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**Gender-Based Salary Anomaly Implementation Report**

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**Final Report  
March, 2010**

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## SUMMARY

As required by the 2006-2010 Collective Agreement, the Salary Anomaly Committee (SAC) reviewed the *Gender-Based Salary Anomaly Report* of November 2009 (GSAR2009) arising from application of the terms of Letter of Understanding H of the 2006-2010 Collective Agreement.

The GSAR2009 contained analyses of salaries for two groups of faculty: Probationary and Tenured faculty, and Limited Term faculty (including Basic Scientists in Clinical Departments). For both groups the study found that, after controlling for differences in years of experience, rank, performance scores, discipline and other statistically significant observed characteristics, there was on average no statistically significant salary difference between male and female faculty. It did, however, find evidence suggestive of systematic gender salary differentials for two groups of Probationary and Tenured faculty. Specifically, the salaries of female faculty members hired since the last gender-based salary adjustment in 2006, and the salaries of female faculty at the Professor rank, both appeared to be lower than those of men with otherwise similar characteristics.

The SAC repeated and extended the analysis reported in the GSAR2009 using updated data. The SAC found, on average, for Probationary and Tenured faculty present before the last gender-based salary adjustment in 2006, and for all Limited Term faculty, no statistically significant, systematic salary difference between male and female faculty that can be ascribed to gender. The SAC also found that the salaries of Probationary and Tenured female faculty hired since 2005/06 are, on average, systematically lower than those of men of similar accomplishment and experience hired in the same period. However, with the updated data and a more detailed analysis, the SAC no longer found a statistically significant difference between the salaries of male and female faculty at the Professor rank.

Following the methodology used in 2005/06 to determine gender-based salary adjustments, the SAC has recommended that the salaries of 48 of the 74 female Probationary and Tenured faculty hired since 2005/2006 be adjusted. The average adjustment recommended was \$2,282. The SAC repeated its regression analysis of salaries including the recommended gender-based salary adjustments and found that with these adjustments, no statistically significant gender-derived salary difference remained between male and female Probationary and Tenured faculty overall and for the sub-group hired since the last gender-based salary adjustment.

The conclusion that female Probationary and Tenured faculty hired since 2005/06 have salaries that are lower than those of men of similar characteristics suggests a systematic gender bias in the starting salaries of new faculty. The SAC analyzed starting salaries of Probationary and Tenured faculty using available data for all new hires 2000/01 and found some statistical evidence that this was the case.

As a matter of due diligence the SAC also undertook a department-by-department inspection of the projected salaries of all Probationary, Tenured and Limited Term faculty for evidence of systematic salary differences in local pockets of male or female faculty after non-gender characteristics are taken into account. For Probationary and Tenured faculty the SAC found no evidence of such pockets, but did do so for six Limited Term faculty, all women, in four academic units. The average value of the salary adjustment recommendations for this group of Limited Term faculty was \$2974.

## **Gender-Based Salary Anomaly Implementation Report**

### **1. Mandate of the 2009-10 Salary Anomaly Committee in Implementation of Recommendations of the *Gender-Based Salary Anomaly Report* of November 2009**

Under Letter of Understanding H attached to the faculty Collective Agreement of 2006-10 (CA), the Salary Anomaly Committee (SAC) was required to take two steps with regard to gender anomalies in 2008-09 and 2009-10. First, it was mandated to conduct a study of gender-based anomalies. That study, titled the *Gender-Based Salary Anomaly Report*, was completed in the fall of 2009 and sent to the Employer and UWOFA on November 9, 2009.<sup>1</sup> Second, if gender-based anomalies were noted in that study, the SAC was to “distribute funds available in the 2009-10 Salary Anomaly Fund in accordance with Clauses 39 and 39.1” of the Compensation and Benefits Article of the CA. These clauses are as follows:

39. Following any gender anomalies review process under this Collective Agreement, Gender-Based Anomalies Adjustments shall be assigned from the 2009-10 Salary Anomaly Fund to Probationary, Tenured, or Limited-Term Members whose salaries are anomalously low because of their gender. These adjustments shall be made from the Salary Anomaly Fund before any Performance-Based Anomaly Adjustments are considered.

39.1 In the case of distribution for the purposes of gender anomaly, the committee shall consider any report arising from the gender anomalies review process.

The Salary Anomaly Fund for 2009-10 has \$500,000 in base money at its disposal.

Letter of Understanding H of the CA requires the SAC to consider salary patterns for Probationary and Tenured Members, and for Limited Term Members using regression analysis where annual salary is the dependent variable. A list of independent variables that could be used in this study, but did not necessarily need to be used, was given: gender, highest degree, years since highest degree, years since first degree, years employed as a faculty member at Western, age, rank, years in rank, home Faculty, and Department average salary.

The SAC’s report on the first step of its work on gender-based anomalies (the *Gender-Based Salary Anomaly Report*, November 2009, hereafter referred to as GSAR2009) provided separate regression analyses of Probationary and Tenured Members’ salaries and of Limited Term Members’ salaries. It identified some possible areas where gender-based anomalies might exist for Probationary and Tenured faculty, but did not find evidence of systematic gender anomalies for Limited Term Members.

This report covers the implementation phase of the SAC’s work, in which the committee developed specific recommendations for gender-based anomaly awards for individual Members.

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<sup>1</sup> A copy of this report can be found at:

[http://www.uwo.ca/pvp/facultyrelations/documentation/UWO%20Gender%20Pay%20Equity%20Report%20091103%20\(2\).pdf](http://www.uwo.ca/pvp/facultyrelations/documentation/UWO%20Gender%20Pay%20Equity%20Report%20091103%20(2).pdf)

In doing this work the SAC performed additional regression analysis beyond that in the GSAR2009, and then used the results of that analysis to determine the amounts of individual salary adjustments. The additional analysis makes use of updated data made available by the Office of Institutional Planning and Budget (IPB) and follows in the spirit of the Pay Equity Implementation exercise of 2006 (PEI2006), which refined the regression analysis of the 2005 Pay Equity Report (PER2005).<sup>2</sup>

## 2. Membership and Meetings of the Salary Anomaly Committee

The SAC included five members:

**Chair (jointly appointed by the Association and the Employer):**  
Terry Sicular (Professor, Economics)

**Association Appointees:**  
James Davies (Professor, Economics)  
Ann Bigelow (Lecturer, Management and Organizational Studies)

**Employer Appointees:**  
Alan Weedon (Professor of Chemistry, Vice-Provost (Academic Planning, Policy and Faculty))  
David Wardlaw (Professor of Chemistry and Dean of Science)

The committee was assisted by Jimmy Chien (Analyst, IPB), who served as a resource person.

