THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

FACULTY SALARY EQUITY

TASK FORCE REPORT

Presented to Provost Bruce Carney

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Prepared by:

**The Faculty Salary Equity Task Force
The University of North Carolina at Chapel Hill**

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FACULTY SALARY EQUITY TASK FORCE REPORT

I. Introduction

The Faculty Salary Equity Task Force was convened by Provost Carney in December 2010. The members of the Task Force are listed in Appendix A. The Task Force met approximately biweekly during calendar year 2011 as it worked to fulfill the following charge.

> The Taskforce will examine current salary equity differentials by gender and race at UNC-Chapel Hill and will compare salary equity differentials over time to determine if improvement is occurring. The work of this Taskforce should be completed within one calendar year from the date of the charge.

Taskforce Charges:

1. After examining pre-existing data sources, recommend and initiate a routine methodology for assessing UNC's gender/race equity in faculty compensation, promotion, and start-up packages. This methodology should result in periodic reports that allow for longitudinal tracking of changes and permit comparisons over time. Evaluate the possible use of outside consultants in conducting the assessments and data analysis. Consider how to examine gender and race impacts on the following aspects:

   - **Compensation** including a) total pay on hiring, b) current total pay, and c) change in total pay over time.
   - **Time to promotion** including a) promotion from assistant to associate professor and b) promotion from associate to full professor. Please evaluate for fixed term and tenure track faculty, including the stoppage of tenure clock as a variable.
   - **Start-up packages** to determine equity aspects of who gets and who does not get a start-up package and start-up package magnitude.
   - **Nominations to distinguished professorships.**

2. Implement a new *2010-2011 Study of Gender/Race Impacts on UNC Faculty Salaries*. Produce two reports: a) Report to Faculty Council with data at the school-level only, in order that no personally-identifying information is revealed due to small sample sizes, and b) Report to the Provost, Dean, and Department Chair with data at the department, program, and individual faculty-level for use in Annual Reviews and to implement interventions.

3. **Recommend policy and strategies to justly address salary inequities** which may be uncovered. In this process, we expect that the Taskforce will examine the root causes of salary and related inequities and consider remedies which may address the fundamental origins of these inequities. The work of this Taskforce should result in actionable steps to address both current inequities and position the University for equity in the future.

The study requested by the Provost was intended as a follow-up to a study of faculty salaries reported in 2002, which undertook a multiple regression analysis of faculty salaries to determine if systematic patterns of disparity by gender and ethnicity might exist at the University of North Carolina at Chapel Hill. The report of the 2002 study is included here as Appendix E. The present study adopted a methodology similar to that of the 2002 study, though with some differences that are noted in the body of this report. The methodology of the analysis and the findings resulting from it are detailed in the Section II of this report, and are compared to those of the earlier report as appropriate.

Three significant additions to the analysis conducted a decade ago were implemented in the present study. The first of these is an examination of time to promotion for different populations of tenure-track and tenured faculty, which was not conducted in the earlier effort but which was specifically requested as part of the charge to the task force. The methodology of this analysis and the findings resulting from it are detailed in the Section III of the report.

The second addition to the 2002 analysis is an investigation of the gender and ethnicity of faculty hired within a specific time period. This was not included in the charge to the task force, but arose as a natural consequence of the examination of time to promotion for those faculty members. The findings of this investigation are detailed in the Section IV of the report.

The third addition, requested in the charge to the task force, is a set of recommendations for policy and strategies to address inequities. The primary recommendations formulated by the task force are concerned with the gathering and maintenance of data on a wide range of factors related to compensation and faculty careers at UNC-CH. These are detailed in the Section V of the report.

II. Salary Study

A. Methodology

We reviewed several faculty salary equity studies as we designed these analyses, including those endorsed by the Association of American University Professors (AAUP) guidelines: *The Higher Education Salary Evaluation Kit* (Scott, 1977), *Achieving Pay Equity on Campus* (Gray, 1990), and most recently, *Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education Faculty* (Haignere, 2002).

1. Initial Regression Models

Consistent with our data analytic approach in the 2002 UNC-Chapel Hill Salary Equity Study and recommendations in Haignere (2002), we performed a series of multiple regression analyses to examine the effects of gender and race/ethnicity on faculty salaries. We conducted three major analyses for: (1) the Division of Academic Affairs; (2) the School of Medicine; and (3) the units in the Division of Health Affairs other than the School of Medicine.

In each analysis, we "controlled for" several relevant professional characteristics to capture the complexity of a faculty member's professional profile in determining salary. If we compared average salaries by gender and race/ethnicity alone, we would have failed to take into account other career-related factors that might explain these observed differences. Thus, in addition to gender and race/ethnicity, other career-related factors were included in each model. These variables are: degree information, years at UNC, years at another institution before coming to UNC, fixed-term status, tenure, rank, years in rank, administrative role, school (within Academic Affairs: Kenan-Flagler Business, Education, Government, Information and Library Science, Journalism and Mass Communication, Law, Social Work; within Health Affairs: Medicine, Nursing, Dentistry, Eshelman Pharmacy, Gillings Global Public Health) and departments in the College of Arts and Sciences (33 units).

2. Examination of Salaries that Differ from Expected Values

Once we examined the regression model for all faculty members within each of the three areas, we then examined the AAUP model, based on only White male faculty members, as applied to female faculty members and faculty members from underrepresented race/ethnic groups. This special comparison was used to describe differences between actual salaries and the expected salaries that would be predicted for White male faculty members with similar professional characteristics such as discipline, academic rank, time since degree, etc.[1] The AAUP model was used to identify specific individuals of any race or gender who had relatively high or relatively low salaries relative to their peers.

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[1] The "AAUP White Male Model" or the "AAUP Model" approach, in which the regression equation that best predicts the salaries of White male faculty members, is applied to the data for faculty members who are female or from a racial/ethnic group that is not

To help understand if there are subsets of the data that did not match the regression models well, we next evaluated cases that deviated beyond 1.5 standard deviations from the expected salary level, as predicted by the regression model. These relatively unusual cases warrant some attention to understand for what reasons the salary values are particularly low or high, as compared to the rest of the population being studied. In this report we examined whether there were any trends in salaries that were particularly extreme as a function of gender or racial/ethnic group. Beyond these broad generalizations provided in this report, a more detailed qualitative case by case analysis must be performed by individuals who have context-specific knowledge of a faculty member's career history and professional performance.

B. Data Sources and Quality

1. Salary and Personnel Data

Data were extracted from the University's Personnel Data File by the Office of Institutional Research and Assessment (OIRA), which is a snapshot taken of all active and on-leave-with-pay employees as of September 30th each year. For all academic units except the School of Medicine (see discussion below), the data represent a "snapshot" of all UNC-Chapel Hill faculty as of September 30, 2009, and individual changes in status or income after that date (e.g., promotions, raises) were not recorded. Because all University faculty members are included in the analyses, these data are considered population information.[2]

We chose the 2009 snapshot for two reasons: (1) the 2010 file was not yet ready for analysis when the project was started in early 2011; and (2) 2009 was the last year that we could use the race/ethnicity categories that corresponded with the 2002 salary report.[3]

For the School of Medicine, the population was created from employees in the personnel files on September 30, 2009. Salary data were compiled using the entire 2009-2010 fiscal year in order to capture all clinical income usually paid on a quarterly basis during the fiscal year in addition to base salary. The Relative Value Units (RVUs) were provided by the School of Medicine as a measure of productivity. [4]

2. Data Quality

To ensure data quality, a department by department analysis of individual faculty records was undertaken by the Office of Institutional Research and Assessment with assistance from HR and school and department staff. These data were also reviewed against other data sources. Missing data were flagged, along with inconsistencies noted during the electronic edit procedures that might or might not indicate

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White. It is a popular approach that has been recommended frequently in the literature (Scott, 1977; Haignere, 2002). If the mean difference between the actual salaries of female faculty members or faculty members from underrepresented racial/ethnic groups is substantially different from their AAUP model predicted salaries, it suggests that those groups are being compensated at a different rate than White males for the same attributes. It is thought to have some advantage over the total population approach, in which the coefficients or weights that describe the impact of the independent variables on salaries are the result of averaging across all members of the population. However, the validity of this method depends on having sufficient numbers of White males at each level of the variables used in the analysis, and that is often not possible in university settings where females tend to dominate the fixed-term ranks and certain disciplines, as is observed in the School of Nursing and Women's Studies (Haignere, 2002).

[2] In faculty salary equity studies, there is discussion about the appropriateness of treating the data as a population or sample. The decision has important implications about whether inferences should be made about parameter estimates. Consistent with several authors (Snyder, Hyer, & McLaughlin, 1994; Haignere, 2002; Gray, 1990) and our approach in the 2002 report, we treat our data as population-level information and de-emphasize statistical significance throughout this report.

[3] In 2010, the race/ethnicity categories were significantly expanded so that an employee could choose more than one category and the campus had invited everyone to review their current designation and re-categorize themselves if they wished. By using the 2009 categories in this study, we could make more direct comparisons to the 2002 Salary Equity Study.

[4] Relative Value Units (RVUs) are part of the compensation system used in the School of Medicine and reflect the total income from clinical services rendered (or relative value units). This clinical income is distributed as bonus payments at various points during the fiscal year, with individual faculty members often receiving more than one payment (cf. Johnson & Newton, 2002).

errors. Examples of corrections made include updating inconsistent tenure and rank codes, adding terminal degrees received since the date of hire, clarifying administrative titles, and updating salaries for faculty on leave.

3. Population

A total of 3,116 faculty members were included in the salary regression analyses (n = 1,290 Academic Affairs faculty; n = 1,323 School of Medicine faculty; n = 503 Other Health Affairs faculty). The population included individuals with a primary appointment as a faculty member who met the following four criteria:

1. The faculty member was employed on September 30, 2009;
2. The faculty member had a permanent full-time appointment (100% FTE);
3. The faculty member was on "Active" or "On Leave with Pay"; and
4. The faculty member did not hold the administrative appointments of Chancellor, Vice Chancellor, Provost, Associate Provost, Dean, or director of a major center or institute reporting directly to the Provost or Vice Chancellor for Research.

Tables 1 and 2 show the number of faculty by gender and race/ethnicity for each of the major units in Academic Affairs and Health Affairs, as well as by tenure status. Appendix B provides these tables with percentages, as well as additional tables showing the breakdown of gender and race/ethnicity by tenure status.

Table 1. Study Population by Academic Affairs and Health Affairs, Gender, and Race/Ethnicity

Gender and Race/Ethnicity	Male	Female	White	Black /AA	Asian	Hisp.	Native Amer.	Other	Total
Academic Affairs									
College of Arts & Sciences									
Fine Arts & Humanities	178	147	260	15	14	34	2	0	325
Natural Sciences & Math	241	91	278	12	34	5	2	1	332
Social & Behavioral Sciences	163	94	184	25	32	12	4	0	527
Kenan-Flagler Business School	76	30	89	1	13	2	1	0	106
School of Education	15	33	43	4	1	0	0	0	48
School of Government	30	19	47	2	0	0	0	0	49
School of Info. & Library Science	12	10	19	1	2	0	0	0	22
School of Journalism & Mass Comm.	26	17	35	2	2	4	0	0	43
School of Law	14	19	37	3	3	0	0	0	43
School of Social Work	16	49	52	9	2	2	0	0	65
Subtotal	**781**	**509**	**1044**	**74**	**103**	**59**	**9**	**1**	**1290**
Health Affairs: Medicine									
School of Medicine									
Allied Health	15	50	58	3	3	1	0	0	65
Basic Sciences	157	73	187	2	34	7	0	0	230
Clinical	604	424	847	45	104	23	4	5	1028
Subtotal	**776**	**547**	**1092**	**50**	**141**	**31**	**4**	**5**	**1323**

Gender and Race/Ethnicity cont.	Male	Female	White	Black /AA	Asian	Hisp.	Native Amer.	Other	Total
Health Affairs: Other Than Medicine									
School of Dentistry	70	34	74	6	13	11	0	0	104
School of Nursing	7	92	85	9	5	0	0	0	99
Eshelman School of Pharmacy	56	36	67	1	23	1	0	0	92
Gillings School of Global Public Health	99	109	170	12	20	5	1	0	208
Subtotal	**232**	**271**	**396**	**28**	**61**	**17**	**1**	**0**	**503**
Total	**1789**	**1327**	**2532**	**152**	**305**	**107**	**14**	**6**	**3116**

Table 2. Study Population by Tenure Status,

Tenure Status	Tenured	Tenure-Track	Fixed-Term	Total
Academic Affairs				
College of Arts & Sciences				
Fine Arts & Humanities	184	64	77	325
Natural Sciences & Math	210	58	64	332
Social & Behavioral Sciences	178	48	31	257
Kenan-Flagler School of Business	42	33	31	106
School of Education	28	6	14	48
School of Government	29	11	9	49
School of Information & Library Science	17	2	3	22
School of Journalism & Mass Communication	20	17	6	43
School of Law	31	9	3	43
School of Social Work	18	4	43	65
Subtotal	**757**	**252**	**281**	**1290**
Health Affairs: Medicine				
School of Medicine				
Allied Health	20	8	37	65
Basic Sciences	115	29	86	230
Clinical Medicine	314	113	601	1028
Subtotal	**449**	**150**	**724**	**1323**
Health Affairs: Other than Medicine				
School of Dentistry	48	9	47	104
School of Nursing	26	11	62	99
Eshelman School of Pharmacy	35	9	48	92
Gillings School of Global Public Health	105	21	82	208
Subtotal	**214**	**50**	**239**	**503**
Total	**1420**	**452**	**1244**	**3116**

Regression Models

1. <u>Dependent Variable</u>

The dependent variable was annual salary in dollars.[5]

In the Academic Affairs regression model, a faculty member's 9-month salary was used, not including summer school or overload teaching stipends. Salaries for 12-month faculty members (e.g., the Institute of Government) were converted to 9-month salary equivalents by multiplying by 0.818 (9/11), as recommended by the AAUP.

For the School of Medicine regression model, 12-month total salary was the dependent variable, which calculated as the sum of the base salary (the annual negotiated salary) and bonus payments from clinical services rendered (RVUs) at any point during the 2010 fiscal year.

For the regression model reflecting the salaries for the Health Affairs schools other than the School of Medicine (Schools of Dentistry, Nursing, Eshelman Pharmacy, and Gillings Global Public Health), we used 12-month faculty salary as the outcome, not including overload or one-time payments. Salaries for the School of Dentistry included RVU income. Nine-month salaries, primarily in the School of Nursing, were converted to a 12-month equivalent by dividing by 0.818.[6]

2. <u>Independent Variables</u>

Each of the three regression models included the same set of independent variables, given in Table 3. In general, these variables can be grouped in domains capturing faculty members' demographic background and various career-related factors:

- Demographics--Gender, race/ethnicity
- Education--Highest earned degree
- Experience and Service Length--Years since terminal degree, years at UNC-Chapel Hill, years prior to UNC-Chapel Hill, years in current rank. We used the years in their raw form (after centering) as well as their "squared" form.[7]
- Professional Status--Appointment type (fixed term, tenure track/tenured), rank, administrative role (major role, other role), distinguished professorship
- Discipline--Indicators for each school/department[8].

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[5] The transformation of salaries to the natural logarithm prior to regression analysis is seen frequently in the literature on faculty salary equity analysis. The advantage of this method is that the transformation sometimes results in a better-fitting overall model when salaries are very skewed or otherwise not normally distributed. The coefficients from the model must undergo a mathematical conversion to be read as a percentage difference in salaries (Halvorsen & Palmquist, 1980; Kennedy, 1981), and are not as easily understood by general audiences as when expressed in dollars (Ferree & McQuillan, 1998).

[6] Although the School of Dentistry faculty members receive part of their compensation from clinical activities, that income is embedded in the annual salary listed in the payroll files, and there are no bonuses paid at other points during the year as with Medicine. In that respect, and because of its relatively small size (n = 104), we combined the School of Dentistry with the other non-Medicine Schools under Health Affairs.

[7] Time-related and service length variables expressed as years are often not linearly related to salary. Several authors (Haignere, 2002) have recommended entering a quadratic term (the original variable squared) to the model in addition to the original variable. A variable and its square are highly correlated, so to avoid multicollinearity problems, the original variable was first centered (i.e., each faculty member's number of years is subtracted from the mean number of years for all faculty members) and then squared. Both the centered variable and its square replace the original predictor in the regression models.

[8] In these analyses we used department or unit to reflect market differences. In the 2002 Salary Equity study, we included a market index to reflect the academic medicine marketplace, collected annually by the American Association of Medical Colleges. We elected not to use this variable at this point because it was not a strong predictor in the prior analyses and was collinear with department and units.

3. <u>Interpretation of Regression Coefficients</u>

The unstandardized regression coefficients associated with gender and race/ethnicity can be directly interpreted as the dollar amount of difference between the average salaries of female faculty members and White male faculty members, and between different racial/ethnic groups and White males, after controlling for all the other independent variables in the model. For example, a regression coefficient of -$2,000 for Female predicts that two faculty members who have similar characteristics except for gender would have, on average, salaries that differ by $2,000 (with the female faculty member having the lower salary).

D. Results

1. <u>Descriptive Analyses</u>

Appendix B describes the control variables and how they relate to gender and race of the faculty for the Academic Affairs, School of Medicine, and Health Affairs other than the School of Medicine.

