UTFA Information Report

University of Toronto Faculty Association June 9, 2010

Information Report #13

Equity Issues at the University of Toronto: A Preliminary Discussion*

Judith Teichman, Chair, UTFA Equity Committee, and Reni Chang, UTFA Staff

A 2007 American Association of University Professors (AAUP) report on the topic of salary differentials concluded that the topic of salary disparities "is a subject that we must discuss openly and frankly because financial inequality has significant implications for the quality of higher education" (AAUP 2007, 34). Indeed, we believe that this is a topic of pressing concern not only because salary differentials have been on the rise everywhere in North America but also because the salary gap among disciplines at the University of Toronto may be higher than elsewhere. A recent AAUP study of disciplinary salary differences in U.S. doctoral-granting state universities found that Full Professors in Business earned 47% more on average than English Full Professors (AAUP 2007, 32) while at the University of Toronto's St. George Campus, Management Full Professors earn 60% more than their Humanities counterparts. Another important reason for exploring this topic is the fact (to be explained more fully later in the report) that disciplinary salary differentials are a significant factor in gender salary differences. Finally, we believe that a serious discussion of this topic is important given what we already know about the disproportionate financial contributions made by large undergraduate programs to the overall operating budget at the University of Toronto (Luste 2010). The largest undergraduate programs involve faculty in Arts and Sciences (St. George), UTSC, UTM and Engineering. It suggests that the subsidies provided to some of the professional faculties may contribute to their higher salaries.

This report is the first of what we hope will be a series of reports exploring issues of salary differences at the University of Toronto. We focus on the professorial stream in this report. While we do present some data on teaching stream and librarian salaries, we intend to address salary issues for these groups in later reports.[1] This report identifies three types of salary disparities in the professorial stream: disparities based on discipline, disparities based on gender, and disparities based on campus. These salary differences are demonstrated in the three scatter plots that appear below. Since the disciplinary gap emerges as the largest and most consistent form of salary differential across the University, we begin our discussion here. Then, we turn to a closer examination of gender salary differences, followed by an examination of salary disparities between the east/west campuses, on the one hand, and the St. George campus, on the other. The last section of the report offers some tentative conclusions and sets forth a number of issues arising from the report's findings. The data upon which this report is based is found in the Statistical Appendix.**

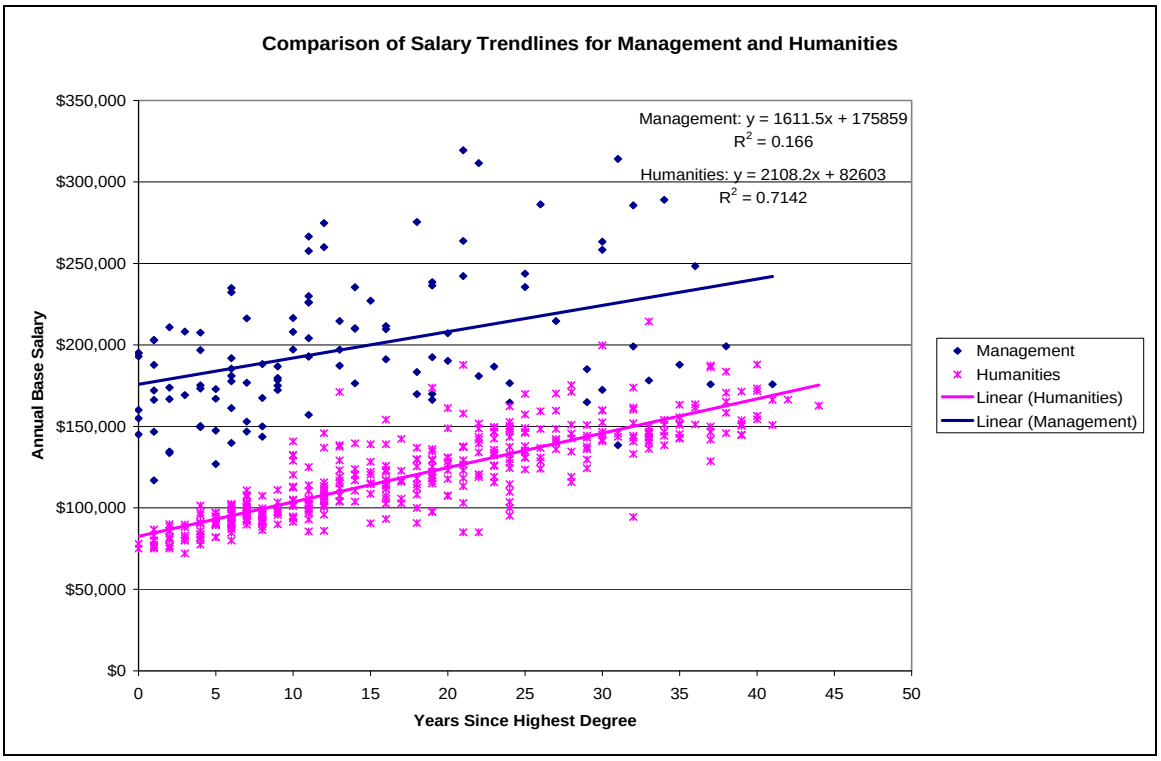
* We are grateful to George Luste, Kent Weaver, David Mackenzie, Scott Prudham and Terezia Zoric for their helpful comments on an earlier version.

