Salary-Equity Study
for the **Rochester Institute of Technology**

April 2016

Prepared jointly by

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Executive Summary

In spring 2015, the AdvanceRIT Resource Allocation Committee (RAC) of the Rochester Institute of Technology contracted with the Center for Higher Education at Ohio University to help the RAC design and implement a procedure for conducting a faculty salary equity study that could serve as a model to be replicated moving forward, and to conduct an initial study using one year's data. The dataset used for this study consists of information from a total of 699 tenured and pre-tenured RIT faculty. (Deans, faculty in endowed chairs, and working retirees were not included).

The main dependent variable used throughout this study was the natural logarithm of the annualized 2014 base salary. The following independent variables were used: years in rank; other RIT years; and dichotomous (or "dummy") variables for gender, rank, two-digit CIP (Classification of Instructional Programs) code, 2013 performance rating, terminal degree, and AALANA (African American, Latino American, Native American) status. Tenure status was not included because it was highly correlated with rank and other variables, and thus it added little to the model while increasing standard errors. Other variables were also considered for inclusion within the model and were excluded due to either insignificance or lack of institutional tracking, such as years of experience prior to employment at RIT.

It was found that discipline, rank, years in rank, 2014 performance rating and terminal degree were significant predictors of salary, and that gender was not a significant predictor of salary.

Methodology

To understand differences in salary, we estimated two regression models that iteratively introduced controls for measureable factors that should legitimately affect pay. The hierarchical approach enabled us to view the additive effect of each set of variables upon the fit of the model and observe how the coefficients and their statistical significance values changed with each addition.

	Model 1	Model 2
Dependent Variable	Ln(Salary)*	Ln(Salary)*
Independent Variables	Gender	Gender
	Rank	Ln(Benchmark)**
	CIP code	
	Time in Rank	Time in Rank
	Performance Rating	Performance Rating
	Other RIT Years	Other RIT Years
	Terminal Degree	Terminal Degree
	AALANA Flag	AALANA Flag

* Natural log of annual salary (i.e., 9.5-month, full-time equivalent)
** Incorporates discipline (captured in CIP code) and rank

Both models used the natural log of annual salary (i.e., 9.5-month, full-time equivalent) as the dependent variable, and were first estimated with the dummy variable for gender as the only independent variable; additional variables were successively added in the order they appear in the

above table. Models 1 and 2 differ in how they incorporate rank and discipline (captured in CIP code): **Model 1** used dummy variables for Rank and CIP code directly, whereas **Model 2** used the natural log of the benchmark salary, a figure that is determined by a faculty member's rank and CIP code. Both models provided similar results. In **Model 1**, the additional variables introduced were rank, CIP code, time in rank, performance rating, other RIT years, terminal degree, and AALANA flag. In **Model 2**, the dependent variable was again the natural log of annual salary; but as mentioned previously, the independent variables for CIP code and rank were replaced with the natural logarithm of the benchmark salary and additional variables remained the same: time in rank, performance rating, other RIT years, terminal degree, and AALANA flag.

Findings & Next Steps

The coefficient of each independent variable indicates its effect on the dependent variable, controlling for all the other variables included. As expected, discipline, rank, years in rank, and performance rating above "meets expectations" were significant predictors of salary with positive coefficients, while lack of a terminal degree was a significant predictor with negative coefficients. The estimated coefficients for the variable Female, while negative, were not statistically significant from zero in either model, indicating that the observed average salary difference by gender can be attributed to chance, as opposed to some systemic source[1].

In cases where individual salaries are significantly lower than expected, Human Resources will follow up with associated leadership as appropriate based on results of the analysis.

For this faculty salary equity study, the AdvanceRIT RAC set specifications and hired the Center for Higher Education at Ohio University to conduct the analysis, and in doing so established a methodology and process in which stakeholders can have high-levels of confidence. Important components of this process occurred in three stages: 1) Preparing for a faculty salary equity study, 2) Developing a contractual agreement, and 3) Conducting a collaborative analysis.   RIT has conducted salary studies for faculty and staff in recent years and is committed to conducting such studies on an annual basis. This study used a unique approach by expanding the number and breadth of people involved, working in partnership with the consultants to develop a salary model and report, and demonstrating transparency through a commitment to disseminating results. **The AdvanceRIT RAC recommends that RIT continue to use and develop a collaborative process and resulting methodology to conduct annual faculty salary equity studies.**

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[1] Random error is present in all measurement but should not impact findings as it will differ across groups and individuals, theoretically zeroing out. Alternatively, systematic error is indicative of something that is consistently present across groups or individuals and affects the distribution positively or negatively, thereby introducing bias.