



Summary Report on Reed Smith EEO Analysis of Tenure Track Faculty Salaries
Submitted to the Provost in September 2016

I. Background

In Spring 2016, the Office of the Provost commissioned Reed Smith LLP to execute a full audit of tenure track faculty salaries at Carnegie Mellon University. The objective was to determine whether salaries were equitable with respect to gender and race or ethnicity. At the same time, Provost Jahanian enlisted our help to collaborate with Reed Smith to produce a report for the campus community.

II. Study Overview

David McAllister and Nathan Comstock led the team at Reed Smith, a firm with extensive experience undertaking analyses of faculty salaries. They were requested to assess the degree of systemic gender-based and race/ethnicity-based equity in the Nine-Month Salaries of the University's Tenure Track Faculty. We worked closely with them while they were producing their report and offered suggestions for additional analyses of the data. It is our opinion that the resulting report follows best practices.

To conduct the study, Reed Smith was given confidential access to the relevant information about tenured and tenure-track faculty in all colleges, including nine-month salaries from 2015-16.

The regression model incorporated several key variables including: academic rank, college and/or field, years of external funding over the past three years (0-3), and measures of experience (years of prior experience, experience on the tenure track and experience in the current academic rank). As is typical of faculty compensation studies, Reed Smith did not have available key variables reflecting reputation, productivity and impact. Nor did they have access to quantitative variables reflecting service or teaching contributions. The only attempt to reflect a measure of research contribution was the variable indicating years of external funding over the past three years. It should be noted that, while this statistical analysis was limited to available measures, department level decisions related to merit increases and tenure take into account the aggregate of *all* these factors – research, teaching and service.

III. Findings

The model predicted salaries fairly well ($R^2 > 75\%$). Having accounted for the measured

variables, on average overall male faculty members made 1.14% more than female faculty members with an average annual difference of \$2,672, which is not statistically significant. Similarly, on average, majority faculty members made 1.23% more than minority faculty members, which is also not statistically significant. In a more refined analysis performed by college, the pay differentials favored women and minorities in about half of the comparisons. Only one comparison was statistically significant and it showed a slight advantage to women faculty.

As we are all aware, the sample size of women and underrepresented minority faculty members is small. In an attempt to address the limitation of small numbers, Reed Smith compared the observed salaries of members in these focal groups to predicted salaries (computed without including the focal group). In this setting, they were looking for patterns of residuals that might suggest the focal group was underpaid relative to the reference group, but they did not find evidence of this in their analysis. Using the reference group to predict salaries, women and underrepresented minorities were paid close to the predicted amount and approximately equal numbers were paid above and below expectation.

IV. Conclusion

It is worth noting that in an observational study it is not possible to prove or disprove compensation equity in general or for an individual. It is only possible to look for statistical differences across groups of faculty after controlling for likely features that influence pay, such as field of study or years in rank. Moreover, because faculty members are not systematically rated for merit or productivity, a key covariate is missing from the model.

Nevertheless, in spite of the challenges to the study, the Committee is satisfied that the analysis conformed to best practices. Within the limitations of the analysis, there did not appear to be evidence of systemic inequity in tenure track faculty pay at Carnegie Mellon.

Signed by

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