

July 31, 2007

**The University of Western Ontario
Report of the Career Trajectory Adjustment Committee 2007**

Background and Mandate:

The Career Trajectory Adjustment Committee (CTAC) was established as described in the 2006-2010 Collective Agreement between The University of Western Ontario (the Employer) and The University of Western Ontario Faculty Association (the Association). Under the provisions of Clauses 11 and 41 to 41.4 of the *Compensation and Benefits* Article of the 2006-2010 Collective Agreement, a Career Trajectory Adjustment Fund has been established. The value of this Fund in 2007-08 is \$1,200,000. The CTAC is charged with distributing the 1,200,000 in the Career Trajectory Fund in the manner described in clauses 41 to 41.4 of the Article on Compensation and Benefits. In particular, the Collective Agreement requires that this Fund be used to adjust the salaries of Probationary, Tenured and Limited-term Members whose salaries are determined to be below a trajectory appropriate to their career stage, compared to similar faculty at comparator institutions, based on factors including, but not limited to, years of service, years since highest degree, and highest degree. (see the Article for details).

Summary of Recommendations:

The CTAC reviewed relevant data, developed a systematic model and, following a case-by-case review, recommended systematic adjustments to the salaries of Probationary, Tenured and Limited-Term faculty. For those faculty members affected, the Career Trajectory Committee has recommended salary adjustments that range in value from 1% of a faculty member's salary to as much as \$7,500. These adjustments will be made to the 2007-08 salary following the application of the Scale Increase of 3% and any Performance-Linked Career Progress increase and so will be effective July 1, 2007. Of the approximately 1000 probationary and tenured faculty in the bargaining unit, 46.9% will receive an adjustment. Similarly, of the 140 Limited-Term faculty, 39%% will receive an adjustment.

2007 Committee Membership

In accord with Clause 41.2 of the Article on Compensation and Benefits (C&B), the CTAC consisted of five members, with two appointed by the Association, two appointed by the Employer, and a Chair chosen jointly by the Employer and Association. The committee membership was:

Chair:

Martha Karen Campbell (Professor and Chair, Epidemiology and Biostatistics)

Association Appointees:

James Davies (Professor, Economics)

Ann Bigelow (Professor, Management and Organizational Science Program)

Employer Appointees:

Alan Weedon (Professor of Chemistry and Vice Provost, Academic Planning, Policy, Planning and Faculty)

David Wardlaw (Professor of Chemistry and Dean of Science)

Resource Persons:

Allan Heinicke (appointed by the Association), Emeritus Professor, Mathematics

Ruban Chelladurai (appointed by the Employer), Associate Vice-President (Institutional Planning and Budgeting)

Deadlines

Based upon agreement between the Association and the Employer, the committee recommendations were made in time for the Fund to be distributed non-retroactively.

CTAC Meetings

The dates of the CTAC meetings were as indicated below.

April 19 1:00-2:00

April 23 9:00-11:00

April 26 11:00-12:00

May 7 1:00-3:00

May 24 11:00-1:00

May 25 3:00-5:00

June 11 1:00-3:00

June 13 1:00-3:00

June 21 1:00-3:00

June 25 1:00-3:00

June 27 7:30-9:30

June 29 1:30-2:30

July 3 9:00-1:00

July 10 1:00-3:00

July 13 9:00-11:00

Process

Initial data inspection:

The Committee commenced its work by reviewing publicly available salary data for probationary and tenured faculty at Western and at the Universities of Waterloo, McMaster and Queen's. These data are available in aggregated form from Statistics Canada, which undertakes an annual survey of salaries in post-secondary institutions (this is the *Universities and Colleges Annual Survey of Salaries*, usually known as UCASS).

The data show that the average salaries of Western faculty, calculated in 5-year year-from-highest-degree (YHD) bands, are, for some bands, lower than the average salaries of faculty in the other three universities. This is particularly true for the 5-year bands corresponding to those in mid-career. Based on further detailed analysis of the Western salaries, the committee concluded that the apparent "mid-career sag" may, to a large degree, reflect disciplinary and demographic variability.

Examination of data to identify patterns by YHD for various disciplinary groups revealed reasonably consistent trajectories among disciplinary groups, provincially, with some minor disciplinary variation. The committee felt that, beyond examination of trajectories, more detailed comparisons of Western to comparator institutions using provincial data would be hard to interpret for a variety of reasons including: 1) the UCASS data can include "all" or "none" of the faculty who have administrative duties, and for stratification by YHD, the available data include "all"; 2) the UCASS data reflect total income, as opposed to base salary, and include administrative stipends; 3) medical and dental faculty are excluded, thus excluding Basic Scientists in Clinical Departments; 4) there is likely some heterogeneity in how professorial ranks are assigned and/or constrained at various universities; 5) contract status is not distinguished in the data, and comparisons at the Assistant Professor rank in particular will be influenced by this; comparisons by discipline will necessarily involve disciplinary "groupings" that may not align with the way disciplines are grouped within Faculties at each individual institution, including Western. The lack of individual-level data at comparator institutions meant that regression analyses could not be performed.

The decision was made to use the UCASS data for overall trajectory comparisons but to develop some regression models using the Western data so we could understand the components of the trajectories in salaries. In particular, salaries in any YHD band are a product of "age, period and cohort" effects and further modeling of the salaries would be helpful. The Committee undertook a detailed regression analysis of Western seeking to define the relationships between an individual's salary and determinant variables (years from first degree, years from highest degree, nature of highest degree, rank, years in rank, years at Western, department, and performance as measured by PAI relative to the average PAI in the individual's department). Then the committee considered the placement of individual salaries relative to what the salary is projected to be given individual characteristics and given adjustment of the Western trajectory to the provincial trajectory.

