



Oregon Institute of Technology

Faculty Pay Equity Analysis

Report of Findings

February 21, 2023

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Segal Introductions

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personalized advice and help

Report of Findings

- 1. Summary of Findings**
2. Methodology
3. Detailed Analysis

Summary of Findings

Background

- Oregon Institute of Technology engaged Segal to conduct a pay equity study to understand the impact gender and race may have on compensation for its faculty.

Objectives

- Determine the extent to which there may be a systemic bias in pay with respect to gender and/or race/ethnicity, while controlling for effects of other variables, such as education, experience, and responsibilities of the job.
- To accomplish these objectives, Segal conducted a comprehensive and independent statistical analysis of multiple variables and their relationship to pay. The focus was to determine the primary drivers of pay and to help understand the impact gender and/or race may have on pay levels.

Summary of Findings

Systemic Findings

- The following variables proved to be primary drivers of faculty compensation:
 - Rank
 - Division
 - Campus
 - Time in Rank
 - Department
- The primary drivers of pay above represent reasonable characteristics that would be expected to contribute to pay in the market.
- The data analyses and predictive model conclude that there **do not appear to be systemic inequities based on gender and/or race/ethnicity** after the above predictive variables were considered.

Summary of Findings

Individual Findings

- There were 10 individual outliers (6.3% of the population), as can be expected, with total salaries below or above 2.0 standard errors from the predictive model. These outliers should be examined on a case-by-case basis, and other reasonable factors influencing their pay (such as prior experience not considered, performance, etc.) should be noted for each individual.

Outliers by Gender & Race/Ethnicity

	Count	Percentage of Cohort Group
Population	160*	100.0%
Low Outliers	3	1.9%
Female / Male	0 / 3	0.0% / 1.9%
Minority / Non-Minority / Not Disclosed	0 / 3 / 0	0.0% / 1.9% / 0.0%
High Outliers	7	4.5%
Female / Male	4 / 3	2.5% / 1.9%
Minority / Non-Minority / Not Disclosed	1 / 6 / 0	0.6% / 3.8% / 0.0%

* Includes bargaining unit members and department chairs (only the base salary)

Summary of Findings

Next Steps and Recommendations:

1 Complete review of low individual outliers

- Continue reviewing individual outliers to ensure rationale behind pay differences are captured, where appropriate.

2 Implementation of individual pay adjustments, as appropriate

- Determine the extent of pay adjustments for low outliers and potential freezes for high outliers. Decide on a timeframe for any pay adjustments.

3 Bolster data-upkeep

- Continue to collect relevant data to all components of pay (specifically surrounding grant funded positions) to ensure completeness of data and to improve future pay equity studies.