Conflict of interest protocol: Members of the committee left the room during the discussion of, and assignment of any salary adjustments to, individuals in their home departments; the Dean of Science left the room during the discussion of and assignment of any salary adjustments to individuals in the Faculty of Science.

The bulk of the committee's implementation work was carried out at the following meetings:

August 6, 2009, 8:30-10:30  
August 11, 2009, 8:30-10:30  
August 20, 2009, 8:30-10:30  
August 26, 2009, 8:30-10:30  
September 11, 2009, 9:30-12:30  
September 27, 2009, 9:30-12:00  
October 6, 2009, 12:00-3:00  
October 8, 2009, 9:00-11:00

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<sup>2</sup> These reports are available at <http://www.uwofa.ca/@storage/files/documents/149/2005payequityreport.pdf> and <http://www.uwofa.ca/@storage/files/documents/150/2005payequityimplementationreport.pdf> and also at <http://www.uwo.ca/pvp/facultyrelations/documentation/Pay%20Equity%20Report%202005.pdf> and <http://www.uwo.ca/pvp/facultyrelations/documentation/PEI%20report%20FINAL.doc>

October 13, 2009, 12:00-3:00  
 October 21, 2009, 9:30-12:00  
 October 28, 2009, 12:00-3:00  
 November 11, 2009, 9:30-12:30  
 November 23, 2009, 9:30-12:30  
 December 3, 2009, 2:30-4:30  
 December 15, 2009, 8:30-11:30

### **3. Key Findings in the *Gender-Based Salary Anomaly Report of November 2009* (GSAR2009)**

The GSAR2009 contained analyses of salaries for two groups of faculty: Probationary and Tenured faculty, and Limited Term faculty (including Basic Scientists in Clinical Departments). For both groups the study found that, after controlling for differences in years of experience, rank, performance scores, discipline and other statistically significant observed characteristics, there was on average no statistically significant salary difference between male and female faculty. It did, however, find evidence suggestive of systematic gender salary differentials for certain subgroups of Probationary and Tenured faculty, specifically, for female faculty members hired since the last pay equity salary adjustment in 2005/06, and for female full Professors. In addition, the study found evidence suggestive of possible gender differences in the APE and post-tenure promotion process for Probationary and Tenured faculty.

The GSAR2009 made the following recommendations with respect to the implementation of gender-based salary anomaly adjustments:

- It was not necessary to make university-wide adjustments for Limited Term or Probationary and Tenured faculty.
- Among Probationary and Tenured faculty, there might be some need for gender-based salary adjustments for recent female hires and for women at the rank of Professor (but not at the ranks of Assistant or Associate Professor). It was suggested that attention should be paid to Associate Professors in view of the apparently longer time to promotion to Professor for women.
- Further regression-based analysis should be completed to determine the appropriate amount of salary adjustments for each of these faculty groups. It was suggested that these regressions should be run separately for men and women in each of the two groups, and that then the patterns of predicted salaries be examined, following the methodology used in the 2005/06 implementation analysis. Departments and units might need to be combined due to small numbers of men or women in some departments/units. If at all possible, the analysis should include starting salary information. Finally, predicted salaries from these regressions should be used as the basis for determining salary adjustments, so as to ensure that systematic gender-based differences are corrected.

#### 4. Methods for Identifying and Correcting Systemic Gender Anomalies

In beginning its implementation work the SAC reviewed the approach taken by the 2006 Pay Equity Implementation Committee (PEIC2006). That committee set out a systematic approach based on regression analysis that was adopted here.

The approach of the PEIC2006 was to estimate two salary regressions, one for men and one for women. The committee then performed a Chow test to see if the relationship between salary and characteristics was statistically different for men and women.<sup>3</sup> It found a statistically significant difference between men and women in the relationship between salary and characteristics. There was, on average, a \$2,271 difference between the predicted salaries of male and female faculty members with otherwise identical characteristics.

The PEIC2006 proceeded to estimate the predicted salary for each female faculty member using estimated coefficients from (a) the female regression, and (b) the male regression. The difference between these two predictions provided an estimate of the pure gender effect on a woman's salary. Suppose, for example that a female Associate Professor with 10 years employment at UWO, with a PhD obtained 12 years earlier, and in a particular unit, had a predicted salary from the female regression of \$75,000. If, with the same characteristics, the male regression predicted a salary of \$77,500, then this would imply the presence of a systematic gender-based salary anomaly of \$2,500. This estimated anomaly would then serve as the basis for the recommended gender-based salary anomaly adjustment.

The PEI2006 exercise and the resulting salary adjustments attempted to correct fully all gender-based salary anomalies of female faculty members. It is therefore not surprising that the GSAR2009 did not find evidence of overall systematic gender-based anomalies for faculty members who were present at UWO when the PEI2006 recommendations were enacted (faculty members hired prior to Jan. 1, 2006). The GSAR2009 did, however, find indications of two possible systematic areas of concern and suggested that, in addition, there could be localized "pockets" of gender-based anomalies in particular units or Faculties.

The two areas of concern found in the GSAR2009 were: first, female faculty members hired after Jan. 1, 2006, and second, female faculty at the rank of Professor, with consideration of the possible pattern of slower promotion to Professor for women. An important task in the SAC's implementation work was to reexamine these concerns using updated data so as to establish as firmly as possible whether systematic gender-based anomalies continued for these groups.

The existence of local "pockets" with gender-based anomalies is possible even if the university as a whole does not show evidence of systematic gender-based anomalies. For example, suppose a unit with twenty-five faculty members, ten of whom were female, had a systematic \$2,000 difference between the salaries of males and females. In principle, this local gender differential should show up as a significant coefficient on the interaction term between the indicator variable

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<sup>3</sup> The Chow test is a statistical test of whether or not, overall, the relationship between the dependent and independent variables, in this case salary and individual characteristics, is the same for two different sub-samples, in this case men and women.

for that unit and for gender, and as a significant difference between the estimated coefficients of the unit indicator variable for that unit in the separate male and female regressions.

The committee recognized, however, a difficulty in identifying gender-based salary anomalies at the unit level. This difficulty arises because the regression methodology is not well-suited to identifying gender-related salary anomalies for units that contain very few women (or men). Suppose, for example, that a unit contains 15 faculty members, of whom only one is female and the rest are male. The regression results may find a significant salary difference between men and “women” for this unit, but the prediction may be based on individual characteristics of the lone female that are not captured in the regression, rather than a systematic gender-based anomaly in the unit. In other words, the female faculty member’s salary is anomalous, but it is not clear whether this is due to gender.

