

Report of Western University Career Trajectory Fund Committee
October 17, 2022¹

Background and Mandate:

The Career Trajectory Fund Committee was established as required in the 2018-2022 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 24, 25 and 36 to 36.4 of the *Compensation and Benefits* Article of the 2018-2022 Collective Agreement, a Career Trajectory Fund (CTF) was established.

As per Clauses 24 and 36, the value of this Fund is \$930 multiplied by the number of eligible Full-Time Probationary, Tenured and Limited Term Members as of June 30, 2021, who are also eligible Probationary, Tenured or Limited-Term Members on July 1, 2021. At that date there were 954 Full-Time Probationary, Tenured and 229 Limited Term Faculty for a total of **1183**. The total fund to distribute therefore was 1183 x \$930.00 per faculty member = **\$1,100,190.00**.

The Career Trajectory Fund Committee was charged with distributing the **\$1,100,190.00** as per the parameters in clauses 36 through 36.4 of the Article on *Compensation and Benefits*. In particular, Clause 36.2 of the Collective Agreement (CA) required that Gender-based anomaly adjustments should be assigned from the CTF to Members whose salaries are determined to be anomalously low because of their gender. Adjustments for gender anomalies were to be made from the CTF before any anomalies determined in clause 36.3 were addressed.

Any funds remaining after gender anomalous adjustments are addressed in Clause 36.3 of the CA. Clause 36.3 requires that the CTF be distributed systematically to Probationary, Tenured, and Limited-Term (LT) Members whose salaries are determined, based upon experience and accomplishment, to be below a trajectory appropriate to their career stage. As well, CTF is to be distributed after special consideration to faculty whose salaries are determined to be below a trajectory appropriate to their career stage compared to similar faculty at comparator institutions (see "Available Data" section below). While the process to determine anomalies between peer institutions and internal anomalies were two separate processes, the outcomes (the external at 50% and the internal at 100%) and the ratios applied were done in combination on the final spreadsheet.

¹ An important note for future committees addressing these issues: the CTF Committee encountered through the process instances where both statistical and "assessment of what was fair and right" judgements needed to be deployed. The Committee was able to make these collegially and to the best of our combined skill and judgement, but it is conceivable a different Committee might have made different, and perhaps in the end equally defensible, choices.

In addition, Clause 36.4 of the CA limits the maximum allowable salary adjustments indicating that the adjustment should not exceed \$10,000 less 50% of any excess (if any) of the Member's 2020-2021 salary over \$150,000.

In brief, the mandate of the committee may be summarized in the following four goals.

Goals:

1. To examine whether the salary structure of Western's faculty had evidence of any systematic gender-based anomalies;
2. To construct a systematic, empirical model of Western's salary structure based on the best available objective numerical data for each faculty;
3. To construct a systematic and empirically-grounded model comparing Western's salary structure with those of comparable Ontario universities to identify systematic anomalies; and 4. To use the results of steps 1-3 to allocate the identified funds.

Summary of Recommendations:

The CTF Committee reviewed relevant data to develop a systematic model of Western's salary structure as described below.

1. The Committee found no indication of significant anomalies due to gender or gender interacting with other variables in the majority of the Faculties. Exceptions were found in the Faculties of Social Science and to a lesser extent Science, where anomalies were found with respect to a significant interaction of gender with PAI (at the 95% confidence level). Gender anomalies within these two Faculties were determined once the final model (selection of variables) was decided upon by the Committee. Gender anomaly corrections amounted to **\$252,087** for **64** women who received corrections ranging from \$60-\$9922.00.
2. The salary trajectory at Western, contingent on experience, accomplishment, and career stage, was established through a systematic empirical investigation using internal UWO salary data and multiple regression analysis.
3. The Committee also reviewed available salary information from comparable universities to determine the trajectory of salaries, depending on career stage, for faculty at our traditional comparator universities (the Bovey 4). Here the committee used UCASS data from 2020-21 by rank and years since highest degree.
4. After the gender anomaly corrections were applied, the Committee made the decision to divide the remainder of the funds available (\$848,103) proportionately among the population of Probationary and Tenured (P/T) and LT faculty members. Probationary and Tenured faculty represent approximately 81% of those considered, and Limited Term approximately 19%, so the fund was divided accordingly.
5. Estimates of the total by which Members' salaries fell short contingent on their experience and career stage combined with external comparisons were used, together

with a case-by-case review, to calculate recommended adjustments to the salaries of Probationary, Tenured, and Limited-Term Faculty.