4 Incorporate results into current pay policies and practices

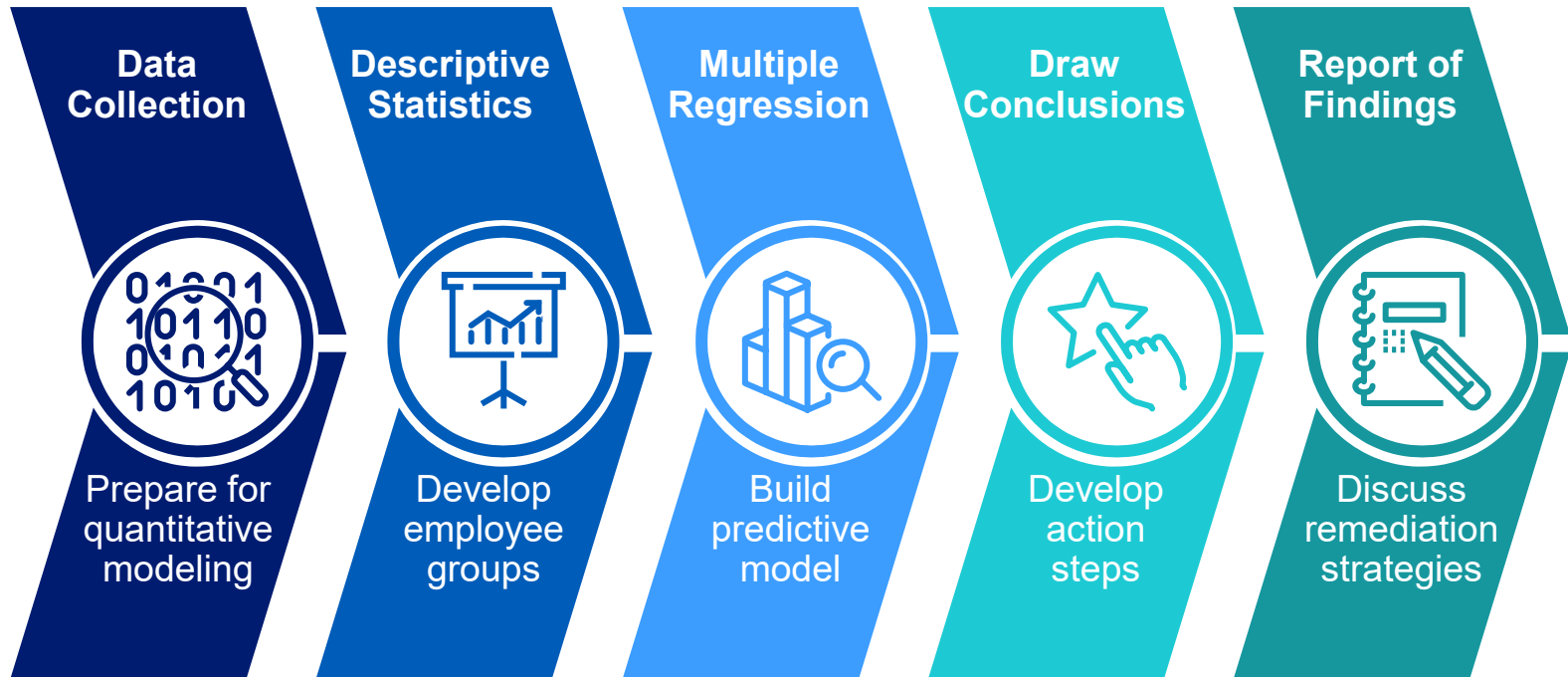
- Utilize the predictive models to assess compensation levels when hiring or promoting to maintain equity.

| Report of Findings

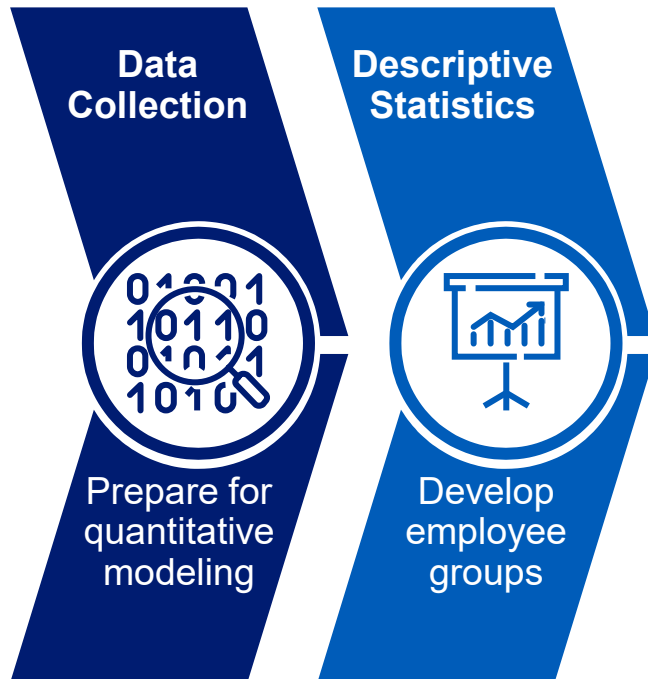
1. Summary of Findings
2. **Methodology**
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Methodology