Individual salary anomalies are the focus of the SAC’s work in the “regular” salary anomaly process. For Probationary and Tenured faculty, non-gender derived salary anomalies can be corrected through a regular performance-based salary anomaly adjustment. However, Limited Term faculty members are not eligible for performance-based anomaly awards. For Limited Term members, therefore, the SAC treated the anomaly as a gender-based anomaly. As explained later, this situation applied in a few of the salary awards recommended for Limited Term faculty members.

Finally, in trying to identify possible pockets of localized gender anomaly, the committee applied the principle that if the minority gender in a unit was paid better than the majority gender, this would not be considered a gender anomaly. The committee’s view was that the majority sets the salary norm for the unit. If, for example, a unit contained three men and twelve women, and if the predicted salaries indicated that the few men were paid more than the many women, the committee regarded the men’s salaries as being anomalously high rather than the women’s salaries as being anomalously low. Accordingly, no awards would be recommended for such units.

## **5. Probationary and Tenured Faculty : Methodology and Recommendations**

In accordance with the recommendations of the GSAR2009, the implementation work for Probationary and Tenured faculty focused on identifying gender salary anomalies for individuals in two groups, recent hires and Professors. With respect to Professors, in view of the possible pattern of slower promotion of women from Associate to Full rank for women, particular attention was paid to faculty members promoted to the rank of Professor since the last pay equity exercise. The logic for this focus is that women who were at the rank of Associate Professor in 2006 would have received pay equity adjustments in 2006 that corrected any salary differences relative to men in the same rank at that time. Once promoted to Professor, however, it is possible that women could still be underpaid relative to men at the rank of Professor with similar characteristics.

The GSAR2009 used data for Jan. 1, 2008. The first step of the implementation analysis was to re-run the salary regressions using updated salary data. IPB provided data updated to August 31,

2009, that included the July 1 salary changes (scale, salary-point, career trajectory) as well as all new market adjustments and changes in permanent stipends. The updated data also contained some changes in the population of Probationary and Tenured faculty reflecting departures and new hires. Descriptive statistics for the new data are shown in Table 5.1.

*A. Salary regressions: Specification and estimation strategy*

The regression specification is based on that in the GSAR2009, but with a few changes. First, the indicator variable for individuals hired since the 2006 Pay Equity salary adjustment was corrected to differentiate more accurately between faculty who had been present and considered for pay equity salary adjustments in 2006, and those who were not. After careful checking of the records and consultation with members of the PEIC2006, the SAC determined that the appropriate cutoff date should be January 1, 2006, rather than July 1, 2005. In order to capture possible differences between salary patterns for new hires at the mid-career level versus at the Assistant level, the committee included in the regression two indicator variables, one for new hires at the rank of Associate Professor and Professor, and one for new hires at the rank of Assistant Professor.

Second, in some units the number of faculty members overall, or of one or the other gender, was too small to obtain meaningful estimated coefficients on unit category variables, especially when regressions were run separately for men and women. For this reason, the committee carefully reviewed the estimated coefficients for the unit indicator variables and combined units where the disciplines were similar and the estimated coefficients for those units were not statistically significantly different. After combining units in this way, all units in the regression contained at least 10 members, and all units but one contained at least four women and at least four men. The one exception was the combined unit for Ivey Finance and Ivey Global Environment of Business, which contained 10 men and no women. This unit was significantly different from and could not be combined with any other unit; however, as a male-only unit with 10 members, it could be included in the pooled and male regressions without problem.

Third, the interaction between the square of the product of UWO and average relative PAI was changed, so that in this term years are squared but not relative PAI. This better captures the fact that the nonlinearity in the relationship between PAI and salary is due to the compounding of salary increases over time.

Fourth, a few variables that were consistently insignificant in both the pooled and separate male and female regressions were dropped.

Variables used in the regressions are described in Table 5.2.

The regressions were estimated using ordinary least squares. The committee reviewed the results of the regressions run with and without outliers (outliers were defined as those individuals whose salaries were 20% higher or lower than those predicted by the analysis). As discussed in the GSAR2009, due to the fact that the data are for the entire population of eligible faculty, and also because of small numbers of observations for some units, in evaluating the results and hypothesis testing the committee used the relatively generous confidence level of 20%.

The committee ran regressions pooling men and women that included interactions between gender and other variables. In addition, it ran separate regressions for men and women, which gave similar estimated magnitudes of the coefficients, but with more precise estimation with higher significance levels. In addition, a Chow test was done to test whether the male and female salary equations were statistically significantly different or not.

### *B. Salary regressions: Results*

The results of the pooled regressions run using updated data are shown in Table 5.3. The table shows the results for two regressions, one using the entire population and the other excluding outliers. Both regressions have high significance overall and high explanatory power.

The gender category variable is not significantly different from zero in either regression. The interactions between gender and professorial rank are also not significant, which finding differs from that in the GSAR2009. The GSAR2009 showed indications of a significant, negative interaction between gender and the Professor rank. This change probably reflects the effect of using updated data, which includes a larger number of females at the rank of Professor.

The gender interactions for recent hires (on or after Jan. 1, 2006) show significance in both regressions and suggest that among faculty members hired since the last pay equity salary adjustment, women may have lower salaries than men. This result is consistent with findings of the GSAR2009.

The gender interaction for individuals who receive their highest degree four or more years after hire at UWO is significant in the regression that excludes outliers. The composition of this group is heterogeneous, and the estimate is sensitive to the exclusion of outliers; consequently, the committee concluded there was not convincing evidence of gender differences within this group.

Results for the separate male and female regressions are shown in Table 5.4. For most variables the estimated coefficients are of similar size and significance level, and the male and female coefficient estimates are not significantly different in size. Differences appear, though, for the indicator variables for recent hires (on or after January 1, 2006) at the Mid-Career and Assistant rank. For women, the estimated coefficients for both these variables are about -\$6000 and significant. For men, the estimated coefficients for these variables are not significant.

The Chow test is a statistical test of whether or not, overall, the relationship between the dependent and independent variables, in this case salary and individual characteristics, is the same for two different sub-samples, in this case men and women. The Chow test statistics at the bottom of Table 5.4 indicate that one cannot reject the hypothesis that, overall, the true salary equations are the same for men and women.

Based on the results of both the pooled and separate regressions, the committee concluded that there is evidence of systematic gender salary differentials for individuals hired since the last pay equity adjustment; however, the regressions do not provide evidence of systematic gender salary

differences overall or for other subgroups. These findings suggest that the last pay equity salary adjustment in 2006 was indeed successful in removing systematic gender-based salary differentials for faculty members who were present at the time, but that gender-based salary differentials have emerged for women hired since.