** The link for the Statistical Appendix to this report can be found at the UTFA Equity website page at http://utfa.org//index.php?option=com_content&task=view&id=111&Itemid=119

The Overall Picture

The three scatter plots below indicate the general picture with regard to the three types of salary differentials identified above. We have controlled for years since highest degree as an indicator of experience.[2] While there is a salary ranking among disciplines (discussed in more detail later in this report), the scatter plot showing the highest earning discipline (Management) and the lowest earning discipline (Humanities) illustrates the extreme ends of the disciplinary salary spectrum at the University of Toronto.[3] Here, we find a difference on average of about $85,000 per year in salary between Management and Humanities faculty in the professorial stream. The ratio of average and median Management salaries to average and median Humanities salaries is 1.6:1 (calculated from Statistical Appendix, pgs. 36 and 49).

Disciplinary Salary Differences in the Professorial Stream
Highest and Lowest Earning Disciplines
Management and Humanities



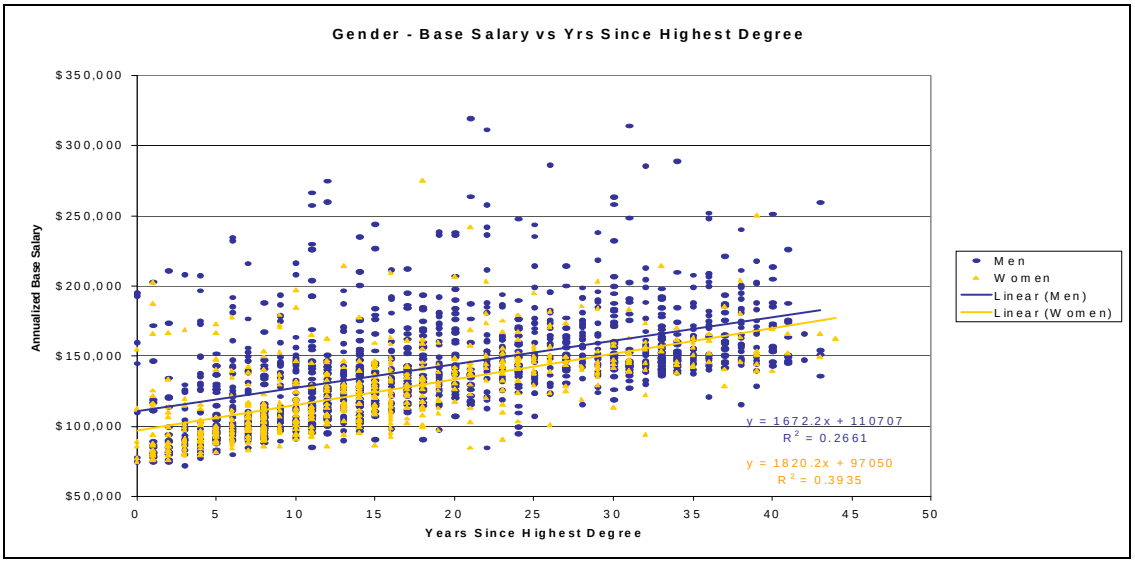
Information on other disciplines, which lie between these two extremes, is found in the Statistical Appendix and will be discussed in more detail later in this report. However, relative to other disciplines, Management stands out with its average salary 44.5% above the University average salary and its median salary 38.8% above the University median salary (Statistical Appendix, pg. 22). Furthermore, Management, representing only 6.1 % of all faculty at the University, accounts for 35.6% of those within the University's top 10% of income earners