Specific findings with respect to <u>gender</u> include the following findings. Compared to male faculty members, female faculty members are more likely to:
- Hold a fixed term appointment.
- Have the rank of assistant or instructor.
- Not hold a distinguished title.
- Have spent fewer years in their current ranks.
- Be in a lower-paying discipline area.

With respect to <u>race/ethnicity</u>, in comparison with White faculty members, faculty members from racial/ethnic groups other than White are more likely to:
- Be on tenure track, but not yet tenured.
- Hold rank below full professor.
- Have spent fewer years in their current ranks.

2. <u>Regression Analyses</u>

Full results for the three separate regression analyses (Academic Affairs, School of Medicine, and Other Health Affairs) are given in Appendix D.

The same independent variables were used in each of the three analyses with only minor modifications. Each block of variables that entered into the model (education level, status, department/discipline, experience, and career level) made substantial contributions to the prediction of salary. The variables reflecting gender (Female) and the racial/ethnic groups (Black/African-American, Asian, Hispanic/Latino/a, Native American, and other groups) did not increase the percentage of variance already accounted for by the overall model, which averaged 80% across the three analyses.[9]

a. Academic Affairs
The results of the Academic Affairs regression analyses are summarized below in Table 3. The gender coefficient indicated that female faculty members on average received lower salaries than the White male reference group, after controlling for all other variables in the model. Regression coefficients reflecting the three race/ethnicity contrasts were positive for Black/African-American faculty members and Asian faculty members and negative for the group consisting of Hispanic/Latino/a, Native American, and other faculty members.

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[9] Selected two-way interactions with gender and with race/ethnicity did not reveal associations with salary. However, a two-way interaction emerged for gender and whether or not a faculty member held a permanent or term distinguished title, showing that the association between having a distinguished title and higher salary, differed as a function of gender.

Table 3. Academic Affairs: Multiple Regression Analysis Results

	N	%	Adjusted R^2	Coefficient
Total Population	1290	100.0%	83.6%	
Female	509	39.5%		-$1,431
Black/African-American	74	5.7%		$1,348
Asian	103	8.0%		$2,871
Hispanic/Latino/a, Native American, Other	69	5.3%		-$1,909

Note. The independent variables used in this regression model are described in Appendix C. For Academic Affairs, the reference group consists of faculty members who are male, White, untenured assistant professors, with a Ph.D., with no administrative role, no distinguished title, and who are from the History Department.

Using the AAUP model, we explored whether particularly high or low salaries tended to occur in specific gender and race/ethnicity groups. For example, salaries below the 10th percentile after adjustment for factors described in Appendix C (corresponding to a difference of $21,407) were less likely to belong to Asians and Black/African-American females. Salaries above the 90th percentile (corresponding to a salary differential of $18,022) tended to belong to male faculty members. It must be noted that the sample sizes are extremely small for this descriptive analysis.

b. School of Medicine Regression Analysis

The School of Medicine analyses must reflect the very heterogeneous faculty, the wide variations in the market values of its disciplines, and the differentiated income plans present in that academic unit. We conducted two sets of models. The first analysis considered the entire School of Medicine faculty and did not include relative value units (RVUs) in the analysis. The second analysis focused on the largest subgroup in the School of Medicine: Clinical Medicine. This analysis included RVUs to help capture clinical practice income.

Table 5 provides the regression coefficients for the total School of Medicine sample and the Clinical Medicine sub-analysis. After controlling for the other independent variables in the model, in the School of Medicine it is clear that there were large negative coefficients for women and the race/ethnic groups under study. This difference is even more pronounced in Clinical Medicine.

Table 4. School of Medicine: Multiple Regression Analysis Results

	N	%	Adjusted R^2	Coefficient
Total Population	1323	100.0%	74.1%	
Female	547	41.3%		-$13,158
Black/African-American	50	3.8%		-$1,898
Asian	141	10.7%		-$12,593
Hispanic/Latino/a, Native American, Other	40	3.0%		-$3,398
Clinical Medicine	1028	100.0%	72.7%	
Female	424	41.2%		-$16,040
Black/African-American	45	4.4%		-$6,617
Asian	104	10.1%		-$14,381
Hispanic/Latino/a, Native American, Other	32	3.1%		-$10,665

Note. The independent variables used in this regression model are described in Appendix C. Relative Value Units were included in the analysis for Clinical Medicine only. The School of Medicine reference group consists of White male assistant professors on the tenure track, with an MD only, who are in the Department of Medicine with no clinical subspecialties, no distinguished title, and no administrative duties.

The study of the pattern of relatively extreme salaries derived from applying the AAUP model showed that in the lowest part of the distribution of residuals, a higher percentage of these values for faculty members were Asian, male Hispanic/Latino, Native American, or "other" ethnicity. For the upper part of the distribution of residuals, no gender or race/ethnic group had a particularly high percentage of residuals represented.

c. Other Health Affairs Professional Schools Regression Analysis
This analysis included all tenured/tenure track and fixed term faculty in the School of Dentistry, School of Nursing, UNC Eshelman School of Pharmacy, and UNC Gillings School of Global Public Health. School of Dentistry salaries include any clinical income received as part of their total compensation.

The regression model results are summarized in Table 5. Similar to the other analyses, the regression model explained a large portion of the variance in salaries, although gender and ethnicity contributed virtually nothing over and above the other variables. As in other analyses, being a faculty member who was female or who was Asian was negatively related to salaries, while being a faculty member who was Black/African-American was positively associated with salaries, controlling for all other variables.

Table 5. Other Health Affairs (Nursing, Eshelman Pharmacy, Dentistry, Gillings Global Public Health): Multiple Regression Analysis Results

	N	%	Adjusted R^2	Coefficient
Total Population	503	100.0%	75.4%	
Female	271	53.9%		-$2,670
Black/African-American	28	5.6%		$5,768
Asian	61	12.1%		-$9,783
Hispanic/Latino/a, Native American, Other	18	3.6%		$409

Note. The independent variables used in this regression model are described in Appendix C. For the Health Affairs units that are not in the School of Medicine, the reference group consists of White male assistant professors on the tenure track, with a Ph.D., no distinguished title, and no administrative duties at the department chair level or higher.

We next examined the residual values when the AAUP model was applied to the other Health Affairs units (without the School of Medicine). These residuals were examined to determine the extent to which discrepancies between actual and model-predicted salaries were a function of race and gender. The highest 10% of residuals represent actual salaries that exceed model-predicted salaries by the greatest amount, and the lowest 10% of residuals represent actual salaries that are below model-predicted salaries by the greatest amount. If race and gender were not factors related to salary, the gender and race distributions in the highest 10% and lowest 10% of residuals should mirror that of the faculty as a whole. We found that white males were underrepresented in the lowest 10% of residuals relative to all other groups (indicating that salaries of white males are more favorable). In the upper 10% of residuals, we found that white females and Asian males were underrepresented (indicating that salaries of white females and Asian males are less favorable).

E. Summary of Findings

As we observed in the 2002 Salary Equity Study, there were some important consistencies across all populations examined in the current study. Each regression model was highly predictive of salaries, with R^2 values in the range of 0.72 - 0.83. These findings show that a significant portion of the variability in faculty salaries could be accounted for by the selected study variables.[10] Furthermore, across all populations and all models, the strongest predictors of salary as indicated by the relative size of their standardized coefficients were those variables that we commonly attribute to higher salaries (in descending order of magnitude):

- Specializing in a high paying discipline
- Being at the rank of full professor
- Holding a major administrator role, such as Associate Dean
- Having a distinguished title
- Holding another administrator role, such as department chair
- Having a tenure-track appointment as opposed to fixed-term.

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[10] Although the models developed are quite predictive, the results indicate that approximately 20% of the variability in faculty salaries was not explained by the analyses. This remaining variability might well be due to differences in the quality of faculty contributions that are not accounted for in these regression analyses. Most faculty salary increases are allocated to individuals based on merit, and it is quite likely that individual differences in productivity over time account for a great deal of the unexplained variance observed here.

The findings with respect to gender and race/ethnicity varied depending on which part of the University was being examined.

For Academic Affairs, there were relatively small negative salary differences for gender and the racial/ethnic group reflecting Hispanic/Latino/a, Native American, and other race/ethnicities. Faculty members who were Black/African-American or who were Asian showed a positive coefficient.

The School of Medicine analyses, however, showed more substantial differences: analyses revealed large negative salary consequences for females and all underrepresented racial/ethnic groups studied here. These differences were even more pronounced in the Clinical Medicine divisions.

Use of the relative value units in salary analysis is relatively new and is a promising addition to these analyses given that they represent clinical productivity. Additional documentation regarding the calculation of these relative value units would be useful to future studies.

The Health Affairs departments other than the School of Medicine showed yet another pattern with female faculty members and Asian faculty members showing negative salary coefficients, while Black/African-American faculty members showed positive coefficients.

When the AAUP model was used to understand if there was differential representation of relatively low or high salaries across gender and race/ethnicity, there were subgroups where these differentials were more likely to occur. Further analyses at the school/department level can focus on the individuals with large negative or positive disparities between their predicted and actual salaries to determine what productivity differences or other factors that could not be measured here might account for the observed gap.

F. Comparison with 2002 Study

The 2009 faculty population used in this study differed considerably from the one analyzed in the 2002 Faculty Salary Equity Study. Selection criteria were comparable across the two studies, but the shift in faculty demographic characteristics during the past decade changed the overall faculty profile considerably. Total faculty increased in numbers by 725 (29.5%). The percentage of female and non-white faculty increased, particularly in the School of Medicine. The percentage of fixed-term faculty among all faculty in Medicine grew significantly. While it is not clear that these population changes impacted any of these findings, they are worth noting when considering changes in compensation patterns over time. Table 6 shows how the composition of the faculty has changed over this period.

Table 6. Composition of the faculty

	Academic Affairs		School of Medicine		Other Health Affairs	
	2002	2009	2002	2009	2002	2009
N	1093	1290	941	1387	421	503
Female	32%	40%	30%	41%	47%	54%
Non-White	14%	19%	13%	18%	13%	21%
Fixed-Term	15%	22%	35%	52%	38%	48%

G. Recommendations Arising From the Salary Study

The Provost should appoint a task force composed predominantly of persons from outside the School of Medicine to investigate salary allocation practices in the School of Medicine, especially the Clinical Medicine departments, to identify the reasons behind the differences in salary by gender and race/ethnicity revealed in this study. Particular attention should be paid to the fact that the differences have increased since the 2002 salary equity study, which suggests that they may arise from entrenched practices in salary allocation.

The unit head responsible for salary allocation for each faculty member whose salary deviates by 1.5 standard deviations (1.5σ) or more (in either direction) from the value predicted by the regression analysis should be asked to justify the salary (in writing) to the Provost. These explanations should be examined by a committee appointed by the Provost for this purpose in an effort to identify any systematic practices that may result in such deviations being concentrated in particular groups of faculty members.

III. Promotion Study

A.   Methodology

1. Data Sources

Data for the studies reported here were derived primarily from the University's Human Resources Data Warehouse. The warehouse is a repository of annual snapshots of University employee records taken at designated points during each year since 1994. The warehouse data were supplemented and validated using a variety of other sources, including the University's official Fall Personnel Data Files submitted annually to UNC General Administration, extracts from the payroll system, hardcopy personnel files maintained by the Office of the Provost, and departmental records.

These sources contain data originally collected for administrative use in business processes such as hiring, payroll, salary increases, employee terminations, and budget management. As a result, some historical information that might contribute to a more complete understanding of variations in individual faculty career progression was either never collected in electronic form or was not systematically maintained in these legacy systems. For example, no information on appointments held prior to employment at UNC-Chapel Hill – which could have accounted for some of the variance observed in time to promotion -- was available in electronic format.

The data that are stored in the Human Resources Data Warehouse also present a number of challenges for longitudinal analyses. Since the warehouse tables were developed using annual snapshots of employee status at specific points such as calendar or fiscal year end, events that occur between these capture points can be lost. For example, a leave of absence taken between January and June will most likely be missed when building a longitudinal record of an individual faculty member. One of the charges to the current Faculty Salary Equity Study Committee was to extend previous tenure and promotion analyses by adjusting time to tenure for leaves and tenure clock extensions for family-related obligations that disproportionately fall to females. Since there were no complete records on these events, faculty leaves had to be identified and coded manually using department staff recollections, review of 500+ individual paper personnel files, and 15 years of Board of Trustee minutes on personnel actions. The results reported here most likely undercounted these events, and in many cases the timing and duration of the leaves had to be estimated.

The reliability and validity of the findings of the promotion study might also be compromised to an unknown extent by the quality of data extracted from these campus systems. Particularly for the earlier cohorts used in this study, missing and inconsistent data on tenure status, appointment and promotion dates, and degrees earned required many months of staff time to research and verify. Dozens of faculty records had to be supplemented by information from internet searches. **Until a comprehensive review and clean-up of existing faculty personnel data is completed and the University commits to maintaining quality data in the future, the credibility and usefulness of studies of this kind will be limited.**

2. Description of Study Population

The objective of these analyses was to examine promotion patterns of recent cohorts of tenure track assistant professors and tenured associate professors at UNC-Chapel Hill for any evidence of sex and race/ethnicity differences in promotion rates and time-to-promotion that are not easily explained by other factors. Longitudinal analyses of faculty cohorts involve several logistical issues. Cohorts of faculty with similar characteristics are difficult to create because of the relatively small numbers of new appointees to tenure track and tenured positions made each year. In addition, new hires at the same rank can vary significantly in terms of prior experiences that later influence the likelihood of achieving tenure and time to promotion. The following criteria were used to select population members for the assistant and associate professor analyses.

a. Assistant Professor

Criteria for the Assistant Professor population were:

- First appointment at UNC-Chapel Hill as a full-time tenure track assistant professor. Those with prior appointments as fixed term or visiting faculty at this institution were not included in this analysis. . Approximately a dozen cases were deleted due to missing or conflicting information regarding tenure status that could not be resolved.

- A beginning appointment date that fell between January 1, 1994 and September 1, 2003. This provided nearly 10 full years of new hires that could be followed for a minimum of seven years to observe tenure outcomes.

A total of 568 faculty members met these criteria. Their characteristics are described in the Table 7.

Documentation that a tenure clock extension or a personal or family-related leave of absence was approved during the tenure track period was found for 48 of the 568 cases (8.5%). Females accounted for 74% and non-white faculty 18% of these approvals. Twenty-eight of these approvals were tenure clock extensions, with 27 granted for twelve months and 1 for six months. The time to tenure variable used in the analysis was reduced by the length of the extension. Leave of absence periods varied, and some records did not provide enough information to determine the length. In those cases, a period of six months – the average length of time reported for cases with adequate documentation – was used to adjust the time to tenure.

b. Associate Professor Criteria:

- Tenured appointment at the associate professor rank with an effective date between July 1, 1990 and July 1, 2000. Faculty who received their appointments after July 1, 2000 could not be followed for an entire 10 year period, since the most recent, complete data on personnel actions available for this study ended with August 2010.

- To maintain a large-enough pool for statistical analysis, those who were identified as active tenured associate professors in the 1994 and later files that exist in the Human Resources Data Warehouse, but who had an effective tenure appointment date no earlier than July 1, 1990 were included. This strategy possibly omitted a few tenured associate professors (estimated to be fewer than ten) who were appointed between 1990 and 1993 but left that post before 1994.

- Faculty who were hired at an initial rank of associate professor in a fixed term appointment and later moved to a tenured or tenure track position were excluded. Those who were hired as associate professors on tenure track were included, and the date tenure was granted was used as the beginning date for determining time to full professor status.

3. Statistical Analysis

Data were analyzed using simple descriptive statistics and by using the Cox proportional hazards model for time to promotion, adjusting for relevant factors of interest. The descriptive statistics include gender and racial/ethnic composition of the cohorts and percentage of cohort members who experienced no change in rank, a promotion, or who resigned in each year (overall and stratified by gender, race/ethnicity, and division). Reasons for resignation (e.g., leaving academia, taking a different academic position) have not been consistently maintained by the University. Average time to promotion, among the faculty members promoted, was calculated by gender, race/ethnicity, and unit in the associate professor cohort. The Cox proportional hazards model was used to examine differences in time to promotion as a function of gender and race/ethnicity after adjustment for important factors such as type of terminal degree, prior experience, and division. Time to promotion was censored at the time of resignation without promotion. In many cases this censoring is likely to be informative (e.g., the reason for resignation may be to take a more attractive position elsewhere or to seek alternative employment when promotion is unlikely). However, because the University currently does not consistently maintain high-quality data on place of employment after departure from UNC or on reasons for departure, the analysis could not account for these explanatory factors.

B. Results from the Assistant Professor Cohort

1. Demographic Characteristics of the Cohort

The Assistant Professor cohort contained 568 faculty members, of whom 39.8% were female and 60.2% were male, as seen in Table 7. The cohort was majority white (80.3%), with 11.8% Asian, 4.9% African American, 2.5% Hispanic, and 0.5% Native American.