Pay Equity Analysis Framework



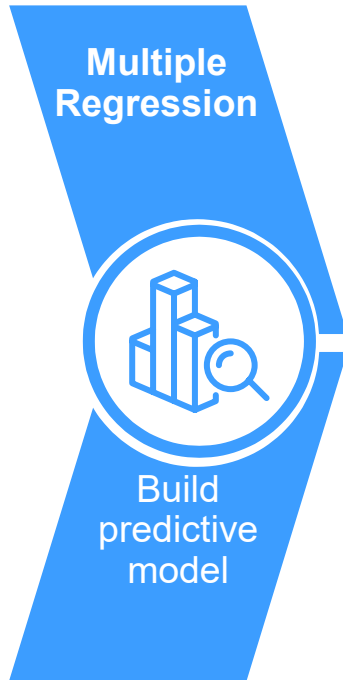
Methodology



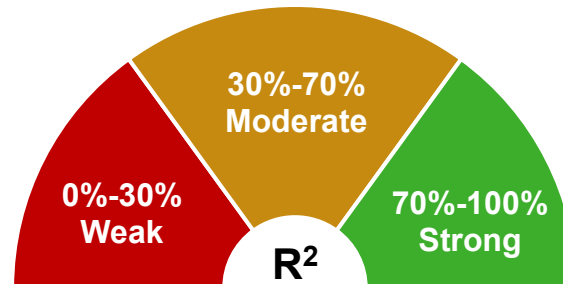
- Collect quantitative data including categorical, discrete, and continuous variables.
- Determine appropriate number and types of employee groupings.
- Identify initial pay gaps within each group, considering a variety of variables.
- Determine data transformations necessary for more rigorous modeling.

To ensure the data conformed to a normal (i.e., bell-shaped) distribution, we used the natural log of the salaries as the dependent variable in the multiple regression analysis.

Methodology



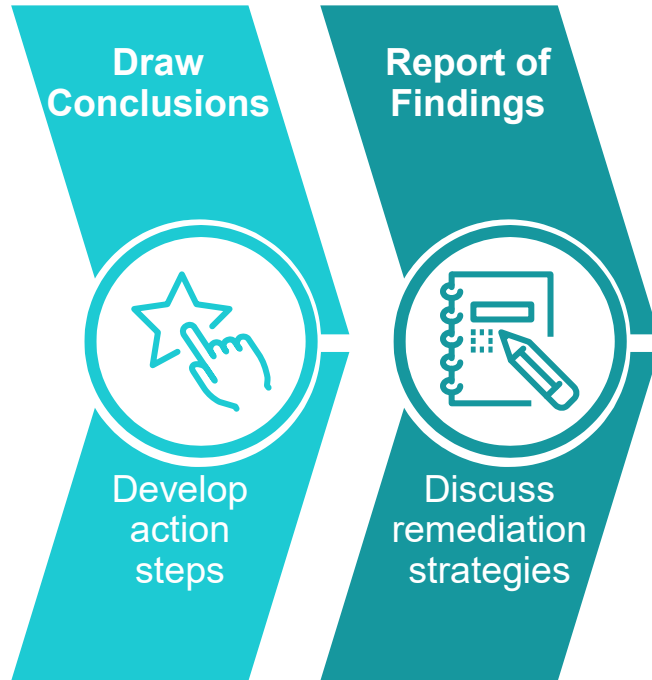
- Identify variables that have the largest influence on pay differentiation, while accounting for multiple factors.
- Determine significant differences across groups while controlling for effects of other significant variables.
- Develop a predictive model based on the primary drivers of pay.
- Conventional standards used to measure explanatory power (**R²**) and variable significance (**p-value**).



p-Value	Presumption
< 0.01	Very strong
0.01 to 0.05	Strong
0.05 to 0.10	Low
> 0.10	None

The Adjusted R² value for our predictive model is **87%** suggesting that the set of predictor variables does a strong job of estimating variances in salaries.

