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International Students' Earnings in London, Ontario

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INTERNATIONAL STUDENTS' EARNINGS IN LONDON, ONTARIO

by

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ABSTRACT

While there is an abundance of literature on the labour outcomes of immigrants, there is limited research on the earnings of former international students. This study uses the 2016 census to compare the earnings of new labour market entrants who were international students, and are now permanent residents, to those of domestic students and foreign-educated immigrants in London, Ontario. The results found that former international students had slightly lower earnings than domestic students, despite being more likely to have completed a bachelor's degree, have studied a STEM field, and be working in a NOC skill level A occupation. Former international students fared considerably better than the foreign-educated group. This study illustrates that further efforts should be made to ensure the successful transition of international students to the workforce once they have completed their studies. This paper is significant in that it contributes to the literature on international students' labour outcomes, which is integral in a country and city that heavily rely on international student enrolment.

Keywords: international students, internationalization, universities, labour, integration, immigration, Canadian education, earnings, employment, London, Ontario

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Introduction

Canada's immigration framework is ever-changing. As fertility rates decline, and the country relies more on sustaining a globalized economy, there is an increasing number of immigrants being accepted into the country. Many of these immigrants are international students, who are virtually a guarantee of high economic returns for Canada (Naomi & Cohl, 2012).

International students choose Canada as one of the top 10 places in the world to study (Government of Canada, 2017). Canadian postsecondary institutions are one of the top choices amongst international students, as they are deemed more affordable than their counterparts in the US, UK, and Australia (Canadian Bureau for International Education, 2016). Within Canada, a large majority of 43.6% of international students enroll in Ontario (Canadian Bureau for International Education, 2016). From 2009 to 2015, international students increased in the makeup of total students in Southwestern Ontario from 3.3% to 10.7% (Decock, McCloy, Steffler, & Dicaire, 2016). In London, Ontario, at Western University (2017), international enrolment is on track to be at 15% by this year, and at Fanshawe College, international enrolment in 2018 was at 10% (Fanshawe College, 2018).

Canada brings in a large population of international students to help sustain postsecondary institutions and to remain economically competitive (Ministry of Advanced Education and Skills Development, 2018). At the post-secondary level, they pay tuition exponentially higher than that of their domestic counterparts. Canada-wide, international students contribute to a $15.5B export industry (Global Affairs Canada, 2016). International students are so coveted that some postsecondary institutions in Ontario are relying on

international enrolment to meet quotas due to a lack of domestic student enrolment (Decock, McCloy, Steffler, & Dicaire, 2016).

Another factor supporting increased international student enrolment across Canada is that upon graduation, international students receive their educational qualifications from accredited Canadian institutions, possibly bypassing the issue of foreign credentials not being recognized, a barrier that immigrants to Canada often face. Across the literature, many immigrants face hardships in finding work due to either their work experience, education, or neither, being recognized by Canadian employers. This affects both first and second-generation immigrants, who either came to Canada at a very young age or are the first generation in their family to be born in Canada (Abada, Hou, & Ram, 2009; Buzdugan & Halli, 2009; Portes, Fernandez-Kelly, & Haller, 2005). The number of immigrants who arrive with a degree has increased, while general immigrant earnings have decreased over the years, which can be attributed to discrimination and lack of foreign credential recognition (Buzdugan & Halli, 2009). By completing postsecondary education in Canada, these barriers may be overcome. This issue will be further explored in the Discussion section.

International students benefit the economy of their locale, but do they receive returns on their investment? This study will assess the earnings of former international students and how they compare to those of domestic students in London, Ontario.

Background

I will begin the literature review by illustrating the importance of this subject matter. First, I will provide background on the human capital model, as this is a foundational theory in Sociology, followed by a snapshot of international student enrolment in Canada and a

general overview of immigration pathways for international students after they have graduated. I will then delve deeper into the issues of earnings differentials between former domestic students and international students and link these to the importance of London.

This paper is structured in a way where each hypothesis is motivated by the literature, followed by the descriptive statistics generated from the study. Further information on the study itself is outlined in the Methodology and Multivariate Results section. This paper concludes with a lengthy discussion on this study, its potential impacts, the issue of foreign credential recognition, and further research that should be conducted.

Why London?

Baby Boomers will have reached age 65 by 2031, meaning that the oldest working cohort will be at, or nearing, retirement (Martel & Menard, 2015). Concurrently, visible minorities across Canada will increase as Canadian-born births decline (Statistics Canada, 2011).

In London, Ontario, Baby Boomers are entering retirement and are projected to continue doing so until 2029 (Simian, Mountenay, & Withenshaw, 2015). There has been a drastic increase in non-permanent residents coming to London, up from 728 in 2012 to 2,683 in 2016 (Statistics Canada, 2018). This is quite high in comparison to fluctuating amounts of immigrants, being at 2,706 in 2012, down to 2,328 in 2014, and back up to 3,201 in 2015 (Statistics Canada, 2018). While this number accounts for an influx of refugees, it also captures the increase in international students coming to London, ON.

Most immigration literature focuses on nation-wide results, without casting any attention on what the earnings differentials between different immigrant groups look like in

secondary cities. London is a second-tier city, which has historically made headlines for having high unemployment rates (Simian, Mountenay, & Withenshaw, 2015). This, coupled with the large numbers of international students admitted to study at the two main post-secondary institutions in the city, Western University and Fanshawe College, makes it a germane focus of this study.

Human Capital Theory

There are many immigration theories in Sociology that guide research. One of the most commonly cited theories in immigration literature is the human capital theory, which "is the idea that the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor (productivity) so as to produce economic value" (Buzdugan & Halli, 2009).

The human capital model is a basic, foundational model for explaining the relationship between education and earnings in societies. It outlines that the more human capital one has, the more one will earn; however, there are other facets of society, including, but not limited to visible minority status and foreign credential recognition, that make this model inapplicable to certain groups, such as immigrants.

The human capital theory has an underlying assumption that immigrants often are less successful in the labour market due to a lack of skills, intelligence, or motivation. This theory has been widely criticized for the prejudice it puts on immigrants, as well as for failing to recognize factors that are external to the individual, such as host country reception (Buzdugan & Halli, 2009). This is widely the case for first generation immigrants who arrive with no Canadian work or education experience. International students are a unique case in

that they receive their education in the host country. This study uses the human capital model to assess the labour outcomes of international students; however, the goal of analysis is not to assess the skills and knowledge of international students, but to critically analyze:

i)   Whether immigrant status or place of study is more salient a factor in explaining earning differentials, and;

ii) The extent to which studying in Canada, compared to not having studied in Canada, helps explain earnings gaps between former international and domestic students.

Increasing International Student Enrolment

Since the early 2000s, there has been an increased effort towards recruiting and retaining international students in Canada. For example, from 1990 to 1994, 31,000 international students were admitted to Canada every year, whereas this number more than tripled to 96,000 from 2010 to 2013 (Hou & Lu, 2015).

Despite the 1995 deregulation of tuition fees for Canadian institutions, (Williams, Williams, Arbuckle, Walton-Roberts, & Hennebry, 2015), there was almost a nine-fold increase in the number of international students with a work permit, up to 60,000 in 2011, from 6,800 in 2002 (Naomi & Cohl, 2012). This is likely due to the implementation of the 2002 Immigration and Refugee Protection Act, which highlighted the importance of bringing in skilled immigrants (Williams, Williams, Arbuckle, Walton-Roberts, & Hennebry, 2015).