Table 7. Assistant Professors by Sex and Race/Ethnicity

| | Sex | | | | Total | Total by Race/Eth |
| | Female | | Male | | | |
	N	%	N	%		
White	176	38.6%	280	61.4%	456	80.3%
Black/AA	24	85.7%	4	14.3%	28	4.9%
Native American	1	33.3%	2	66.7%	3	0.5%
Asian	19	28.4%	48	71.6%	67	11.8%
Hispanic	6	42.9%	8	57.1%	14	2.5%
Total	226	39.8%	342	60.2%	568	100.0%

2. Probability of Promotion and Time to Promotion from Assistant to Associate Professor

While very large differences were not found as a function of gender, the probability of promotion to tenured associate professor was higher for men (64.6%) than for women (60.2%). Table 8 shows the number hired and the percentage tenured within seven years. The probability of promotion was higher for Asian (65.7%) than for white (63.2%) faculty members, and both Asian and white faculty members had higher probabilities of promotion than those of African-American, Native American, and Hispanic (55.6%) faculty members. Trends by gender and race were similar in both Academic Affairs and Health Affairs, although the overall probability of promotion was substantially lower in Health Affairs (53.7%) than in Academic Affairs (71.9%). The Task Force found evidence of a trend in the School of Medicine of moving tenure-track faculty members to other tracks before the time of promotion. Adjustment for other factors in the time to event analysis (terminal degree, prior experience, and division) did not have a large effect on these differences.

Table 8. Assistant Professors Tenured/Promoted to Associate within Seven Years

	All		Female		Male		White		Asian		Others	
	H	Ten.	H	Ten.	H	Ten.	H	Ten.	H	Ten.	H	Ten.
AS HFA	58	75.9%	29	72.4%	29	79.3%	45	80.0%	6	50.0%	7	71.4%
AS Soc Sci	70	70.0%	35	65.7%	35	74.3%	54	70.4%	10	60.0%	6	83.3%
AS Sci Math	79	77.2%	20	65.0%	59	81.4%	65	75.4%	13	92.3%	1	0.0%
Acad Affairs Other	78	65.4%	39	69.2%	39	61.5%	61	65.6%	7	85.7%	10	50.0%
Med Clinical	162	43.2%	46	43.5%	116	43.1%	141	46.1%	14	21.4%	7	28.6%
Med Basic Sci	46	89.1%	15	86.7%	31	90.3%	33	90.9%	9	88.9%	4	75.0%
Health Affairs Other	75	54.7%	42	45.2%	33	66.7%	57	52.6%	8	75.0%	10	50.0%
Total	**568**	**62.9%**	**226**	**60.2%**	**342**	**64.6%**	**456**	**63.2%**	**67**	**65.7%**	**45**	**55.6%**

Among faculty members who did achieve tenure, average times to tenure by race, ethnicity, and gender followed different trends between divisions, as illustrated in Figure 1. In Academic Affairs, the average time to tenure was 5.3 years for white and Asian faculty members and 5.9 years for African-American, Hispanic, and Native American faculty members. Mean time to tenure for women faculty members in Academic Affairs was 5.6 years, compared to 5.1 years for their male counterparts. In Health Affairs, mean time to tenure was 6.1 years for white faculty members and 5.9 years for Asian faculty members as well as for African-American, Hispanic, and Native American faculty members. Average time to tenure for women faculty members in health affairs was 5.9 years compared to 6.1 years for men. Adjustment for other factors (terminal degree, prior experience, and division) considerably reduced the magnitude of these differences.

Table 9. Assistant Professor Time to Tenure

	All		Female		Male		White		Asian		Others	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
AS HFA	44	5.46	21	5.34	23	5.57	36	5.35	3	5.67	5	6.10
AS Soc Sci	49	5.42	23	5.78	26	5.10	38	5.30	6	6.00	5	5.60
AS Sci Math	61	5.13	13	5.73	48	4.97	49	5.22	12	4.75		
Acad Affairs Other	51	5.30	27	5.50	24	5.07	40	5.20	6	5.42	5	5.90
Med Clinical	70	6.07	20	5.82	50	6.17	65	6.07	3	5.82	2	6.50
Med Basic Sci	41	6.18	13	6.12	28	6.21	30	6.29	8	6.10	3	5.30
Health Affairs Other	41	5.92	19	5.83	22	5.99	30	5.94	6	5.72	5	6.00
Total	357	5.63	136	5.70	221	5.59	288	5.62	44	5.53	25	5.88

C. Results from the Assistant Professor Cohort

1. Demographic Characteristics of the Cohort

The Associate Professor cohort contained 535 faculty members, of whom 35.5% were female and 64.5% were male. The cohort was majority white (86.7%), with 6.0% Asian, 5.2% African American, 1.7% Hispanic, and 0.4% Native American.

Table 10. Associate Professors by Sex and Race/Ethnicity

	Sex				Total	Total by Race/Eth
	Female		Male			
	N	%	N	%		
White	165	35.6%	299	64.4%	464	86.7%
Black/AA	11	39.3%	17	60.7%	28	5.2%
Native American	0	0.0%	2	100.0%	2	0.4%
Asian	8	25.0%	24	75.0%	32	6.0%
Hispanic	6	66.7%	3	33.3%	9	1.7%
Total	190	35.5%	345	64.5%	535	100.0%

2. Probability of Promotion and Time to Promotion from Associate to Full Professor

Probability of promotion from associate to full professor was lower for women than men in Academic Affairs, while there was little evidence of a gender difference in Health Affairs. (See Table 11.) In Academic Affairs, the probability of promotion to full professor in 7 years was 40.9% for women and 58.5% for men; the probability of promotion to full professor in 10 years was 53.4% for women and 67.7% for men. In Health Affairs, the probability of promotion to full professor in 7 years was 46.1% for women and 44.8% for men; the probability of promotion to full professor in 10 years was 57.8% for women and 59.7% for men.

Table 11. Associate Professor Promotions to Full Professor

	Total		Female		Male		White		Asian		Others	
	N	%	N	%	N	%	N	%	N	%	N	%
Academic Aff. (N=252)												
Within 7 Yrs.	132	52.4%	36	40.9%	96	58.5%						
Within 10 Yrs.	158	77.2%	20	65.0%	59	81.4%						
Health Aff. (N=283)												
Within 7 Yrs.	128	45.2%	47	46.1%	81	44.8%						
Within 10 Yrs.	167	59.0%	59	57.8%	108	59.7%						
All (N=535)												
Within 7 Yrs.	260	46.8%	83	43.7%	177	51.3%	228	49.1%	21	65.6%	11	28.2%
Within 10 Yrs.	325	60.7%	106	55.8%	219	63.5%	284	61.2%	24	75.0%	17	43.6%

As might be expected, faculty members hired externally at the associate rank were more likely to be promoted to full professor in 10 years (66.7%) than their counterparts who had been promoted from assistant professor at UNC-Chapel Hill (58.7%). However, upon closer examination this trend was driven by women (71.4% of external hires were promoted within 10 years compared to 51.4% of those who had been assistant professors at UNC), with corresponding promotion probabilities similar among men (64.6% versus 63.1%, respectively).

While the number of non-white faculty members in this cohort was not large, the trends by race/ethnicity were striking. The small number of minority faculty members precluded examinations of trends within division. In addition, small sample sizes required grouping of all non-Asian minorities. In the University at large, Asian faculty members were most likely to be promoted, followed by white and traditionally underrepresented minority (African American, Native American, and Hispanic) faculty members. Specifically, the probability of promotion to full professor in 7 years was 65.6% for Asian faculty members, 49.1% for white faculty members, and 28.2% for minority faculty members. The probability of promotion to full professor in 10 years was 75.0% for Asian faculty members, 61.2% for white faculty members, and 43.6% for minority faculty members.

Among faculty members who were promoted to full professor, mean times to promotion by race/ethnicity were 4.8 years for Asian faculty members, 5.6 years for white faculty members, and 5.9 years for traditionally underrepresented minority faculty members. (See Table 13) Trends were similar in Academic Affairs and Health Affairs. In Academic Affairs, the average time to promotion to full professor was 4.7 years for Asian faculty members, 5.2 years for white faculty members, and 5.5 years for traditionally underrepresented minority faculty members. In Health Affairs, mean time to promotion to full professor was 4.9 years for Asian faculty members, 5.9 years for white faculty members, and 6.4 years for traditionally underrepresented minority faculty members. .

Table 13. Associate Professor Time to Promotion to Full Professor (Of Those Promoted Within 10 Years)

	Total		Female		Male		White		Asian		Others	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Academic Aff.	158	5.2	47	5.6	111	4.9	137	5.2	11	4.7	10	5.5
Health Aff.	167	5.9	59	5.9	108	5.8	147	5.9	13	4.9	7	6.4
All	325	5.5	106	5.8	219	5.4	284	5.6	24	4.8	17	5.9

Among faculty members who were promoted to full professor, average times to promotion by <u>gender</u> followed different trends between groups. Mean time to promotion from associate to full professor for female faculty members in Academic Affairs was 5.6 years, compared to 4.9 years for their male counterparts. This gender difference was driven by the non-fine-arts divisions (in fine arts, women were promoted on average 0.8 years earlier than their male counterparts, a trend strongly countered by other academic affairs units). The difference was much smaller in Health Affairs: average time to promotion for women faculty members was 5.9 years, compared to 5.8 years for their male counterparts.

These differences are essentially unchanged by adjustment for other relevant factors in the time to event analysis (terminal degree, prior experience, and division), as illustrated in the following plots.

D. Recommendations Arising From the Promotion Study

The Provost should direct the Appointments, Promotion and Tenure (APT) committee to investigate evaluation and promotion practices in Academic Affairs to identify the reasons behind the differences in promotion rates by gender and race/ethnicity revealed in this study. Particular attention should be paid to the fact that the differences persist in faculty cohorts hired relatively recently, and therefore are unlikely to reflect earlier practices now discontinued.

IV. Hiring Study

This section of the Faculty Salary Equity Task Force explores the data on the hiring of faculty members who are members of traditionally underrepresented minority groups, with a focus on the significant role existing diversity programs have had in the hiring of underrepresented faculty. The scope of these data is limited primarily to the years 1994 to 2003 to accord with the promotion study described earlier in this report.

A. Current Minority Initiatives

The Carolina Postdoctoral Program for Faculty Diversity (CPPFD), under the auspices of the Office of the Vice Chancellor for Research, was established in 1983 to develop scholars from underrepresented groups for possible tenure track appointments at the University of North Carolina and other research universities throughout the nation.[11] The program has grown to a continuing class of ten scholars who serve two-year postdoctoral appointments in the College of Arts & Sciences and the professional schools. As of July 2011, 151 scholars have participated in the program. Of these 151 scholars, 36 (24 percent of all those who participated in the program) were hired by the University, and 28 (19 percent of all participants) remain employed by the University. Of these 28 faculty members, 8 were hired as assistant professors between 1994 and 2003.

The Simmons Scholar Program was established in 1994 to improve diversity in the faculty of the School of Medicine. According to a strategic plan report published by the School of Medicine in 2006, "This program has been the single most successful tool for bringing under-represented minorities to our faculty. The program should be further supported, and its availability for bringing faculty other than research-oriented assistant professors to campus better publicized."[12] Since 1994, 24 Simmons Scholars have been appointed, and of these, 14 remain employed by the School of Medicine. Of these 14 Simmons Scholars currently employed, 2 were appointed between 1994 and 2003.[13]

The Provost's Target of Opportunity Diversity Initiative was established in 2001. Its mission is to "attract accomplished and talented new faculty members [from all ranks and] from underrepresented groups for

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[11] All data and information on the Carolina Postdoctoral Program for Faculty Diversity provided by Susan Walters, Program Manager, Carolina Postdoctoral Program for Faculty Diversity, Office of the Vice Chancellor for Research.
[12] UNC School of Medicine, *Strategic Plan*, October 2006, p. 36.
[13] This data provided by Carol J. Edenton, Executive Assistant, Medicine Administration.

tenure track [or tenured] appointments at the University of North Carolina at Chapel Hill. This may include individuals who grew up in economically disadvantaged circumstances, individuals with substantial professional experience working with minority and economically disadvantaged populations; individuals doing significant research on issues that disproportionately affect minority and disadvantaged populations; and individuals whose teaching or research specialty is in a field that is currently underrepresented in the University faculty."[14] It is important to note that the CPPFD fellows who have been hired by the University as faculty are appointed under the Provost's Target of Opportunity Diversity Initiative. Therefore, the following data only include those faculty members from minority groups who had not been fellows of the CPPFD and who are still employed by the University: from 1994 to 2003, 2 African American males, 2 African American females, and 1 Hispanic female were hired under the Provost's Target of Opportunity Diversity Initiative.

B. Results

Of the 585 assistant professors hired by the University between 1994 and 2003:

- Whites totaled 465 (284 males, 181 females) or 79.5% of assistant professors.
- Asians totaled 71 (52 males, 19 females) or 12.1% of assistant professors.
- African Americans totaled 31 (4 males, 27 females) or 5.3% of assistant professors.
- Hispanics totaled 15 (8 males, 7 females) or 2.6% of assistant professors.
- Native American totaled 3 (2 males, 1 female) or 0.5% of assistant professors.

These low numbers of minority hires were especially acute in the College of Arts and Sciences. Of the 210 assistant professor hired in the college, only 1 African American male, 6 African American females, 4 Hispanic males, 3 Hispanic females, 1 Native American male, and 1 Native American female were hired. Of the 216 hires in the School of Medicine, there were only 2 African American males, 6 African American females, 2 Hispanic males, 1 Hispanic female, and 1 Native American male. A notable percentage of these hires had been fellows in the CPPFD or appointed via the Simmons Scholar Program and the Provost's Target of Opportunity initiative.

For instance, the 1 African American male, 4 of the 6 African American females, and the 1 Native American male who were hired in the College of Arts and Sciences had come to the University via the CPPFD. This means that 77 percent of all African American and Native American faculty members hired in the College between 1994 and 2003 were fellows in this program. Meanwhile, 1 Hispanic female was hired in the College under the Provost's Target of Opportunity Hire initiative. This one hire constituted 14 percent of all Hispanic faculty members hired in the College between 1994 and 2003, whereas *the one African American male hired in the College during this same period was a Carolina Postdoctoral Program for Faculty Diversity fellow*.

The 1 Native American male hired in the School of Medicine was a fellow in the CPPFD, while the 2 African American males hired in the School of Medicine were Simmons Scholars. 1of the 3 African American females was a targeted hire. Forty-four percent of all African American and Native American hires in the School of Medicine were either targeted hires, Simmons Scholars, or had been fellows in the CPPFD.

Lastly, of note, out of the total 38 assistant professors hired in the UNC Gillings School of Global Public Health, 12 or 31.6% were minorities. Of these 12 minority hires, 1 African American female, representing 8.3% of these hires, was appointed via the Provost's Target of Opportunity Initiative.

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[14] Office of the Executive Vice Chancellor and Provost. http://provost.unc.edu/announcements/news_item.2010-07-19.2192199229. Accessed November 8, 2011.

C. *Summary of Findings*

These programs have contributed notably to the appointment of members of underrepresented groups as junior faculty members, especially in the College of Arts and Sciences. For this reason they need to be further supported and expanded by the University, particularly since recent reports and studies show that in spite of these initiatives the lack of minority representation among faculty has only slightly improved. Minority representation in the assistant professor rank remains particularly low. The Office of Diversity and Multicultural Affairs published its *Diversity Plan Report, 2009-2010* in 2010. Among its findings were the following data for minority assistant professors as of 2009[15]:

- 81.0% of all faculty (including fixed term) in the University are white.
- White assistant professors make up 9.2% of all faculty.
- Asian assistant professors make up only 2.0% of all faculty.
- African American assistant professors make up only 1.0% of all faculty.
- Hispanic assistant professors make up only 1.0% of all faculty.
- American Indian assistant professors make up less than 0.2% of all faculty.

This study also indicates that among the total 425 assistant professors as of 2009:

- Whites totaled 295 or 69.4% of assistant professors.
- Asians totaled 63 or 14.8% of assistant professors.
- African Americans totaled 31 or 7.3% of assistant professors.
- Hispanics totaled 27 or 6.4% of assistant professors.
- American Indians totaled 6 or 1.4% of assistant professors.

In comparing these percentages from 2009 to those from 2003 above, we conclude that:

- Whites decreased from 79.5% to 69.4% of all assistant professors.
- Asians increased from 12.1% to 14.8% of all assistant professors.
- African Americans increased from 5.3% to 7.3% of all assistant professors.
- Hispanics increased from 2.6% to 6.4% of all assistant professors.
- American Indians increased from 0.5% to 1.4% of all assistant professors.

The percentage of minority assistant professors across the University has increased from a total of 20.5% in 2003 to 29% in 2009.[16] We can attribute these increases in part to the ongoing contributions the CPPF, the Provost's Target of Opportunity Initiative, and the Simmons Scholars Program are making to the University's diversity goals. For instance, between 2004 and 2009:

- 11 fellows were hired from the CPPFD, representing 9% of all minority assistant professors employed by the University as of 2009.
- 21 Target of Opportunity hires were appointed as assistant professors, representing 17% of all minority assistant professors employed by the University as of 2009.
- 3 Simmons Scholars were appointed in the School of Medicine, representing 2% of all minority assistant professors employed by the University as of 2009.

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[15] Office of Diversity and Multicultural Affairs, *2009-2010UNC-Chapel Hill Diversity Plan Report*, p. 14.

