UNCA

Here are the final recommendations of the Task Force to Study Faculty Salary Distribution.

Equity Adjustments

In order to address the issue of equity adjustment the Task Force developed two multiple regression models, which are discussed at length in the statistical analysis that follows these recommendations. In one model dummy variables were employed to provide insight into the relationship between salary, gender, race and other minority status for the entire study population; in a second model the dummy variables were excluded and only the white-male population was examined. This latter “white-male” model is the preferred approach for equity studies, drawing its ultimate authority from Oaxaca (1973), and was used to predict salaries to identify faculty for salary review.

One must keep in mind that the model is, like all models, limited and provides approximations of the true parameter estimates. Although the model would be strengthened by capturing merit, this was beyond the ability of the task force, given time and data limitations. Conventional practice in equity studies is to not make explicit provision for merit.

Recommendation 1. Use the “white-male” model for predicting salary.

Discussion The white-male model has been widely used in the scholarly investigation of wage differentials associated with gender and race. Its primary advantage is to create “an estimate of what the salary of a woman or minority faculty member would be if she or he were a white male with the same attributes and experience” (E. L. Scott as quoted in Haignere (2002,42)).

This model predicts for white males how their salary changes as they move through their careers. The model can then be used to predict the salary for female and/or minority faculty by incorporating into the model their specific attributes and experience. The predicted salary reflects what the model estimates their salary would be if they were white males. The predicted and actual salaries for an individual are then used to calculate the percent by which she or he deviates from predicted salary using the expression $(\text{actual salary} / \text{predicted salary}) \times 100$.

Recommendation 2. Identify faculty for review according to the percent by which a faculty member’s actual salary deviates from his or her salary as predicted by the white-male-population model.

Discussion. The Task Force cautions against simply reviewing faculty members with the lowest salaries, as this would fail to capture bias that, if it exists, would be expected to exist at all salary levels. As well, we caution against simply targeting those with the largest difference between predicted and actual salary. This would focus the reviews on members of the faculty with higher salaries, for which there does not appear to be a basis. Finally, we oppose the use of standard deviation (or some percent thereof) as a basis for selection because it would also bias toward higher salaries the group identified for review.

Example: Professor X may have a predicted salary of \$70,000 and an actual salary of \$63,000, (a difference of \$7,000 and 10% below the predicted salary). Professor Y, on the other hand, may have a predicted salary of \$50,000 and an actual salary of \$43,000 (still a difference of \$7,000,

but here it is 14% below predicted salary). The above example illustrates the advantage of using a “percent of predicted” review threshold over any method based on the absolute difference.

The model, when applied to all of the faculty, necessarily generates instances where the actual salary of a faculty member substantially exceeds predicted salary. Our recommendations address only those individuals receiving less than their predicted salary.

Recommendation 3. Give highest priority to reviewing faculty members of all ranks with salaries at or below 90% of predicted salary and secondary priority to reviewing faculty members with salaries between 90% and 95% of predicted salary.

Discussion. A small percent of the population falls below 90% of predicted salary—just 19 people. Review of that number of individuals is not thought to be burdensome to Academic Affairs. 28 faculty fall between 90 and 95% of their predicted salary. We suggest these cases also be reviewed as the number is also relatively small.

Recommendation 4. Review the salaries of all minority faculty on campus.

Discussion. Because the black and “other minority” populations on the UNCA campus are small, we recommend they all be reviewed. As well, earlier regression models including women and minorities on campus indicated both a level of variance in minority pay that warranted review and possible pay discrepancies, especially for non-black minorities.

Recommendation 5. Create and communicate a systematic salary review process.

Discussion. Once faculty are identified for review, the Task Force recommends salary be considered in light of the individual and his or her history, including merit recommendations. It is important that the criteria employed in conducting these reviews be made known to the UNCA faculty, for this will contribute to an understanding of fairness in the process as well as communicate and strengthen institutional norms and values.