Beginning in 2006, international students were granted permission to work off-campus and by 2008, international graduates were granted work permits that did not require them to have any specific type of employment, nor a job offer (Naomi & Cohl, 2012). In 2011, the government made a commitment to allocate $10 million towards an international

education strategy until 2013 (Naomi & Cohl, 2012). From 2008 to 2015, international student enrolment in Canada increased by 92% (Canadian Bureau for International Education, 2016).

Immigration Pathways for International Students

In the past few years, the Canadian government has implemented pathways to entry and residence to Canada, especially for international students.

The Study Direct Stream, implemented by the Government of Canada, makes it easier and faster for international students from China, India, the Philippines, and Vietnam to obtain their study permit (Government of Canada, 2018).

The Canadian Experience Class stream allows those with Canadian work experience to gain permanent residence status. Ontario's Provincial Nominee Program is called the Ontario Immigrant Nominee Program and provides three streams for entry to permanent residence: Business, employer job offer, and human capital. Under this program, international students with a job offer, or international students who have completed a Master's or PhD in Ontario are eligible to be nominated to apply for permanent residence status. Those who gain permanent residence status through the Provincial Nominee Program are expected to meet the labour demands in their locale (Government of Canada, 2018). The Express Entry system is an electronic application system, based on Comprehensive Ranking System scores, that was implemented as an efficient system for the above pathways to permanent residence with processing times of six months or less (Government of Canada, 2018).

Hypotheses

Earnings Differentials Hypothesis

One of the key driving forces behind this study is the fact that there is limited research on the earnings of former international students, let alone in an area smaller than a CMA. Over the next few sections, I will review the literature on each of the hypotheses of the study and illustrate the gaps that exist on this subject.

According to the labour market shelters theory, foreign credentials are often not recognized due to professional associations giving accreditation only to Canadian education and experience. Since international students gain domestic credentials, this study will analyze whether there is an earnings differential between them and domestic students, and why this is.

Reitz, Curtis, and Elrick (2014) found that immigrants earned less than their native-born counterparts even when they had similar abilities, racial backgrounds, and worked in the same occupational skill level. Immigrants were also found to be underemployed with their skills being underutilized across provinces, and the gap between immigrants and domestic students growing as the years pass (Reitz, Curtis, & Elrick, 2014). The literature on lower earnings of immigrants is consistent globally.

Focusing more on the locale, there is some data available on the total income of international students in London, ON for every year after the expiration of their study permit. The following table outlines the earnings of former international students from 2004 to 2015:

Table 1: Total Income of Retained International Students in London (2015 CAD)						
Cohort	Years Since Permit Expiration					
	0	1	2	3	4	5
2004	24,183	32,648	41,112	48,367	51,994	51,994
2005	21,416	29,579	36,679	39,045	43,778	47,327
2006	25,529	33,652	34,812	42,935	45,256	48,737
2007	23,865	35,230	39,776	46,594	42,048	52,276
2008	23,301	27,739	37,725	36,615	44,382	45,492
2009	21,137	30,986	34,306	42,052	47,586	53,119
2010	20,539	31,514	32,601	41,294	43,468	48,901
2011	24,285	33,788	39,068	46,459	53,850	
2012	23,926	33,288	43,691	50,973		
2013	31,959	41,238	53,609			
2014	29,324	40,447				
2015	23,000					

Source: Dr. Michael Haan

While there is some fluctuation over the years for each cohort, total income gradually increases every year after their study permit expires. Income increases doubly five years after international students have entered the labour market.

Despite the gradual increase illustrated above, based on the 2006 census, in London, family income for non-immigrants was higher than that of immigrants, despite immigrants having larger family sizes. The top three income groups for immigrants were $100,000-$124,000 at 9.2%, followed by $80,000-$89,999 and $35,000-$39,999, both at 6% (Statistics Canada, 2006). Comparatively, the top family income groups that non-immigrants fell into were $100,000-$124,999 at 13.8%, followed by 8.1% in the $125,00-$149,999 family income group, and 7.7% earning a family income of $80,000-$89,999 (Statistics Canada, 2006). Further, Canada-wide results by Hou and Lu (2017) found that international students earn less than Canadian-borns.

These points lead to my first hypothesis on the potential earnings disparity between former international students and former domestic students.

H1: Overall, domestic students earn more than those who studied in Canada as international students.

Earnings Differentials Descriptive Results

As hypothesized, the reference group, domestic students, earn more than international students and foreign-educated immigrants. International students are at a disadvantage of about $617 compared to domestic students, while foreign-educated immigrants are at an even steeper disadvantage of over $3,262. According to table 12, in the Multivariate Results section, for every year spent in Canada, immigrants earn an additional $159. This supports hypothesis 1 in that international students earn less than their domestic student counterparts; however, in comparison to those who were foreign-educated, the amount of discrepancy is miniscule, illustrating that location of study does impact earnings, but that this is not the sole driver of earnings differentials.

**Table 2: Total Income vs. Immigrant Status**

	Mean	Column N %
International Student	38432	10.7
Foreign-Educated	35787	1.7
Domestic Student	39049	87.6

While the mean earnings are generally low given that the study was conducted on those who are early career, what compounds the comparison of the three groups, as illustrated in table 3, is that those who earn the most, domestic students, are the youngest with a mean age of 26, followed by international students who have a mean age of 27, and finally foreign-educated immigrants, who earn the least, having a mean age of 28.

Table 3: Age by Immigrant Status

		Mean
Age	International Student	27
	Foreign-Educated	28
	Domestic Student	26

Due to limitations meeting confidentiality requirements, I was unable to compare age by year with immigrant status and could only release data illustrating total income by age for international students and domestic students split into five-year age groups. As expected, the older one is, the higher one's earnings are. For the sample, as a whole, the mean earnings progressively increase the older the individual is. The number of individuals in the labour market also gradually increases the older they get as more individuals finish school and enter the workforce.