Methodology

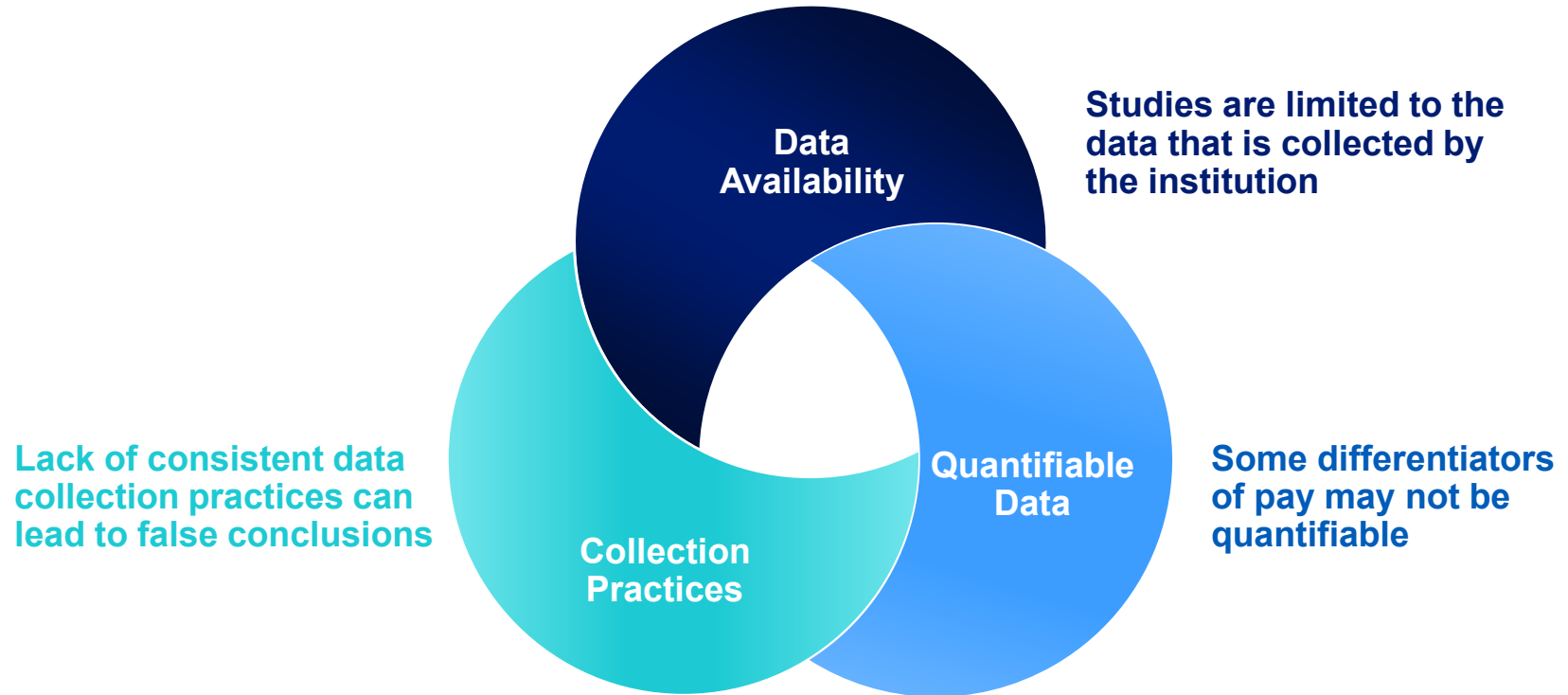


- Determine the extent to which there is systemic pay inequity potentially stemming from a gender or race/ethnicity bias.
- Compare actual pay to expected pay for each employee and provide a list of individual outliers.
- Calculate associated costs necessary to remediate any issues under various remediation strategy alternatives.

No systemic inequities based on gender and/or race/ethnicity were found. Individual outliers should be reviewed on a case-by-case basis to determine potential pay adjustments.

Methodology

Limitations of Pay Equity Studies



Due to these limitations, and since pay can differ for each employee for these and many other individualized reasons, it is impossible for any pay equity study to account for all differences in pay.

| Report of Findings

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Overview of Data

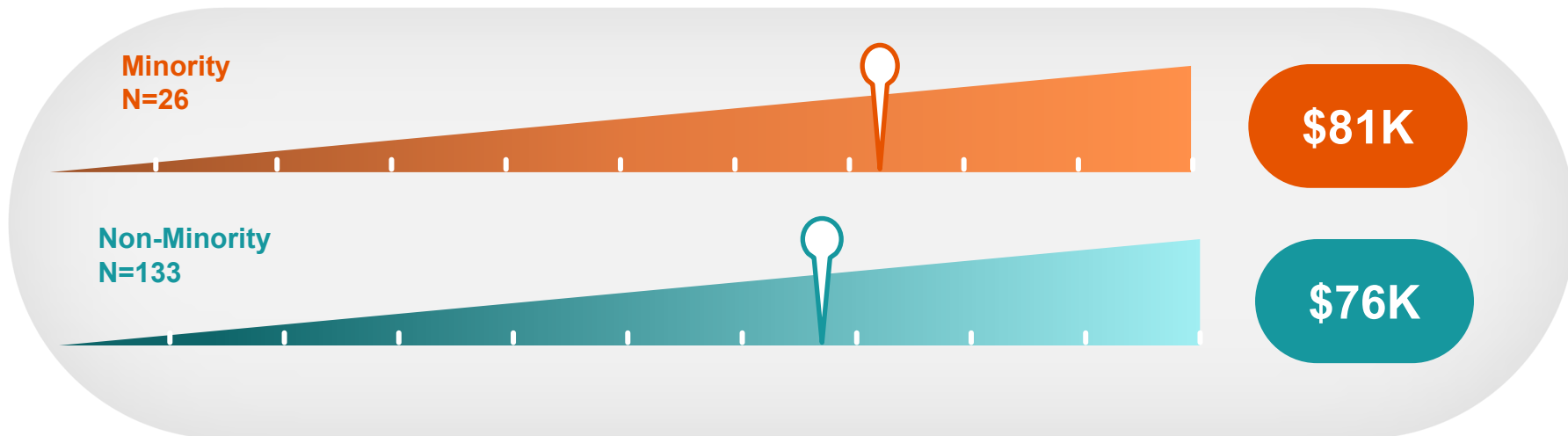
Overview of Data Elements Used in the Study