Starting Salary Offers

Recommendation 6. Starting faculty salaries should be established annually, in light of faculty salaries and conditions of employment by discipline at comparable institutions, in order to attract and retain a diverse faculty of excellence that reflects the mission of the university.

Discussion. UNCA conducts national searches for tenure track faculty and thus must be responsive to the salaries and conditions of employment at comparable institutions elsewhere. This responsiveness should consider relative salaries for disciplines inside and outside UNCA.

Compensation for Department Chairs and Program Directors

Chairs and Program Directors perform diverse duties even within categories (see *Faculty Handbook* 3.1.2). Therefore compensation may vary widely across positions with regard to stipends and reassigned time allocated. In order to equitably compensate them for their duties, the Task Force recommends the following.

Recommendation 7. Chairs and Program Directors should receive a stipend for the performance of their duties. We recommend a stipend of \$4-8K per academic year, subject to departmental and institutional needs. Compensation is awarded only for the duration of their tenure.

Recommendation 8. If warranted by the nature and extent of their required duties, Chairs and Program Directors may receive an additional month of salary (1/9 or 11% of academic year salary) for activities necessarily performed during the summer.

Recommendation 9. When a Chair or Program Director is hired from outside the university, the base salary should be established as for a regular faculty member. Additional compensation for duties performed as Chair or Program Director will follow established guidelines.

Recommendation 10. A systematic approach to reassigned time is an important component of compensation for both Chairs and Program Directors. We recommend the current formula for allocation of Reassigned Time to Chairs and Program Directors be retained (ref. *Faculty Handbook* 3.1.4.1.5) until it can be evaluated.

Compensation for Faculty Members Coming From or Partially In Administrative Positions

Recommendation 11. Since the current policy only covers Senior Academic and Administrative Officers—please see (http://www.northcarolina.edu/content.php/legal/policymanual/uncpolicymanual_300_1_6r.htm)—the Task Force recommends that it apply to all faculty members who are in temporary administrative appointments, such as the Associate Vice Chancellors for Academic Affairs. This policy would not apply to those individuals hired as administrators and not part of the Senior Academic and Administrative Officers. Senior Academic and Administrative Officers are defined by UNC-OP as Chief Finance Officer, Chief Academic Officer, Chief Student Affairs Officer, University Legal Counsel and University Librarian.

Recommendation 12. Include in the policy to continue to calculate their academic salary as though they were faculty members, while they are on administrative duty. They would return to their calculated faculty salary once their administrative appointment was complete.

Recommendation 13. A letter specifying duration of appointment, how salary is calculated while in administrative post, and how salary will be recalculated once individual returns to faculty position should be in writing, with copies to the individual, Academic Affairs, and the person's personnel file.

Additional Recommendations

Recommendation 14. Equity adjustments should begin with the 2005-2006 academic year and continue as needed. In addition, equity adjustments should be given a high priority when UNCA next has a campus-based tuition increase.

Recommendation 15. The Faculty Welfare and Development Committee and the Provost and Vice Chancellor for Academic and Student Affairs should work with the Office of Institutional Research to provide for regular, systematic review of the faculty salary distribution. In particular:

- The Office of Institutional Research should update the database created for this study annually, expanding it as appropriate.
- The Office of Institutional Research should update this study annually and distribute its findings—including statistical work and tables—to the Faculty Welfare and Development Committee and the Provost and Vice Chancellor for Academic and Student Affairs. These findings should be considered in annual faculty salary decisions.

Recommendation 16. The Faculty Welfare and Development Committee and the Provost and Vice Chancellor for Academic and Student Affairs should convene a Task Force every four years to examine the existing approach to the study of the faculty salary distribution. *The next Task Force should be convened in Fall 2008.*

Recommendation 17. The Faculty Welfare and Development Committee and the Provost and Vice Chancellor for Academic and Student Affairs should work together to examine the roles and responsibilities of Lecturers on the UNCA campus, so as to further systematize their compensation. This examination should include, but not be limited to, consideration of special institutional needs, the scope of faculty searches and the possibility of additional distinctions among the rank of Lecturer.