### *C. Starting salaries: Regression specification and results*

A possible explanation for the finding above is that gender salary differentials have arisen due to gender differences in starting salaries. In the past, analysis of starting salaries has not been possible due to lack of data, but in 2000 the University began to include starting salary data in its human resources information system. The starting salary data for Probationary and Tenured faculty hired since that time were made available to the committee for analysis.

Starting salary data are available for the 616 faculty members (217 women, 399 men) hired during or since 2000. These data are summarized in Table 5.5. The average overall starting salary for men is higher than that for women, but this could be due to differences in the composition of newly hired men and women with respect to year of hire, rank, prior academic experience, and unit. As shown in Table 5.5, starting salaries have increased over time, and on average starting salaries of men have been higher than those of women except in two years (2004 and 2010).

In order to reveal possible systematic gender-based anomalies in starting salaries, the committee carried out a regression analysis on starting salaries. In order to control for inflation and across-the-board scale increases over time, the regression included an indicator variable for each year of hire. In order to control for differences across professorial rank and unit, indicator variables were included for ranks and for units. In view of the relatively small sample size and small number of women in some units, similar units were combined, as discussed in sect 5.A above. Table 5.6 gives descriptions of the variables used in the regressions.

The effects of gender on starting salary were investigated in two ways. First, an indicator variable for gender was included in a regression estimated using the pooled data for men and women. Second, separate regressions were estimated each using data only for men or women, and the Chow test was used to test whether the male and female equations were the same.

The committee ran a linear specification (using starting salaries as the dependent variable) and also a log-linear specification (using the log of starting salaries as the dependent variable). The log-linear specification fit the data better than the linear specification. Table 5.7 gives the results for the log-linear regression on pooled data for women and men as well as the results for the separate male and female regressions. The Chow test is shown at the bottom of the table.

In the regression on pooled data for men and women the estimated coefficient for the female category variable is negative, but it is not statistically significant. This result implies that the intercepts of the male and female salary equations are the same. Inspection of the intercepts (constant terms) in the separate regressions for males and females confirms this. The estimated intercepts are similar.

Estimated coefficients for some other variables in the male and female equations, however, are not similar. For men, the coefficient on Professor rank is 0.2484, higher than the coefficient of 0.1124 on Associate rank. This indicates that men hired at the rank of Professor on average have a starting salary that is 25% higher than for men hired at the rank of Assistant. Hire at the rank of Associate has a starting salary premium of 11%, lower than the premium for Professor.

For women the coefficient on Professor rank is 0.1686 and on Associate 0.1626. This implies a starting salary premium of about 17% for hire at the rank of Professor for women, no higher than the premium for women hired at the rank of Associate, and significantly lower than the 25% starting salary premium for men hired at the rank Professor. The estimated coefficients on years since highest degree and squared years since highest degree are also different for men and women. Some coefficients on year of hire and units also differ, although in some cases the numbers of women hired in particular years or in particular departments are very few.

These differences in coefficients are reflected in the Chow test result, which indicates that the male and female salary equations are significantly different.<sup>4</sup>

Overall, then, the regression analysis of starting salaries provides evidence of differences in starting salaries between men and women. This analysis is preliminary and exploratory. Further analysis of the starting salary data in the future, when more data are available for more years, would be useful.

#### *D. Identification of gender-based salary anomalies: Case-by-case review*

In order to identify the amount of gender-based salary anomalies for individual faculty members, the SAC carried out case-by-case reviews based on predicted salaries calculated using the estimated coefficients from the separate male and female salary regressions. Determination of gender-based salary adjustment was based on predicted salaries from the regressions, not on actual salaries. Predicted salaries reflect systematic gender differences, while actual salaries include idiosyncratic salary differences. The mandate of the committee is to correct for systematic gender-based salary differences, and so it used predicted salaries to decide on salary adjustments.

As preparation for the case-by-case review, the results from the separate male and female regressions (shown in Table 5.4) were used to calculate an estimate of the amount (if any) of the gender-based differential in predicted salaries for every Probationary and Tenured faculty member. The calculation was done as follows:

- (a) For each faculty member, the estimated coefficients for the separate male and female regressions were used to calculate two predicted salaries, a predicted “female” salary using the estimated coefficients from the female regression, and a predicted “male” salary using the estimated coefficients from the male regression.

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<sup>4</sup> We use a confidence level of 20% in view of the relatively small number of observations and in view of the fact that the data include the population of probationary and tenured faculty members hired in or after 2000.

- (b) For each woman, the predicted female salary was subtracted from the predicted male salary; this difference indicates how much more (or less) that woman would have been paid if she were male. If the difference was positive, i.e., the predicted male salary was larger than the predicted female salary, the difference was noted and used as an initial estimate for a salary adjustment.
- (c) For each man, the predicted male salary was subtracted from the predicted female salary; this difference indicates how much more (or less) that man would have been paid if he were female. If the difference was positive, i.e., the predicted female salary was larger than the predicted male salary, the difference was noted and used as an initial estimate for a salary adjustment.

Once the predicted salary differences were calculated as above, spreadsheets were constructed that included key variables used in the regressions as well as the predicted salaries and predicted salary differences. Using these spreadsheets, the committee carried out the case-by-case review. The spreadsheets contained information on all Probationary and Tenured faculty members within each unit, not just particular groups of concern, so as to allow careful comparison of all individuals in the same unit in order to ensure that recommended salary adjustments based on predicted salaries were reasonable.

The committee's case-by-case review was gender neutral. The committee carefully examined predicted salary differences for both men and women. It did not rule out the possibility that some men might be eligible for gender-based salary adjustments.

The case-by-case review consisted of two parts: (1) case-by-case review of Probationary and Tenured faculty members hired since Jan. 1, 2006, and (2) case-by-case review of units where the data suggested the possible presence of a local "pocket" of gender-based salary differences.

- *Step One: Identification of gender-based salary anomalies for recent hires*

The regression results showed evidence of systematic gender salary differences for female faculty members hired since Jan. 1, 2006, but not for other groups. In the first step of the case-by-case review, then, the SAC closely examined the spreadsheet data of all male and female Probationary and Tenured faculty members hired since Jan. 1, 2006. Comparisons were made to other Probationary and Tenured faculty in the same unit, in order to ensure that any recommended salary adjustments did not introduce obvious inequities.

- *Step Two: Identification of gender-based salary anomalies in local "pockets"*

The second step of the case-by-case review was a systematic review of all units to see if there were any units within which a case could be made that there exist local, systematic gender salary anomalies.