(Statistical Appendix, pg. 4). Humanities, on the other hand, accounts for 45.7% of those within the bottom 10% of income earners, but represents only 21.6% of all faculty (Statistical Appendix, pg. 5). Furthermore, Management is overrepresented among top income earners by over 75% at the Assistant and Associate Professor levels (Statistical Appendix, pgs. 5 and 7). Humanities is overrepresented among the lowest 10% in all ranks—by a high of 59.4% at the Associate Professor level (Statistical Appendix, pg. 7).

Our second scatter plot illustrates that women faculty earn, on average, $12,000 less than men. Women account for 33.1% of the professorial stream, a figure corresponding to the proportion of women faculty at Canadian universities (CAUT 2008, 1). As the following table illustrates, there is a higher proportion of women at the Assistant and Associate Professor ranks and a lower proportion at the Full Professor rank, reflective of their fewer years since highest degree. Furthermore, women are, on average, two years older than men at the same career point (Statistical Appendix, pg. 13).[4]

Proportion of Male and Female Faculty in the Professorial Stream by Rank

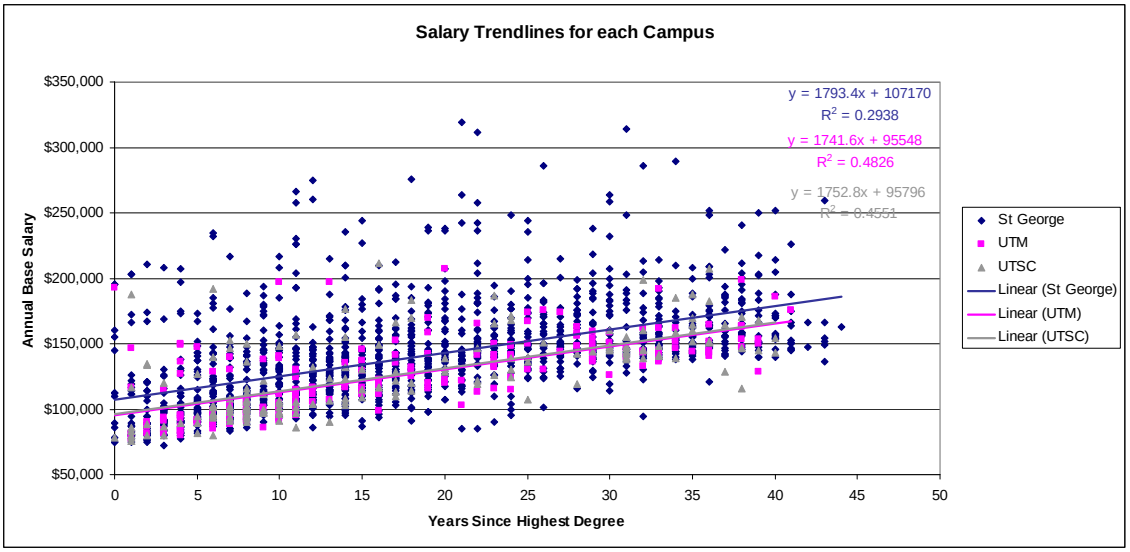
	All	Men		Women	
		N	% of Men	N	% of Women
Assistant Professor	428	243	19.3%	185	29.6%
Associate Professor	646	397	31.5%	249	39.9%
Professor	810	620	49.2%	190	30.4%
Total	1884	1260	100.0%	624	100.0%



In the professorial stream, women are found disproportionately in three of the lower paying disciplines: Education (60%), Humanities (43%) and Social Sciences (37%). They are underrepresented in two of the top three high paying disciplines: Management (6%) and Engineering/Computer Science (13%). An exception at the University of Toronto is Law, a top earning discipline, where women represent 35% (17) of the faculty. Women also have significant representation in the Life Sciences (30%), another relatively low-paying discipline.