Discussion. The statistical models developed were limited in their ability to predict lecturer salaries. There are several reasons for this. First, although the discipline variable strongly predicts salary for tenure-track faculty, it is less successful in predicting lecturer salaries because they are paid at roughly the same rate across disciplines. Secondly, some lecturers on campus can be thought of as "senior lecturers" and receive significantly higher salaries for that reason, even though their rank does not reflect this status. Thirdly, some lecturers seem to play a role comparable to Visiting Assistant Professors. Even with that said, the data suggest that there is more variation in lecturer pay than would be expected based on the characteristics and histories of individuals.

Recommendation 18. The Faculty Welfare and Development Committee and the Provost and Vice Chancellor for Academic and Student Affairs should work together on an annual basis to establish faculty salary funding priorities.

Discussion. For any given academic year the funds available for faculty salaries are limited and decisions must be made as to how they should be directed. This work will be done most effectively if faculty governance and Academic Affairs do it collaboratively.

Attachments. References, Task Force to Study Faculty Salary Distribution [29 April 2004] and Statistical Analysis

References

- College and University Professional Association for Human Resources. *2003–04 National Faculty Salary Survey by Discipline and Rank in Four-Year Colleges and Universities*. 28 September 2004. (http://www.cupahr.org/surveys/files/NFSS04_Exec_Sum.pdf)
- Haignere, Lois. *Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education Faculty*. 2d ed. Washington, D.C.: American Association of University Professors, 2002.
- Oaxaca, Ronald. “Male-Female Wage Differentials in Urban Labor Markets.” *International Economic Review* 14 (1973): 693-709.
- Scott, E. *Higher Education Salary Evaluation Kit*. Washington, D.C.: American Association of University Professors, 1977.
- Stewart, Kenneth D., Margaret M. Dalton, Geri A. Dino and Steven P. Wilkinson. “The Development of Salary Goal Modeling: From Regression Analysis to a Value-Based Prescriptive Approach.” *Journal of Higher Education* 67, 5 (September-October 1996): 555-76.
- Sutton, Terry P. and Peter J. Bergerson. *Faculty Compensation Systems: Impact on the Quality of Higher Education*. ASHE-ERIC Higher Education Report, Vol. 28, No. 2. San Francisco: Jossey-Bass, 2001.
- University of North Carolina. “The UNC Policy Manual: 300.1.6[R].” 4 April 2005. (http://www.northcarolina.edu/content.php/legal/policymanual/uncpolicymanual_300_1_6r.htm)

Task Force to Study Faculty Salary Distribution

Recommendations [29 April 2004]

The Task Force to Study Faculty Salary Distribution was created by the Faculty Senate through SD 0403F. Its members are:

Gwen Ashburn, Literature and Language
 Dee Eggers, Environmental Studies
 Archer Gravely, Director of Institutional Research
 Steve Honeycutt, University Budget Officer
 Gregg Kormanik, Biology
 Bruce Larson (Chair), Economics
 Betsy Mayes, Management and Accountancy
 Dwight Mullen, Director of Diversity and Multicultural Affairs
 Scott Walters, Drama

The Task Force was charged with making recommendations that include guidelines for:

- equity adjustments,
- allocating merit,
- allocation of future salary increases into merit, cost of living and equity adjustments,
- starting salary offers,
- compensation for department chairs [and program directors] and
- compensation for faculty members coming from or partially in UNCA administrative positions.

In light of this very broad charge and the need to provide actionable recommendations during this academic year, the Task Force decided to work in steps.

Step 1. Address academic years 2001-02, 2002-03 and 2003-04 during which there were no meaningful across-the-board salary increases and no merit increases. These years are central to decisions on how to allocate funds from (a) the Campus Based Tuition Increase (CBTI) and (b) the budgetary actions of the State of North Carolina. The Task Force has recommendations with respect to *cost of living* and *merit*.