[16] According to an article recently published in *The Daily Tar Heel*, 20 percent of all tenured and tenure-track faculty in the College of Arts and Sciences since July 1, 2010 are minorities, an increase of 13 percent from one decade ago. This same article reports that Dean Karen Gill appointed a task force in fall 2010 to explore ways the College could enhance faculty diversity. Recommendations of this taskforce are scheduled to be submitted to Dean Gill on September 23, 2011. Nicole Comparato, "The College of Arts and Sciences is coming to grips with the fact that it now has no black department chairmen, highlighting a lack of diversity on campus," *The Daily Tar Heel* 119/75 (September 21, 2011), pp. 1, 4.

A total of 35 minority assistant professors were hired between 2004 and 2009 as a result of these three programs: a contribution of 28% of all minority assistant professors employed by the University as of 2009, while only 13 were hired between 1994 and 2003.

While the reports and studies mentioned above confirm that the University has a long way to go to meet its diversity goals, they do not address the question of why more minorities are not being hired via conventional departmental hiring procedures. Are departmental hiring committees and chairs doing enough to recruit minority applicants and to identify minority candidates on their short-lists?

During the 2010-11, academic year, the Office of Diversity and Multicultural Affairs and the Office of Institutional Research and Assessment, in consultation with EEO/ADA, Human Resources, Faculty Governance, and the Division of Student Affairs will conduct a diversity climate assessment.[17] Perhaps this study will offer some insight into the diversity climate within the college's departments and the University's professional schools.

D. Recommendations Arising From the Hiring Study

The University should not depend only on minority hiring initiatives and programs to achieve its diversity goals. The Deans of the various Schools should direct departments and other hiring units within their schools to increase their efforts to recruit more minority applicants to apply for national searches. To this end, training in best practices for search committees (now mandatory according to EEO rules) should be enforced, and its effectiveness should be evaluated.

The Carolina Postdoctoral Program for Faculty Diversity, the Simmons Scholar Program and the Provost's Target of Opportunity initiative should be further supported and expanded by the University, particularly since recent reports and studies show that in spite of these initiatives the lack of minority representation among faculty has not improved.

V. Recommendations

The overall finding that little has changed between the 2002 and 2012 reports hints at the extraordinary difficulty of continuous monitoring of factors relevant to faculty compensation and promotion. Obtaining all the data for the study required extraordinary measures, such as sending members of the staff of the Office of Institutional Research and Assessment to the basement of South Building to pour over paper personnel records. When errors (such as incorrect or missing appointment dates) were found during the "data cleaning" process, there was no mechanism available for assuring that corrections were made in the permanent records. Because this type of study necessarily involves retrospective analysis as well as current data, accurate historical records spanning a typical faculty employment period (three decades) are required. Under the current University practices, obtaining such records is often difficult and frequently impossible.

Such ongoing monitoring is necessary if inequities are to be corrected or, better, prevented from arising. The difficulty in regular monitoring, which produces the necessity of periodic studies such as this one, arises in large part because the University has not established a systematic means of assembling and retaining data on these factors for each member of the faculty. The implementation, currently underway, of a new digital system for personnel data as part of the Enterprise Resource Planning (ERP) process provides a unique opportunity to introduce a means of maintaining the data needed to monitor salary equity on a regular basis. ***It is a primary recommendation of the Task Force that a study of this type be done in the individual Schools at two-year fixed intervals, with periodic re-evaluation of the regression model (perhaps every five years)****. Obviously, this will not be possible with the current system of record-keeping, under which each study is a year-long (or longer) task requiring considerable

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[17] Office of Diversity and Multicultural Affairs, *2009-2010 UNC-Chapel Hill Diversity Plan Report*, p. 5.

time and effort on the part of the Office of Institutional Research and Assessment as well as others. We therefore recommend changes in the way that data on faculty compensation and status are kept.

We present here recommendations arising from the findings of each of the three parts of this study, as well as recommendations regarding data-handling procedures to facilitate ongoing monitoring of salary, promotion, and hiring equity.

A. Recommendations from the Salary Study

Although differences by gender and race/ethnicity in salaries were found in all of the Schools, the most striking differences occurred in the School of Medicine, especially in the Clinical Medicine departments. This was also true in the 2002 salary equity study, and the differences have increased in the past decade (despite the very limited funds made available for salary increases in the last four years). This suggests that whatever practices produced the earlier differences remain unaltered today. It was not possible in this study to consider some variables that would legitimately lead to differences in compensation between individuals, such as scholarly productivity and distinction, or excellence in teaching*. **We recommend that the Provost appoint a task force comprising predominantly persons from outside the School of Medicine to investigate salary allocation practices in the School of Medicine, especially the Clinical Medicine departments, to identify the reasons behind the differences in salary by gender and race/ethnicity revealed in this study.** Particular attention should be paid to the fact that the differences have increased since the 2002 salary equity study, which suggests that they may arise from entrenched practices in salary allocation.

Beyond the aggregate differences in salary between groups, this study has identified a number of individuals whose salaries differ significantly (in either direction) from those predicted by the regression analysis. As described earlier in Section II, we looked for patterns among these outliers by gender and race/ethnicity, and unit in which the faculty appointment is held. Even in the absence of this type of pattern, the individual outliers deserve careful scrutiny to assure that their salaries were appropriately assigned. (All of the outliers will be reported to the Provost in a separate document.) As was done after the 2002 study, *we recommend that the unit head responsible for salary allocation for faculty members whose salaries deviate by 1.5σ or more (in either direction) from the value predicted by the regression analysis be asked to justify the salary (in writing) to the Provost.* In addition, since the unit head would in most cases have been responsible for setting the outlying salary, *we further recommend that these explanations be examined by a committee appointed by the Provost for this purpose.* The group should bring to bear sufficient expertise in faculty evaluation across disciplines (and how it can be influenced by implicit bias) to provide an informed and objective assessment of the justifications provided by the unit heads. This would also provide a means of identifying any systematic practices that may result in such deviations being concentrated in particular groups of faculty members.

B. Recommendation the Promotion Study

The findings detailed in the Promotion Study Section of this report regarding differences in promotion rates among different genders and racial/ethnic groups are troubling, and are worthy of careful attention on the part of the University. The fact that the differences vary by School (and by division within Schools) suggest that local practices (rather than University-wide policies) may be responsible for them. This is particularly worthy of note because the faculty members reported on in this study became eligible for promotion relatively recently, and it is likely that the practices used in those decisions are still in use today. Unless the sources of the disparities are identified and corrected as appropriate, there is no reason to believe that the disparities will not persist indefinitely. We therefore recommend that the various Schools use these findings as a starting point for an investigation into their possible causes within their local practices in hiring, mentoring of junior faculty, allocation of service responsibilities (e.g. advising and committee work), provision of resources for professional development, and evaluation of readiness for promotion.

Differences in rates of promotion and time to promotion based on gender and race/ethnicity were found in all Schools. However, the most significant and systematic differences were found in Academic Affairs. The faculty cohort examined in this study arrived at UNC-Chapel Hill relatively recently, and so the differences in promotion rate and time presumably result from practices currently in use rather than relics of the past. ***We therefore recommend that the Provost direct the Appointments, Promotion and Tenure (APT) committee to investigate evaluation and promotion practices in Academic Affairs to identify the reasons behind the differences in promotion rates by gender and race/ethnicity revealed in this study.***

C. Recommendations from the Hiring Study

As stated in the Academic Plan, "Carolina will recruit, retain, and enhance the inclusiveness of our faculty…Recruitment and retention of faculty members of color and of an array of ethnicities are especially challenging, and requires sustained, informed, and innovative strategies.[18]" The University aspires to a faculty that is excellent and is optimal for carrying out its broad and varied mission. This requires that the faculty include significant representation from various racial and ethnic groups. However, as section IV of this report shows clearly, the fraction of faculty members hired as Assistant Professors at UNC-Chapel Hill who are members of racial/ethnic minorities has increased slightly in recent years, but remains well below the fraction of minorities in the US population, or even in the pool of recent Ph.D. recipients. Further, a large fraction of those new Assistant Professors were hired through one of the targeted programs designed to enhance the diversity of our faculty. This finding highlights the value of these programs, but also raises the question why the University's ordinary hiring practices result in the hiring of so few members of minority groups. Comparison of the demographics of UNC-Chapel Hill's faculty with those of peer institutions[19] shows that while a few institutions report slightly higher percentages of minority members among their faculty, the differences are small enough to be obscured by differences in reporting (e.g. whether or not medical faculty were included). The challenge of diversifying the faculty is thus one faced by major public research universities across the country. However, that should not deter the University from attempting to be a leader in this regard. A careful examination of the composition of the applicant pools for faculty positions (available from the Equal Opportunity / ADA Office) and its relation to the demographics of recent Ph.D. recipients (typically available from federal sources such as the National Science Foundation, the Department of Education, or from disciplinary societies such as the American Institute of Physics) might reveal areas in which the recruiting of a diverse applicant pool could be improved. Training for members of search committees about best practices in recruiting and evaluation of candidates has recently become mandatory according to EEO policy. However, the search committee checklist prepared by the EEO Office only indicates that search committee members "should" complete the online training module, and it is not clear if there is any means in place to enforce the requirement. Information should be gathered to determine if search committee members are in fact completing the training, and the effect of the training should be assessed to see if it is causing any change in the composition of the applicant pools and the number of members of minority groups to whom offers of a position are made. In cases in which an applicant declines the offer of a position, search committees should be asked to ascertain (if possible) the reason for declining the offer and the institution at which the applicant accepted an offer. This is likely to give useful information about how UNC-Chapel Hill can be made more attractive to those (from all racial/ethnic groups and genders) whom the institution wishes to add to its faculty.

Robust efforts to attract a diverse pool of applicants and to make selections free of unconscious bias should prevail in all hiring activities. ***We therefore recommend that the Deans of the various Schools direct departments and other hiring units within the Schools to increase their efforts to recruit more minority applicants to apply for national searches.*** To this end, training in best practices for search committees (now mandatory according to EEO rules) should be enforced, and its effectiveness should be evaluated.

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[18] *Academic Plan 2011* http://academicplan.unc.edu/index.php
[19] Information obtained from the AAUDE Faculty Profile by CIP 2010.

It is clear from the findings of this study that the Carolina Postdoctoral Program for Faculty Diversity, the Simmons Scholar Program and the Provost's Target of Opportunity initiative have been very important to what little progress has been made in recent years in diversifying the faculty. *We therefore recommend that these programs be further supported and expanded by the University.*

D. Recommendations Regarding Data Handling and Future Studies

1. The "Compensation Transcript"

We recommend that the personnel record for each faculty member contain a "compensation transcript," similar in spirit to the academic transcript kept for each student who attends the University. The database in which the compensation data would be kept can be constructed such that access to some information (e.g. nominations to Distinguished Professorships) is limited to maintain confidentiality, while other information (e.g. date of first employment at UNC or current rank) is publicly available. Having such a database would make studies such as the present one far simpler, enabling periodic assessments of the University's progress toward complete equity in compensation. The database would need to be sophisticated and linked to relevant information gathered in other contexts (as noted below). However, the task force is confident that all the necessary features can be incorporated into the system ultimately adopted, provided that they are introduced when the system is implemented rather than added at a later date. Given that the ERP process is currently being applied to personnel records, this recommendation is especially timely.

Below are items we believe should be part of each faculty member's "compensation transcript," (in addition to information routinely included, such as date of highest degree, date of first employment at UNC-Chapel Hill, starting salary, and current base salary) together with a brief explanation of the relevance of each item to equity in salary and promotion.

a. Extensions of the Maximum Probationary Period ("Stopping the Tenure Clock")
In order to determine whether there are inequities between different groups (e.g. men and women) in the time to promotion, it is necessary to have a record of extensions of the probationary period for reasons such as childbirth, as allowed for in Section 2.c.6.iii of the *Tenure and Promotion Code*. Without such information, the time to promotion for some individuals may appear longer than it actually was. *We therefore recommend that extensions of the probationary period be included in the "compensation transcript."*

b. Start-up Package
A new faculty member (especially in the natural sciences) is ordinarily provided with a "start-up package" of resources to allow her/him to establish a research program and compete successfully for external research funding to support the program after the first few years. The resources made available commonly include funding for the purchase of equipment and the renovation or furnishing of laboratory space, stipends for graduate research assistants and postdoctoral researchers, travel funds to attend professional conferences, and the like. This package is the subject of intense negotiation at the time of hiring because it can be crucial to the ultimate success of the faculty member and therefore to her/his future salary and time to promotion. While the details (and magnitude) of the resources provided vary significantly depending on the type of research the new faculty member intends to engage in, it is impossible to determine if such resources are provided equitably without a record of what resources were provided to whom. Since a description of the startup package is included in the formal offer of employment, it should prove possible to capture this information and include it in the database. *We recommend that the information about the start-up package be included in the "compensation transcript."*

c. Research Space Allocation
Especially in the natural sciences, the allocation of laboratory space in which to conduct research is a vital component for success of a faculty member (and thus for her/his time to promotion and salary

increases). As the 1999 *Study on the Status of Women Faculty in Science at MIT*[20] showed, at some institutions the allocation of laboratory space may be influenced by the gender of the faculty member or by other inappropriate factors. It is our understanding that the eSPOTS database of research space on campus has the capability to associate individual researchers with specific spaces, and that reports of how much space is allocated to particular groups of researchers can be generated at will. The database is also linked to the RAMSeS system used by the Office of Sponsored Research, which facilitates the linkage of researchers (and research projects) with specific spaces. Some units (notably in the School of Medicine) have taken advantage of this capability, but it could be extended to as many units as desired by requesting that the necessary fields be added to the forms used by the unit's space coordinator*. **We recommend that all units for which research space is relevant be asked to include specific space assignments in eSPOTS, and that for faculty members making use of research space, the "compensation transcript" include a link to this database**. This will make it possible to correlate research space allocated with salary and time to promotion among various subgroups.

d. Nominations to Distinguished Professorships
As Appendix D shows, holders of distinguished professorships have a higher average salary than their counterparts who have not been so honored; this is to be expected. However, the fraction of Professors who receive this additional compensation is higher among males than among females: in the humanities, fine arts and social sciences 43% of male professors and 32% of female professors hold permanent distinguished professorships. In the natural sciences and mathematics, the discrepancy is even wider: 36% of male Professors and 20% of female Professors have been granted such status. Further, the average salary of female Distinguished Professors is significantly lower than that of their male counterparts (see Appendix B). It is entirely possible that these discrepancies arise as a result of differences among individuals in the productivity and achievement that distinguished professorships are intended to recognize and reward. However, the size of the discrepancies makes it relevant to inquire whether there could be any inequity in the selection process for distinguished professorships, whether at the nomination stage, the award stage, or in the determination of the resulting salary increase. In order to make it possible to monitor this process, ***we recommend that nominations to distinguished professorships be included in the "compensation transcript."*** Since such nominations are considered confidential, it will be necessary to restrict access to this information to those authorized to make appropriate use of it, but this should be possible with a sufficiently sophisticated database.

e. Outside Offers and Retention Efforts
The high quality of the UNC-Chapel Hill faculty means that each year some faculty members receive offers of employment from other institutions. Frequently offers include a substantial increase in salary. In an effort to retain these faculty members, UNC-Chapel Hill sometimes makes a counter-offer that includes an increase in salary. As a result, faculty members who have received such offers but remained here often have higher salaries than do their colleagues who have not taken such offers under consideration. While the higher salary may reflect higher productivity and achievement that led to the outside offer being made to the faculty member in the first place, other factors including the willingness to consider (or even actively seek) such an offer through contacts in one's professional network also play a role. It is possible that such factors may differ among groups (such as males and females), or even that the University's response to an outside offer made to one of its faculty could be influenced by gender or ethnicity. ***It is therefore relevant to the monitoring of salary equity to include information about outside offers and retention efforts in the "compensation transcript."*** As for nominations to distinguished professorships, this information should be made available only with appropriate authorization.

f. Relative Value Units
In Health Affairs, faculty members with clinical responsibilities have part of their salaries determined by the Relative Value Units (RVUs) of the clinical services they provide. The RVU for a particular service is determined by the relative level of time, skill, training and intensity necessary to provide it as well as the costs of providing the service (including equipment, supplies and non-physician staff costs). ***Because the RVUs of the services a faculty member provides can have a significant effect on her/his salary, we recommend that they be included in the "compensation transcript" for Health Affairs faculty***

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[20] Available at http://web.mit.edu/fnl/women/women.pdf

with clinical responsibilities. These data are readily available (and were provided for the present study), so their inclusion in the transcript should not be problematic.