- The following data fields were provided and considered for inclusion in the statistical model:

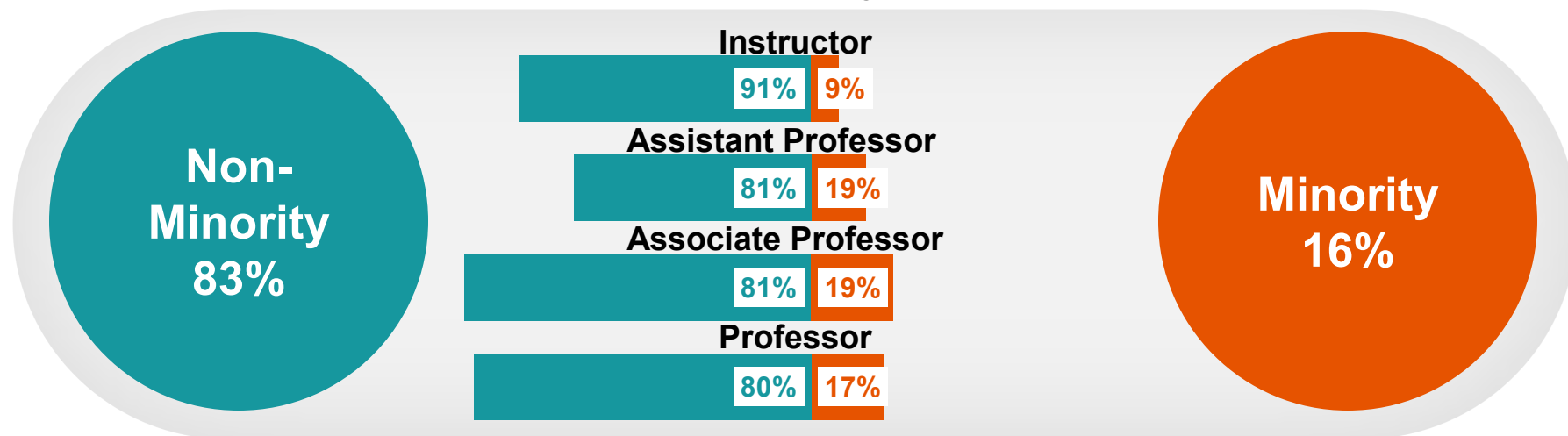
Data Fields		
<ul style="list-style-type: none">• Unique Employee ID• Name• ECLS Code• Location• Division• Department• Job Title• Position Number	<ul style="list-style-type: none">• Hire Date• FTE Percentage• Annual Appointment• Annual Salary• Current Tenure• Current Rank• Rank History• Current Hire Date	<ul style="list-style-type: none">• Supervisor• DOB• Ethnicity Code Description• Ethnicity IPEDs Description• Gender• Degree (partial)• COLA History• Department Chair Status

