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## Research Panel: Wage Discrimination at Universities and Professional Schools

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# Wage Discrimination in University Professional Schools: Evidence from British Columbia's Business & Law Faculties

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Collective Bargaining in Higher Education and the Professions

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# The BC Professional School Salary Study

- Six British Columbia universities included in the study: University of British Columbia (UBC – 55,000 students), Simon Fraser University (SFU – 30,000 students), University of Victoria (UVic – 31,000 students), University of British Columbia-Okanagan (UBC-O – 9,000 students), University of Northern British Columbia (UNBC – 3,500 students) and Thompson Rivers University (TRU – 8,300 students)
- All six universities have business schools; UBC, UVic and TRU have law schools
- Times Higher Education World Rankings (2017; N = 981 universities): UBC – 36; SFU – 201-250; UVic – 301-350; UBC-O (not ranked); UNBC (not ranked); TRU (not ranked)
- Salary data: B.C.'s “Sunshine Law” – *Financial Information Act*, ss. 2(3)(a) and *Financial Information Regulation*, s. 6 – total annual remuneration for university employees (earning above \$75K) must be reported
- Individual employee data obtained from university websites and other internet sources such as LinkedIn and Research Gate

# The BC Professional School Salary Study - Variables

- Dependent variables:

i) Salary (“includes any form of salary, wages, bonuses, gratuities, taxable benefits” as per the *Financial Information Act*); ii) Natural log of Salary

*Note*: Salary data reported in 2016 calendar year (2014-15 fiscal year) – most recent data available

- Independent variables (dummy variables):

i) Institution (UBC, SFU, UVic, UBC-O, UNBC and TRU)

ii) Academic Administrator (Dean, Associate Dean, Assistant Dean and Director/Chair)

iii) Academic Rank (Full Professor, Associate Professor, Assistant Professor and Instructor) *Note*: sessional instructors excluded from the study

iv) Business or Law School (Business: N= 351; Law: N=99)

v) Female faculty member (35.1% of the total faculty complement)

vi) Member of visible minority (21.8% of the total faculty complement)

vii) Interaction term (female x visible minority)

viii) Highest degree (Doctorate, Master and Bachelor)

# Mean Salary: Descriptive Statistics (N=450)

	Overall	Male (N=292)	Female (N=158)	Male/Female Ratio
Mean Salary	\$162,306	\$170,720	\$146,757	1.16
Mean Salary – Business	\$165,045 (N=351)	\$172,769 (N=243)	\$147,667 (N=108)	1.17
Mean Salary – Law	\$152,596 (N=99)	\$160,562 (N=49)	\$144,789 (N=50)	1.11
Mean Salary – Professor	\$205,539 (N=138)	\$206,029 (N=106)	\$203,914 (N=32)	1.01
Mean Salary – Assoc. Professor	\$166,975 (N=108)	\$175,031 (N=66)	\$154,315 (N=42)	1.13
Mean Salary – Asst. Professor	\$133,669 (N=91)	\$134,399 (N=53)	\$132,652 (N=38)	1.01
Mean Salary – Instructor	\$128,478 (N=113)	\$139,967 (N=67)	\$111,744 (N=46)	1.25

# Mean Salary: Descriptive Statistics continued (N=450)

	Overall	Male (N=292)	Female (N=158)	Male/Female Ratio
Mean Salary – UBC	\$193,154 (N=195)	\$207,372 (N=126)	\$167,190 (N=69)	1.24
Mean Salary – SFU	\$149,040 (N=92)	\$152,578 (N=63)	\$141,356 (N=29)	1.08
Mean Salary – UVic	\$139,083 (N=78)	\$145,075 (N=43)	\$131,712 (N=35)	1.10
Mean Salary – UBC-O	\$147,566 (N=16)	\$152,940 (N=10)	\$138,611 (N=6)	1.10
Mean Salary – UNBC	\$132,656 (N=11)	\$138,562 (N=8)	\$116,906 (N=3)	1.19
Mean Salary – TRU	\$120,560 (N=58)	\$124,595 (N=42)	\$109,969 (N=16)	1.13

# Mean Salary: Descriptive Statistics continued

	Overall (N=98)	Male (N=62)	Female (N=36)	Male/ Female Ratio
Member of a Visible Minority	\$158,226	\$166,650	\$143,716	1.16
Visible Minority – Professor	\$200,845 (N=18)	\$196,763 (N=12)	\$209,009 (N=6)	0.94
Visible Minority – Associate Professor	\$163,674 (N=33)	\$178,500 (N=21)	\$137,727 (N=12)	1.30
Visible Minority – Asst. Professor	\$135,798 (N=28)	\$137,154 (N=15)	\$134,234 (N=13)	1.02
Visible Minority – Instructor	\$141,137 (N=19)	\$154,667 (N=14)	\$104,393 (N=5)	1.48
Visible Minority – Business School	\$162,149 (N=87)	\$167,910 (N=58)	\$150,626 (N=29)	1.11
Visible Minority Law School	\$127,194 (N=11)	\$148,378 (N=4)	\$115,090 (N=7)	1.29