Figure 1: Total Income vs. Age
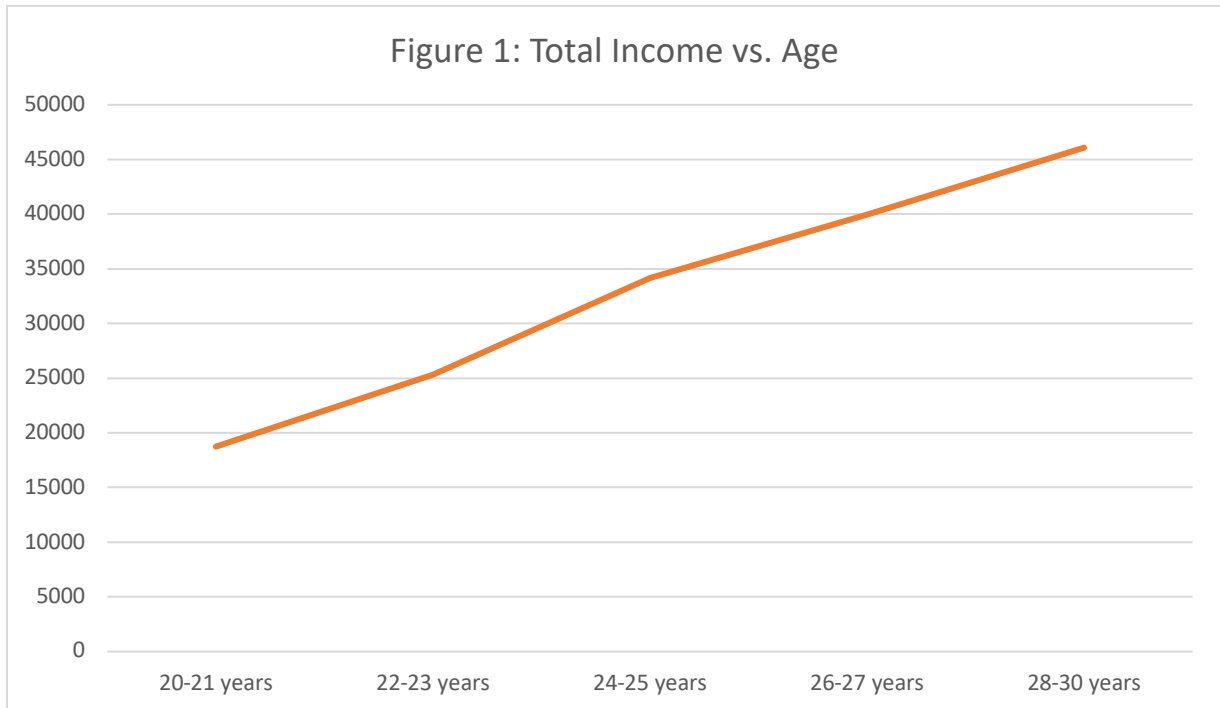
Taking a closer look at international students in direct comparison to domestic students split into the age groups of 20-24 years and 25-30 years, both groups do increase in earnings considerably over the years; however, international students do so at a slightly lower rate.

Figure 2: Income vs. Age by Immigrant Status
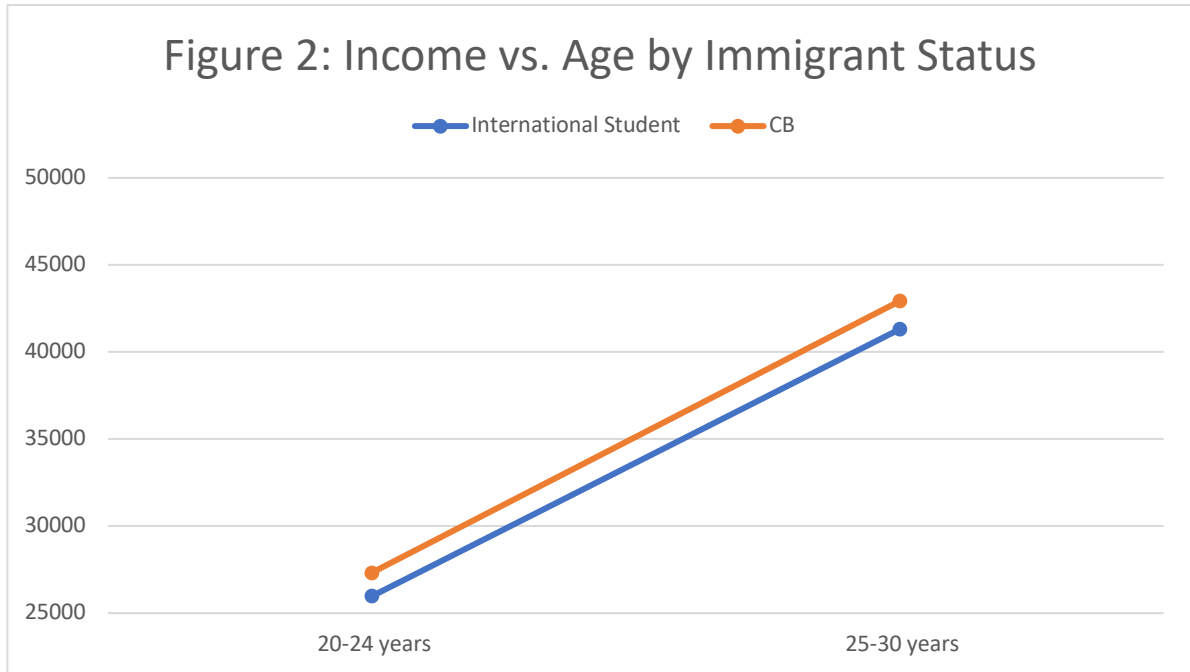
Also, as time goes on, the gap slightly widens between the two groups, starting off with a mean discrepancy of $1,352 and ending with a mean discrepancy of $1,617. While not a huge difference, this result is still significant.

Table 4: Total Income vs. Age

	Mean	Column N %
20-21 years	18744	2.8
22-23 years	25330	11.6
24-25 years	34142	20.6
26-27 years	39959	25.0
28-30 years	46085	40.0

STEM vs BHASE Fields of Study Hypothesis

Chen and Skuterud (2018) found that there was an earnings gap between Canadian-educated and international student graduates in Canada. A larger gap was found amongst international students who had not completed a STEM (Science, Technology, Engineering, Math) degree and females who had college degrees. Over 66% of international students, compared to 48% of domestic students, completing a bachelor's degree or higher, in the United States study a STEM field (Gesing, 2017). Many who studied STEM also feel inclined to stay for future job opportunities and career growth (Gesing, 2017).

According to Statistics Canada (2006), a higher number of immigrants studied a STEM field, at 13.6%, compared to non-immigrants, at 9.1%. Despite being more likely to complete a STEM field of study, the literature illustrates that international students are still at an earnings disadvantage (Hou & Lu, 2017).

Based on the human capital model, international students should earn more than domestic students if they are more likely to complete a STEM field of study; however, based on the literature, I hypothesize that international students who study a STEM field are shielded by what would be an even higher earnings disadvantage if a BHASE (Business, Humanities, Health, Arts, Social Science, Education) field of study was completed.

The second hypothesis and further hypotheses will be tested on the basis of H1.

H2: The earnings differential, as outlined in H1, can partially be attributed to former international students who study a STEM field shielding a greater earnings disparity than if they studied a BHASE subject, yet still leading them to earn less than domestic students.

STEM vs BHASE Fields of Study Descriptive Results

Those who study a STEM field have higher earnings than those who study a BHASE field by a coefficient of $4,836. The STEM earners earned more than the BHASE earners for the international student and domestic student groups, but not for the foreign-educated group, whose STEM earners were at approximately a $7,000 disadvantage compared to their BHASE counterparts. As hypothesized, despite being smaller in population, those who were international students were more likely to study a STEM subject; 20% of the international student population had studied STEM as compared to 14% of the domestic student population. The foreign-educated group had the highest STEM rate at 23%. Those who studied BHASE for all three immigrant groups had almost equal earnings, with domestic students earning the most, followed by foreign-educated, and international students earning the least.

The domestic student STEM earners had a $3,694 advantage over international students and a $15,878 advantage over foreign-educated immigrants. Within each immigrant group, domestic students had the largest earnings premium for those who studied STEM as compared to a BHASE field.