Women are underrepresented among the University's top income earners in the professorial stream: Eighty-nine percent of the University's top income earners (defined as the top 10%) are men while only 10.6% are women. Meanwhile, women are overrepresented among the lowest 10% of income earners at 51.6% (Statistical Appendix, pg. 4) (versus their representation within the faculty at 33%). This reflects, to a considerable extent, their overrepresentation in low salary disciplines and in lower ranks, and their fewer years since highest degree. However, when ranks are examined separately, women are making some progress in breaking into the category of the top income earners. At the Assistant Professor level, women represent 32.6% of top income earners, very close to their representation within the stream (Statistical Appendix, pg. 5). Unfortunately, women still remain overrepresented among the lowest 10% of income earners at all ranks (Statistical Appendix, pgs. 6–8).

Our third scatter plot, illustrating campus salary differences, suggests that, on average, professors on the east/west campuses earn about $12,000 less than on the St. George Campus. The east/west campuses are underrepresented among top income earners and are overrepresented among the low salary group. UTM accounts for 10.6% of all professors, but 3.7% of the top 10% income earners and 16.5% of the bottom 10% income earners. The corresponding figures for UTSC (9.0% of professors) are 5.3% and 13.8%, respectively (Statistical Appendix, pgs. 3, 4).



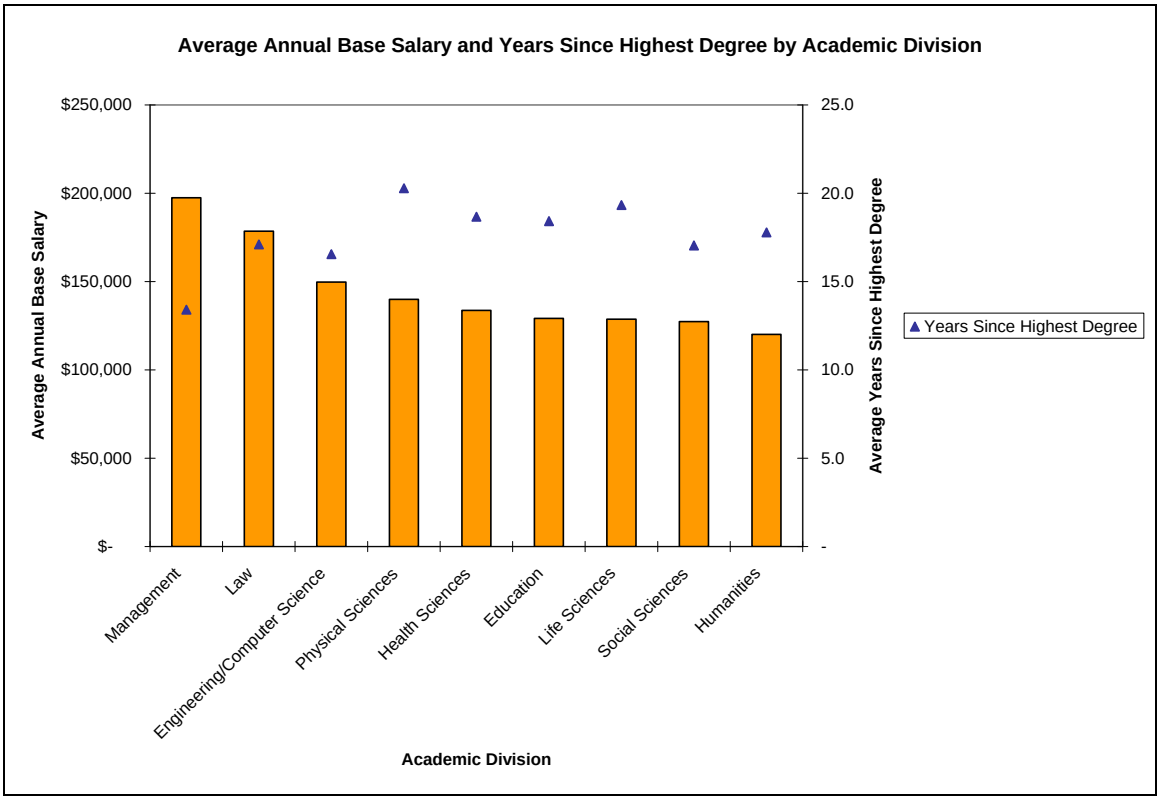
- UTM and UTSC trend lines overlap and therefore are difficult to discern separately.