Descriptive Statistics by Minority Status

Average Salary by Minority Status



Composition by Rank



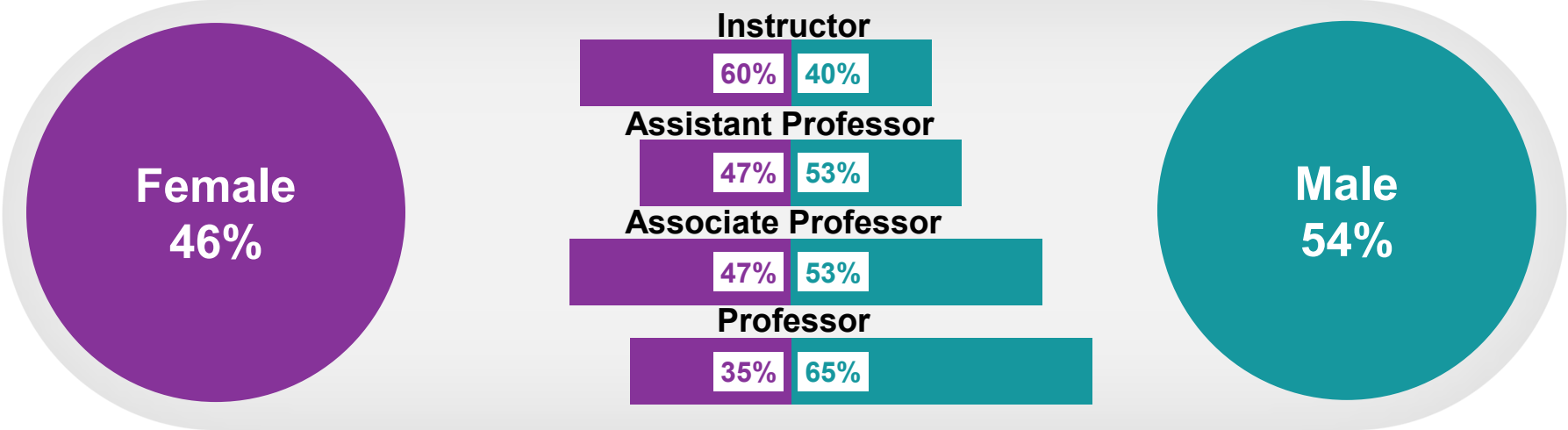
* Totals exclude one (1) individual who declined to respond to the Race/Ethnicity question