Table 5: Total Income vs. STEM

			Mean	Column N %
International Student		STEM	42366	2.3
		BHASE	37323	8.3
Foreign-Educated		STEM	30182	0.39
		BHASE	37421	1.3
Domestic Student		STEM	46060	12.2
		BHASE	37914	75.4

Highest Level of Education Hypothesis

As previously mentioned, there is not a lot of literature on international students, so this study will contribute to this small field of research. These next two sections will analyze immigration literature that will serve as cognate literature with trends similar to the hypothesized statements in H3 and H4.

At a national level, the Student Partners Program, in partnership with the Colleges and Institutes Canada, focuses on issuing visas to students from India and China (Williams, Williams, Arbuckle, Walton-Roberts, & Hennebry, 2015). International enrolment in Ontario is highest for colleges, which has increased by 784% from 2000 to 2012, followed by universities, which increased by 77% (Williams, Williams, Arbuckle, Walton-Roberts, & Hennebry, 2015).

While this study is not limited to those who obtained their highest degree in London, ON, it is limited to those who obtained their highest degree in Canada and have lived in

London for at least one year. For this reason, we will take a closer look at Western University and Fanshawe College, the two main postsecondary institutions in London.

Western University is the university in London where students can obtain a degree or certificate above university level. As London is a small city, with relatively high unemployment rates historically, we will assume that most respondents who were degree-holders attended Western University and decided to stay in London, instead of studying elsewhere and coming to London to join the labour market. In Fall 2016, 9.4% of students who enrolled in a bachelor's degree program were international students (Western University, 2017). This number has been steadily increasing over the years, with a goal of having international enrolment at 15% by 2019 (Western International, 2014).

Fanshawe College has also been recognized for their increasing international enrolment. In September 2016, the college admitted 2,400 students, which was a 16% increase from 2015 (Fanshawe College, 2018). Similar to Western University, international students make up 10% of the student population at Fanshawe College (Fanshawe College, 2018). The college has a goal to continually increase international student enrolment by 6% over the next three years (Fanshawe College, 2017).

Moreover, based on the 2006 census, which was the most readily available data source for London, ON prior to conducting the research outlined in this paper, non-permanent residents, who were mainly international students, had higher educational qualifications than non-immigrants. The top three qualifications this group held were 20.5% with a bachelor's degree, while 15.9% had attended college, and 10.2% had a master's degree. Comparatively, the top three qualifications for non-immigrants were 22% with a

college diploma, 11% holding a bachelor's degree, and 4.7% with a trades certificate (Statistics Canada, 2006).

Having higher education is correlated with a higher likelihood of employment (Simian, Mountenay, & Withenshaw, 2015); however, this held true only for non-immigrants, who had a 66.9% employment rate, compared to 52.9% of immigrants being employed, despite having higher educational qualifications (Statistics Canada, 2006). In Ontario, international students are more likely to be male than female, are generally older, with the majority being in the 21-25 and 26-30 age ranges, and are more likely to have a university degree upon entering an Ontario postsecondary institution (Decock, McCloy, Steffler, & Dicaire, 2016); however, despite these pre-existing qualifications, are international students still at an earnings disadvantage compared to domestic students? This leads to the third hypothesis.

Based on the human capital model, international students should earn more than domestic students if they are more likely to complete a higher level of education; however, based on the literature, I hypothesize that international students completing a university degree are shielded by what would be an even higher earnings disadvantage if a college education was completed.

H3: The earnings differential, as outlined in H1, can partially be attributed to former international students being more likely to complete a university degree, shielding a greater earnings disparity than if they completed a college diploma, yet still leading them to earn less than domestic students.

Highest Level of Education Descriptive Results

Despite college becoming a more popular and needed avenue to enter the labour market, those with undergraduate degrees as their highest field of study earned more than those with college, CEGEP, or a non-university certificate as their highest field of study. The mean earnings for domestic students with a bachelor's degree was $42,024, a $2,565 premium over international students, and almost $9,000 more than the foreign-educated group. Those in the college group were at a similar level across the three immigrant groups, with domestic students having a much smaller advantage of $1,289 over international students. Those in the college group who were foreign-educated had a slight advantage of $348 over international students. More of the international student population, approximately 50%, completed a bachelor's degree, whereas 39% of domestic students completed a bachelor's degree. These findings support the third hypothesis which states that international students are more likely to have a higher level of degree but are likely to earn less than domestic students.

Table 6: Total Income vs. Education Level

		Mean	Column N %
International Student	Bachelor's degree	39368	5.2
	College	34369	4.9
Foreign-Educated	Bachelor's degree	33960	1.1
	College	34717	0.3
Domestic Student	Bachelor's degree	42024	35.1
	College	35658	53.5

NOC Skill Level Hypothesis

The National Occupational Classification groups jobs by different skill levels. Skill levels 0 and A include jobs, such as, professionals, managers, and those that require a university education. Skill level B jobs are those which require college education or an apprenticeship. Skill level C requires a secondary school diploma and skill level D jobs are occupations where on-the-job training is provided so no prior education or experience is necessary. Individuals can be in the same industry, but at different NOC skill levels.

There are a few theories in the immigration literature that are applicable to the topic of employment in different skill levels. The split labour market theory divides work into primary labour, which is stable work, usually dominated by Caucasians, and secondary labour, which is unstable work, usually dominated by women and minorities (Buzdugan & Halli, 2009). The screening hypothesis explains that foreign credentials are often overlooked due to Canadian credentials seeming more appealing. This results in immigrants being pushed to the secondary labour market, resulting in a cycle of downward occupation mobility (Buzdugan & Halli, 2009). As discussed later in this paper, international students may be able to bypass the barriers presented with the screening hypothesis, as they receive their educational qualifications in Canada. As international students are a unique class of newcomers, not much is known about their labour market outcomes, if they do decide to stay in Canada. This study will help determine the extent to which former international students are subject to falling into secondary labour.

Based on Statistics Canada (2006), the top three industries of employment for residents in London were manufacturing, health care and social assistance, and retail trade. While the NOC skill level can vary within an industry, it is unlikely that there are many jobs

in the manufacturing sector that are of a managerial level, given that London is known to have many manufacturing jobs. Thus, the 2006 census results illustrated that despite having higher education levels, immigrants were more likely to be working in the manufacturing sector than non-immigrants, with 17.5% immigrants compared to 13.6% non-immigrants working in this sector.

This leads to my fourth hypothesis on NOC skill levels and how they relate to earnings for former international and domestic students.

H4: The earnings differential as outlined in H1, can partially be attributed to former international students working in lower NOC skill levels than domestic students.

NOC Skill Level Descriptive Results

As is expected, those who had a job classified as NOC Skill Level A earned more than those in Skill Levels B, C, and D. Domestic students with jobs in skill level A had a $1,692 mean earnings advantage over international students in the same skill level. The gap between domestic and international students in skill level B was $1,507. The gap between domestic and international students in skill levels C and D was the smallest at $1,100. Those in the foreign-educated category were at a much steeper disadvantage than international students in skill levels A and B, but earned the highest among the immigrant categories in skill levels C and D.

Among international students, 39% had jobs in skill level A. Among foreign-educated immigrants, 47% had jobs in skill level A. Among domestic students, 32% worked in occupation skill level A. More international students had jobs in skill level A than the

other skill levels, whereas amongst the domestic students, skill level A had the smallest number of jobholders. These results are contrary to the hypothesis, as international students were more likely to be in skill level A than domestic students; however, despite this, domestic students still earned more, which supports the overall hypothesis of earnings differentials between international and domestic students.