Step 2. Address the broader charges of the Task Force, in particular *equity adjustments*. Work on the necessary equity study will begin this summer.

Here are our recommendations for **Step 1**. Recommendations for **Step 2** will be made in the next academic year.

Cost of Living

Recommendation 1 (adjustments). Faculty salaries should be adjusted to reflect the recent inflationary experience of the U.S. economy during the last three years so that the purchasing power of faculty of any given position will be preserved.

Merit

Note that faculty may receive one of four evaluations in a given year: No Increase, Merit, High Merit or Exceptional Merit.

Recommendation 2 (adjustments). Faculty salaries should be adjusted to reflect the merit evaluations received by faculty during the last three years. In light of institutional practice in areas such as reappointment, promotion, post tenure review and chair assignments, the adjustments should be for a fixed dollar amount for any given merit category for any given year.

Recommendation 3 (amounts). For each of the last three years, merit amounts should be awarded in accordance with the following schedule: No Increase (\$0); Merit (\$450); High Merit (\$675); and Exceptional Merit (\$900).

Recommendation 4 (amount evaluation schedule). Merit amounts should be examined and communicated annually to reflect inflationary experience in addition to the budgetary actions of the State of North Carolina.

Recommendation 5 (merit evaluation process). Academic Affairs should work with the Faculty Senate to determine whether the existing merit evaluation process yields consistent results within and among departments.

Staff Compensation

Recommendation 6. UNCA faculty and staff collaborate with one another to provide a superior liberal arts education for well-prepared students who are committed to learning and personal growth. Due to the recent Campus Based Tuition Increase, some progress has been made toward bringing UNCA faculty salaries in line with those of its peers. However, staff salaries still remain to be addressed. Because the provision of a superior liberal arts education requires the recruitment and retention of an outstanding staff, as well as an outstanding faculty, the university administration should take all appropriate measures to ensure that UNCA staff compensation is brought in line with that of its peers.

Statistical Analysis

Introduction

The purpose of this study was to examine the distribution of faculty salaries at UNCA for systematic patterns of disparity by comparing *actual* with *predicted* salaries. Most studies of this type focus solely on identifying salary differentials for women and minorities, but the UNCA study included all faculty in the analysis and review of salary equity. The AAUP publication *Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education* (Haignere, 2002) was used as a reference manual for establishing the study methodology and selecting predictor variables. The study was conducted by the UNCA Office of Institutional Research during Fall 2004 and Spring 2005. Data for the study were extracted from the UNCA Human Resource System. All substantive decisions about the study population, methodology, variable construction, and statistical analysis were made in close coordination with the *Task Force to Study Faculty Salary Distribution*. Predicted salaries were generated using a multiple regression analysis of a number of institutional variables. It is important to note that the study does not take into account any performance or personnel evaluation measures in generating predicted salaries.

Methodology

Population

The population for the study included 186 faculty employed during the Fall 2004 semester. The personnel data are as of October 1, 2004 and do include tuition and legislative salary increases for the 2004-05 academic year. The salary equity study population is based on full-time instructional faculty as defined by the federal IPEDS¹ definition. The IPEDS definition includes faculty with 9-12 month contracts who have instruction as a primary duty. (Librarians are not defined as instructional faculty under the IPEDS definition.) Exceptions to this basic definition include the following categories:

1. Visiting faculty members were not included in the study.
2. Tenured administrators (N=6, .e.g., Associate Vice Chancellors and Director of Diversity and Multicultural Affairs) were included in the study with the exception of the Chancellor, Provost, and University Librarian). Salaries for administrators included in the study were adjusted to reflect their nine-month faculty salaries.
3. One full-time instructional faculty member who was originally hired by UNCA as a full-time administrator was not included in the study population.
4. One tenured faculty member who is employed .75 FTE this year was included in the study with a salary adjusted to full-time status.