# OLS Regression Results (N = 450)

Independent Variable	Dependent Variable = Salary (p-value)	Dependent Variable = <i>ln</i> Salary (p-value)
<b>Institution – UBC</b>	<b>64,855.71 (0.00000)</b>	<b>0.38075 (0.00000)</b>
<b>Institution – SFU</b>	8,247.61 (0.30661)	<b>0.09959 (0.02474)</b>
Institution – UVic	6,931.43 (0.38618)	0.07944 (0.07061)
Institution – UBC-Okanagan	6,530.73 (0.61262)	0.11277 (0.11143)
Institution – UNBC	10,066.56 (0.49935)	0.09185 (0.26136)
<b>Admin – Dean</b>	<b>59,483.87 (0.00000)</b>	<b>0.31833 (0.00001)</b>
<b>Admin – Associate Dean</b>	<b>47,873.18 (0.00000)</b>	<b>0.24830 (0.00003)</b>
Admin – Assistant Dean	3,084.99 (0.83696)	0.05259 (0.52254)
<b>Rank – Full Professor</b>	<b>75,142.87 (0.00000)</b>	<b>0.45303 (0.00000)</b>
<b>Rank – Assoc. Professor</b>	<b>43,525.02 (0.00000)</b>	<b>0.29375 (0.00000)</b>
<b>Rank – Assistant Professor</b>	<b>23,078.62 (0.00810)</b>	<b>0.14767 (0.00204)</b>



# OLS Regression Results continued (N = 450)

Independent Variable	Dependent Variable = Salary (p-value)	Dependent Variable = <i>ln</i> Salary (p-value)
<b>Business School</b>	<b>26,253.20 (0.00009)</b>	<b>0.13047 (0.00037)</b>
<b>Female Faculty Member</b>	<b>-10,426.07 (0.04677)</b>	<b>-0.06441 (0.02522)</b>
Professor – Visible Minority	2,538.22 (0.69755)	0.01704 (0.63438)
Female x Visible Minority	-8,757.44 (0.41242)	-0.05792 (0.32313)
Highest Degree – Doctorate	5,464.55 (0.60966)	0.07917 (0.17788)
Highest Degree – Masters	-969.49 (0.91426)	0.05465 (0.26963)
R <sup>2</sup> /Adjusted R <sup>2</sup>	0.52744/0.50885	0.55003/0.53232
F value	28.36330 (0.00000)	31.06271 (0.00000)

Reference categories: TRU (Institution); Chair/Director (Administrative position); Instructor (Rank); Law School (versus Business School); Bachelor Degree (Highest Degree)

# Wage Discrimination in B.C. University Business & Law Schools: Conclusion & Discussion Points

- According to Statistics Canada, in 2017, 40.2% of all full-time academic teaching staff were women; in this study, 35.1% of the faculty members were women
- In this study, and across all of the universities, faculties, administrative positions and ranks included in the study, the mean male/female wage gap is approximately 16%
- There is a comparatively modest male/female mean salary differential when comparing full professors and assistant professors (about 1% in favour of male faculty members)
- The female wage gap falls to approximately 6.5% when there are controls for university, faculty, administrative position, rank, race and degree (the gap is approximately 7.7% in an equation that excludes controls for race and degree)

## Wage Discrimination in B.C. University Business & Law Schools: Conclusion & Discussion Points continued

- The largest mean salary gap – 24% – was at UBC. What might account for this comparatively larger gap?
- When an interaction term (Female x UBC) was included in the equation, this variable indicated a significant 14% adverse gender effect and the “Female” variable, although still negative (albeit very small – 2/10ths of 1%), was no longer significant.
- The results of this study are largely consistent with those reported in the AUUP 2016-17 salary study, “Visualizing Change” (overall, a 6% to 9% male salary wage gap depending on rank)
- The results suggest that there is no discrimination by race

## Wage Discrimination in B.C. University Business & Law Schools: Conclusion & Discussion Points continued

- However, although not statistically significant ( $p = .32$ ; *Quaere*: Is that even relevant when reporting population data?), the coefficient for the “Female x Visible Minority” interaction variable is negative and suggests there is a 6% wage gap for visible minority women (N=36); Note also the mean salary differences as between minority men and women at the associate professor/instructor ranks (30% and 48% gaps, respectively) and for mean business and law faculty salaries (12% and 29%, respectively)
- Business school faculty salaries are approximately 13% higher than law school salaries (women constituted slightly more than 50% of all law school faculty members but only 30.8% of business school faculty members)
- There is an 11% mean salary gap as between male and female law faculty members and a 17% mean salary gap as between male and female business school faculty members