Table 7: Total Income vs. Occupation Skill Level

		Mean	Column N %
International Student	Skill level A	47720	4.2
	Skill level B (college/apprenticeship)	37434	3.0
	Skill levels C & D (high school/on-the-job training)	28166	3.5
Foreign-Educated	Skill level A	46909	0.80
	Skill level B (college/apprenticeship)	20351	0.41
	Skill levels C & D (high school/on-the-job training)	30506	0.50
Domestic Student	Skill level A	49412	28.3
	Skill level B (college/apprenticeship)	38941	29.8
	Skill levels C & D (high school/on-the-job training)	29266	29.6

Self-Employment Hypothesis

Common in immigration literature, immigrants often end up being left with no choice but to start their own businesses. Ethnic enclaves are naturally formed, where businesses are started by and for certain ethnic communities. While self-employment of international students is a topic the literature has yet to explore, the immigrant population in London had relatively high self-employment rates for unincorporated businesses reported in the 2006 census. The immigrant population had a self-employment rate of 6.1% and non-permanent residents, such as those in London with a study permit, had a rate of 9.8% (Statistics Canada, 2006). This was much lower for the non-immigrant population at 5.1% (Statistics Canada, 2006).

In the London Economic Region, there are 5,426 organizations without employees, over double the 2,358 organizations with employees, which is indicative of a large number of small businesses and self-employed individuals (Simian, Mountenay, & Withenshaw, 2015). Self-employed individuals are either pushed or pulled into self-employment (Lin, Picot, & Compton, 2000). A push occurs when economic conditions are poor, as is likely the case for the self-employed individuals in London.

The literature on international students' self-employment is very limited. This study will serve as contributing to the literature on international students after they complete their studies.

H5: The earnings differential as, outlined in H1, can partially be attributed to former international students being more likely to be self-employed than domestic students.

Self-Employment Descriptive Results

Being self-employed is a strong negative predictor of earnings, as illustrated in the

Multivariate Results. Based on the results in table 8, below, 3.6% of international students

are self-employed, whereas 4.5% of domestic students are self-employed. Domestic students

who are self-employed have a mean income that is $11,115 higher than self-employed

international students. Comparably, amongst those who are not self-employed, the earnings

advantage domestic students have over international students drops to $293.

Contrary to the hypothesis, international students are less likely to be self-employed;

however, the hypothesis supports the results illustrating that self-employed international

students earn less than self-employed domestic students.

Table 8: Total Income vs. Employment Status

		Mean	Column N %
International Student	Self-employed	22192	0.39
	Employee	39052	10.4
Domestic Student	Self-employed	33307	4.0
	Employee	39345	84.6

Visible Minority Status Hypothesis

Immigrants are consistently at a disadvantage, and the majority of immigrants are of

visible minority status; by 2031, it is projected that the South Asian population will increase

from 25% to 28% of the Canadian population, blacks and Filipinos will double in numbers, and those of Arab and West Asian descent will triple in population (Statistics Canada, 2011).

International students are likely to be visible minorities; Canada-wide, international students come from 187 countries, with 47% originating from East Asian countries (Canadian Bureau for International Education, 2016). International students from Africa were most likely to look for work in Canada after graduating, followed by those from South Asia, East Asia the Middle East, and North Africa; to contrast, international students from the United States of America were less likely to look for work in Canada (Esses, Sutter, Ortiz, Luo, Cui, & Deacon, 2018). The top five countries of international student citizenship in 2015 were China at 33.6%, India at 13.7%, France at 5.7%, South Korea at 5.6%, and the United States at 3.5% (Canadian Bureau for International Education, 2016).

London's population as of 2016 comprised of 22% immigrants, 69% non-immigrants, and 2% non-permanent residents (MacTaggart, Eldik, Oliviera, & Jeng, 2016), with 20% being of visible minority status; comparatively, the population of visible minorities was 16% in 2011 (MacTaggart, Zonruiter, Oliviera, & Jeng, 2013).

London's most recent immigrants, according to the 2016 census, have come from the following top 10 countries: Syria, India, China, Iraq, Columbia, Philippines, United States of America, South Korea, Egypt, and Pakistan (MacTaggart, Eldik, Oliviera, & Jeng, 2016). The top countries of origin from the 2011 census were: Columbia, China, United States of America, South Korea, Iraq, India, United Kingdom, Egypt, Saudi Arabia, and Afghanistan (MacTaggart, Zonruiter, Oliviera, & Jeng, 2013). Clearly, the composition of recent immigrants to London has changed over the past few years, with an increase of immigrants who are of visible minority status. This leads to my final hypothesis.

H6: International students are more likely to be of visible minority status than domestic students and may face additional barriers due to this; the earnings gap will close once visible minority status is accounted for.

Visible Minority Status Results

The results of this study show that this hypothesis was not supported due to the multivariate results, as shown in table 9, being statistically insignificant. This can be explained by the variable being non-residual; the variable focused on anyone who classified themselves as non-white. The visible minority group is a diverse group, with an abundance of heterogeneity; there are many differences within this variable, and simply put, some groups may be more likely to succeed than others, causing this variable to be statistically insignificant. Despite the statistical insignificance, this is still of sociological significance, and the topic of visible minority status, as it relates to employment, will be further explored in the Discussion section.

Table 9: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	31830.267	722.15		44.077	0
Visible minority status	-683.059	625.166	-0.01	-1.093	0.275

Methodology

Hypotheses

The focus of this research is to analyze the labour market outcomes, defined as earnings, and operationalized as total income, for domestic students and former international students who studied in Canada and have entered the labour market.

The main research question is: How do the earnings of former international students compare to those who are domestic students over a 5-year trajectory in London, ON?

This information will be used as a means to understand bias and prejudice in London since international students have a Canadian degree, and thus, the reasoning of foreign credentials not being of quality is not a valid explanation.

The research is based on the following hypotheses:

1. Overall, former domestic students earn more than those who studied in Canada as international students.

The gap in H1 was tested to be partially explained by the following five hypotheses:

2. The earnings differential, as outlined in H1, can partially be attributed to former international students who study a STEM field shielding a greater earnings disparity than if they studied a BHASE subject, yet still leading them to earn less than domestic students.

3. The earnings differential, as outlined in H1, can partially be attributed to former international students being more likely to complete a university degree, shielding a

greater earnings disparity than if they completed a college diploma, yet still leading

them to earn less than domestic students.

4. Former international students earn less than domestic students due to working in

    lower NOC skill levels.

5. Former international students earn less than domestic students due to being self-

    employed. Those who were international students are more likely than domestic

    students to be self-employed and earn less.

6. International students are more likely to be of visible minority status than domestic

    students and may face additional barriers due to this; the earnings gap will close once

    visible minority status is accounted for.

The main focus of the analysis is to compare former domestic students to former

international students. Foreign-educated immigrants are included as a comparison point to

test the extent to which having studied in Canada has an impact on the earnings of

international student graduates.

Data

Data for this study was taken from the 2016 census, which is a 20% sample of the

population. The unit of analysis is the individual level. The census outlines those who

studied in Canada, as well as employment income for those who worked in 2015.