Definition of Salary

The salary equity analysis is based on instructional faculty nine-month salaries. Faculty with 10 or 11 month salaries were adjusted to nine-months for this study. Administrator salaries were adjusted to nine-month faculty salaries without the administrative component. Distinguished faculty holding endowed positions had state and non-state salary amounts included. Faculty receiving additional payments for teaching distance education courses did not have these amounts included in their nine-month instructional salaries. The population of faculty by various demographic categories and mean salaries is shown in Table 1.

¹Integrated Post-Secondary Educational Data System

Table 1: Salary Equity Study Population: Fall 2004

	N	9-Month Salary			Yrs-UNCA		Yrs-High Degree		Yrs in Rank	
		Mean	Min	Max	Mean	Max	Mean	Max	Mean	Max
Humanities	70	52,633	31,785	93,733	9.5	38	15.1	41	4.5	21
Natural Science	53	57,331	34,000	97,362	11.3	36	17.1	36	6.3	25
Social Sciences	63	59,696	28,000	101,250	12.9	34	16.0	34	5.6	23
Full Professor	59	73,407	53,489	101,250	20.3	38	24.4	38	8.2	25
Assoc Professor	52	54,027	45,354	83,603	10.6	22	14.0	29	4.6	19
Asst Professor	47	48,350	41,120	69,045	3.9	21	6.3	25	3.0	15
Lecturer	28	38,243	28,000	58,928	5.1	23	18.0	41	4.5	23
On Tenure Track	51	49,149	32,000	84,000	3.5	21	6.8	28	2.5	5
Tenured	108	64,243	45,354	101,250	16.3	38	19.7	38	6.9	25
Non Tenure Track	27	38,474	28,000	58,928	5.2	23	18.5	41	4.7	23
No Terminal Degree	23	43,002	28,000	76,244	7.6	26	17.8	41	5.5	23
Terminal Degree	163	58,249	30,000	101,250	11.7	38	15.7	39	5.3	25
Asian	6	48,044	41,120	63,135	6.0	20	7.3	20	2.2	4
Black	8	53,465	44,995	66,987	12.1	20	11.3	18	3.4	11
American Indian	1	74,498	74,498	74,498	17.0	17	17.0	17	6.0	6
Hispanic	2	63,615	46,162	81,067	15.5	26	15.0	26	9.5	14
White	169	56,603	28,000	101,250	11.2	38	16.5	41	5.5	25
Female	69	51,597	30,000	79,312	9.6	27	13.2	32	4.6	23
Male	117	59,174	28,000	101,250	12.1	38	17.6	41	5.8	25
Total	186	56,364	28,000	101,250	11.2	38	16.0	41	5.4	25

Statistical Analysis

The analysis took two approaches to the examination of potential disparities in faculty salaries. A basic multiple regression procedure (SAS/PROC REG default model) was used to calculate a predicted salary for each faculty member in the study population using fourteen predictor variables as described in Table 2. This model provides a general picture of how faculty salaries are distributed based on the predictor variables. The second regression analysis was based on white males only. The resulting parameter estimates were then used to predict the salaries for minorities and women faculty as well as white males. Discrepancies between the actual and predicted salaries can be used to identify faculty for administrative salary equity review.

A very important, but hard to define, predictor of salary is market salary differential due to academic discipline. This variable contributes to considerable variation in starting salaries among academic disciplines due to market differentiation. Based on the approach recommended by the AAUP, the present study attempted to measure academic market discipline by grouping faculty into one of four salary groups based on *national* salary means by CIP (Classification of Instructional Programs) discipline category. The national salary means by discipline/CIP code for public four-year institutions are shown in Table 3. UNCA faculty were classified into one of four discipline categories based on their home department and the national salary mean for that CIP discipline. The four discipline salary categories were: (1) 80,000-up; (2) 70,000-79,000; (3) 60,000-69,000; and (4) 50,000-59,000.

