

DEGREES OF DIFFERENCE: COMPARING BACHELOR'S DEGREE OUTCOMES ACROSS ONTARIO COLLEGES AND UNIVERSITIES

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APPENDIX A:

Table A1: Descriptive Statistics				
	Medical Doctoral	Comprehensive	Primarily Undergraduate	College
Graduate and Second-entry Participation (percent)	32.3	21.3	21.9	4.7
Age				
21	3.0	2.2	3.3	1.1
22	58.4	49.1	55.4	49.3
23	38.6	48.7	41.3	49.6
Parental Income Quintile				
1 (lowest)	17.2	18.2	14.6	18.1
2	15.7	18.7	18.8	21.1
3	15.8	18.2	21.9	20.1
4	17.0	17.5	20.5	16.4
5 (highest)	21.0	15.4	13.0	10.5
Missing	13.3	12.0	11.1	13.8
Sex				
Male	37.1	38.2	34.7	37.8
Female	62.9	61.8	65.3	62.2
Immigration Status				
Not a immigrant	90.2	93.2	96.2	92.4
Recent immigrant	9.8	6.8	3.8	7.6
Dependants				
Zero	85.7	86.1	87.6	86.5
One or more	14.3	13.9	12.4	13.5
Relationship Status				
Single	98.1	97.7	96.6	96.3
In a relationship	1.9	2.3	3.4	3.7
Institutional Region				
Eastern Ontario	31.1	10.5	19.7	10.2
Greater Toronto Area (GTA) (excl. Toronto)	23.3	8.6	25.5	28.0
Toronto	24.8	35.2	8.3	47.1
Southwest Ontario	20.8	45.7	0.0	12.2
Northern Ontario	0.0	0.0	46.5	2.6
Field of Study				
Education	0.1	0.8	0.9	0.0
Visual and Performing Arts, Communications Tech.	3.3	4.9	8.3	23.3
Humanities	9.3	8.1	7.9	0.0

Table A1: Continued

	Medical Doctoral	Comprehensive	Primarily Undergraduate	College
Social and Behavioural Sciences, Law	26.8	28.0	23.2	20.8
Business, Management and Public Admin.	14.7	21.1	13.2	27.2
Physical and Life Sciences, Technologies	18.9	10.1	9.5	0.8
Math, Computer and Information Sciences	2.6	3.1	2.9	2.1
Architecture, Engineering and Related Tech.	9.5	8.3	7.7	3.9
Agriculture, Natural Resources and Conservation	1.0	2.2	2.3	0.0
Health and Related Fields	12.4	11.1	20.3	11.7
Personal, Protective and Transportation Services	0.2	1.6	2.7	10.0
Other	1.2	0.7	1.2	0.2
Graduating Cohort				
2013	13.5	13.3	13.5	6.2
2014	13.5	13.5	13.3	9.6
2015	13.9	13.8	14.1	13.3
2016	14.1	14.3	14.0	13.6
2017	14.7	15.0	15.1	19.2
2018	14.9	14.9	15.2	18.7
2019	15.4	15.1	14.8	19.4
Transfer				
No	94.8	92.9	88.1	95.2
Yes	5.2	7.1	11.9	4.8
Length of Enrolment				
Four years	68.1	59.3	69.1	65.0
Less than four years	2.2	2.8	5.6	9.2
More than four years	29.7	37.9	25.3	25.8
Borrowing Behaviour				
Did not borrow	61.7	57.8	56.6	60.5
First tertile	12.7	14.5	13.0	11.9
Second tertile	12.4	14.4	14.0	14.8
Third tertile	13.2	13.3	16.4	12.7
Work Experience				
Did not work	9.2	5.5	4.6	4.7
First quintile	22.5	16.1	13.8	14.5
Second quintile	20.1	17.4	18.2	16.7
Third quintile	17.6	19.0	22.1	17.9
Fourth quintile	15.7	20.2	23.4	23.2
Fifth quintile	15.0	21.8	17.9	23.1
Median Annual Earnings (\$)	\$69,500	\$62,400	\$60,200	\$58,100
Number of Observations	128,260	139,960	24,780	7,240

Note: The sample size is 300,240. All values are percentages unless otherwise noted. Percentages may not add up to 100 due to rounding.