Descriptive Statistics by Gender

Average Salary by Gender



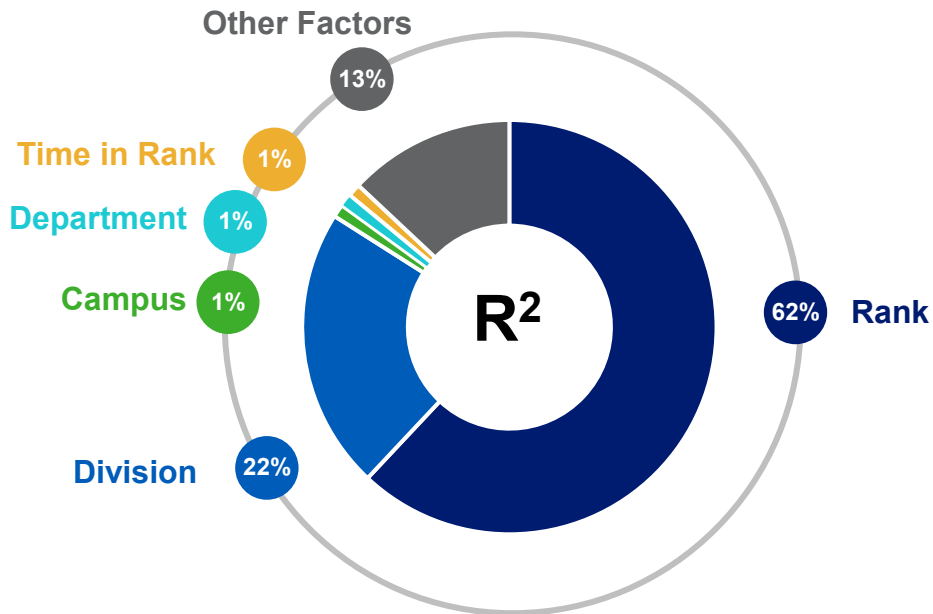
Composition by Rank



Predictive Model

Multivariate Regression Analysis Results

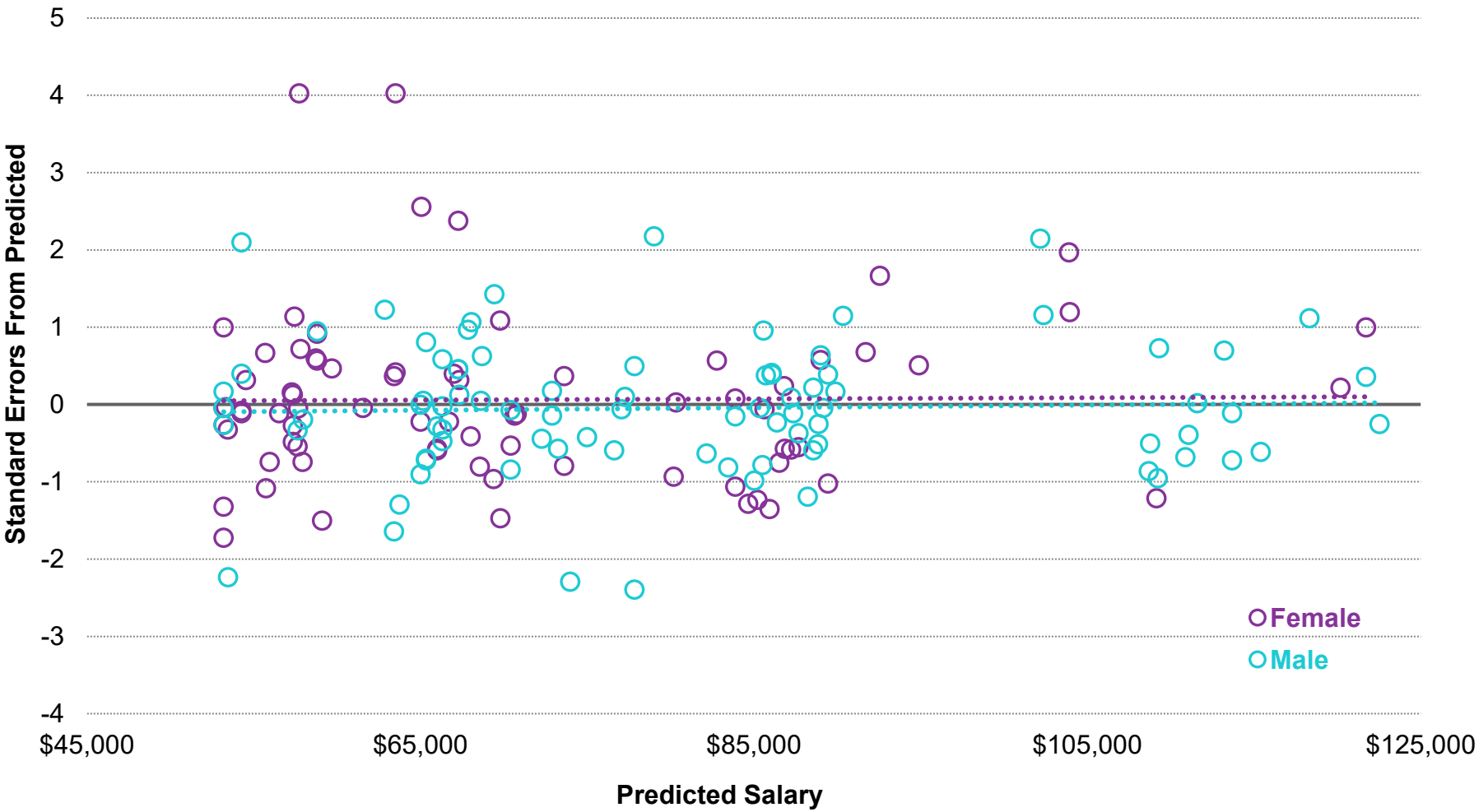
Predictive Power of Each Variable (Adjusted R²)