Because there are *four* salary categories that describe all national CIP disciplines, *three*² dummy coded (1 or 0) discipline variables were defined to capture market differential as described in Table 2.

Table 2: Predictor Variables

Variable	Type	Description
Full Professor	Dummy Coded	1 = yes 0 = No
Assoc Professor	Dummy Coded	1 = yes 0 = No
Asst Professor	Dummy Coded	1 = yes 0 = No
Endowed	Dummy Coded	1 = yes 0 = No faculty member holds distinguished professorship
UNCA Years	Continuous	Years employed as a full-time faculty member at UNCA
Degree Years	Continuous	Years since receiving highest degree
Rank Years	Continuous	Years in current rank
Discipline 80K	Dummy Coded	1 = yes 0 = No (see Table 3 for disciplines included)
Discipline 70K	Dummy Coded	1 = yes 0 = No (see Table 3 for disciplines included)
Discipline 60K	Dummy Coded	1 = yes 0 = No (see Table 3 for disciplines included)
Chair/Program Director	Continuous	Number of years listed in catalog as a chair/program director since 1969
Black	Dummy Coded	1 = yes 0 = No
Other Minority	Dummy Coded	1 = yes 0 = No (All races other than White or Black)
Female	Dummy Coded	1 = yes 0 = No

²Dummy coded variables provide a mechanism for using categorical variables in regression models and other statistical procedures that require at least interval level measurement. A "1" is assigned if the condition is met, e.g. female and "0" otherwise. If there are two possible values, then only one dummy variable is required. Thus, for market discipline with four levels only three dummy variables are used. In our study, those faculty with a home department that has a national mean salary of 50-59K would have a "0" assigned to the three discipline categories.

Table 3: CUPA-HR³ 2003-04 National Faculty Salary Survey by Discipline in Four-Year Public Colleges and Universities

Discipline Title	CIP*	Mean Salary
Business, Management, Marketing, and Related Support Services	52	80,907
Computer and Information Sciences and Support Services	11	74,835
Physical Sciences	40	67,387
Natural Resources and Conservation	03	65,989
Biological and Biomedical Sciences	26	65,287
Social Sciences	45	63,275
Psychology	42	62,467
Mathematics and Statistics	27	61,489
Philosophy and Religious Studies	38	60,410
History	54	59,334
Education	13	57,403
Communication, Journalism, and Related Programs	09	55,342
Foreign Languages, Literatures, and Linguistics	16	54,306
Visual and Performing Arts	50	54,123
Parks, Recreation, Leisure and Fitness Studies	31	53,973
English Language and Literature/Letters	23	53,467
Liberal Arts and Sciences, General Studies and Humanities	24	53,281

* Classification of Instructional Program

Results

Model 1: All Faculty

The first regression model includes all faculty (N=186) and provides a mechanism to estimate the contribution of each of the fourteen predictors in explaining faculty salaries at UNCA. The model parameter estimates (non-standardized beta weights) are provided in Table 4. The overall model had an adjusted R² value of .90 which indicates that 90% of the variability in faculty salaries is explained by the fourteen predictor variables. However, the mean square error (MSE) was \$4,860, which indicates that for any individual faculty member the regression model has a good deal of prediction error. This relatively large prediction error is probably due to the absence of individual performance measures and annual chair performance reviews in the model. To some extent, rank may provide a proxy measure for these important salary determinants. Among the fourteen predictors, six were not found to be statistically significant at the $p \leq .05$ level. It can be argued that statistical significance is irrelevant when dealing with a known total population with no sampling. However, our modeling work has shown that with a small faculty N of 186, results can vary dramatically by simply including or excluding one or two cases that could be identified as outliers. In this analysis statistical significance seems to provide a good measure of coefficient stability.