6. The value of the fund available to be distributed was not sufficient to correct the estimated amounts required. Therefore a ratio was created based upon the total of internal and external (reduced to 50% of the estimated required correction) corrections (ratio: total amount left after gender anomaly increases divided by total of internal and external projections). The ratio for Probationary and Tenured faculty members was at 19.5% and 12.5% for Limited Term. The ratio for Probationary and Tenured faculty rose to 19.5% after the maximum salary rates were accounted for, as a number of faculty became ineligible for an increase. Those who earned over \$170,000 as of June 30, 2021, were not eligible for trajectory increases (CA, Compensation and Benefits Article, Clause 36.4). The ratio also was adjusted after those no longer at Western were removed from the consideration.
7. Of the **954** probationary and tenured faculty in the bargaining unit, it was recommended that **400**, or **41.9%**, should receive an adjustment for a total of \$683,930 ranging from \$107-\$7599. Similarly, of the **229** Limited-Term faculty, **95**, or **41.5%**, were recommended to receive an adjustment, for a total of \$164,172 ranging from \$100-\$7350.

2022 Committee Membership:

As per Clause 36.1 of the Article on Compensation and Benefits, the CTFC consisted of five members, with two appointed by the Association, two appointed by the Employer, and a Chair chosen jointly by the Employer and the Association. The committee membership was:

Chair:

Nicholas Harney (Professor of Anthropology, Dean of Social Science)

UWOFA Appointees:

Nicholas Kahnert (Lecturer, DAN Management)

Laura Stephenson (Professor, Political Science)

Employer Appointees:

Denise Connelly (Associate Professor, School of Physical Therapy, Associate Vice-Provost – Academic Planning, Policy & Faculty)

Matt Davison (Professor, Applied Mathematics and of Statistical & Actuarial Sciences, Dean of Science).

Resource Person:

Margaret Poirier, Senior Analyst, Office of the Vice Provost Academic Planning, Policy, and Faculty

Timelines:

According to Clause 36.4, the CTF Committee was to complete its analysis and make recommendations to the Provost by no later than July 15, 2021. In the process of analyzing and evaluating the data, the CTF committee asked for and received an extension to this deadline which was approved by the Provost and UWOFA. It completed its analysis in September 2022 and this report by Oct 14, 2022.

CTF Meetings:

The dates of the Career Trajectory meetings were:

Mon, April 11, 10:30 AM to 12:00 PM	Tues, July 26, 8:30 AM to 10:00 AM
Thurs, May 5, 8:00 AM to 9:00 AM	Wed, Aug 3, 8:30 AM to 10:00 AM
Thurs, May 19, 8:30 AM to 10:00 AM	Wed, Sept 7, 8:30 AM to 10:00 AM
Mon, May 30, 8:30 AM to 10:00 AM	Mon, Sept 12, 8:30 AM to 9:50 AM
Mon, June 6, 8:30 AM to 10:00 AM	
Fri, June 10, 11:00 AM to 12:30 PM	
Mon, June 27, 8:30 AM to 10:00 AM	
Thurs, July 21, 8:30 AM to 10:00 AM	

Data Used:

The CTF committee had access to detailed Western data which organized all UWOFA Members by Faculty, Department (if applicable) and rank, containing fields for gender, years from first degree, years since highest degree (YHD), relative PAI score as measured by average PAI over the last three years relative to the average PAI in the individual's department, years at Western, and years at rank. The University's new Data Governance Policy suppressed data on gender count for units with fewer than 15 members, which created a quandary for the committee since its role was to address gender inequity. The Committee forged ahead despite this restriction and attempted to identify where gender would appear as a salient factor through multiple regressions. When Departments were too small, we looked at the Faculty level. With respect to external data, the Committee also had access, via OCUFA, to compilations of salary data from 2020-21 for all full-time faculty at Western and at Western's traditional "Bovey 4" comparators of Guelph, McMaster, Queen's, and Waterloo, gathered through the UCASS survey by Statistics Canada.

Data Analysis

In the first number of meetings the CTF Committee asked the senior analyst to run a number of regressions (step-wise, forced, and forced with outliers removed) that investigated the utility of

the following variables in assessing gender anomalies: Years Since Highest Degree (for P&T), Years since First Degree (for LT)², Years at Rank, Years at Western, Relative PAI Score (i.e. average PAI over the last three years relative to the departmental PAI average), Rank, Discipline (Department), Gender, and interactions of Gender with Relative PAI Score. After a number of iterations, tests and discussions, the Committee determined there were variables that were too highly correlated: Years since Highest Degree/Years at Rank/Years at Western and as a result, the Committee settled on Years since Highest Degree as the most analytically useful to include for P&T and Years since First Degree for LT.

The presence of gender anomalies was determined by the significance of the gender variable and/or interactions of gender with other variables (most relevantly, Relative PAI). For the PT faculty, in the majority of the Faculties the relevant variables were insignificant; however, in Social Science and Science the gender*Relative PAI interaction was significant at the 95% confidence level. For the LT faculty, the gender variable was significant. Once the final model was decided on, these variables were used to determine gender anomalies.

The Initial regression models included all Faculties. After discussion and assessment, the Committee moved to a model by Faculty (and departments, if applicable, as a variable within the Faculty). Further, regressions were run by appointment type (Probationary and Tenured in one grouping; Limited Term, Limited Term Continuing, Externally Funded Basic Scientists in another). The Committee examined the fit diagnostics and found, particularly for LT due to the low N, that there may be a better model. The Committee then re-examined a model with all LT and Probationary and Tenured included and agreed it appeared to be the best model to use due to fit diagnostics. The Appointment type (PT and LT) was used as an extra explanatory variable within the model; a forced regression with outliers removed was used as the final model for adjustment estimates.