In this step the committee focused its attention on departments that met one of the following two criteria: (a) the estimated coefficient on the female interaction term for that unit in the pooled regression was significant (at the 20% level of significance or higher), or (b) within the unit one

gender showed a disproportionate number of faculty with predicted underpayment, and where that gender was in the minority.<sup>5</sup> This second criteria was used because, due to small numbers in some units and the combining of units in the regression analysis, the regression results could not fully capture gender salary differences within some units.

The committee reviewed the spreadsheet data for all faculty members in each department that met one or the other of the above criteria.

#### *F. Results and recommendations for gender-based salary anomaly adjustments*

Based on the case-by-case review following step (1), the committee determined that 48 of the 74 Probationary and Tenured women hired since Jan. 1, 2006, should receive salary adjustments to correct for systematic gender salary differences, and it recommended salary adjustments accordingly. Based on the case-by-case review following step (2), the committee determined that there was no evidence of “pockets” of systematic gender salary differences for Probationary and Tenured faculty within units. Following steps (1) and (2), the committee determined that there was no evidence of systematic gender salary differences for Probationary and Tenured men.

To double check that the recommended salary adjustments were appropriate, the salary regressions were re-run after adding the recommended salary adjustments to the actual salaries of individuals. With these salary adjustments, the regressions no longer showed evidence of systematic, significant gender-based salary differences overall or for any sub-group.

The committee acknowledges that, as discussed in the GSAR2009, the salary regressions do not capture potential systematic gender differences due to slower promotion for women or due to differences between men and women in PAI evaluations. The committee did not have the resources or time to analyze these potential sources of systematic gender-based salary anomalies.

## **6. Limited Term Faculty: Methodology and Recommendations**

### *A. Salary regressions: Specification and estimation strategy*

Many of the features of the regression studies performed for Limited Term members (including Basic Scientists in Clinical Departments) parallel those for Probationary and Tenured faculty. In this case also the first step was to re-run salary regressions reported in the GSAR2009 using updated salary data from August 31, 2009. Descriptive statistics for the new data are shown in Table 6.1. “Collapsing” of units was not necessary in the Limited Term case, since Limited Term members had already been sorted into broader disciplinary groups in GSAR2009, which groupings are used here. Other variables used in the Limited Term regressions, shown in Table 6.2, were for the most part the same as in the Probationary/Tenured regressions. Exceptions

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<sup>5</sup> For example, if a department consisted of 3 men and 20 women, and the predicted salary difference was negative for most of the men and positive for most of the women, the committee considered this potential evidence of local salary discrimination and would look closely at the pattern of salaries to determine if men should receive a gender-based salary adjustment. The committee did not consider situations where the majority gender had negative predicted salary differences as indicating salary discrimination.

include the use of a single variable “Years at UWO” instead of a breakdown of that variable into the period before and the period after achieving the present rank; the lack of an indicator variable for hire since Jan. 1, 2006;<sup>6</sup> and the appearance of the Assistant rank as an indicator variable—Lecturer is the omitted rank here.

### *B. Salary regressions: Results*

The results of the pooled regressions run using updated data are shown in Table 6.3. The table shows the results for the regression run using the entire population and also excluding outliers. Both regressions have high significance overall and high explanatory power.

The gender category variable is not significantly different from zero in either regression. The interactions between gender and professorial rank are also not significant. At the collapsed unit level, however, some signs of possible gender effects appear.

Results for the separate male and female regressions are shown in Table 6.4. This table shows only the results of regressions that were run with outliers included in the sample. The number of outliers was small—four for males and just one for females—and the results excluding outliers are similar to those obtained including outliers.

In the separate male and female regressions for Probationary/Tenured faculty, for most variables the estimated coefficients were of similar size and significance level, and the male and female coefficients were not significantly different in size. In the Limited Term case there are, in contrast, several variables with quite different estimated coefficients in the two regressions. Both “Years at UWO” and “Years between highest degree and hire at UWO” have insignificant effects in the male regression, but have sizeable and significant negative coefficients in the female regression, for example. The implications of such differences are not obvious, however, since “Years since highest degree” also enters the regression interacted with “relative PAI average,” and this interaction variable’s estimated coefficient is much larger in the female regression than in the male regression (in both cases the coefficient is positive). Whether females are rewarded less for years of experience than males is therefore not immediately evident. The Chow test statistics at the bottom of Table 6.4 indicate that one cannot reject the hypothesis that, overall, the separate male and female salary equations are not significantly different.

Based on the results of both the pooled and separate regressions, the committee concluded that there is no evidence of systematic gender salary differentials for Limited Term faculty. This is consistent with the conclusion of the 2005 Pay Equity committee, but is more strongly founded, given the use here of separate male and female regressions and the Chow test, which did not feature in the 2005 study. (Recall that Limited Term members were not considered in the 2006 Pay Equity Implementation report, which used methods similar to those employed here.)

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<sup>6</sup> In the Probationary/Tenured case there is reason to use the “Hired Since Jan. 1, 2006” variable—it is the marker for whether a person was included in the Pay Equity exercise of 2006, that is, had already been considered for a gender anomaly adjustment. Limited Term members were not included in the 2006 Pay Equity exercise. Exploratory regressions that included a variable for being hired since that time in the Limited Term regression showed that it was highly insignificant.

### *C. Identification of gender-based salary anomalies*

As in the case of Probationary/Tenured faculty, the regression analysis was followed by a case-by-case review using spreadsheets that contained information on key variables used in the regressions as well as the predicted salary difference for every Limited Term faculty member. This review was gender neutral. The committee carefully examined both men and women for gender-based salary anomalies and did not rule out the possibility that some men might be eligible for gender-based salary adjustments.

Following the case-by-case review, the committee looked for “pockets” that might have anomalies, proceeding in two stages. Four unit groupings had differences in the coefficients on unit indicator variables between the male and female regressions that approached significance at conventional levels. Also, as mentioned above, the regression including both men and women showed significant gender effects for several units.

Based on case-by-case review of the faculty in these units, the committee recommended a salary adjustment for a woman in one department.

The committee’s final step was to look by unit grouping at the frequency with which Limited Term members in the minority gender were underpaid relative to the other gender. It then looked at the detailed situation in each unit grouping to try to establish if there were anomalies that could be attributed to gender. This final step resulted in the identification of one case of anomaly in each of two units, and of three cases in another unit.<sup>7</sup> In all five of these cases, recommended awards were for females.

As for the Probationary and Tenured faculty, the Limited Term salary regressions were re-run using salaries that included the recommended adjustments. The committee’s review of the re-run regression results confirmed that the recommended salary adjustments eliminated evidence of gender-based salary differentials.