An unexpected result of the study was that UNCA years and degree years were found to be highly non-significant. This is undoubtedly due to the fact that this information is embedded in rank and thus does not provide additional information. The findings with respect to race and gender were mixed. Black faculty were found to earn an average of \$112 more than other faculty after controlling for the other variables. This small amount was not statistically

³ College and University Professional Association for Human Resources

different from 0. Women faculty earn \$268 less than male faculty after controlling for the effects of other predictors, but this beta weight was not statistically significant. Faculty classified as “other minority” (N=9) were found to earn \$3,033 less than other faculty and while not statistically significant at the traditional $p \leq .05$ level, it is close enough ($p = .082$) to merit administrative review.

Table 4: Model 1 Parameter Estimates

Variable	Parameter Estimate	Standard Error	t Value	p
Intercept	32,063	1476.5	21.71	<.0001
Full	26,677	1886.0	14.14	<.0001
Assoc	14,762	1341.4	11.01	<.0001
Asst	11,155	1375.3	8.11	<.0001
Endowed	24,525	3298.1	7.44	<.0001
UNCA Years	48	110.6	0.44	0.664
Degree Years	37	66.9	0.55	0.5806
Years in Rank	767	126.9	6.04	<.0001
Discipline 80K	18,180	1603.9	11.33	<.0001
Discipline 70K	11,231	2028.0	5.54	<.0001
Discipline 60K	1,492	815.6	1.83	0.0691
Chair/Program Director	552	107.5	5.14	<.0001
Black	112	1820.6	0.06	0.9509
Other Minority	-3,033	1730.9	-1.75	0.0815
Female	-268	803.8	-0.33	0.7393

Model 2: White Male Faculty

A separate regression analysis was developed for white male faculty (N=97) as a method of developing parameter estimates for predicting salaries for females and minorities. Scott (1977) notes that “the advantage of the white male model is that it provides an “estimate of what the salary of the woman or minority faculty member would be if she or he were a white male with the same attributes and experience.” Because there is only one gender and race in this model, the race, female and other minority variables used in model one were dropped from the analysis. The parameter estimates for the white male model are shown in Table 5. These beta weights are reasonably comparable to the estimates obtained from the all faculty model.

Table 5: White Male Parameter Estimates

Variable	Parameter	Standard	t Value	p
	Estimate	Error		
Intercept	31,242	2,220	14.07	<.0001
Full	24,283	2,703	8.98	<.0001
Assoc	14,290	2,155	6.63	<.0001
Asst	9,138	2,357	3.88	0.0002
Endowed	24,890	4,021	6.19	<.0001
UNCA Years	79	163	0.49	0.6285
Degree Years	104	97	1.07	0.2853
Years in Rank	761	185	4.11	<.0001
Discipline 80K	23,754	2,750	8.64	<.0001
Discipline 70K	10,500	2,591	4.05	0.0001
Discipline 60K	2,533	1,276	1.98	0.0501
Chair/Program Director	579	144	4.03	0.0001

Selection of Faculty for Administrative Review

Based on the parameter estimates for the white male regression analysis show in Table 5, predicted salaries were estimated for all faculty. The ratio of actual salary/predicted salary was calculated for each faculty member. To illustrate, if a faculty member has an actual salary of \$50,000 and a predicted salary of \$55,000, then his or her ratio is 50,000/55,000 or .91 or 9% less than predicted. The distribution of faculty by salary/predicted ratio is shown in Table 6. Approximately half of the faculty are below predicted salaries and 26% are below 95% of predicted salaries.

Table 6: Distribution of Faculty by Salary/Predicted Ratio

Salary/Predicted Ratio	N Faculty	Percent	Cum Percent
0.73 - 0.89	17	9.1	9.1
0.90 - 0.95	32	17.2	26.3
0.96 - 0.99	43	23.1	49.4
1.00 - 1.05	55	29.6	79.0
1.06 - 1.10	21	11.3	90.3
1.11 - 1.15	10	5.4	95.7
1.16 - 1.20	6	3.2	98.9
1.17 - 1.25	2	1.1	100.0
Total	186	100.0	