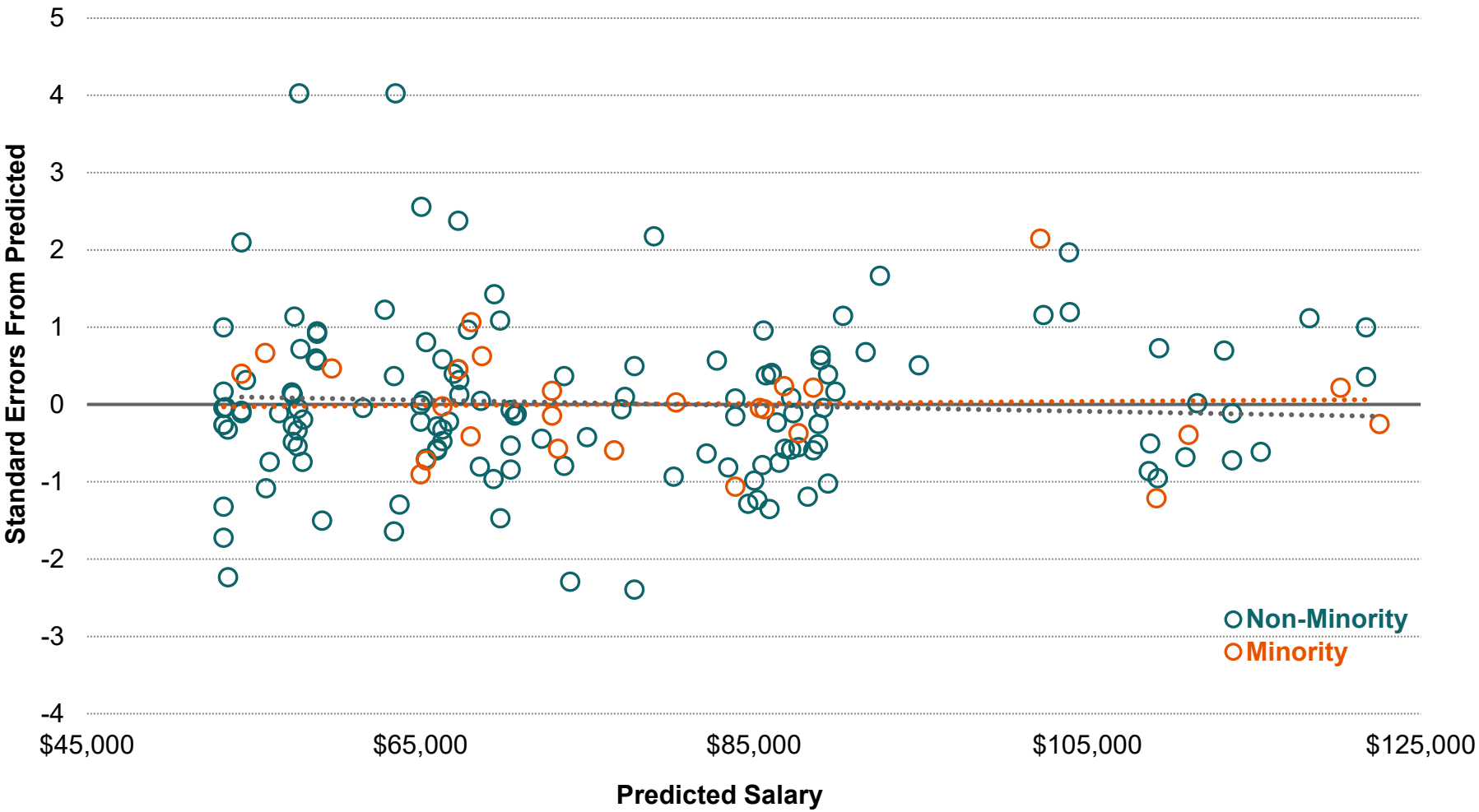
- The predictive model provides an overall Adjusted R² value of **87%**. This suggests that the set of predictor variables does a strong job estimating the variance in salaries overall.
- Rank and Division are the most significant factors influencing pay, followed by Department, Campus and Time in Rank.
- “Other Factors” that can influence pay may include:
 - Rank at hire
 - Performance
 - Other data not captured in the HRIS system

Gender and races/ethnicities were not noted as a statistically significant variables after the above predictive variables were considered.

Predicted Salary vs. Standard Errors From Predicted Salary



Predicted Salary vs. Standard Errors From Predicted Salary



Conclusion

Based on the analyses above, we conclude:

- Oregon Institute of Technology uses a reasonable set of data fields to differentiate pay, as determined through the development of a strong predictive model.
- There do not appear to be systemic inequities based on gender and/or race/ethnicity after other predictive variables were considered.
- As can be expected, 10 individual outliers were identified. These outliers should be examined on a case-by-case basis, for other reasonable factors influencing their pay.