## **7. Concluding Comments**

In addition to recommending salary adjustments, the SAC would also like to make recommendations regarding any future gender anomaly exercises as follows:

- (a) As the evidence gathered in this process indicates that gender salary differentials have arisen for faculty members hired since the last pay equity adjustment in 2006, it is important that a process be developed to check on a regular basis that starting salaries do not continue to contribute to gender salary differentials in the future. The committee suggests that this process should involve both an initial review at the time of hire, with a

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<sup>7</sup> In each of three units, there was just one female Limited Term member in the unit. As discussed at the end of Section 4, one cannot therefore identify whether the anomaly is gender-based or not. All that is clear is that there is an anomaly. Since Limited Term members are ineligible for “regular” anomaly awards from the SAF, the Committee has recommended that these women should receive gender-based anomaly awards, in order to ensure that any anomalies that could be gender-based are in fact corrected.

follow up a year later, perhaps using regression analysis, to determine if the starting salary is anomalous.

- (b) The methodology used by the committee did not identify the effects on salaries of possible slower promotion of women or systemic differences between men and women in PAI evaluations; the effects of such processes are complex and would require additional study using different methods. The committee recommends that any future committees consider these issues in depth.

**Table 5.1: Number of Probationary and Tenured Faculty in Different Categories and Mean Values of Selected Variables in the Salary Regression Models**

<b>Variable</b>	<b>Women</b>	<b>Men</b>	<b>All</b>
Number of faculty	305	721	1026
Number by rank:			
Professor (%)	61 (20.0%)	290 (40.2%)	351 (34.2%)
Associate Professor (%)	121 (39.7%)	285 (39.5%)	406 (39.6%)
Assistant Professor (%)	123 (40.3%)	146 (20.2%)	269 (26.2%)
Base salary	109,357	123,907	119,581
Base salary + continuing stipends	109,851	124,865	120,402
Hired on or after January 1, 2006 (%)	74 (24.3%)	133 (18.4%)	207 (20.2%)
Hired at Assistant Professor rank	67	92	159
Recently promoted to Professor (since 1/1/06) (%)	26 (8.5%)	56 (7.8%)	82 (8.0%)
Years at UWO	9.4	13.8	12.5
Years between highest degree and hire at UWO	3.4	5.2	4.7
Years between first and highest degrees	10.5	7.8	8.6
Relative PAI, average over prior four years	0.995	1.002	1.000

Source: IPB dataset, August 31, 2009.

Note: Numbers in parentheses are percentages of the total numbers of faculty members shown in the first row.

**Table 5.2: Variables Used in Probationary and Tenured Salary Regression Models**

<b>Variable</b>	<b>Description</b>
Salary	base salary plus continuing stipends
Gender	=1 if female, =0 if male
Years between highest degree and hire at UWO	year of hire at UWO minus year of highest degree
Highest degree received four or more years after hire at UWO	=1 if highest degree received four or more years after hire at UWO; =0 otherwise
Years between first and highest degrees	year of highest degree minus year of first degree
Years at UWO prior to current rank	year in which current rank was attained at UWO minus year of hire
Years in current rank	2009 minus year in which current rank was attained
Hired on or after Jan. 1, 2006	=1 if hired after Jan. 1, 2006; =0 otherwise
Relative PAI, average over past four years	PAI divided by the unit mean PAI score, four-year average ('08, '07, '06, '05)
Interaction between years since highest degree and relative PAI average	years since highest degree times relative PAI average
Interaction between years since highest degree squared and relative PAI average	years since highest degree squared times relative PAI average
Rank— Professor	=1 if Professor; = 0 otherwise
Rank—Associate Professor	= 1 if Associate Professor; =0 otherwise
Recently promoted to Professor	=1 if promoted to Professor on or after Jan. 1, 2006; =0 otherwise
Unit	category variables indicating home unit (see footnote b)

Notes:

- (a) The rank of Assistant Professor is the omitted or reference category for the rank category variables, and the group “other Social Science” is the omitted or reference category for the unit category variables.
- (b) The units used in the regression were: Film and Visual Arts; Other Arts and Humanities; Ivey Finance and Global Environment of Business; other Ivey; Education; Engineering; Kinesiology; Other Health Sciences; Information and Media Studies; Law; Epidemiology, Medical Biophysics, and Physiology and Pharmacology; Other Medicine and Dentistry; Music; Computer Science; other Science; Management and Organizational Studies; Economics; other Social Science.

**Table 5.3: Results of Probationary and Tenured Salary Regression, Pooled Men and Women**

Variable	Entire Population		Excluding Outliers	
	Base parameter	Interaction with gender	Base parameter	Interaction with gender
Intercept	78252.0***	na	77015.0***	na
Gender	-331.5	na	905.5	na
Years between highest degree and hire at UWO	-2336.5***	371.5	-2420.9***	455.9
Years between first and highest degree	149.1	18.4	118.9	48.6
Years at UWO prior to current rank	-3080.6***	498.1	-3052.5***	470.0
Years in current rank	-2007.3***	856.2	-1860.8***	709.7
Highest degree four or more years after hire at UWO	9269.1**	147.6	1760.3	7656.4 <sup>†</sup>
Hired on or after Jan. 1, 2006, Mid-Career	2972.7 <sup>†</sup>	-8977.9 <sup>†</sup>	812.8	-6818.0 <sup>†</sup>
Hired on or after Jan. 1, 2006, Assistant	-2168.4	-3701.1	-1446.8	-4422.6*
Promoted to Professor on or after Jan. 1, 2006	-6229.3***	1641.5	-4750.7***	162.9
Interaction between years since highest degree and relative PAI	3708.8***	-681.9	3835.4***	-736.5
Squared years since highest degree	66.8***	-17.1	64.1***	-14.4
Interaction between years since highest degree squared and relative PAI	-77.3***	24.9	-77.2***	24.8
Rank—Professor	30315.0***	-3937.0	29159.0***	-2780.4
Rank—Associate Professor	11434.0***	-1631.6	11246.0***	-1443.3
Number of observations	1026		1009	
R <sup>2</sup> (adjusted R <sup>2</sup> )	.886 (.879)		.930 (.926)	

Notes:

- (a) \*\*\* indicates significance at the 1%, \*\* at the 5%, \* at the 10%, and <sup>†</sup> at the 20% level. No asterisk and no <sup>†</sup> indicates that the estimated coefficient is not significant at the 20% level. “na” indicates not applicable.
- (b) The regression equations also included unit category variables, and the interactions between unit category variables and the gender category variable. Unit category variables

are described in the notes to Table 5.2. To conserve space, we do not report the estimated parameters for these variables and their interactions with gender.