The analysis is restricted to include only individuals who:

- Lived in London one year prior to the census, to account for employment outcomes in London;

- Worked during the census timeline;

- Did not attend school during the census period;

- Had postsecondary education of college or bachelor level;

- Received their postsecondary education in Canada;

- Were either immigrants who have obtained Permanent Residence status, or domestic students (non-permanent residents were excluded as they are not representative of anticipated long-term residence in Canada), and;

- Were between the ages of 20-30 years.

Since the 2016 census does not have a variable that indicates when the highest education was obtained, nor when individuals entered the labour market, age is used as a proxy for new labour market entrants. The age range of 20-30 years is used as this is the time when students are completing college diplomas or undergraduate degrees and entering the labour market. The sample is restricted to those who obtained college or bachelor level education since individuals are often older when obtaining a master's degree or higher, and the literature provides evidence that international students attend and complete their education at postsecondary institutions at later ages than domestic students. By excluding those who had a master's degree or higher, I was also able to eliminate some skewness and produce a more statistically significant model.

Variables

The explanatory variables accounted for in this study are age, NOC skill level, highest level of postsecondary education obtained, whether individuals studied a STEM (Science, Technology, Engineering, and Math) subject, whether individuals are employees or self-employed, and visible minority status. The dependent variable is total income, defined as:

"Employment income from wages, salaries, tips, commissions, and net income from self-employment, income from investment sources, such as dividends and interest on bonds, accounts, guaranteed investment certificates (GICs) and mutual funds income from employer and personal pension sources, such as private pensions and payments from annuities and registered retirement income funds (RRIFs) other regular cash income, such as child support payments received, spousal support payments (alimony) received and scholarships income from government sources, such as social assistance, child benefits, Employment Insurance benefits, Old Age Security benefits, Canada Pension Plan and Quebec Pension Plan benefits and disability income" (Statistics Canada, 2018).

The control variables include sex, marital or common-law status, the number of children in a census family, and years spent in Canada.

Due to a limited number of variables on labour and education, I was unable to assess individuals based on the time they entered the labour market nor when they finished their degree. Instead, age was used as a proxy and the groups were compared to each other based

on age. Since the age range is 20-30 years of age, this is a suitable proxy as these are

formative years in finishing school and entering the labour market.

The coding for variables used in this study are presented in the table below:

Table 10: Regression Coding Key	
Variable	**Coding**
Age:	
Age 20-30	Scale Variable (Continuous)
Visible Minority status:	
Not a visible minority	Reference Category
Visible minority	Dichotomous, 1=yes
Years in Canada	Scale Variable (Continuous)
Immigrant status	
Domestic Students	Reference Category
International Students	Dichotomous, 1=yes
Foreign-Educated Immigrants	Dichotomous, 1=yes
Field of Study:	
BHASE	Reference Category
STEM	Dichotomous, 1=yes
Highest Degree/Diploma Obtained:	
Bachelor's degree or university certificate or diploma above bachelor level	Reference Category
College, CEGEP, other non-university certificate or diploma, or university certificate or diploma below bachelor level	Dichotomous, 1=yes
Class of Worker:	
Employee	Reference Category
Self-Employed	Dichotomous, 1=yes
NOC Skill Level Category:	
Skill Level A (Managers & Professionals)	Reference Category
Skill level B (College or apprenticeship training)	Dichotomous, 1=yes
Skill levels C & D (High School or Job- Specific Training, On-the-Job Training)	Dichotomous, 1=yes
Sex:	
Male	Reference Category
Female	Dichotomous, 1=yes
Marital/Common-Law Status:	
Single	Reference Category
Married/Common-Law	Dichotomous, 1=yes
Number of Children	Scale Variable (Continuous)
Total Income	Scale Variable (Continuous)

Analytical technique

First, all nominal variables were dummy coded to ensure accuracy and produce binary outcomes, as shown in the table above.

All the variables were inputted in the same model to assess the hypotheses. This method illustrates what income should be in relation to all of the explanatory variables. A linear regression was used for this study. This model allows for a comparison of international students, domestic students, and foreign-educated immigrants.

The following equation outlines the model:

Y = a + International Student + Foreign-Educated Immigrant + Age + Visible Minority Status + Years in Canada + STEM + College, CEGEP, Other Non-University Certificate or Diploma, or University Certificate or Diploma Below Bachelor Level + Self-Employed + NOC Skill Level B + NOC Skill Levels C & D + Sex + Marital/Common-Law Status + Number of Children

Limitations

This study is limited in that it does not address long-term transitions to the workplace. It also does not address those who left Canada and came back later and does not include those with a post-graduate work permit as this permit is indicative of temporary residents. The study also does not account for retention, as domestic students are more likely to stay in Canada than those who immigrated as international students. Finally, having to use age as a proxy for when individuals entered the labour market was a limitation as this

variable does not account for those who have been in the labour market for a few years; however, it is still indicative of how labour market outcomes can expect to shift for individuals as the years go on.

Multivariate Results

As can be seen below, the independent variables have a fairly strong relationship with the dependent variable. The r square indicates that the dependent variable, total income, explains 23.5% of the variation in the independent variables. The closer the r square is to the number one, the closer the fit; however, in a study of this nature, having any relationship between the independent and dependent variables is considered positively. The r square of 0.235 indicates some fit, but also leaves room for further research.

Table 11: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.485[a]	0.235	0.234	21352.963

a. Predictors: (Constant), HCDD14v_college, Self-employed dummy variable, Number of children in census family, sex_1, Foreign-Educated, Years in Canada, Skill level B (college/apprenticeship) dummy variable, Age_new, STEM dummy variable, visible minority dummy variable, Skill levels C & D (high school/on-the-job training) dummy variable, married/common-law, International Student

The model in table 12, below, tells us the statistical significance of each of the variables. All of the variables in the model are statistically significant, except for the visible minority status variable. This is worth noting as one may expect that potential variations in income by immigrant status may be linked with visible minority status, but this result proves

otherwise; however, as mentioned earlier, this is not to say that this is not sociologically significant.

As expected, earnings increase with age, specifically by $2,187 for every year after the age of 20. Also, as hypothesized, international students, when compared to domestic students, are at a disadvantage; domestic students have a $5,779 premium over international students and those who were foreign-educated are at a magnified disadvantage of earning $12,415 less than those in the reference group. Also, worth noting is the $17,407 disadvantage of those who are self-employed. As expected, the earnings of those working in NOC skill levels B, C, and D, are at increased levels of earnings disadvantage compared to those working in NOC skill level A. Finally, consistent with the literature, those who complete a STEM field of study have an earnings advantage; in the case of this study, the STEM premium is $4,836.

Table 12: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	31830.267	722.15		44.077	0
Visible minority status	-683.059	625.166	-0.01	-1.093	0.275
Married/common-law	7380.261	487.859	0.148	15.128	0
Self-employed	-17406.512	858.603	-0.145	-20.273	0
Skill level B (college/apprenticeship)	-7525.733	466.069	-0.148	-16.147	0
Skill levels C & D (high school/on-the-job training)	-14328.862	474.435	-0.283	-30.202	0
STEM	4835.665	530.861	0.069	9.109	0
Sex	-5941.043	373.382	-0.119	-15.911	0
Years in Canada	158.562	70.552	0.039	2.247	0.025
International Student	-5778.622	1424.266	-0.075	-4.057	0
Foreign-Educated	-12414.775	1479.673	-0.066	-8.39	0
Number of children in census family	-410.843	205.633	-0.018	-1.998	0.046
Age	2186.696	74.907	0.231	29.192	0
College education	-935.351	386.626	-0.019	-2.419	0.016

a. Dependent Variable: Income: Total income

Discussion & Conclusion

The purpose of this study was to compare the earnings of new labour market entrants in London, Ontario who are former international students, to those of former domestic students, in an effort to test the extent to which foreign credential recognition plays a role in

the earnings of international students. Foreign-educated immigrants were used as a point of comparison to analyze the extent of the potential earnings disparity.