2. Other Recommendations Regarding Data-Keeping

In addition to the "compensation transcript," we recommend several other improvements in data-keeping to make it easier to monitor and improve equity in salaries and promotion. These include mechanisms for ongoing "data cleaning," maintenance of data for extended periods to make retrospective studies possible, and gathering of data about faculty who choose to leave the University.

a. Data Cleaning
One of the biggest challenges in conducting a study of this kind is that of assuring that the data used in the analysis are complete and correct. The process of "data cleaning" required significant time and effort on the part of the OIRA staff during this study. When errors were found, there was no mechanism available to assure that corrections were made to the permanent record. This means that a fresh "cleaning" effort is necessary every time such a study is conducted, rendering more-frequent or ongoing monitoring unfeasible.

b. Maintenance of Data for Extended Periods
Because of the significant effort involved in transferring salary and status data from the current personnel record-keeping system to the new software developed as part of the ERP process, there is a temptation for the Office of Human Resources to include only recent data (e.g. for the last five years) in the new system. However, this would make studies such as this one substantially more difficult, as access to the "legacy" system in which earlier data are maintained would be limited (and eventually unavailable). If the University is to be able to track improvements in faculty salary equity as well as equity in time to promotion, it is vital that records dating back at least as long as a typical faculty employment period (30 years) be kept available.

c. Faculty who Leave UNC-Chapel Hill
Faculty members leave an institution voluntarily for many reasons. They may find that their professional aspirations would be better fulfilled elsewhere, they may receive attractive offers from other institutions, they may wish to move closer to family members, and/or they may have spouses or partners who wish to pursue employment at other locations. Additional reasons for leaving that are more relevant to equity in salary and promotion include dissatisfaction with one's compensation and prospects for promotion, and an informal indication from one's department chair or division director that promotion is not likely. As soon as the End of Employment action is entered into the EPA Web system, the University's Equal Opportunity /ADA Office invites the departing faculty member to participate in an exit interview. Unfortunately, the End of Employment action usually occurs only after the faculty member has left (despite the fact that the action can be entered with an effective date in the future), and a face-to-face interview is not generally possible. Instead, the office sends a form inquiring whether the faculty member felt that s/he was treated fairly at UNC-Chapel Hill, whether s/he was able to achieve her/his professional goals, where s/he is going and why, and similar questions. While the responses to these inquiries could be quite valuable in monitoring equity in the University, only a small fraction (< 15%) of departing faculty members choose to complete the form. Thus the University has no formal record of why a faculty member left, or where s/he has gone.

Two simple changes in procedure are recommended. The End of Employment Form has a place to enter information about where the departing faculty member is going, but this is rarely completed because that information is not provided to the HR Facilitator. In almost all cases, even if the faculty member's letter of resignation (which should be, but often is not, attached to the End of Employment form) does not contain that information, the departing faculty member's destination is known to the department chair or division chief. Concerted efforts on the part of leaders of units to assure that this information is entered on the form would make a difference in this regard. Similarly, as soon as a faculty member has made her/his final decision to depart, the End of Employment form could be filled out with an appropriate effective date. This would allow the Equal Opportunity / ADA Office to contact the departing faculty member for an interview, which would be a much more effective means of gathering information relevant to this topic.

This could be combined with a formal mandate to obtain information from the department chair or division chief regarding the reasons for the faculty member's departure. While complete candor cannot be expected from either party in this situation, such efforts would at least enable the University to obtain additional information relevant to its efforts in equity and retention. ***Therefore, it is recommended that all academic units should be directed to include information about the destination of departing faculty members in the End of Employment form.***

VI. SUMMARY OF RECOMMENDATIONS

1. A study of this type should be done in the individual Schools on a rolling basis, with periodic re-evaluation of the regression model (perhaps every five years).
2. The Provost should appoint a task force comprising predominantly persons from outside the School of Medicine to investigate salary allocation practices in the School of Medicine, especially the Clinical Medicine departments, to identify the reasons behind the differences in salary by gender and race/ethnicity revealed in this study.
3. The unit head responsible for salary allocation for any faculty member whose salary deviates by 1.5σ or more (in either direction) from the value predicted by the regression analysis should be asked to justify the salary (in writing) to the Provost. I
4. These explanations should be examined by a committee appointed by the Provost for this purpose.
5. The Provost should direct the Appointments, Promotion and Tenure (APT) committee to investigate evaluation and promotion practices in Academic Affairs to identify the reasons behind the differences in promotion rates by gender and race/ethnicity revealed in this study.
6. The Deans of the various Schools should direct departments and other hiring units within their schools to increase their efforts to recruit more minority applicants to apply for national searches
7. Programs to foster the hiring of underrepresented minorities to the faculty should be further supported and expanded by the University.
8. The personnel record for each faculty member should contain a "compensation transcript," similar in spirit to the academic transcript kept for each student who attends the University. The "compensation transcript" should include the following items in addition to the conventional records:
    a. information regarding extensions of the probationary period
    b. information about the start-up package"
    c. information about assignment of specific research space (where relevant) via a link to the eSPOTS database
    d. nominations to distinguished professorships
    e. information about outside offers and retention efforts
    f. RVUs (for Health Affairs faculty with clinical responsibilities)
9. Records for faculty members who came to UNC in or after 1980 should be transferred to the new personnel record system when it becomes available.
10. All academic units should be directed to include information about the destination of departing faculty members in the End of Employment form.

VII. References

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Appendix A

Task Force Members

Laura McNeil, *Chair*, Professor, Physics and Astronomy, College of Arts and Sciences

Ada Adinora, Professor, Medicine, School of Medicine

David Garcia, Professor, Music, College of Arts and Sciences

Amy Herring, Professor, Biostatistics, Gillings School of Global Public Health

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David Parker, University Counsel

Lynn Williford, Assistant Provost, Office of Institutional Research and Assessment

Appendix B

Descriptive Statistics for Faculty Groupings

Academic Affairs: Descriptive Statistics

Includes the Schools of Business, Education, Government, Information & Library Science, Journalism & Mass Communication, Law, and Social Work
(N=1,290)

	By Gender		By Race/Ethnicity			
	Male	Female	White	African Amer	Asian	Other
Number of Faculty	781	509	1,044	74	103	69
Percentage of Total	60.5%	39.5%	80.9%	5.7%	8.0%	5.3%

	N	%	N	%	N	%	N	%	N	%	N	%
Tenure Status												
Tenured	528	67.6%	229	45.0%	649	62.2%	39	52.7%	50	48.5%	19	27.5%
Tenure Track	137	17.5%	114	22.4%	167	16.0%	23	31.1%	31	30.1%	30	43.5%
Fixed Term	116	14.9%	166	32.6%	228	21.8%	12	16.2%	22	21.4%	20	29.0%
Rank												
Professor	392	50.2%	138	27.1%	479	45.9%	19	25.7%	20	19.4%	12	17.4%
Associate	167	21.4%	120	23.6%	223	21.4%	23	31.1%	31	30.1%	10	14.5%
Assistant	163	20.9%	142	27.9%	216	20.7%	25	33.8%	33	32.0%	31	44.9%
Instructor/Lecturer	59	7.6%	109	21.4%	126	12.1%	7	9.5%	19	18.4%	16	23.2%
Highest Earned Degree												
Below doctorate	84	10.8%	73	14.3%	118	11.3%	13	17.6%	16	15.5%	10	14.5%
PhD or other doctorate	651	83.4%	397	78.0%	847	81.1%	58	78.4%	84	81.6%	59	85.5%
First professional	46	5.9%	39	7.7%	79	7.6%	3	4.1%	3	2.9%	0	0.0%
Administrative Duties												
None	717	91.8%	479	94.1%	960	92.0%	71	95.9%	101	98.1%	64	92.8%
Dept chair/Asst dean/Dir minor unit	42	5.4%	21	4.1%	55	5.3%	3	4.1%	1	1.0%	4	5.8%
Assoc dean/Dir major unit	22	2.8%	9	1.8%	29	2.8%	0	0.0%	1	1.0%	1	1.4%
Distinguished Title	188	14.6%	51	4.0%	221	17.1%	6	0.5%	8	0.6%	4	0.3%

	Male	Female	White	African Amer	Asian	Other
Mean years between highest degree and hire at UNC	6.2	5.7	6.2	7.6	3.6	4.1
Mean years between hire at UNC and year appointed to current rank	5.4	4.3	5.5	2.7	3.0	2.9
Mean years in current rank at UNC	8.2	5.4	7.7	6.0	4.0	4.0
9-Month Equivalent Salary						
Mean	$115,038	$88,570	$107,869	$91,572	$100,027	$75,827
Median	$105,200	$80,000	$97,206	$81,195	$91,200	$68,650

Health Affairs Units Without Medicine: Descriptive Statistics

Includes the Schools of Dentistry, Nursing, Pharmacy, and Public Health

(N=503)

| | By Gender | | By Race/Ethnicity | | | |
	Male	Female	White	African Amer	Asian	Other
Number of Faculty	232	271	396	28	61	18
Percentage of Total	46.1%	53.9%	78.7%	5.6%	12.1%	3.6%

	N	%	N	%	N	%	N	%	N	%	N	%
Tenure Status												
Tenured	133	57.3%	81	29.9%	182	46.0%	7	25.0%	23	37.7%	2	11.1%
Tenure Track	18	7.8%	32	11.8%	35	8.8%	4	14.3%	8	13.1%	3	16.7%
Fixed Term - Research Title	41	17.7%	53	19.6%	59	14.9%	6	21.4%	24	39.3%	5	27.8%
Fixed Term - Clinical Title	40	17.2%	105	38.7%	120	30.3%	11	39.3%	6	9.8%	8	44.4%
Rank												
Professor	94	40.5%	51	18.8%	126	31.8%	3	10.7%	13	21.3%	3	16.7%
Associate	83	35.8%	83	30.6%	132	33.3%	11	39.3%	18	29.5%	5	27.8%
Assistant	50	21.6%	121	44.6%	121	30.6%	12	42.9%	28	45.9%	10	55.6%
Instructor/Lecturer	5	2.2%	16	5.9%	17	4.3%	2	7.1%	2	3.3%	0	0.0%
Highest Earned Degree												
No terminal degree	14	6.0%	60	22.1%	67	16.9%	3	10.7%	3	4.9%	1	5.6%
PhD or other doctorate	118	50.9%	151	55.7%	208	52.5%	18	64.3%	38	62.3%	5	27.8%
First professional	31	13.4%	27	10.0%	53	13.4%	1	3.6%	3	4.9%	1	5.6%
Multiple terminal degrees	31	13.4%	14	5.2%	26	6.6%	2	7.1%	12	19.7%	5	27.8%
Post-doc/Professional degree	38	16.4%	19	7.0%	42	10.6%	4	14.3%	5	8.2%	6	33.3%
Administrative Duties												
None	188	81.0%	241	88.9%	329	83.1%	23	82.1%	59	96.7%	18	100.0%
Dept chair/Asst dean/Dir minor unit	35	15.1%	20	7.4%	49	12.4%	5	17.9%	1	1.6%	0	0.0%
Assoc dean/Dir major unit	9	3.9%	10	3.7%	18	4.5%	0	0.0%	1	1.6%	0	0.0%
Distinguished Title	29	5.8%	5	1.0%	26	5.2%	1	0.2%	7	1.4%	0	0.0%

	Male	Female	White	African Amer	Asian	Other
Mean years between highest degree and hire at UNC	9.8	7.4	8.4	8.2	9.1	10.1
Mean years between hire at UNC and year appointed to current rank	5.6	4.3	5.4	3.2	3.0	3.1
Mean years in current rank at UNC	7.5	4.0	6.2	2.8	4.0	2.8
12-Month Equivalent Salary						
Mean	$144,694	$107,859	$127,357	$119,354	$113,187	$117,731

School of Medicine: Descriptive Statistics

Includes Clinical, Basic Sciences, and Allied Health Sciences Departments

(N=1,323)

	By Gender		By Race/Ethnicity			
	Male	**Female**	**White**	**African Amer**	**Asian**	**Other**
Number of Faculty	776	547	1,092	50	141	40
Percentage of Total	58.7%	41.3%	82.5%	3.8%	10.7%	3.0%

	N	%	N	%	N	%	N	%	N	%	N	%
Tenure Status												
Tenured	335	43.2%	114	20.8%	407	37.3%	8	16.0%	26	18.4%	8	20.0%
Tenure Track	100	12.9%	50	9.1%	109	10.0%	8	16.0%	29	20.6%	4	10.0%
Fixed Term - Research Title	116	14.9%	110	20.1%	167	15.3%	4	8.0%	45	31.9%	10	25.0%
Fixed Term - Clinical Title	225	29.0%	273	49.9%	409	37.5%	30	60.0%	41	29.1%	18	45.0%
Rank												
Professor	284	36.6%	85	15.5%	348	31.9%	3	6.0%	14	9.9%	4	10.0%
Associate	194	25.0%	122	22.3%	261	23.9%	15	30.0%	31	22.0%	9	22.5%
Assistant	276	35.6%	254	46.4%	393	36.0%	27	54.0%	90	63.8%	20	50.0%
Instructor/Lecturer	22	2.8%	86	15.7%	90	8.2%	5	10.0%	6	4.3%	7	17.5%
Highest Earned Degree												
No terminal degree	21	2.7%	122	22.3%	129	11.8%	6	12.0%	5	3.5%	3	7.5%
Doctoral degree	249	32.1%	196	35.8%	365	33.4%	5	10.0%	60	42.6%	15	37.5%
MD degree	406	52.3%	177	32.4%	476	43.6%	32	64.0%	57	40.4%	18	45.0%
MD and PhD	63	8.1%	21	3.8%	67	6.1%	2	4.0%	14	9.9%	1	2.5%
Post-doc degree	37	4.8%	31	5.7%	55	5.0%	5	10.0%	5	3.5%	3	7.5%
Administrative Duties												
None	653	84.1%	510	93.2%	946	86.6%	45	90.0%	134	95.0%	38	95.0%
Dept chair/Asst dean/Dir minor unit	100	12.9%	31	5.7%	118	10.8%	4	8.0%	7	5.0%	2	5.0%
Assoc dean/Dir major unit	23	3.0%	6	1.1%	28	2.6%	1	2.0%	0	0.0%	0	0.0%
Distinguished Title	72	5.4%	13	1.0%	78	5.9%	1	0.1%	4	0.3%	2	0.2%

	Male	**Female**	**White**	**African Amer**	**Asian**	**Other**
Mean years between highest degree and hire at UNC	9.6	7.9	8.9	8.8	8.7	10.0
Mean years between hire at UNC and year appointed to current rank	5.5	4.1	5.4	3.2	2.8	2.9
Mean years in current rank at UNC	6.0	4.4	5.7	3.2	3.5	3.8
12-Month Equivalent Salary						
Mean	$200,800	$113,110	$175,119	$184,001	$153,678	$149,359
Median	$174,739	$110,547	$150,346	$163,945	$135,000	$133,103

School of Medicine: Descriptive Statistics
Includes Clinical Departments Only
(N=1,004)

| | By Gender | | | | By Race/Ethnicity | | | | | | | |
	Male		Female		White		African Amer		Asian		Other	
Number of Faculty	593		411		829		44		101		30	
Percentage of Total	59.1%		40.9%		82.6%		4.4%		10.1%		3.0%	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Tenure Status												
Tenured	237	40.0%	72	17.5%	281	33.9%	7	15.9%	14	13.9%	7	23.3%
Tenure Track	75	12.6%	36	8.8%	84	10.1%	6	13.6%	20	19.8%	1	3.3%
Fixed Term - Research Title	66	11.1%	67	16.3%	96	11.6%	3	6.8%	28	27.7%	6	20.0%
Fixed Term - Clinical Title	215	36.3%	236	57.4%	368	44.4%	28	63.6%	39	38.6%	16	53.3%
Rank												
Professor	213	35.9%	50	12.2%	248	29.9%	3	6.8%	8	7.9%	4	13.3%
Associate	144	24.3%	100	24.3%	202	24.4%	14	31.8%	20	19.8%	8	26.7%
Assistant	217	36.6%	182	44.3%	296	35.7%	22	50.0%	68	67.3%	13	43.3%
Instructor/Lecturer	19	3.2%	79	19.2%	83	10.0%	5	11.4%	5	5.0%	5	16.7%
Highest Earned Degree												
No terminal degree	15	2.5%	98	23.8%	102	12.3%	5	11.4%	4	4.0%	2	6.7%
Doctoral degree	100	16.9%	94	22.9%	160	19.3%	2	4.5%	25	24.8%	7	23.3%
MD degree	394	66.4%	170	41.4%	460	55.5%	31	70.5%	56	55.4%	17	56.7%
MD and PhD	48	8.1%	20	4.9%	54	6.5%	2	4.5%	11	10.9%	1	3.3%
Post-doc degree	36	6.1%	29	7.1%	53	6.4%	4	9.1%	5	5.0%	3	10.0%
Administrative Duties												
None	496	83.6%	383	93.2%	714	86.1%	39	88.6%	97	96.0%	29	96.7%
Dept chair/Asst dean/Dir minor unit	78	13.2%	24	5.8%	93	11.2%	4	9.1%	4	4.0%	1	3.3%
Assoc dean/Dir major unit	19	3.2%	4	1.0%	22	2.7%	1	2.3%	0	0.0%	0	0.0%
Distinguished Title	54	5.4%	8	0.8%	58	5.8%	1	0.1%	1	0.1%	2	0.2%

	Male	Female	White	African Amer	Asian	Other
Mean years between highest degree and hire at UNC	10.0	8.4	9.3	8.8	9.4	11.9
Mean years between hire at UNC and year appointed to current rank	5.4	3.8	5.1	3.4	2.3	3.6
Mean years in current rank at UNC	5.8	4.1	5.5	3.0	3.4	4.4
12-Month Equivalent Salary						
Mean	$222,465	$142,902	$192,583	$194,362	$172,546	$167,474
Median	$200,252	$130,000	$169,700	$175,233	$158,592	$141,551