- (c) Outliers are defined as observations for which the actual salary differs from predicted salary by more than 20%. Of the 17 outliers, 2 were in the Faculty of Arts and Humanities, 3 in Ivey, 1 in Health Sciences, 5 in Medicine and Dentistry, 2 in Music and 4 in Social Science. All but one outlier were above the rank of Assistant Professor. All outliers were male; none were female.

**Table 5.4: Results of Probationary and Tenured Salary Regression, Male and Female Separately**

Variable	Men		Women
	Entire population	Excluding outliers	
Intercept	78252.0***	77015.0***	77921.0***
Years between highest degree and hire at UWO	-2336.5***	-2420.9***	-1965.0***
Years between first and highest degree	149.1	118.9	118.9
Years at UWO prior to current rank	-3080.6***	-3052.5***	-3052.5***
Years in current rank	-2007.3***	-1860.8***	-1151.1**
Highest degree four or more years after hire at UWO	9269.1*	1760.3	9416.8***
Hired on or after Jan. 1, 2006, Mid-Career	2972.7	812.8	-6005.2*
Hired on or after Jan. 1, 2006, Assistant	-2168.4	-1446.8	-5869.5***
Promoted to Professor on or after Jan. 1, 2006	-6229.3***	-4750.7***	-4587.8**
Interaction between years since highest degree and relative PAI	3708.8***	3835.4***	3099.0***
Squared years since highest degree	66.8***	64.1***	49.7**
Interaction between years since highest degree squared and relative PAI	-77.3***	-77.2***	-52.4***
Rank—Professor	30315.0***	29159.0***	26378.0***
Rank—Associate Professor	11434.0***	11246.0***	9802.6***
Number of observations	721	704	305
R <sup>2</sup> (adjusted R <sup>2</sup> )	.866 (.860)	.924 (.920)	.937 (.931)
Chow test, entire population	F (31, 964) = 0.99, Pr > F = .48		

Notes:

- (a) \*\*\* indicates significance at the 1%, \*\* at the 5%, \* at the 10%, and † at the 20% level. No asterisk and no † indicates that the estimated coefficient is not significant at the 20% level.
- (b) The regression equations also included unit category variables, and the interactions between unit category variables and the gender category variable. Unit category variables

are described in the notes to Table 5.2. To conserve space, we do not report the estimated parameters for these variables and their interactions with gender.

- (c) Outliers are defined as observations for which the actual salary differs from predicted salary by more than 20%.

**Table 5.5: Data on Starting Salaries for Probationary and Tenured Faculty**

	Number of Faculty			Average Starting Salaries		
	Women	Men	All	Women	Men	All
All	217	399	616	73288	78259	76508
By year of hire						
2000	5	32	37	62431	63038	62956
2001	10	47	57	60329	62810	62375
2002	19	36	55	59306	70490	66921
2003	13	33	46	63423	73690	70789
2004	27	31	58	77068	76158	76581
2005	27	39	66	68374	77211	73596
2006	30	43	73	72133	81367	77572
2007	22	37	59	73294	77619	76006
2008	33	55	88	83911	90098	87778
2009	20	38	58	78799	101495	93669
2010	11	8	19	89849	89406	89663
By rank at time of hire						
Professor	18	62	80	99035	103157	102229
Associate Professor	69	186	255	66885	71246	70066
Assistant Professor	130	151	281	73122	76674	75030
By unit (only large units shown)						
Arts & Humanities, Other (excl. Film and Visual Arts)	26	35	61	60214	64529	62689
Science, Other (excl. Computer Science)	26	67	93	72892	72970	72948
Social Science, Other (excl. BMOS and Economics)	33	48	81	67461	66536	66913

Source: IPB dataset, August 31, 2009.

**Table 5.6: Variables Used in Probationary and Tenured Starting Salary Regressions**

<b>Variable</b>	<b>Description</b>
Log of Salary	log of base salary plus continuing stipends
Gender	=1 if female, =0 if male
Hired in 2000	=1 if hired this year, =0 otherwise
Hired in 2001	=1 if hired this year, =0 otherwise
Hired in 2002	=1 if hired this year, =0 otherwise
Hired in 2003	=1 if hired this year, =0 otherwise
Hired in 2004	=1 if hired this year, =0 otherwise
Hired in 2005	=1 if hired this year, =0 otherwise
Hired in 2006	=1 if hired this year, =0 otherwise
Hired in 2007	=1 if hired this year, =0 otherwise
Hired in 2009	=1 if hired this year, =0 otherwise
Hired in 2010	=1 if hired this year, =0 otherwise
Rank—Professor	=1 if full Professor; = 0 otherwise
Rank—Associate Professor	= 1 if Associate Professor; =0 otherwise
Unit	category variables indicating home unit (see footnote b)

Notes:

- (a) The omitted or reference categories are 2008 for year of hire, Assistant Professor for rank, and “other Social Science” for unit.
- (b) The units used in the regression were: Film and Visual Arts; Other Arts and Humanities; Ivey Finance and Global Environment of Business; other Ivey; Education; Engineering; Kinesiology; Other Health Sciences; Information and Media Studies; Law; Epidemiology, Medical Biophysics, and Physiology and Pharmacology; Other Medicine and Dentistry; Music; Computer Science; other Science; Management and Organizational Studies; Economics; other Social Science.

**Table 5.7: Results of Probationary and Tenured Starting Salary Regressions**

Explanatory Variables	Dependent Variable: Log of Starting Salary		
	Pooled Men and Women	Men	Women
Intercept	11.1310***	11.1285***	11.1432***
Gender	-0.0108		
Hired in 2000	-0.3731***	-0.3774***	-0.3655***
Hired in 2001	-0.2739***	-0.2744***	-0.2939***
Hired in 2002	-0.2518***	-0.2472***	-0.2645***
Hired in 2003	-0.1844***	-0.1789***	-0.2100***
Hired in 2004	-0.1075***	-0.1210***	-0.0989***
Hired in 2005	-0.1027***	-0.0996***	-0.1268***
Hired in 2006	-0.0739***	-0.0814***	-0.0743***
Hired in 2007	-0.0403**	-0.0445*	-0.0466*
Hired in 2009	0.0355*	0.0456*	0.0119
Hired in 2010	0.0296	-0.0430	0.0877***
Rank—Professor	0.2356***	0.2484***	0.1686***
Rank—Associate Professor	0.1216***	0.1124***	0.1626***
Years since highest degree	0.0124***	0.0149***	0.0057*
Squared years since highest degree	0.0002**	0.0001	0.0006***
R <sup>2</sup> (adjusted R <sup>2</sup> )	.835 (.826)	.839 (.825)	.859 (.837)
Number of observations	616	399	217
Chow test		F(32,552)=1.25 <sup>†</sup> , Pr>F = 0.168	

Notes:

- \*\*\* indicates significance at the 1%, \*\* at the 5%, \* at the 10%, and <sup>†</sup> at the 20% level. No asterisk and no <sup>†</sup> indicates that the estimated coefficient is not significant at the 20% level.
- The regression equations also included unit category variables. Unit category variables are described in the notes to Table 5.6. To conserve space, we do not report the estimated parameters for these variables.
- No outliers were detected for either men or women.