The first hypothesis, that domestic students earn more than international students, was found to be true. The reference group was found to have a $617 advantage over international students and $3,262 advantage over the foreign-educated group. Domestic students were also found to increase earnings over the years at a steeper rate than international students.

The second hypothesis, that those who were international students are more likely to have studied a STEM subject in university, but earn less, than those who are domestic student, was fully supported. The domestic student STEM earners had a $3,694 advantage over international students and a $15,878 advantage over foreign-educated immigrants.

The third hypothesis, that international students are more likely to have a higher level of degree, but earn less, than those who are domestic students, was also supported. The college premium was $1,289 and bachelor's degree premium that domestic students had over international students was $2,565, despite international students being more likely to have a bachelor's degree.

The fourth hypothesis, that international students are more likely to work in lower level sectors and earn less than domestic students, was only partially supported. International students were more likely to have jobs that were skill level A but had a mean earnings disadvantage of $1,692.

The fifth hypothesis, that international students are more likely than domestic students to be self-employed and earn less, was only partially supported. Domestic students had higher self-employment rates than international students. They also earned $11,115 more

than self-employed international students, compared to the earnings advantage of non-self-employed domestic students over international students being only at $293. This alludes to the importance of having social networks in Canadian society, which will be discussed below.

The sixth hypothesis, that international students earn less as a result of their visible minority status, was not supported due to the variable being statistically insignificant. Based on the fact that London's and Canada's visible minority populations are increasing (MacTaggart, Eldik, Oliviera, & Jeng, 2016; Statistics Canada, 2011), this variable should be further explored and tested in future research.

Further, the results showed that the three immigrant types were more on par with their earnings for the BHASE (non-STEM) groups, the college-educated groups, and the employee (not self-employed) groups. The earnings gaps between domestic students, former international students, and foreign-educated immigrants were much larger for university educated, STEM, and self-employed earners. While within international and domestic student groups, individuals with a university degree and those who had studied a STEM subject earned a premium, there were still significant gaps between domestic students and international students. The largest gap was for the self-employed earners, possibly illustrating the impact that social networks and social capital have in being successful. This ties in with the topic of foreign credential recognition, and whether it is an adequate enough explanation on its own for the lower earnings amongst immigrants, or, if there is an underlying cause, such as informal barriers in the workplace.

Foreign Credential Recognition

As illustrated in the literature review, the issue of foreign credential recognition is complex, and thus, while I was able to obtain results, my paper is not fully complete. While there is not literature on the exact effects of foreign credential recognition and international students, the available literature can be used as a guide. The discussion will now turn to the issue of credentialism along with a brief survey of the literature. The literature on this topic is included in this section, as it will serve to support the argument that earnings differentials cannot solely be explained by lack of foreign credential recognition. Due to the limited scope of this study, I was unable to hypothesize and operationalize this argument; however, this will further assist in any future research on this topic.

According to Buzdugan and Halli (2009), when immigrants are newer to Canada, employers value Canadian work experience more than education, but as their time in Canada increases, the focus shifts on their educational qualifications. Also, in an analysis of immigrants under the Economic Class who transitioned to permanent residency from temporary work status, immigrants who had no Canadian work experience, and immigrants who had some Canadian work experience before their arrival, Hou and Bonikowska (2015) found that Canadian work experience is a very salient factor in the earnings of those working in Canada. Both groups of immigrants who had Canadian work experience had significantly stronger labour market outcomes than did those without Canadian work experience. Immigrants who had Canadian work experience were found to have higher earnings than domestic student workers in their first year after immigrating (Hou & Bonikowska, 2015). Immigrants who had Canadian education, but no Canadian work experience were only slightly more successful than those who did not have Canadian education, whereas

immigrants who had Canadian work experience along with Canadian education earned much more and continued to earn more over the years compared to immigrants without Canadian work experience.

As previously mentioned, international students are a unique group of immigrants, in that, of the little literature that exists, researchers have been unable to explain the differences in earnings between former international students and domestic students. In immigration literature, earning disparities between immigrants and non-immigrants are often explained to occur as a result of lack of foreign credential recognition amongst employers.

While international students are in a unique position as they obtain both their education and work experience in Canada, it is important to analyze the literature on how the issue of foreign credential recognition affects immigrants in general. For example, Buzdugan and Halli (2009) found that immigrants in Western countries, such as Canada, were more likely to have positive labour outcomes, but only for those who had been here for over 10 years; the origin of education did not have an effect on the labour market outcomes of short-term immigrants. Also, education was found to be a stronger predictor of the labour outcomes of Canadian-borns, while work experience was found to be a stronger predictor of the labour outcomes of immigrants. The longer an immigrant stayed in Canada, the more their education played a role in predicting their earnings and the less did their work experience (Buzdugan & Halli, 2009). This suggests that after immigrants have surpassed barriers to finding employment, language proficiency barriers, and after they have acculturated, is when having Canadian education truly matters (Buzdugan & Halli, 2009). Thus, having Canadian education may not be enough for international students to have as positive outcomes in the labour market, especially when they have just entered it.

Hou and Lu (2017) found that international students fared worse in the workplace than domestic students, but better than foreign-educated immigrants. Former international students in Ontario who transition to permanent residence status have more quickly increasing incomes than other immigrants, with a mean advantage of $2,848 (Williams, Williams, Arbuckle, Walton-Roberts, & Hennebry, 2015). However, Hou and Lu (2017) also found that the domestic student population still had higher outcomes than international students. Overall, Canadian-educated immigrants were younger than international students and had less work experience. Canadian-educated immigrants were more likely to be able to speak an official language of Canada than were foreign-educated immigrants (Hou & Lu, 2017). Despite the general trends found in their study, Hou and Lu (2017) could not explain the variation in outcomes amongst immigrants who had been educated in Canada. Also, while their specific focus was not international students, but short-term immigrants, defined as those who had been living in Canada from zero to 10 years, and long-term immigrants, defined as those who had been living in Canada for 10 years or more, Buzdugan and Halli's (2009) findings suggest the credentialism issue to be more complex.

Esses, Dietz, Bennett-Abuayyash, and Joshi (2007) found evidence that having education and training from Canada results in equivalent outcomes regardless of visible minority status. However, Esses, Dietz, Bennett-Abuayyash, and Joshi (2007) also alluded to the fact that having foreign qualifications results in less favourable outcomes only when the individual is of visible minority status; thus, it is possible that international students who indicated foreign work experience on their job applications may be at a disadvantage. This would affect the majority of international students as a large percentage are from China, India, and Iran. Also, skill discounting was found to be more a result of prejudice rather than

lower quality qualifications (Esses, Dietz, Bennett-Abuayyash, & Joshi, 2007). The literature on international students and the acceptance into the labour market, whether due to recognition of credentials, or discrimination, is lacking.