Appendix C

Independent Variables Used in the Regression Models

All Models	Code	Description
Demographics		
Female	1 dummy code	
Race/Ethnicity	3 dummy codes	African American, Asian, Hispanic/Native American/Other
Education		
Highest Terminal Degree	2 dummy codes	Below Doctorate, Professional Degree (e.g., Ph.D. or other doctorate such as DPH, EDD, DFA, DSW)
Experience and Service Length		
Prior Experience: Unsquared, Squared*	2 continuous	Years since highest degree and hire date at UNC
Years at UNC-Chapel Hill: Unsquared, Squared*	2 continuous	Years between initial hire at UNC-Chapel Hill and date of current rank.
Years in Rank: Unsquared, Squared*	2 continuous	Years since appointment to current rank at UNC
Professional Status		
Appointment Type: Fixed Term, Tenured	2 dummy codes	Fixed-Term = Not on tenure track; Tenured = Holds tenure
Rank: Below Assistant, Associate, Full	3 dummy codes	Below Assistant = Instructor and Lecturer
Administrative Role: Major, Other	2 dummy codes	Major = Associate deans or directors of large centers; Other = department chairs, directors of small centers
Distinguished	1 dummy code	Holds either a permanent or term distinguished title
Model-Specific Independent Variables		
Academic Affairs Model		
Departments	46 dummy codes	14 departments - Humanities and Fine Arts; 9 departments - Social Sciences; 10 departments - Natural Sciences; 6 schools, 7 departments within a school
School of Medicine Model		
Departments	45 dummy codes	45 departments and units
Additional Degrees	2 dummy codes	MD & Ph.D., Post-doctoral degree
Title	2 dummy codes	Clinical Track, Research Track (Instructors, Lecturers, ranks with modifiers of clinical, research, and adjunct)
Clinical Full-Time Equivalent	1 dummy code	Fraction

Relative Value Units	1 dummy code	From the School of Medicine
Health Affairs (not School of Medicine) Model	20 dummy codes	7 departments from Dentistry; 8 departments from Gillings Global Public Health, 4 departments from Eshelman Pharmacy; 1 from Nursing

Note. The asterisk means that the variable was centered. For Academic Affairs, the reference group consists of faculty members who are male, White, untenured assistant professors, with a Ph.D., with no administrative role, no distinguished title, and who are from the history department. For the School of Medicine, the reference group is White male assistant professors on the tenure track, with an MD Only, who are in the Department of Medicine with no clinical subspecialties, no distinguished title, and no administrative duties. For the Health Affairs units that are not the School of Medicine, the reference group consists of White male assistant professors on the tenure track, with a Ph.D., no distinguished title, and no administrative duties at the department chair level or higher.

Appendix D

Results of Regression Models

Regression -- Academic Affairs

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.919	.844	.836	$19,471	.844	107.292	62	1227	.000
2	.919	.845	.836	$19,471	.001	.999	4	1223	.407

ANOVAc

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.522E+12	62	4.07E+10	107.292	.000
	Residual	4.652E+11	1227	3.79E+08		
	Total	2.987E+12	1289			
2	Regression	2.523E+12	66	3.82E+10	100.849	.000
	Residual	4.637E+11	1223	3.79E+08		
	Total	2.987E+12	1289			

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		

1						
	(Constant)	70461.329	3518.414		20.026	.000
	Prof Degree	-13418.347	4203.318	-.069	-3.192	.001
	Below Doc Degree	-5540.641	2284.663	-.038	-2.425	.015
	Tenured	7388.205	3504.039	.076	2.108	.035
	Fixed Term	-20222.024	2776.846	-.174	-7.282	.000
	Distinguished	34761.615	1769.939	.281	19.640	.000
	Admin Major	37697.285	3689.265	.120	10.218	.000
	Admin Other	20115.211	2562.350	.092	7.850	.000
	Prof Rank	30494.673	3610.840	.312	8.445	.000
	Assoc Rank	6888.608	3281.367	.060	2.099	.036
	Below Asst	1110.251	2952.985	.008	.376	.707
	Education	4960.165	4037.913	.020	1.228	.220
	Government	24741.274	4880.253	.098	5.070	.000
	Info & Lib Sci	8283.474	5047.831	.022	1.641	.101
	Journalism	-1888.094	4263.182	-.007	-.443	.658
	Law	52111.796	5706.132	.194	9.133	.000
	Social Work	8434.213	3944.651	.038	2.138	.033
	AS HFA Amer	-4487.976	6816.180	-.008	-.658	.510
	AS HFA Art	38.894	4833.305	.000	.008	.994
	AS HFA Clas	-8388.108	5766.209	-.019	-1.455	.146
	AS HFA Comm	-3128.081	4627.317	-.010	-.676	.499
	AS HFA Dram	-8162.228	5598.188	-.020	-1.458	.145
	AS HFA Engl	-3750.637	3689.540	-.018	-1.017	.310
	AS HFA Germ	-5260.630	7091.680	-.009	-.742	.458
	AS HFA Ling	-4075.156	7919.305	-.006	-.515	.607
	AS HFA Musc	-6541.290	4459.880	-.021	-1.467	.143

AS HFA Reli	-443.225	5936.734	-.001	-.075	.940
AS HFA RomLg	-4933.458	3986.384	-.022	-1.238	.216
AS HFA Slavic	-14754.313	7982.220	-.023	-1.848	.065
AS HFA Phil	9706.478	5288.937	.024	1.835	.067
AS HFA Wmst	-6538.066	7908.383	-.010	-.827	.409
AS SS Afam	-3966.364	5797.357	-.009	-.684	.494
AS SS Anth	-928.207	4555.221	-.003	-.204	.839
AS SS Asian St	-4505.845	4905.288	-.013	-.919	.359
AS SS City	9045.017	6121.669	.019	1.478	.140
AS SS Econ	39793.329	4515.228	.127	8.813	.000
AS SS Geog	8203.388	5517.413	.019	1.487	.137
AS SS Poli	8387.826	4150.146	.031	2.021	.043
AS SS PubPol	20049.594	6589.715	.038	3.043	.002
AS SS Soci AS	5831.857	4758.265	.017	1.226	.221
ScM Biol AS	5504.822	3911.659	.023	1.407	.160
ScM Chem AS	21201.666	4154.460	.078	5.103	.000
ScM Comp AS	28217.003	4405.590	.094	6.405	.000
ScM Exss AS	2172.052	4956.725	.006	.438	.661
ScM Geol	-3823.563	6530.421	-.007	-.586	.558
AS ScM Marine	1861.922	5951.149	.004	.313	.754
AS ScM Math	13461.569	4372.341	.045	3.079	.002
AS ScM StatOp	15405.568	5212.438	.040	2.956	.003
AS ScM Phys	5240.225	4373.322	.018	1.198	.231
AS ScM Psyc	6253.281	3818.806	.028	1.637	.102
Bus Acct	99688.440	5690.442	.229	17.519	.000
Bus Comm Bus	24947.301	7636.530	.041	3.267	.001
Finance Bus	112742.752	4981.445	.310	22.633	.000
Marketing Bus	82910.584	5943.848	.179	13.949	.000
Operations Bus	67407.845	6337.145	.134	10.637	.000
Org Beh Bus	76213.233	7925.942	.116	9.616	.000
Strat Entr	77259.979	4916.587	.226	15.714	.000
centyrsprior	436.767	151.321	.068	2.886	.004
centyrsunc	-531.152	195.720	-.070	-2.714	.007
centyrsrank	570.270	132.100	.091	4.317	.000
centyrspriorsq	4.088	7.557	.010	.541	.589
centyrsuncsq	7.975	10.524	.015	.758	.449
centyrsranksq	-15.651	7.917	-.038	-1.977	.048

2						
	(Constant)	71119.842	3637.883		19.550	.000
	Prof Degree	-13098.279	4214.907	-.068	-3.108	.002
	Below Doc Degree	-5961.742	2303.918	-.041	-2.588	.010
	Tenured	7002.532	3515.369	.072	1.992	.047
	Fixed Term	-20109.084	2790.834	-.173	-7.205	.000
	Distinguished	34732.766	1772.070	.280	19.600	.000
	Admin Major	37669.199	3691.424	.120	10.205	.000
	Admin Other	20318.843	2564.845	.093	7.922	.000
	Prof Rank	30441.994	3616.093	.311	8.418	.000
	Assoc Rank	6851.691	3282.203	.059	2.088	.037
	Below Asst	1155.660	2962.103	.008	.390	.696
	Education	5418.638	4058.953	.021	1.335	.182
	Government	24650.653	4894.139	.098	5.037	.000
	Info & Lib Sci	8396.651	5054.423	.023	1.661	.097
	Journalism	-1558.719	4270.698	-.006	-.365	.715
	Law	51839.551	5709.793	.193	9.079	.000
	Social Work	8960.108	3968.675	.041	2.258	.024
	AS HFA Amer	-3860.364	6830.166	-.007	-.565	.572
	AS HFA Art	286.900	4845.542	.001	.059	.953
	AS HFA Clas	-8281.231	5783.531	-.018	-1.432	.152
	AS HFA Comm	-3211.773	4632.251	-.010	-.693	.488
	AS HFA Dram	-7590.519	5616.202	-.019	-1.352	.177

AS HFA Engl	-3447.988	3698.458	-.016	-.932	.351
AS HFA Germ	-5100.285	7102.161	-.009	-.718	.473
AS HFA Ling	-3681.265	7924.870	-.006	-.465	.642
AS HFA Musc	-6215.268	4470.994	-.020	-1.390	.165
AS HFA Reli	-166.450	5950.101	.000	-.028	.978
AS HFA RomLg	-4030.822	4087.230	-.018	-.986	.324
AS HFA Slavic	-14213.335	7998.623	-.022	-1.777	.076
AS HFA Phil	9600.233	5297.380	.024	1.812	.070
AS HFA Wmst	-5795.806	7956.205	-.009	-.728	.466
AS SS Afam	-4886.477	6073.103	-.011	-.805	.421
AS SS Anth	-556.383	4564.340	-.002	-.122	.903
AS SS Asian St	-5263.654	4984.000	-.015	-1.056	.291
AS SS City	8690.868	6146.167	.018	1.414	.158
AS SS Econ	39313.152	4528.479	.125	8.681	.000
AS SS Geog	8415.423	5526.687	.020	1.523	.128
AS SS Poli	8418.237	4158.243	.031	2.024	.043
AS SS PubPol	19996.391	6598.103	.038	3.031	.002
AS SS Soci	6012.756	4762.305	.018	1.263	.207
AS ScM Biol	5488.976	3928.150	.023	1.397	.163
AS ScM Chem	20891.921	4169.089	.077	5.011	.000
AS ScM Comp	27434.082	4432.262	.091	6.190	.000
AS ScM Exss	2356.499	4959.326	.007	.475	.635
AS ScM Geol	-3868.645	6548.048	-.007	-.591	.555
AS ScM Marine	1705.628	5974.550	.004	.285	.775
AS ScM Math	13150.877	4384.469	.044	2.999	.003
AS ScM StatOp	14548.165	5246.599	.037	2.773	.006
AS ScM Phys	4618.360	4396.122	.016	1.051	.294
AS ScM Psyc	6356.630	3821.935	.028	1.663	.097
Bus Acct	99416.070	5700.242	.229	17.441	.000
Bus Comm	25977.792	7659.555	.042	3.392	.001
Bus Finance	112300.195	5006.047	.309	22.433	.000
Bus Marketing	82290.066	5963.065	.177	13.800	.000
Bus Operations	66739.513	6358.945	.133	10.495	.000
Bus Org Beh	76799.738	7933.842	.117	9.680	.000
Bus Strat Entr	76936.307	4925.421	.225	15.620	.000
centyrsprior	450.519	151.626	.070	2.971	.003
centyrsunc	-501.213	196.609	-.066	-2.549	.011
centyrsrank	577.052	132.477	.092	4.356	.000
centyrspriorsq	3.924	7.561	.010	.519	.604
centyrsuncsq	6.801	10.562	.012	.644	.520
centyrsranksq	-15.995	7.929	-.039	-2.017	.044
Female	-1430.887	1238.383	-.015	-1.155	.248
African Amer	1348.337	2596.589	.007	.519	.604
Asian	2871.093	2192.880	.016	1.309	.191
Hisp/NatAm/Other	-1909.276	2669.223	-.009	-.715	.475

Regression -- Health Affairs Without Medicine

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.879	.772	.752	$26,702	.772	38.083	41	461	.000
2	.881	.776	.754	$26,601	.004	1.878	4	457	.113

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.11E+12	41	2.72E+10	38.083	.000
	Residual	3.29E+11	461	7.13E+08		
	Total	1.44E+12	502			
2	Regression	1.12E+12	45	2.49E+10	35.129	.000
	Residual	3.23E+11	457	7.08E+08		
	Total	1.44E+12	502			

Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	82292.661	5997.223		13.722	.000
	Tenured Prof	-1504.300	5786.910	-.014	-.260	.795
	Rank Assoc	59408.373	5738.037	.503	10.353	.000
	Rank Below	15976.381	4084.890	.140	3.911	.000
	Asst Research	-2700.119	7252.726	-.010	-.372	.710
	Title Clinical	-24530.596	5275.687	-.179	-4.650	.000
	Title	-6734.025	5480.441	-.057	-1.229	.220
	Distinguished Title	39291.331	5628.360	.184	6.981	.000
	No Terminal Degree	-8503.904	5173.426	-.056	-1.644	.101
	1st Prof Degree	12929.159	5192.126	.077	2.490	.013
	Multi Terminal Degs	13041.474	5240.306	.070	2.489	.013
	Post Doc Degree	14059.804	4894.434	.083	2.873	.004
	Admin 1	39845.229	6699.417	.142	5.948	.000
	Admin 2	28343.698	4225.356	.165	6.708	.000
	Prior Yrs Centered	383.304	284.355	.059	1.348	.178
	UNC Exp Centered	-1047.563	386.657	-.125	-2.709	.007
	Curr Rank Centered	536.354	339.122	.068	1.582	.114
	Prior Yrs Centered	-16.205	17.362	-.033	-.933	.351
	UNC Exp Centered	38.391	26.393	.056	1.455	.146
	Curr Rank Centered	-14.727	19.204	-.030	-.767	.444
	Dent Ecol	-1169.172	6707.208	-.004	-.174	.862
	Dent DSGD	26920.241	7319.552	.098	3.678	.000
	Dent Endo	29878.047	9357.030	.078	3.193	.002
	Dent Oper	8905.491	9809.435	.023	.908	.364
	Dent Oral Surg	190424.349	14702.787	.316	12.952	.000
	Dent Ortho	22488.845	11148.562	.049	2.017	.044
	Dent Ped	36028.730	9501.513	.094	3.792	.000
	Dent Perio	18946.986	10463.705	.044	1.811	.071

Dent Prosth	21117.667	8817.733	.063	2.395	.017
Pharm CBMC	22954.257	6639.206	.091	3.457	.001
Pharm Molecular	11766.091	7868.572	.037	1.495	.136
Pharm Therap	8827.241	6774.585	.034	1.303	.193
Pharm Outcomes	26187.179	10244.685	.061	2.556	.011
Pharm PracExEd	15325.186	7096.619	.059	2.160	.031
PH Bios	37373.845	6074.109	.165	6.153	.000
PH Environ	15320.534	6362.413	.063	2.408	.016
PH Epid	26628.926	5348.513	.145	4.979	.000
PH HBHE	15412.811	7176.441	.055	2.148	.032
PH HPM	14430.831	5898.320	.062	2.447	.015
PH MCH	21160.066	7165.765	.075	2.953	.003
PH Nutrition	21243.995	6108.544	.092	3.478	.001
PH Leadership	15817.346	9103.657	.041	1.737	.083