Table A2: Regression Results by Outcome, Graduate or Second-entry Participation (Logistic) and Employment Earnings (OLS)

	Logistic Regression: Graduate or Second-entry Participation		OLS Regression: Logged Employment Earnings	
	Coefficient	Standard Error	Coefficient	Standard Error
Institutional Type (ref: Medical Doctoral)				
Comprehensive	−0.365***	(0.010)	−0.087***	(0.004)
Primarily Undergraduate	−0.616***	(0.024)	−0.118***	(0.008)
College	−1.746***	(0.057)	−0.094***	(0.010)
Graduating Cohort (ref: 2016)				
2013	0.015	(0.017)	−0.037***	(0.007)
2014	−0.003	(0.017)	−0.021**	(0.007)
2015	−0.039*	(0.017)	−0.019**	(0.007)
2017	0.055***	(0.016)	−0.001	(0.007)
2018	0.060***	(0.016)	0.024***	(0.007)
2019	0.086***	(0.016)	−0.013	(0.007)
Age (ref: 22)				
21	0.112***	(0.034)	−0.023	(0.019)
23	−0.262***	(0.014)	−0.074***	(0.006)
Parental Income Quintile (ref: First quintile)				
Second quintile	0.034*	(0.016)	0.002	(0.007)
Third quintile	0.103***	(0.016)	0.022***	(0.007)
Fourth quintile	0.145***	(0.016)	0.045***	(0.007)
Fifth quintile	0.231***	(0.017)	0.100***	(0.007)
Missing	0.037*	(0.017)	0.040***	(0.008)
Sex (ref: Male)				
Female	0.076***	(0.010)	−0.056***	(0.004)
Immigration (ref: Not a immigrant)				
Recent immigrant	−0.019	(0.019)	0.019*	(0.008)
Dependants (ref: Zero)				
One or more	0.048***	(0.013)	−0.099***	(0.010)
Relationship Status (ref: Single)				
In a relationship	−0.435***	(0.035)	0.060***	(0.005)
Region^a				
East	0.121***	(0.013)	—	—
GTA (excl. Toronto)	−0.195***	(0.014)	—	—
Toronto	−0.265***	(0.012)	—	—
North	0.359***	(0.033)	—	—
Northern Ontario	—	—	0.039***	(0.011)

a Region reflects the location of the institution in the first set of models and the region of residence in the second set. Reference categories are southwest Ontario in the first set of models and southern Ontario in the second.

Table A2: Continued

	Logistic Regression: Graduate or Second-entry Participation		OLS Regression: Logged Employment Earnings	
	Coefficient	Standard Error	Coefficient	Standard Error
Atlantic	—	—	−0.055*	(0.025)
Quebec	—	—	0.007	(0.014)
Prairies and Territories	—	—	0.118***	(0.026)
Alberta	—	—	0.109***	(0.014)
British Columbia	—	—	0.008	(0.012)
Field of Study (ref: Social and Behavioural Sciences, Law)				
Education	0.331***	(0.058)	−0.028	(0.047)
Visual and Performing Arts, Communications Tech.	−0.271***	(0.024)	−0.129***	(0.011)
Humanities	0.502***	(0.016)	−0.137***	(0.010)
Business, Management and Public Admin.	−0.929***	(0.017)	0.252***	(0.005)
Physical and Life Sciences, Technologies	0.882***	(0.013)	0.015	(0.011)
Math, Computer and Information Sciences	−0.081**	(0.029)	0.397***	(0.010)
Architecture, Engineering and Related Tech.	0.035	(0.018)	0.326***	(0.006)
Agriculture, Natural Resources and Conservation	0.245***	(0.033)	0.035*	(0.016)
Health and Related Fields	0.070***	(0.015)	0.220***	(0.008)
Personal, Protective and Transportation Services	−0.205***	(0.046)	0.030	(0.016)
Other	0.440***	(0.040)	0.068**	(0.024)
Transfer (ref: No)				
Yes	−0.072***	(0.018)	0.048***	(0.008)
Length of Enrolment (ref: 4 years)				
Less than 4 years	−0.304***	(0.035)	−0.018	(0.015)
More than 4 years	−0.072***	(0.015)	0.038***	(0.006)
Borrowing Behaviour (ref: Did not borrow)				
First tertile	0.016	(0.014)	−0.009	(0.006)
Second tertile	−0.097***	(0.014)	0.009	(0.006)
Third tertile	−0.174***	(0.015)	0.058***	(0.006)
Work Experience (ref: First quintile)				
Did not work	−0.102***	(0.020)	−0.118***	(0.010)
Second quintile	−0.071***	(0.014)	0.108***	(0.007)
Third quintile	−0.132***	(0.014)	0.183***	(0.007)
Fourth quintile	−0.196***	(0.015)	0.258***	(0.007)
Fifth quintile	−0.161***	(0.015)	0.386***	(0.007)
Constant	−0.729***	(0.024)	10.713***	(0.010)
Observations	300,240		98,540	
R ²	0.076 (Pseudo)		0.16	