Following the philosophy behind the concept of credentialism, former international students should have no issue gaining work and earnings on par of those who were domestic students. However, as illustrated by Hou and Lu (2017), this is not the case. Lack of foreign credential recognition is not a viable explanation should earnings disparities between the two groups exist. Instead, a more holistic approach, that assesses the informal barriers this group experiences, should be taken; while there are legally mandated policies protecting visible minorities against discrimination in the workplace, they do not address the informal barriers that exist. Professional networking is an effective means of entering the workforce (Vallas, 2003), especially for professional jobs in a smaller city like London, ON.

International students are still often considered newcomers to Canada and may face these informal barriers. For example, Crease and Kambere (2003) illustrated the struggles educated women from Africa, with master's degrees and PhDs faced when attempting to enter the labour market; they were clearly qualified enough to make it to the job interview but were then told by employers that their accents were too thick. This unfortunate reality led the women into a spiral of downward mobility despite doing everything in their control to move upwards. Similarly, while international students must pass English language proficiency tests to enter Canada to study, there is no way to test for accents and the level of understandability Canadians might have. Unfortunately, while Canada is a diverse country, understandability may still be perceived as a burden that the speaker is responsible for addressing even after requisite language proficiency tests have been passed.

To further illustrate, Kang, DeCelles, Tilcsik, and Jun (2016) found that those with white names were more likely to be called for an interview as compared to those with black or Asian names, despite having identical qualifications. Those with Asian and black names were also found to change their names to sound whiter (Kang, DeCelles, Tilcsik, & Jun, 2016).

Beyond these informal barriers, newcomers may face inherent barriers in acculturating to the workplace culture if there are discrepancies between their cultural values and those of Canadians. Some of these differences include: Power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, long term orientation versus short term normative orientation, and indulgence versus restraint (Hofstede Insights, 2018). However, while international students may face some of these barriers due to having been in Canada for a lesser amount of time, they likely face higher levels of acculturation than other immigrants as they are often immersed in the post-secondary experience.

Similarly, an issue that is not studied due to the mere difficulty of measuring it, is the cognitive dissonance that may occur when trying to fit in to a Canadian workplace as a newcomer to Canada. Organizational cultures are based on shared beliefs and norms amongst workers. These shared norms compound the issue of coming from a different culture and adjusting the new values and norms in the workplace.

Task forces to address specific areas of equity, such as committees for those who identify as LGBTQ, or those who are a certain subset of visible minority status, such as black or Asian, are becoming common to workplaces. While this is a step in the positive direction, especially for newcomers such as international students, these initiatives may not fully

integrate immigrants in to the overall workplace. Thus, the career growth of former international student labour market entrants may be stunted due to not being fully immersed in the workplace culture and not feeling comfortable to express themselves when not with those of their own minority group (Harris, 1994). Also, immigrants who are highly qualified may pose as a threat to non-immigrants (Dietz, Joshi, Esses, Hamilton, & Gabarrot, 2014). Those who do not have a person-organization fit in a workplace environment that is otherwise homogenous are also at a disadvantage (Dietz, Joshi, Esses, Hamilton, & Gabarrot, 2014).

Despite studying at a Canadian university or college, international students still may experience a dissonance between the culture they come from and the culture in Canada. According to Esses and Thomson (2016), international students who spend time with domestic students as mentors in a structured program experience psychological adaption. Further, staying in homestay allows students to familiarize themselves with the culture, politics, customs, and language of Canada (Esses & Thomson, 2016).

Relating this information back to this study, the results regarding the gap between international and domestic student STEM earners was surprising as these types of jobs place more emphasis on having a technical skillset as compared to soft skills, which can be presented as cross-cultural barriers. Further analysis should be conducted on the informal barriers international students may face in gaining Canadian work experience during their time in their studies; for example, institutions often offer internship programs, and seeing the success rates of international students compared to domestic students for these programs would assist in further understanding this intricate issue.

Steps to Address Earnings Differentials

Fortunately, some of the issues discussed are being addressed by the city of London and the province of Ontario. Among Ontario's goals to support international postsecondary education are to increase tuition transparency, increase funding for PhD international students to 10% of all PhD spaces, increase retention of international students across Ontario, and improve settlement services for international students (Ministry of Advanced Education and Skills Development, 2018). In addition, the International Student Connect program is a program currently being piloted that connects international students to settlement agencies (Ministry of Advanced Education and Skills Development, 2018).

Similarly, positive steps are being taken by the London Middlesex Local Immigration Partnership (LMPLIP) to address the skills gap in London, Ontario. There are many small businesses that have trouble filling positions. The LMLIP plans to assist immigrants with entrepreneurship, educating employers on the perspectives of immigrant jobseekers, and working with government agencies to reduce systemic barriers affecting immigrant employment (LMLIP Strategic Plan, 2016). Across Canada, further efforts should also be made to improve the social capital of international students in order to provide a greater chance of success in the labour market.

Moreover, in a lecture at Western University on May 2nd, 2018, titled Internationalization and Intercultural Learning, Dr. Kara Garson noted effective recommendations to improve internationalization in post-secondary institutions include: Using online collaborative learning for international learning, developing assignments that require multiple cultural perspectives, making interdisciplinary courses a requirement, and providing professional development on internationalization for staff and faculty. Dr. Garson

also referenced the importance of the contact hypothesis, where individuals from different cultural backgrounds must be appropriately prepared to interact with one another through skill development, cultural self-awareness, self-reflection, and peer feedback.

Further Research

Furthermore, since the literature on international students' post-graduation success is limited, there is great opportunity for further meaningful research on this topic. The only other study conducted on international students' labour market outcomes, to the author's knowledge, was conducted by Hou and Lu (2017). The results presented in this paper were in line with Hou and Lu's (2017) findings that, across Canada, former international students earn slightly less than domestic students, but much more than foreign-educated immigrants.

Additional research and tracking should be conducted on the retention of former international students, analyzing whether they stay in their place of study or stay within Canada, if they go back to their home country, or if they go to their home country and come back to work in Canada. Further analysis could include if better workplace outcomes for international students impact their retention. It would also be beneficial to study international students' usage rates of settlement service providers during and after their studies as compared to the services offered at their institution. While difficult to do, analyzing the social capital of former international students and how it plays a role in their job search would assist in understanding this topic better. Finally, conducting a mixed methods study in the future, combining quantitative data with qualitative research, such as interviews and focus groups, with a first-hand account from international students and their experiences would assist in enriching the literature on this topic.

Conclusion

To conclude, international students are a unique subset of immigrants to Canada who contribute greatly to our economy. According to the Canadian Bureau for International Education (2018), international students choose to come to Canada because of our country's high-quality education system, tolerance and diversity, and safety; these students contributed to the equivalent of 168,860 jobs in 2016 (Kunin & Associates, 2017).

In this study, the 2016 census was used to compare the earnings of new labour market entrants who are former international students, to those of domestic students and foreign-educated immigrants. The results showed that, overall, while the international student group fared close to average, they earned slightly less than domestic students and much more than the foreign-educated group. As international student enrolment rises, and they continue to support hundreds of thousands of Canadian jobs (Global Affairs Canada, 2016), this study is imperative in analyzing the returns international students receive. As institutions across Canada continue to recruit and enrol international students in their postsecondary studies, equal, if not more, focus and attention should be directed to ensuring the success of these students once they have arrived.

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