2	(Constant)	84618.089	6581.984		12.856	.000
	Tenured Prof	-822.890	5774.577	-.008	-.143	.887
	Rank Assoc	58110.470	5763.901	.492	10.082	.000
	Rank Below	15039.397	4089.058	.132	3.678	.000
	Asst Research	-3483.420	7263.437	-.013	-.480	.632
	Title Clinical	-23460.807	5276.314	-.171	-4.446	.000
	Title	-6942.198	5475.977	-.059	-1.268	.206
	Distinguished Title	39828.854	5648.674	.187	7.051	.000
	No Terminal Degree	-8038.831	5202.781	-.053	-1.545	.123
	1st Prof Degree	13604.317	5202.568	.081	2.615	.009
	Multi Terminal Degs	14180.221	5285.778	.076	2.683	.008
	Post Doc Degree	13838.365	4887.788	.082	2.831	.005
	Admin 1	40557.754	6686.918	.144	6.065	.000
	Admin 2	27191.900	4255.669	.158	6.390	.000
	Prior Yrs Centered	346.072	284.511	.053	1.216	.224
	UNC Exp Centered	-1071.467	385.593	-.128	-2.779	.006
	Curr Rank Centered	440.804	342.607	.056	1.287	.199
	Prior Yrs Centered	-15.024	17.313	-.030	-.868	.386
	UNC Exp Centered	39.481	26.324	.057	1.500	.134
	Curr Rank Centered	-11.413	19.208	-.024	-.594	.553
	Dent Ecol	-1502.186	6772.269	-.006	-.222	.825
	Dent DSGD	26455.856	7500.105	.097	3.527	.000
	Dent Endo	29362.906	9413.200	.077	3.119	.002
	Dent Oper	7022.797	10208.265	.018	.688	.492
	Dent Oral Surg	188240.010	14802.059	.312	12.717	.000
	Dent Ortho	25291.571	11254.717	.055	2.247	.025
	Dent Ped	36543.494	9601.003	.095	3.806	.000
	Dent Perio Dent	18438.879	10820.407	.043	1.704	.089
	Prosth Pharm	19830.018	9020.423	.059	2.198	.028
	CBMC Pharm	25196.887	7255.097	.100	3.473	.001
	Molecular Pharm	15029.486	8284.530	.048	1.814	.070
	Therap Pharm	7860.003	6925.433	.031	1.135	.257
	Outcomes Pharm	26625.774	10247.990	.062	2.598	.010
	PracExEd PH	14339.793	7106.429	.055	2.018	.044
	Bios	39005.228	6451.118	.173	6.046	.000
	PH Environ	14079.753	6627.715	.058	2.124	.034
	PH Epid	25100.329	5445.427	.136	4.609	.000
	PH HBHE	15178.940	7187.629	.054	2.112	.035
	PH HPM	13420.474	5994.839	.057	2.239	.026
	PH MCH	20456.187	7170.564	.073	2.853	.005
	PH Nutrition	21106.839	6121.691	.092	3.448	.001
	PH Leadership	15368.519	9129.013	.040	1.683	.093
	African Amer	5768.251	5461.519	.025	1.056	.291
	Asian	-9783.271	4333.421	-.060	-2.258	.024
	Hisp/NatAm/Other	408.795	7038.888	.001	.058	.954

Female	-2670.369	3078.953	-.025	-.867	.386

Regression -- School of Medicine

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.871	.758	.741	$52,457.206	.758	43.497	89	1233	.000

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.065E+13	89	1.20E+11	43.497	.000
	Residual	3.393E+12	1233	2.75E+09		
	Total	1.405E+13	1322			

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	167837.779	12773.452		13.140	.000
	No Terminal Degree	-86189.040	7502.668	-.260	-11.488	.000
	Doctoral Degree	-82839.389	5366.767	-.380	-15.436	.000
	MD & PhD Degrees	-26770.124	6539.503	-.063	-4.094	.000
	Post-Doc Degree	-22655.081	7061.607	-.049	-3.208	.001
	Prof Rank	68990.744	7279.076	.300	9.478	.000
	Assoc Rank	38780.321	5309.389	.160	7.304	.000
	Below Asst	-24201.600	7653.655	-.064	-3.162	.002
	Tenured	405.944	7083.007	.002	.057	.954
	Research Title	-30038.447	6400.881	-.110	-4.693	.000
	Clinical Title	-491.757	5840.213	-.002	-.084	.933
	Distinguished Title	56376.636	6960.166	.134	8.100	.000
	Admin 1	51664.944	10441.385	.073	4.948	.000
	Admin 2	43515.430	5502.537	.126	7.908	.000
	Prev Exp Centered	-344.380	355.480	-.023	-.969	.333
	UNC Yrs Centered	-1932.483	504.658	-.112	-3.829	.000
	Yrs Rank Centered	674.040	469.818	.036	1.435	.152
	Prev Exp Centered Sq	62.247	22.571	.058	2.758	.006
	UNC Yrs Centered Sq	59.277	28.919	.042	2.050	.041
	Yrs Rank Centered Sq	-123.491	31.495	-.090	-3.921	.000
	AHSClinLab	-25249.381	21334.608	-.020	-1.183	.237

AHSOccup	-20856.714	20656.154	-.018	-1.010	.313
AHSPhysTher	-25635.253	18643.208	-.025	-1.375	.169
AHSRadiol	-7377.192	23418.270	-.005	-.315	.753
AHSRehab	-20792.630	28816.381	-.011	-.722	.471
AHSSphs	-14623.148	16758.910	-.018	-.873	.383
BSBiochemphys	-810.485	14096.468	-.001	-.057	.954
BSBiomed	6235.674	23290.838	.004	.268	.789
BSCellAnat	-11363.611	15046.673	-.017	-.755	.450
BSCelldevbio	15738.200	24592.639	.010	.640	.522
BSCellMolphy	11580.281	15736.994	.016	.736	.462
BSGenetics	17951.841	15145.369	.026	1.185	.236
BSMicroimm	7678.659	14824.675	.012	.518	.605
BSPharmaco	3416.909	14993.233	.005	.228	.820
BSSocialMed	-2403.398	19137.994	-.002	-.126	.900
CLAnesth	69641.385	13748.873	.128	5.065	.000
CLDerm	30106.025	19086.719	.028	1.577	.115
CLEmerMed	9139.084	16181.316	.011	.565	.572
CLFamMed	-24759.379	13776.086	-.045	-1.797	.073
CLMedCardio	51153.473	15540.739	.068	3.292	.001
CLMedEndo	3245.066	18968.512	.003	.171	.864
CLMedGastro	9686.280	14089.211	.016	.687	.492
CLMedInternal	-16822.762	15192.614	-.024	-1.107	.268
CLMedGeriat	5941.270	20914.795	.005	.284	.776
CLMedHema	10198.453	14167.409	.017	.720	.472
CLMedHosp	-771.981	24537.167	-.001	-.031	.975
CLMedInfect	7184.822	14222.386	.012	.505	.614
CLMedNeph	-16821.315	16233.369	-.020	-1.036	.300
CLMedPulm	-9387.007	14703.047	-.016	-.638	.523
CLMedRheum	1356.433	18579.610	.001	.073	.942
CLNeuro	-9773.437	16375.138	-.012	-.597	.551
CLNeurPed	-17924.182	24391.869	-.012	-.735	.463
CLOBGyn	36249.473	14025.422	.062	2.585	.010
CLOBGynOncol	102661.427	23250.290	.072	4.415	.000
CLOBGynMat	38447.327	23164.073	.027	1.660	.097
CLOBGynRepro	40954.875	28847.513	.022	1.420	.156
CLOtolaryn	67762.992	15063.523	.096	4.498	.000
CLOpthalm	29915.612	19066.003	.028	1.569	.117
CLOrthop	185557.999	18567.400	.178	9.994	.000
CLPathLab	-1907.433	14508.247	-.003	-.131	.895
CLPathAnat	33532.299	17926.087	.034	1.871	.062
CLPathClin	11836.547	16766.075	.014	.706	.480

CLPed	5693.505	12697.862	.014	.448	.654
CLPedCardio	-1342.764	26692.947	-.001	-.050	.960
CLPedEmer	-33030.812	28833.785	-.018	-1.146	.252
CLPedEndo	-51552.020	28840.130	-.027	-1.788	.074
CLPedGastro	-1621.004	26221.547	-.001	-.062	.951
CLPedGenetics	-56197.557	28853.482	-.030	-1.948	.052
CLPedHemo	-41955.921	24405.505	-.027	-1.719	.086
CLPedHosp	-63308.969	29071.880	-.034	-2.178	.030
CLPedNeon	10509.496	21976.732	.008	.478	.633
CLPedPulm	-42346.385	20365.428	-.036	-2.079	.038
CLPedSurg	120165.553	24393.213	.078	4.926	.000
CLPhysMed	1431.994	20998.767	.001	.068	.946
CLPsychiatry	-12642.177	12870.585	-.030	-.982	.326
CLPsyChild	-30152.838	18652.541	-.029	-1.617	.106
CLRadiol	115542.820	14174.756	.190	8.151	.000
CLRadoncol	103017.327	16453.242	.122	6.261	.000
CLSurgery	70863.072	15002.633	.101	4.723	.000
CLSurgCardio	122380.430	24407.285	.080	5.014	.000
CLSurgNeuro	218487.614	19116.117	.201	11.429	.000
CLSurgOncol	77606.953	19156.842	.071	4.051	.000
CLSurgPlas	96703.361	26321.007	.058	3.674	.000
CLSurgTrans	184945.425	26290.489	.110	7.035	.000
CLSurgTrauma	114682.530	18296.547	.114	6.268	.000
CLSurgUrol	76974.010	22992.065	.054	3.348	.001
Female	-13158.436	3413.244	-.063	-3.855	.000
African Amer	-1898.390	7950.549	-.004	-.239	.811
Asian	-12592.751	5090.573	-.038	-2.474	.014
Hisp/NatAm/Other	-3397.772	8720.380	-.006	-.390	.697

Regression -- Clinical Medicine with RVU

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.854	.730	.709	$58,745	.730	35.969	70	933	.000
2	.858	.736	.715	$58,121	.007	6.033	4	929	.000
3	.865	.748	.727	$56,896	.012	21.224	2	927	.000

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.69E+12	70	1.24E+11	35.969	.000
	Residual	3.22E+12	933	3.45E+09		
	Total	1.19E+13	1003			
2	Regression	8.77E+12	74	1.19E+11	35.085	.000
	Residual	3.14E+12	929	3.38E+09		
	Total	1.19E+13	1003			
3	Regression	8.91E+12	76	1.17E+11	36.208	.000
	Residual	3.00E+12	927	3.24E+09		
	Total	1.19E+13	1003			

Coefficients

Model		Unstandardized Coefficients		Std Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	158572.128	15249.611		10.398	.000
	No Terminal Degree	-90145.217	9654.540	-.262	-9.337	.000
	Doctoral Degree	-88139.828	6798.601	-.320	-12.964	.000
	MD & PhD Degrees	-17400.741	8082.189	-.040	-2.153	.032
	Post-Doc Degree	-26732.062	8078.530	-.060	-3.309	.001
	Tenured	2921.598	9264.257	.012	.315	.753
	Research Title	-31802.105	9185.182	-.099	-3.462	.001
	Clinical Title	1435.787	7326.554	.007	.196	.845
	Distinguished Title	59283.657	9136.986	.131	6.488	.000
	Prof Rank	77680.579	9195.883	.314	8.447	.000
	Assoc Rank	43891.288	6667.067	.173	6.583	.000
	Below Asst	-27231.253	9860.629	-.074	-2.762	.006
	Admin 1	46154.116	13200.404	.063	3.496	.000

Admin 2	45123.216	7145.383	.125	6.315	.000
Prev Exp Centered	-565.584	478.144	-.036	-1.183	.237
UNC Yrs Centered	-1931.508	656.003	-.104	-2.944	.003
Yrs Rank Centered	898.866	606.294	.044	1.483	.139
Prev Exp Centered Sq	77.014	29.251	.072	2.633	.009
UNC Yrs Centered Sq	63.673	34.702	.045	1.835	.067
Yrs Rank Centered Sq	-140.988	41.613	-.091	-3.388	.001
CLAnesth	95021.200	16104.845	.182	5.900	.000
CLDerm	28864.114	23122.986	.026	1.248	.212
CLEmerMed	12234.071	18596.821	.016	.658	.511
CLFamMed	-20375.789	15977.382	-.040	-1.275	.203
CLMedCardio	47777.431	17915.080	.068	2.667	.008
CLMedEndo	1549.661	21611.732	.002	.072	.943
CLMedGastro	12552.759	16349.432	.023	.768	.443
CLMedInternal	-15814.100	17539.541	-.024	-.902	.367
CLMedGeriat	4080.923	24767.741	.003	.165	.869
CLMedHema	9121.762	16510.922	.016	.552	.581
CLMedHosp	9802.958	27797.995	.007	.353	.724
CLMedInfect	6733.310	16434.380	.012	.410	.682
CLMedNeph	-21724.493	18623.140	-.029	-1.167	.244
CLMedPulm	-6197.028	16992.809	-.012	-.365	.715
CLMedRheum	-7441.853	20808.142	-.007	-.358	.721
CLNeuro	-13629.553	18827.618	-.017	-.724	.469
CLNeurPed	-23496.408	27680.402	-.017	-.849	.396
CLOBGyn	34695.966	16236.494	.065	2.137	.033
CLOBGynOncol	92663.867	26373.202	.071	3.514	.000
CLOBGynMat	40249.833	26300.751	.031	1.530	.126
CLOBGynRepro	36874.819	32602.140	.021	1.131	.258
CLOtolaryn	67189.516	17422.036	.103	3.857	.000
CLOpthalm	24022.589	21814.523	.024	1.101	.271
CLOrthop	182371.647	21229.477	.189	8.590	.000
CLPathLab	-3364.555	16906.872	-.006	-.199	.842
CLPathAnat	27178.759	20504.722	.030	1.325	.185
CLPathClin	10044.993	19247.654	.013	.522	.602
CLPed	5823.153	14901.365	.015	.391	.696
CLPedCardio	-1665.851	30374.026	-.001	-.055	.956
CLPedEmer	-32521.177	32508.582	-.019	-1.000	.317
CLPedEndo	-61351.593	32517.563	-.035	-1.887	.060
CLPedGastro	-5438.650	29674.788	-.004	-.183	.855
CLPedGenetics	-67923.249	32601.990	-.039	-2.083	.037
CLPedHemo	-46454.581	27669.808	-.033	-1.679	.094
CLPedHosp	-60057.772	32765.434	-.035	-1.833	.067
CLPedNeon	11623.154	24954.905	.009	.466	.641

	CLPedPulm	-50043.779	23140.617	-.046	-2.163	.031
	CLPedSurg	123858.102	27630.705	.088	4.483	.000
	CLPhysMed	-1592.521	24886.350	-.001	-.064	.949
	CLPsychiatry	-13436.261	15110.587	-.034	-.889	.374
	CLPsyChild	-32727.863	21400.607	-.034	-1.529	.127
	CLRadiol	112211.326	16659.537	.192	6.736	.000
	CLRadoncol	100277.545	19157.834	.125	5.234	.000
	CLSurgery	73470.981	17701.394	.107	4.151	.000
	CLSurgCardio	131388.132	27612.207	.093	4.758	.000
	CLSurgNeuro	217320.670	21850.057	.217	9.946	.000
	CLSurgOncol	73786.560	21915.763	.074	3.367	.001
	CLSurgPlas	96154.440	29854.793	.062	3.221	.001
	CLSurgTrans	191406.575	29777.469	.124	6.428	.000
	CLSurgTrauma	123554.685	20790.013	.133	5.943	.000
	CLSurgUrol	78514.909	26104.340	.060	3.008	.003
2	(Constant)	166666.036	15210.415		10.957	.000
	No Terminal Degree	-84135.991	9825.636	-.244	-8.563	.000
	Doctoral Degree	-86080.404	6763.727	-.312	-12.727	.000
	MD & PhD Degrees	-18087.640	8002.024	-.042	-2.260	.024
	Post-Doc Degree	-23976.537	8017.408	-.054	-2.991	.003
	Tenured	3846.474	9174.526	.016	.419	.675
	Research Title	-28759.135	9119.176	-.090	-3.154	.002
	Clinical Title	3101.791	7271.352	.014	.427	.670
	Distinguished Title	59731.395	9044.998	.132	6.604	.000
	Prof Rank	72645.231	9182.891	.293	7.911	.000
	Assoc Rank	42321.623	6634.580	.167	6.379	.000
	Below Asst	-26841.248	9799.468	-.073	-2.739	.006
	Admin 1	44115.669	13075.045	.061	3.374	.001
	Admin 2	42384.631	7096.884	.118	5.972	.000
	Prev Exp Centered	-508.236	476.717	-.033	-1.066	.287
	UNC Yrs Centered	-1982.706	651.770	-.107	-3.042	.002
	Yrs Rank Centered	895.441	600.922	.044	1.490	.137
	Prev Exp Centered Sq	67.519	29.165	.063	2.315	.021
	UNC Yrs Centered Sq	57.653	34.441	.041	1.674	.094
	Yrs Rank Centered Sq	-153.031	41.298	-.099	-3.706	.000
	CLAnesth	97974.617	15958.237	.188	6.139	.000
	CLDerm	35417.324	23010.143	.032	1.539	.124
	CLEmerMed	12100.482	18413.622	.016	.657	.511
	CLFamMed	-20505.516	15854.525	-.040	-1.293	.196
	CLMedCardio	48658.791	17749.774	.070	2.741	.006
	CLMedEndo	5851.329	21415.522	.006	.273	.785
	CLMedGastro	9736.412	16202.856	.018	.601	.548
	CLMedInternal	-16165.656	17374.969	-.025	-.930	.352