Looking More Closely at Disciplinary Salary Gaps

This section examines disciplinary gaps in more detail. It also includes comments on gender and campus as these pertain to disciplinary salary differentials and some consideration of data on the teaching stream. Findings demonstrate that disciplinary salary differentials are prominent within genders, within both the professorial and teaching streams, and across the three campuses.

As illustrated in Figure 1, there is a ranking of disciplines in the professorial stream according to salary that places Management in first place, followed by Law and Computer Science/Engineering. At the bottom of the salary disciplinary ranking is Humanities, with Life Sciences, Social Sciences and Education competing for second to last place (see Statistical Appendix, pg. 22, for median and average salary by discipline). The ordering of disciplinary salary gaps is fairly consistent across genders and campuses. We draw your attention to the fact that Management, Law and Computer Science/Engineering maintain their higher salaries despite average fewer years since highest degree than is the case for Humanities.

Figure 1



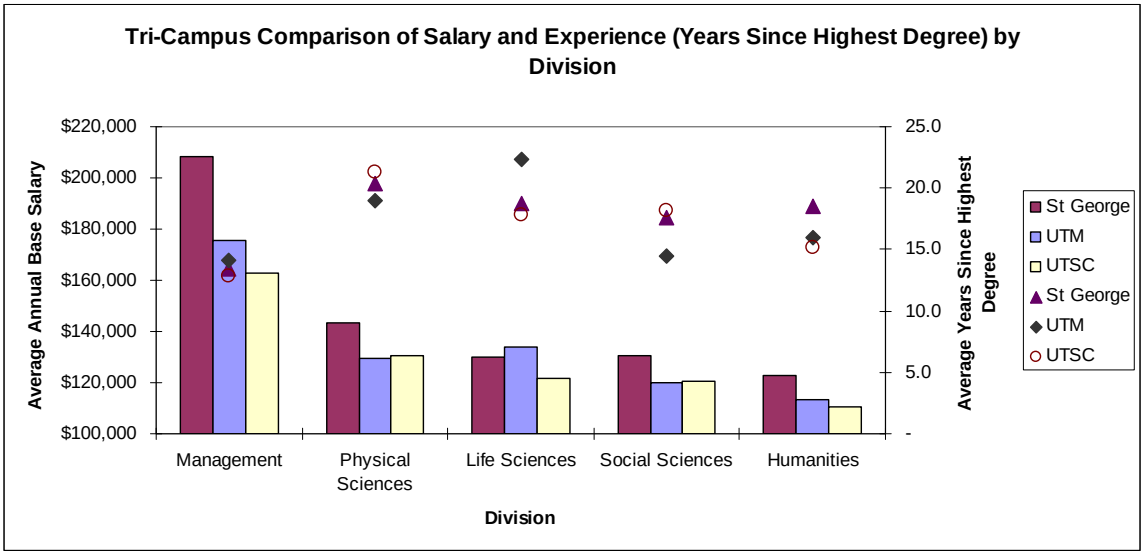
Further, as illustrated in Figure 2, disciplinary salary differences in the professorial stream within the genders are substantial. Management, Law and Computer Science/Engineering are the top earning disciplines and Humanities is at the bottom for both genders.

Figure 2

Notice also that for men, and particularly for women in Management and Engineering/ Computer Science, the disciplinary salary disparity is further exaggerated when the fact of fewer years since highest degree is taken into account. One point that Figure 2 does not show can be seen on pages 23 and 24 of the Statistical Appendix. Here, we see that for both men and women, the greatest disciplinary disparity occurs at the Assistant Professor level, indicating that this type of differential is on the rise. At the Assistant Professor rank, average and median salaries for Management are nearly double those in Humanities.[5]

Disciplinary salary differences in the professorial stream were found to exist on all three campuses as shown in Figure 3. Excluding those disciplines (Law, Health Sciences, and Education) not present on the east/west campuses, Management and Computer Science/ Engineering were the top two earning disciplines on all three campuses. Humanities was the lowest salary ranking discipline, with Social Sciences consistently near the bottom as well.