Notes: Robust standard errors in parentheses. Asterisks denote statistical significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001. The logistic model uses Institutional Region (ref: Southwest); the OLS model uses Region of Residence (ref: Southern Ontario). Em dashes (—) indicate categories not applicable to that model.

Table A3: Predicted Probabilities and Pairwise Differences of Graduate or Second-entry Participation by Institutional Type

	Estimate	Standard Error	95 percent Confidence Interval
Panel A: Predicted Probabilities			
Medical Doctoral	0.283***	(0.001)	[0.280, 0.285]
Comprehensive	0.215***	(0.001)	[0.212, 0.217]
Primarily Undergraduate	0.176***	(0.003)	[0.169, 0.182]
College	0.064***	(0.003)	[0.058, 0.071]
Panel B: Pairwise Difference in Predicted Probability			
Comprehensive vs. Medical Doctoral	-0.068***	(0.002)	[-0.073, -0.063]
Primarily Undergrad vs. Medical Doctoral	-0.107***	(0.004)	[-0.117, -0.098]
College vs. Medical Doctoral	-0.218***	(0.004)	[-0.228, -0.209]
Primarily Undergrad vs. Comprehensive	-0.039***	(0.004)	[-0.049, -0.030]
College vs. Comprehensive	-0.150***	(0.004)	[-0.160, -0.141]
College vs. Primarily Undergrad	-0.111***	(0.005)	[-0.123, -0.099]

Note: Predicted probabilities are on the probability scale. Asterisks denote statistical significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A4: Predicted Log Earnings and Pairwise Differences by Institution Type

	Estimate	Standard Error	95 percent Confidence Interval
Panel A: Predicted Earnings (log)			
Medical Doctoral	11.011***	(0.003)	[11.005, 11.017]
Comprehensive	10.924***	(0.003)	[10.918, 10.929]
Primarily Undergraduate	10.893***	(0.007)	[10.879, 10.906]
College	10.917***	(0.009)	[10.898, 10.935]
Panel B: Pairwise Difference in Predicted Earnings			
Comprehensive vs. Medical Doctoral	-0.087***	(0.004)	[-0.098, -0.076]
Primarily Undergrad vs. Medical Doctoral	-0.118***	(0.008)	[-0.138, -0.098]
College vs. Medical Doctoral	-0.094***	(0.010)	[-0.121, -0.068]
Primarily Undergrad vs. Comprehensive	-0.031***	(0.007)	[-0.050, -0.011]
College vs. Comprehensive	-0.007	(0.010)	[-0.033, 0.018]
College vs. Primarily Undergrad	0.024	(0.011)	[-0.006, 0.054]

Note: Predicted earnings are on the log scale. Asterisks denote statistical significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.