CLMedGeriat	6679.847	24554.951	.005	.272	.786
CLMedHema	10391.397	16350.760	.018	.636	.525
CLMedHosp	8490.899	27555.783	.006	.308	.758
CLMedInfect	8906.565	16330.821	.016	.545	.586
CLMedNeph	-16431.474	18481.216	-.022	-.889	.374
CLMedPulm	-5946.060	16832.648	-.011	-.353	.724
CLMedRheum	-45.081	20647.094	.000	-.002	.998
CLNeuro	-10609.588	18638.164	-.014	-.569	.569
CLNeurPed	-22499.252	27393.343	-.016	-.821	.412
CLOBGyn	40098.500	16132.682	.075	2.486	.013
CLOBGynOncol	104457.539	26245.037	.080	3.980	.000
CLOBGynMat	45037.174	26109.797	.034	1.725	.085
CLOBGynRepro	39533.903	32311.693	.023	1.224	.221
CLOtolaryn	65662.326	17262.258	.101	3.804	.000
CLOpthalm	28525.640	21604.549	.028	1.320	.187
CLOrthop	179384.068	21020.072	.186	8.534	.000
CLPathLab	546.500	16757.500	.001	.033	.974
CLPathAnat	30873.737	20326.870	.034	1.519	.129
CLPathClin	14271.321	19150.291	.018	.745	.456
CLPed	8318.875	14772.456	.021	.563	.573
CLPedCardio	-6019.008	30064.882	-.004	-.200	.841
CLPedEmer	-36078.515	32256.264	-.021	-1.118	.264
CLPedEndo	-52985.360	32298.672	-.031	-1.640	.101
CLPedGastro	1109.229	29406.566	.001	.038	.970
CLPedGenetics	-62097.817	32319.461	-.036	-1.921	.055
CLPedHemo	-45372.796	27403.702	-.032	-1.656	.098
CLPedHosp	-51880.568	32566.159	-.030	-1.593	.111
CLPedNeon	10340.674	24730.809	.008	.418	.676
CLPedPulm	-43891.764	22994.122	-.040	-1.909	.057
CLPedSurg	122705.271	27401.126	.087	4.478	.000
CLPhysMed	8667.967	24725.177	.007	.351	.726
CLPsychiatry	-10767.508	15012.510	-.027	-.717	.473
CLPsyChild	-31134.269	21205.829	-.032	-1.468	.142
CLRadiol	115926.550	16517.183	.198	7.019	.000
CLRadoncol	105201.238	19099.039	.132	5.508	.000
CLSurgery	69883.540	17541.137	.102	3.984	.000
CLSurgCardio	126749.635	27389.473	.090	4.628	.000
CLSurgNeuro	218376.585	21643.728	.218	10.090	.000
CLSurgOncol	78260.034	21714.940	.078	3.604	.000
CLSurgPlas	98571.185	29553.449	.064	3.335	.001
CLSurgTrans	185871.273	29497.438	.120	6.301	.000
CLSurgTrauma	117800.207	20775.486	.127	5.670	.000
CLSurgUrol	74639.850	25845.578	.057	2.888	.004

	Female	-18319.809	4374.565	-.083	-4.188	.000
	African Amer	-4001.630	9413.524	-.008	-.425	.671
	Asian	-17059.829	6780.759	-.047	-2.516	.012
	Hisp/NatAm/Other	-9333.346	11264.388	-.015	-.829	.408
3	(Constant)	159916.745	14992.131		10.667	.000
	No Terminal Degree	-75724.249	9809.594	-.220	-7.719	.000
	Doctoral Degree	-81501.651	6945.831	-.295	-11.734	.000
	MD & PhD Degrees	-12748.514	7898.319	-.029	-1.614	.107
	Post-Doc Degree	-23073.531	7865.133	-.052	-2.934	.003
	Tenured	7905.469	9002.689	.034	.878	.380
	Research Title	-26682.997	8978.201	-.083	-2.972	.003
	Clinical Title	10876.663	7271.167	.050	1.496	.135
	Distinguished Title	56971.578	8872.290	.126	6.421	.000
	Prof Rank	69005.444	9006.640	.279	7.662	.000
	Assoc Rank	38069.935	6527.466	.150	5.832	.000
	Below Asst	-28184.988	9599.243	-.077	-2.936	.003
	Admin 1	45198.450	12946.977	.062	3.491	.001
	Admin 2	43814.648	6993.407	.122	6.265	.000
	Prev Exp Centered	-558.106	467.009	-.036	-1.195	.232
	UNC Yrs Centered	-2040.563	638.157	-.110	-3.198	.001
	Yrs Rank Centered	835.057	588.332	.041	1.419	.156
	Prev Exp Centered Sq	69.940	28.578	.065	2.447	.015
	UNC Yrs Centered Sq	64.621	33.800	.046	1.912	.056
	Yrs Rank Centered Sq	-118.729	40.790	-.076	-2.911	.004
	CLAnesth	124198.521	16431.345	.238	7.559	.000
	CLDerm	29693.189	22765.452	.027	1.304	.192
	CLEmerMed	558.404	18269.391	.001	.031	.976
	CLFamMed	-16328.229	15552.726	-.032	-1.050	.294
	CLMedCardio	46421.126	17700.843	.066	2.623	.009
	CLMedEndo	9855.852	21021.698	.010	.469	.639
	CLMedGastro	10066.587	15992.406	.018	.629	.529
	CLMedInternal	-8159.788	17092.363	-.013	-.477	.633
	CLMedGeriat	15303.886	24131.411	.012	.634	.526
	CLMedHema	14503.111	16093.512	.026	.901	.368
	CLMedHosp	20301.722	27375.854	.014	.742	.459
	CLMedInfect	7178.163	15991.089	.013	.449	.654
	CLMedNeph	-12593.954	18312.255	-.017	-.688	.492
	CLMedPulm	-3566.698	16612.864	-.007	-.215	.830
	CLMedRheum	6548.902	20239.266	.006	.324	.746
	CLNeuro	-11783.726	18393.744	-.015	-.641	.522
	CLNeurPed	-25619.697	26929.965	-.018	-.951	.342
	CLOBGyn	34580.821	15866.438	.064	2.179	.030
	CLOBGynOncol	96649.018	26141.120	.074	3.697	.000

CLOBGynMat	36705.144	25939.761	.028	1.415	.157
CLOBGynRepro	47871.499	31819.620	.028	1.504	.133
CLOtolaryn	61730.587	17025.861	.095	3.626	.000
CLOpthalm	24524.422	21638.323	.024	1.133	.257
CLOrthop	172190.908	21100.703	.179	8.160	.000
CLPathLab	742.112	16440.878	.001	.045	.964
CLPathAnat	9234.410	20443.423	.010	.452	.652
CLPathClin	-13272.470	19493.508	-.017	-.681	.496
CLPed	4095.871	14475.940	.010	.283	.777
CLPedCardio	-12570.483	29858.578	-.008	-.421	.674
CLPedEmer	-23918.750	31870.299	-.014	-.751	.453
CLPedEndo	-33342.712	31898.667	-.019	-1.045	.296
CLPedGastro	1448.314	28908.878	.001	.050	.960
CLPedGenetics	-67664.782	31677.124	-.039	-2.136	.033
CLPedHemo	-38897.336	27022.329	-.028	-1.439	.150
CLPedHosp	-47239.902	31927.463	-.027	-1.480	.139
CLPedNeon	-10912.574	24992.574	-.009	-.437	.662
CLPedPulm	-43276.967	22530.434	-.039	-1.921	.055
CLPedSurg	120204.694	27018.309	.085	4.449	.000
CLPhysMed	4432.080	24375.335	.004	.182	.856
CLPsychiatry	-8112.452	14784.401	-.020	-.549	.583
CLPsyChild	-27961.264	20825.631	-.029	-1.343	.180
CLRadiol	106796.379	16781.722	.182	6.364	.000
CLRadoncol	110902.546	19100.677	.139	5.806	.000
CLSurgery	57228.801	17376.337	.083	3.293	.001
CLSurgCardio	139917.353	26984.376	.099	5.185	.000
CLSurgNeuro	212269.390	21258.498	.212	9.985	.000
CLSurgOncol	86251.600	21725.570	.086	3.970	.000
CLSurgPlas	96864.244	29323.973	.063	3.303	.001
CLSurgTrans	186398.710	28985.769	.120	6.431	.000
CLSurgTrauma	106070.555	20581.382	.114	5.154	.000
CLSurgUrol	63036.462	25549.252	.048	2.467	.014
Female	-16040.149	4299.758	-.072	-3.730	.000
African Amer	-6616.880	9224.020	-.012	-.717	.473
Asian	-14381.138	6659.230	-.040	-2.160	.031
Hisp/NatAm/Other	-10664.613	11028.789	-.017	-.967	.334
Final RVU	5.537	.925	.159	5.986	.000
Clinical FTE	-365.471	75.920	-.124	-4.814	.000

Appendix E

2002 Study of Faculty Salary Equity

Executive Summary

Report on the 2002 Faculty Salary Equity Study

A Study by the Office of the Executive Vice Chancellor and Provost

The University of North Carolina at Chapel Hill

Lynn Williford and Bernadette Gray-Little

Introduction

This report describes the findings of a multiple regression analysis of faculty salaries to determine if systematic patterns of disparity by gender and ethnicity might exist at the University of North Carolina at Chapel Hill. A number of equity-related analyses have been conducted at the University during the past decade with selected faculty populations. However, findings of several widely publicized reports in the past two years concerning the status of women faculty in major research institutions suggested that increased representation had not necessarily led to salary and status equity. In response to those reports, several campus groups expressed an interest to Chancellor James Moeser and Executive Vice Chancellor and Provost Robert Shelton in seeing more research on equity issues concerning women and minority faculty on this campus. Executive Associate Provost Bernadette Gray-Little was asked to work with Dr. Lynn Williford, Assistant Provost and Director of Institutional Research, to conduct a campus-wide study on this topic. Input from various faculty committees was sought concerning specific research questions that should be addressed. Recommendations were made to study a variety of employment conditions that might be perceived as barriers by women and minorities. Provost Shelton determined that the immediate goal would be to determine if salary differences by gender and ethnicity could be detected after controlling for factors that should be compensable, with the possibility of pursuing related topics in subsequent years.

Methodology

Study design. Multiple regression analysis is the statistical method of choice for salary equity studies because it provides a means of estimating the impact of gender and ethnicity on salaries while holding constant other quantitative factors. A number of publications specific to faculty salary equity analyses were reviewed in the process of designing this study, including the Association of American University Professors (AAUP) publication Paychecks: A Guide to Conducting Salary-Equity Studies for Higher Education Faculty (Haignere, 2002). Reviews were also undertaken of the methods used by other institutions, including Michigan, UCLA, UC-San Diego, UC-Irvine, MIT, the SUNY System, Cal Tech, Wisconsin, Illinois, Duke, Washington University, and NC State University. The UNC-Chapel Hill study differed from many of the other studies reviewed in terms of its inclusion of non-tenure track faculty and the clinical areas of Medicine and Dentistry.

Data Sources and Population. Data for the study were extracted from University payroll files, and reviewed for accuracy and completeness by department chairs. The population included all 2,566 individuals with a full-time, permanent, primary appointment as a faculty member on the designated

census date, in either an active or on-leave status. Senior administrators in the roles of chancellor, dean, vice chancellor, provost, associate provost, or director of a major center or institute were excluded.

Variables Used in the Analysis. Variables used as predictors of salary were derived from existing campus electronic databases and included measures of: earned degrees, tenure status, distinguished professorships, rank, years since terminal degree, years at UNC-Chapel Hill, years in current rank, departmental affiliation, and the relative market value of the academic discipline. Notably missing from this study are measures of faculty productivity and quality, other than what is represented in the academic rank and distinguished title variables. Consistent with the approach taken by other institutions that have documented the many difficulties in quantifying merit for statistical analyses, the assumption was made that there are no systematic differences in productivity related to gender and ethnicity.

All salaries were adjusted to 9-month equivalents for faculty in Academic Affairs and 12-month equivalents for Health Affairs. Clinical income received by School of Medicine and School of Dentistry faculty was captured and added to base salaries to model the unique compensation policies of those units.

Results

Faculty data were aggregated into three major units for analysis: (1) Academic Affairs, with additional analyses of tenured/tenure track faculty and the College of Arts and Sciences; (2) the School of Medicine, with additional analyses of tenured/tenure track faculty and those in clinical medicine departments; and (3) other Health Affairs units (Pharmacy, Public Health, Nursing, and Dentistry). Several methods of regression analyses recommended in the literature were used to examine the relationship between gender/ethnicity and salaries; in the table below, the coefficients are expressed in terms of the average salary differences in dollars for females and minorities compared to white males after controlling for all other variables in the model.

Multiple Regression Model Results				
	N	**%**	**R²**	**Coefficient**
Academic Affairs				
Total Population	1,090	100.0%	.819	
Female	353	32.3%		-$1,332
Minority	153	14.0%		$1,680
Tenured/Tenure Track Only	927	100.0%	.814	
Female	261	28.1%		-$1,830
Minority	129	13.9%		$1,249
College of Arts & Sciences	743	100.0%	.786	
Female	211	28.4%		-$1,169
Minority	106	14.3%		629
School of Medicine (MD and doctoral degree holders only)				
Total Population	941	100.0%	.817	
Female	283	30.3%		-$6,976*
Minority	121	12.9%		-$597
Tenured/Tenure Track Only	612	100.0%	.796	
Female	139	22.7%		-$6,713*
Minority	65	10.6%		$6,261
Clinical Medicine Departments	676	100.0%	.793	
Female	200	33.2%		-$9,293*
Minority	81	12.0%		-$195
Other Health Affairs Units (Nursing, Pharmacy, Dentistry, Public Health)				
Total Population	421	100.0%	.800	
Female	196	46.5%		-$3,440
Minority	53	12.6%		$2,552

*Would be considered significantly different from zero at p<.05 in a random sample of this size, but in an analysis of a population where inference to a larger group is not the objective, statistical significance is generally considered irrelevant, and the coefficients are treated as actual differences. See main report for discussion of the use of statistical significance in faculty salary equity studies.

Each of the models attempted was highly predictive of salaries, with R^2 values averaging .80. This indicates that about 80% of the variability in faculty salaries could be accounted for by the variables included in this study. Furthermore, across all populations and all models attempted, the strongest predictors of salary were those variables that we normally expect to be related to higher salaries: full professor rank, distinguished professorship, administrator of a large unit, tenure track appointment as opposed to fixed term, and specialization in a relatively high paying discipline.

After adjustments for the variables expected to be related to higher salaries, the variables gender and ethnicity contributed very little to the overall prediction of salaries. However, examination of the coefficients indicates that status as a minority member was positively related to salary in all but the School of Medicine analyses, where a very small negative differential was observed. However, average female salaries lagged behind the average for the white male reference category in every analysis, ranging from a deficit of $1,169 in the College of Arts & Sciences to $9,293 in Clinical Medicine.

Although the models developed are quite robust, the results indicate that between fifteen and twenty-five percent of the variability in faculty salaries was not explained by the analyses. This remaining variability is quite likely due to differences in the quality of faculty contributions that are not accounted for in the regression analyses. Therefore, the results of this study should be treated as preliminary only. Further

analyses at the school/department level might focus on individuals with large negative disparities between their predicted and actual salaries in an attempt to determine what productivity differences or other factors might account for the observed gap.

Appendix F

2013 Follow-Up Report to the

Faculty Salary Equity Study

The University of North Carolina at Chapel Hill

This is a summary of the Executive Vice Chancellor and Provost's response to the report submitted by the Faculty Salary Equity Task Force in spring 2012. Provost Bruce Carney had charged the Task Force with replicating the 2002 faculty salary equity study to determine if salary differences existed by gender and race/ethnicity after controlling for factors that should be related to compensation. The Task Force was also asked to examine time to promotion and the diversity of new faculty hires, and to recommend ongoing strategies for monitoring equity.

The Provost presented preliminary results from the Task Force report at the April 2012 meeting of Faculty Council and invited feedback and comments. His senior leadership team was assigned to identify follow- up analyses and to study the feasibility of implementing the report's recommendations. The following actions had been taken by the end of the 2012-13 academic year.

- **Salary Equity Study:** The Task Force had recommended further analysis of the data to include "…a more detailed, qualitative, case-by-case analysis performed by individuals who have context- specific knowledge of the faculty member's career history and professional performance." The Provost asked the Office of Institutional Research and Assessment to provide each dean with the regression models for his/her school and a roster of the faculty who had been included in the analysis. Several suggestions were made by school-level experts to modify the regression models and variables to improve the validity of the findings. These included using a more precise method of adjusting a faculty member's salary to account for administrative duties, differentiating between permanent and temporary distinguished chair awards, and introducing a new measure of clinical productivity as a salary predictor. The final roster listed each faculty member's actual salary, the salary predicted by the regression model (after controlling for experience, discipline area, rank, tenure status, and other career-relevant factors), and the difference between the two. Faculty members with large negative discrepancies between their actual and predicted salaries (defined as 1.5 standard deviations from the mean for their academic units) were flagged. The Provost asked the deans to investigate these cases and to provide an explanation and a description of any actions taken to remedy disparities that were not justifiable based on professional productivity, quality, or other appropriate factors. These explanations were reviewed by the Provost's senior leadership team.

- **Tenure and Promotion Study:** The Task Force Report outlined the data issues that limited their ability to conduct a comprehensive analysis of faculty career progression. Solutions for improving the availability and quality of faculty data have been discussed by the Provost's Office and members of the Appointment, Promotion, and Tenure Committee. The Office of Institutional Research and Assessment, the Office of Human Resources, and the Office of Academic Personnel have raised these data issues during the planning process for the upcoming conversion of the University's legacy human resources and financial systems to PeopleSoft. It will be particularly important to develop new reporting systems that enable analysis of both historical and current data and longitudinal studies of individual faculty over time.

- **Hiring Study:** Efforts continue to track former participants in the faculty diversity initiatives

described in the Task Force Report and using the results to evaluate the effectiveness of these programs. In addition, the Office of Diversity and Minority Affairs, the Office of Equal Opportunity, and the Office of Institutional Research and Assessment are collaborating on ways of increasing the information available to assess recruitment, hiring, and retention patterns by gender and race/ethnicity over time, and to compare our progress with our peers.