Figure 3



Discipline discrepancy in salary level is also present in the teaching stream although the disparities are not as pronounced and there are some departures from the professorial stream (see Statistical Appendix, pgs. 73–75). For both men and women at the Lecturer level, Management and Computer Science/Engineering show above average and median salary levels while Humanities is at the bottom with the lowest average and median salary. Within the rank of Senior Lecturer, the disciplinary ranking differs for men and women and the general trend is less obvious. Nevertheless, Health Sciences and Management are the two top income disciplines while Humanities and Education rank within the bottom three.[6]

A Consideration of Gender Salary Issues within Disciplines

The fact that women are overrepresented in the lower paid disciplines accounts for a considerable amount of the salary disparity between male and female professors shown in our second scatter plot. Furthermore, there are a sizeable number of disciplines/ranks where either men do not earn more than women or their apparent greater earnings can be explained by more years since highest degree.[7] However, gender salary differentials are apparent across a variety of disciplines and affect some ranks more than others (a fact not illustrated in Figure 2). The summary tables in the Statistical Appendix (pg. 80) show that there are very few occasions in the professoriate in which women earn more than men and more occasions where women clearly earn less than men. Although the numbers are small in particular cases, in a number of areas there appears to be gender salary discrimination. If we consider the teaching stream and librarians along with the professorial stream, there were seven cases where women were not only earning less than men but had more years since their highest degree than did their male counterparts.

The fact that male Assistant Professors earn more than their female counterparts in three cases (Management, St. George; Social Sciences, St. George; and UTM) means that salary differences are likely to persist or even worsen in these cases as faculty progress through the ranks. However, the good news is that, in the professorial stream, in the majority of cases there are either no discrepancies in male-female salaries at the junior level or they are explainable by more years since highest degree. In Law (although the numbers are admittedly very small), female Assistant Professors effectively earn more than males since they have fewer years since highest degree—perhaps an indication that disparities further up the ranks might in fact be reversed over time.

Within the professoriate, education is an important outlier with regard to gender salary differences. It is a low salary discipline and its faculty is 60% female. As illustrated in Figure 2, women earn more than men given that men have more years of experience and should be earning more than they do relative to women. But there are variations according to rank. While women start off with slightly lower salaries than men, at the Full Professor level women's salaries pull ahead of men's salaries (see Statistical Appendix, pgs. 27 and 80).

Campus Salary Differences: A Closer Look

Figure 3 illustrates the salary gaps for the professorial stream between the east/west campuses, on the one hand, and the St. George campus, on the other. A detailed look at the ranks where the discrepancy is the greatest can be found in a summary table on page 81 of the Statistical Appendix.

We have included only those disciplines present on all three campuses (Health Sciences, Education, and Law are therefore excluded). In the case of Computer Science/Engineering, there were insufficient numbers for comparison with UTM (4) and UTSC (7). Note that while the bar for Life Sciences at UTM is higher than for St. George, the fact of many more years of experience since highest degree for UTM faculty generates a lower relative salary. Similarly, social scientists and physical scientists at UTSC earned less than on the St. George campus despite more years since highest degree.

Figure 3 does not tell us about how the ranks in the same discipline compare across the two campuses. For this, see page 81 of the Statistical Appendix. Comparing ranks across the three campuses, we are hard pressed to find a single rank in a discipline where St. George faculty make less than their counterparts on the east/west campuses.[8] If we look within each of the ranks for each discipline, we find that when a professorial stream salary variation was found to exist among the campuses, St. George salaries were higher. This finding of lower salaries at the east/west campuses persisted when high end and low end salaries were excluded. For those disciplines (shown in Statistical Appendix, pg. 81) where Assistant Professor salaries at the east/west campuses were lower than on the St. George campus, the salary gap can be expected to persist or deepen. However, where significant differences in Assistant Professor salaries were not found (Physical Sciences, UTM; Social Sciences, UTM and UTSC; Humanities, UTSC and UTM), discrepancies in the higher ranks may diminish in the future as junior faculty move up the ranks.