Deciding on gender anomaly amount: A regression model was run that included PT and LT in one model with Years since Highest Degree (PT), Years since First Degree (LT), Rank discipline/department, Relative PAI Score, Gender, Gender * Relative PAI, and Appointment type. Two prediction outputs were created for LT faculty and for Social Science and Science faculty – running the same model, gender coefficients were applied in one case and the second excluded the application of gender coefficients (i.e. treating everyone as though they were male). The difference between the two models was determined to be the anomaly due to gender and used to estimate the necessary correction due to the women who had a negative result between the two models.

² Since holding a PhD is not always likely, required or desirable as a terminal degree for Limited-Term members, the CTF Committee used the variable “years since first degree” in the regression models for LT members rather than the “years since highest degree” as used for Tenured and Probationary members.

The Committee then applied these increases to the salaries of those receiving a gender anomaly. After calculating the new salaries, the Committee ran the same regression model and the result was that the gender variables were no longer statistically significant.

To determine increases needed to correct internal salary anomalies, the Committee ran the same regression model again, this time without the gender variables, to determine necessary increases. The model fit was strong with R² ranging from .81 to .94.

External Comparison: After completing the internal analysis of salary and potential inequities, the CTF committee turned to comparator institutions, the Bovey 4, using data made available through UCASS 2020-21 data by rank and years since highest degree. Using these data the Committee determined the ratio of salaries between Western and the Bovey 4 comparator universities. This ratio, averaged over all faculties and ranks, was 0.93. Following the procedure used by the previous CTF Committee, the Committee identified individuals within units (faculty/discipline and years since highest degree cohorts) where the salary ratio compared to the Bovey 4 was below the overall ratio. The Committee decided that because the comparator data was not recent the corrections were not ideal and therefore decided to discount the identified salary corrections by 50%. This left more of the fund to make internal corrections. This is the same decision taken by the previous CTF Committee. Note that this step, although it decreased the required salary corrections, still resulted in a total value of corrections several times above the available fund.

Once the CTF committee had a high degree of confidence in the estimated corrections, it reviewed anonymized individual data in combination with the adjustments suggested by the model for each and every faculty member to ensure that corrections maintained internal fairness in the context of each unit (i.e., not permitting 'leap frogging').

Annex: Relevant Clauses of the 2018-2022 Collective Agreement
Career Trajectory Fund

24. A Career Trajectory Fund shall be established in 2021-22 in the amount of \$930 per Probationary, Tenured and Limited-Term Member. This Fund shall be distributed as described in Clauses 36 to 36.4 of this Article. *Compensation and Benefits*

25. Floor Salaries for the professorial ranks will be set as follows:

	<u>2020-21</u>	<u>2021-22</u>
Professor	\$114,670	\$116,677
Associate Professor	\$94,741	\$96,399
Assistant Professor	\$83,244	\$84,701
Lecturer	\$62,549	\$63,644

After the scale adjustment, lump-sum adjustment, Career Trajectory adjustment, and any PLCP adjustment, salaries of those Members that are below the new Floor Salaries will be moved up to the new Floor Salaries.

Career Trajectory Fund for Probationary, Tenured and Limited-Term Members

36. A Career Trajectory Fund (CTF) shall be established in 2021-22. The value of this Fund shall be \$930 multiplied by the number of eligible Full-Time Probationary, Tenured and Limited Term Members as of June 30, 2021, who are also eligible Probationary, Tenured or Limited Term Members on July 1, 2021.

36.1 The CTF shall be administered by a Career Trajectory Fund Committee composed of five members, as follows:

- a) two members (or alternates) chosen by the Association;
- b) two members (or alternates) chosen by the Employer;
- c) the chair of the Committee, who shall be chosen jointly by the Employer and the Association.

36.2 Gender – based anomaly adjustments shall be assigned from the CTF to Full-Time Members whose salaries are determined to be anomalously low because of their gender. These adjustments shall be made from the CTF before any Career Trajectory Adjustments are considered under Clause 36.3 of this Article.

36.3 Funds remaining after application of Clause 36.2 of this Article shall be distributed systematically to Full-Time Members based on experience and accomplishment, but in a manner that gives special consideration to faculty whose salaries are determined to be below a trajectory appropriate to their career stage compared to similar faculty at comparator universities. Members with an average PAI score greater than or equal to 1, based on the three most recent PAI scores, shall be eligible to receive CTF distributions.

36.4 The distribution of the CTF using the provisions of Clauses 36.2 and 36.3 of this Article shall be recommended to the Provost by the CTF Committee no later than July 15, 2021. Payment shall be retroactive to July 1, 2021. Recommendations for adjustments of a Member's salary using the provisions of Clause 36.3 of this Article shall not exceed \$10,000 minus 50% of the excess (if any) of the Member's 2020-21 salary over \$150,000.