Adjustment:

The adjustment process was conducted separately for probationary/tenured faculty and limited term faculty with \$1,080,000 and \$120,000 allocated, respectively, for adjustments in each group, which is proportionate to the relative salary mass of each group.

Full-time probationary/tenured salaries:

The regression models were developed using full-time, probationary/tenured UWOFA Members' salaries for 2006/07. Based on preliminary analyses, it was felt that the salary structure at Ivey was poorly understood, even when individuals were sorted according to disciplinary area groups within the Faculty, and thus they were left out of the overall regression model. The resulting non-Ivey regression equation had very high R^2 (.859) indicating that 85.9% of the variance in the non-Ivey probationary and tenured salaries at Western is explained by the regression equation.

Thus, the adjustment recommended by the committee had the following key components. First, the Western regression model was used to generate a projected salary for each individual based on experience (years at Western, years in rank, years from highest degree, years from first degree, etc), department and performance (as measured by the most recent PAI score, relative to the average in the unit). Second, these projections were adjusted to match the Western salary trajectory to the trajectory of mean salaries from McMaster, Queens and Waterloo combined (MQW). This was done by multiplying the projection by a "projection multiplier". The projection for each value of YHD was based on the ratio of the MQW Target to the Projection. The multipliers ranged from 0.98 to 1.05, depending on each individual's years-from-highest-degree, with those in mid-career experiencing a higher factor than those who with higher or low years from highest degree.

For each faculty member whose actual salary was below the projected salary, the difference was calculated, and these differences were summed. The number of dollars in the Career Trajectory Fund was then divided by the sum of the differences to yield a fraction. This fraction was then multiplied against each individual's negative variance from the regression line to yield a salary adjustment. In this way it was ensured that the sum of the salary adjustments was equal to the size of the Career Trajectory Fund, while each faculty member whose salary was below the regression projection received an equal percentage of the gap between his or her actual salary and that projected by the regression. In making a salary adjustment the following two conditions also had to be met: one was that the adjustment to any one individual could not exceed \$7,500 and the other was that for an adjustment to be made it could not be lower than 1% of an individual's actual salary.

No adjustments were made to the salaries of faculty in the Ivey School. This was for two reasons. One was that the salary structure in Ivey and its trajectory appear to be quite different from the rest of campus. Secondly, the evidence available to the CTAC suggested that salaries in the Ivey School are already at least competitive, if not higher, than those in the comparator university available to us (McMaster);

however, the CTAC was not convinced that this is the correct comparator nor did it know what disciplines are mixed into the category of "Business" at McMaster for the UCASS data. Having been charged with making systematic adjustments, the CTAC concluded it did not have information at this time to be confident that it could make such systematic adjustments to Ivey salaries. Steps will be taken to ensure superior data are available in the next cycle of the Career Trajectory Committee's work in 2008-09, and the Committee will give the Ivey School first priority for consideration.

Special priority was given the salaries of faculty in the Faculty of Engineering. The data available to the Committee regarding salaries at Waterloo, McMaster and Queen's suggested that salaries in the Faculty of Engineering at Western are significantly below those of colleagues of similar years-from-highest-degree at Waterloo, McMaster and Queen's. The Committee attempted to correct for this by adding \$3,000 to the projected salary of each faculty member in the Faculty of Engineering. Any adjustment to the resulting projected salary was subject to the same procedure as described above.

Salaries of limited term faculty:

The regression models were developed using limited term faculty salaries for 2006/07. The regression equation had modest R^2 (.664) indicating that 66.4% of the variance in the limited term salaries is explained by the regression equation. The regression model included the factors: rank, years of full time service, years since first degree, has a PhD or not, relative PAI, and disciplinary group (BMOS, Dentistry, Education, Engineering, Fine and Applied Arts, Health Professions excluding dentistry, Humanities, Kinesiology, Social Science other than BMOS and Science). All but 5 of the LT faculty had ranks of "lecturer" or "assistant professor". These 5 were associate professor or higher and were included with assistant professors for the purpose of fitting the model.

The same procedure was then followed as for probationary tenured faculty. That is, the regression model was used to generate a projected salary for each individual. For each faculty member whose actual salary was below the projected salary, the difference was calculated, and these differences were summed. The allocated number of dollars was then divided by the sum of the differences to yield a fraction. This fraction was then multiplied against each individual's negative variance from the regression line to yield a salary adjustment. In making a salary adjustment, the following two conditions to be met were again: that the adjustment to any one individual could not exceed \$7,500; and that for an adjustment to be made it could not be lower than 1% of an individual's actual salary.

Case-by-case review:

Following allocation of the salary adjustments using the algorithms as described above, individual spreadsheets were scrutinized. The spreadsheets were an anonymous case-by-case listing of all variables in the regression equation, salary, projected salary and projected adjustment. These spreadsheets were sorted by department. The committee reviewed all cases to make sure that individual adjustments seemed reasonable relative to other salaries in the home unit.

Recommendations for the 2007/08 analyses:

The CTAC would have liked to have the ability to conduct regression analyses for comparator universities in order to properly compare to the Western population. Unfortunately, the Committee did not have access to individual-level salary data for Waterloo, McMaster and Queens and could not perform this analysis. The CTAC is therefore recommending that the Career Trajectory Adjustment Committee for 2007/08 should meet in September 2007 with an objective of initiating requests to Statistics Canada for some additional analyses of UCASS data.