Tri-campus differences in the teaching stream vary somewhat from the professorial stream pattern. UTM salaries outperform St. George and UTSC salaries. UTSC teaching stream salaries are the lowest, at 5.0% and 2.8% below the average and median salaries for St. George. When years since highest degree are taken into account, however, the disparity disappears for the Senior Lecturer rank (Statistical Appendix, pg. 63). We did not find significant cross campus salary differentials for librarians.

Tentative Conclusions and Issues for Discussion

This study has presented data on salary differentials at the University of Toronto. Disparities have been found based on discipline, campus and gender. Disciplinary salary disparities emerge as the largest and most consistent across the University. Researchers have found that disciplinary salary differences at institutions of higher learning throughout North America have been increasing in recent years (Ehrenberg, McGraw and Mrdjenovic 2005, 4). As suggested earlier, however, the degree of salary differential at the University of Toronto may be higher than most.[9] Salary differentials are widely attributed to impartial market forces. Hence, it is argued that Business and Law schools, for example, must pay higher salaries because in these fields there is greater competition among employers for qualified employees. On the other hand, in disciplines where the demand outside academia is low and the competition among prospective employees for jobs greater, salaries are driven down. This perspective attributes disciplinary salary differentials entirely to these market forces.

However, as this report has shown, low demand disciplines, such as Education, Social Sciences and Humanities, are precisely those fields with higher concentrations of female faculty. Is this situation entirely due to the fact that women simply choose to enter disciplines with poorer labor market conditions and pay? Or are there other forces at work? Researchers have, in fact, documented a depressive effect in occupations when there is a rise in the proportion of women, independent of other characteristics. Those who have studied the trajectory of academic salaries have found a "tipping point" (generally about 30% women in a discipline) after which the salary advantage of the discipline begins to decline (Pfeffer and Davis-Blake 1987, Bellas 1997). These analysts suggest that once women's presence in a discipline reaches a certain threshold, a discipline begins to be considered "women's work" and there is a strong negative effect on salaries. These authors argue that that market forces are only part of the explanation of lower salaries in disciplines with high proportions of female faculty. This perspective points to the possibility that gender discrimination is a hidden component of the disciplinary salary gap.

> "While labor market differentials in salaries may be inevitable in determining salaries in disciplines, there is also the question of how much differential is acceptable and even necessary. Monitoring these differentials, in a context of fiscal restraint, is therefore important."

There are perhaps other reasons to think carefully about the large disciplinary salary disparities. On the one hand, the argument is often made that the University

must offer high salaries to attract the very best in a given field. While this is important, there may be negative implications to carefully consider particularly when the gap in salaries becomes as large as indicated in this report. It has been suggested, for example that such profound salary differentials may damage the cooperation among faculty that is essential for effective and shared governance (AAUP 2007, 34). Talking frankly about salary differentials and addressing those situations in which injustice seems to exist is probably essential to good collegial relations within the university community.

> "There is considerable evidence of lower salaries for comparable work at the east/west campuses."

While labor market differentials in salaries may be inevitable in determining salaries in disciplines, there is also the question of how much differential is acceptable and even necessary. Monitoring these differentials, in a context of fiscal restraint, is therefore important.

This report also indicates that gender discrimination in salary persists on its own. Furthermore its resiliency in the junior ranks in some parts of the University suggests that it will continue to persist for some time. We probably need more information to better understand these differentials and a strategy to best address them.

Finally, this study points to an important area of institutionalized salary discrimination that has not been adequately examined at this University: that of salary differentials across campuses. There is considerable evidence of lower salaries for comparable work at the east/west campuses. We need more information on how these salary differentials have developed. Unfortunately, at a university as complex as ours, the confluence of salary differentials can operate to seriously prejudice those who face multiple forms of institutionalized and non institutionalized salary discrimination, such as those who are both in low paying disciplines and at one of the east/west campuses. Given the rapid rise in enrolments at the east/west campuses in recent years, lower salaries have been coupled with increasingly difficult working conditions. What is the best way to address this issue?

The issues raised by this report are particularly difficult to tackle in times of fiscal constraint. However, to avoid a discussion of them is fraught with even greater dangers. Salary differences seldom go unrecognized by those they affect and they are corrosive to collegiality, trust and cooperation. It is hoped that this study, in raising awareness, will encourage the University community to think carefully and seriously about questions of equity and fairness at this institution. If we become convinced that a portion of our community is being treated unjustly, then we need to consider how such treatment can be most effectively addressed.