**Table 6.1: Number of Limited Term Faculty in Different Categories and Mean Values of Selected Variables in the Salary Regression Models**

<b>Variable</b>	<b>Women</b>	<b>Men</b>	<b>All</b>
Number of faculty	73	102	175
Number by rank:			
Professor (%)	0 (0%)	4 (3.9%)	4 (2.3%)
Associate Professor (%)	5 (6.9%)	9 (8.8%)	14 (8.0%)
Assistant Professor (%)	22 (30.1%)	47 (46.1%)	69 (39.4%)
Lecturer (%)	46 (63.0%)	42 (41.2%)	88 (50.3%)
Base salary	86,927	92,333	90,078
Base salary + continuing stipends	86,927	92,333	90,078
Years at UWO	7.3	7.9	7.6
Years between highest degree and hire at UWO	9.3	9.4	9.4
Years between first and highest degrees	8.2	6.9	7.4
Relative PAI, average over prior four years	0.986	0.949	0.965

Source: IPB dataset, August 31, 2009.

Note: Numbers in parentheses are percentages of the total numbers of faculty members shown in the first row.

**Table 6.2: Variables Used in Limited Term Salary Regression Models**

<b>Variable</b>	<b>Description</b>
Salary	base salary plus continuing stipends
Gender	=1 if female, =0 if male
Years between highest degree and hire at UWO	year of hire at UWO minus year of highest degree
Years between first and highest degrees	year of highest degree minus year of first degree
Years at UWO	2009 minus year of hire
Hired on or after Jan. 1, 2006	=1 if hired after Jan. 1, 2006; =0 otherwise
Relative PAI, average over past four years	PAI divided by the unit mean PAI score, four-year average ('08, '07, '06, '05)
Interaction between years since highest degree and relative PAI average	years since highest degree times relative PAI average
Squared interaction between years since highest degree and relative PAI average	squared years since highest degree times relative PAI average
Rank—Professor	=1 if Professor; = 0 otherwise
Rank—Associate Professor	= 1 if Associate Professor; =0 otherwise
Rank – Assistant Professor	= 1 if Assistant Professor; =0 otherwise
Unit	category variables indicating home unit (see footnote to this Table for list of units)

## Notes:

- (a) The rank of Lecturer is the omitted or reference category for the rank category variables, and the Humanities group is the omitted or reference category for the unit category variables.
- (b) The units used in the regression were: BMOS (Management and Organizational Studies), Business (Ivey) Teaching, Other Business (Ivey), Dentistry, Engineering and Computer Science, Fine and Applied Arts, Health Professions, Kinesiology, Mathematical Science, Other Science, Medicine, Nursing, and Social Science. These groupings are defined in the GSAR2009.

**Table 6.3: Results of Limited Term Regression, Pooled Male and Female**

Variable	Entire Population		Excluding Outliers	
	Base parameter	Interaction with gender	Base parameter	Interaction with gender
Intercept	30648.0***	na	31655.0***	na
Gender	59226.0**	na	53635.0***	na
Years between highest degree and hire at UWO	-250.6	-1762.8 <sup>†</sup>	-153.5	-1916.1**
Years between first and highest degree	792.1***	-878.5***	773.1***	-724.8***
Years at UWO	719.2	-2013.2*	591.7	-2162.2**
Relative PAI Average	17103.0 <sup>†</sup>	-46855.0*	17696.0**	-48508.0**
Interaction between years since highest degree and relative PAI	450.7	2456.2 <sup>†</sup>	367.0	2725.2**
Squared interaction between years since highest degree and relative PAI	5.8	-22.6 <sup>†</sup>	6.1	-25.3**
Rank—Professor	67205.0***	na	80174.0***	na
Rank—Associate	18039.0***	1388.4	24930.0***	-4104.6
Rank—Assistant	14842.0***	-1251.8	11608.0***	3086.5
Number of observations	175		170	
R <sup>2</sup> (adjusted R <sup>2</sup> )	.903 (.870)		.934 (.910)	

Notes:

- (a) \*\*\* indicates significance at the 1%, \*\* at the 5%, \* at the 10%, and <sup>†</sup> at the 20% level. No asterisk and no <sup>†</sup> indicates that the estimated coefficient is not significant at the 20% level. “na” indicates not applicable.
- (b) The regression equations also included unit category variables, and the interactions between unit category variables and the gender category variable. Unit category variables are described in the notes to Table 6.2. To conserve space, we do not report the estimated parameters for these variables and their interactions with gender.
- (c) Outliers are defined as observations for which the actual salary differs from predicted salary by more than 20%. Of the 5 outliers, one each was in Business Teaching, Dentistry, Humanities, Medicine, and Social Science. There was one outlier at each rank above Lecturer and two outliers at the Lecturer rank. Four outliers were male; one was female.

**Table 6.4: Results of Limited Term Salary Regression, Male and Female Separately, Outliers Included**

Variable	Men	Women
Intercept	30648.0**	89874.0***
Years between highest degree and hire at UWO	-250.6	-2013.4***
Years between first and highest degree	792.1***	-86.4
Years at UWO	-719.2	-1294.0*
Relative PAI Average	17103.0†	-29752.0*
Interaction between years since highest degree and relative PAI	450.7	2906.9***
Squared interaction between years since highest degree and relative PAI	5.8	-16.8*
Rank—Professor	67205.0***	na
Rank—Associate Professor	18039.0***	19398.0***
Rank—Assistant Professor	14842.0***	13590.0***
Number of observations	102	73
R <sup>2</sup> (adjusted R <sup>2</sup> )	.890 (.859)	.931 (.903)
Chow test, entire population	F (23,129) = 0.99, Pr > F = .28	

Notes:

- (a) \*\*\* indicates significance at the 1%, \*\* at the 5%, \* at the 10%, and † at the 20% level. No asterisk and no † indicates that the estimated coefficient is not significant at the 20% level. “na” indicates not applicable.
- (b) The regression equations also included unit category variables, and the interactions between unit category variables and the gender category variable. Unit category variables are described in the notes to Table 6.2. To conserve space, we do not report the estimated parameters for these variables and their interactions with gender.