Any and all comments on this Information Report are welcome.

Judith Teichman
Chair, Equity Committee
teichman@utfa.org

UTFA Information Report is published by:
The University of Toronto Faculty Association
720 Spadina Avenue, Suite 419 Toronto ON M5S 2T9
Phone 416-978-4596 Fax 416-978-7061
Email faculty@utfa.org Website www.utfa.org

ENDNOTES

[1] Unless otherwise indicated, all discussions refer to the professorial stream.
[2] We recognize that years since highest degree is not the only factor linked to salary level. Professional experience accumulated prior to obtaining the highest degree, for example, should contribute to higher salaries in some of the professional schools. Studies of faculty salaries have often controlled for levels of productivity (as reflected in publications, for example). We did not have the data to control for such variables.
[3] Strictly speaking some of the categories we have designated as "disciplines" embody several disciplines because we could not obtain a more refined breakdown of data. Hence, what we have referred to as "discipline" frequently covers broad, often fairly heterogeneous, categories (for example, Health Sciences encompasses several disciplines including Nursing and Medicine). As a consequence, we may be missing salary inequalities within these broad categories.
[4] The reason for this is most likely the fact that women (and minorities) take longer to obtain their doctorates than men (Schmidt 2008). One of the most commonly advanced explanations for this is a lack of mentorship.
[5] For women, the ratios for the average and median salaries are 1.8:1 and 1.9:1; the figures for men are 1.9:1 for both average and median salaries. Calculated from Tables 2a(i) and 2b(i), pgs. 23 and 24, Statistical Appendix.
[6] The fact that social sciences ranks within the top three for women lecturers and senior lecturers is a departure from the trend in the professorial stream.
[7] These cases include: Life Sciences (except on St. George at the Full Professor rank) (Statistical Appendix, pg. 46), Social Sciences at UTSC, Full Professor in Social Sciences at UTM, Associate and Full Professor levels in the Social Sciences at St. George (Statistical Appendix, pg. 60). Engineering/Computer Science at the Assistant Professor level (pg. 31), Health Sciences at the Full Professor level (pg. 33), Humanities (pg. 38) (except as explained below), the Physical Sciences (pg. 54), the Associate and Full Professor levels in Management (pg. 50).
[8] St. George salaries were slightly higher than at the east/west campuses at the Assistant Professor level in the Social Sciences. However, higher salaries at the Assistant Professor level at UTSC in the Social Sciences compared with St. George can mostly be explained by the greater number of years since highest degree at UTSC (2.5 years).
[9] The U of T figure cited on page 1 was calculated from the Statistical Appendix, pgs. 34 and 47.

REFERENCES

AAUP (American Association of University Professors). 2007. "Financial Inequality in Higher Education. The Annual Report on the Economic Status of the Profession, 2006–2007." In *Academe*. March-April: 21-34. www.AAUP.ORG

Bellas, Marcia. 1997. "Disciplinary Differences in Faculty Salaries. Does Gender Bias Play a Role?" *Journal of Higher Education.* 68(3): 299–321.

CAUT (Canadian Association of University Teachers). 2008. “Narrowing the Gender Gap: Women Academics in Canadian Universities.” In *CAUT Equity Review*. March 2008. www.caut.ca

Ehrenberg, Ronald G., Marquis McGraw and Jesenka Mrdjenovic. 2005. “Why do Field Differentials in Average Faculty Salaries Vary Across Universities?” IFR Collection Working Papers. Cornell University.

Luste, George. 2010. “How Undergraduates Subsidize Professional Faculties. A Look at U of T’s New Budget Model.” *UTFA Information Report # 11*. (January).

Pfeffer, J. and Davis-Blake, A. 1987. “The Effect of the Proportion of Women on Salaries: The Case of College Administrators.” In *Administrative Science Quarterly*, 32: 1–24.

Schmidt, Peter.“Women and Minorities Take Longer to Complete PhD Study Finds.” Chronicle of Higher Education. September, 9, 2008. Original Source: Council of Graduate Schools. 2008. PhD Completion and Attrition: Analysis of Baseline Demographic Data from the PhD Completion Project.