

International Students in Ontario's Postsecondary Education System, 2000-2012: An evaluation of changing policies, populations and labour market entry processes

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Executive Summary

International students have become an increasingly important dimension of Canada's educational and immigration policy landscape, which has led to the development of pathways from educational to working visa status. In this report we present an analysis of international student numbers, visa transition rates, processes and government policy evolution with regard to international student entry to Ontario between 2000 and 2012. The report's findings suggest four major areas of change: increasing male dominance in the number of student entries; the rise in international student entries into the college sector; the increasing importance of international students as temporary workers post-graduation; and the profound shift in source countries for Ontario-bound international students. Policy knowledge in areas related to these issues is vital to Ontario's ability to compete for international students, who can become potential immigrants, while maintaining high-quality postsecondary educational institutions.

We wanted to know how many international students came to Ontario between 2000 and 2012, their socioeconomic characteristics and their outcomes after finishing their studies. We also wanted to identify the major federal and provincial policy changes that affected student immigration during this time. Based on these objectives, we present statistical analysis of Citizenship and Immigration Canada and Statistics Canada visa data and find that:

- Ontario is the primary and over time an increasingly important destination for international students bound for Canada;
- Over three-quarters of international students who changed visa status in 2011 remained in Ontario after their studies ended;
- Ontario-bound international students show a growing tendency to study in the college sector, with over 50% of new entrants attending a college in 2012;
- Over the last 10 years, gender parity in international student entries has shifted to male bias (60% male in 2012 compared to 52% in 2000). This is the reverse of the Ontario postsecondary sector as a whole, where women accounted for 60% of recent graduates in 2006.
- India and China are the dominant sources of international students coming to Ontario. This marks a major shift from source regions in 2000, which were Western Europe, China and South Korea.
- Using a college sector case study, we also identify how the changes we find in the international student population appear at the program level.

The trends we identify reflect federal and provincial policy changes that have been developed to attract, recruit and retain international students. International students represent a highly skilled workforce upon which Ontario can draw if the correct policy pathways remain in place. Monitoring the experiences of international students in terms of their studies and their transition to post-graduate work status are important for labour market and skills development planning in Ontario and for the rest of Canada. Further research is needed to determine the level of study at which international students enrol, what happens to them after they complete their studies in Ontario, and whether incomes earned compensate for the financial costs borne by international students and their families in order to study in Canada. Research is also needed to determine the influence of major policy changes in three areas: the elimination of the Off-Campus Work Permit, the extension of the Post-Graduate Work Permit, the

introduction of the Express Entry system and Provincial Nominee Programs aimed at international students.

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1. Introduction

Over the last decade, the Canadian higher education sector has developed numerous internationalization strategies by promoting international and cross-cultural research, study abroad opportunities and the recruitment of international students (Snowdon, 2015, p. 4). The Canadian federal government has also developed initiatives backed by new policies aimed at facilitating the entry and transition of international students. While the rise in international students has been well documented (Cudmore, 2005; Bond et al., 2007; CBIE, 2013; Popovic, 2013), less analysis has focused on student pathways and transitions from study to work visas and on the international student experience in the Canadian labour market (cf. van Huystee, 2011). There has also been little research evaluating the effects of provincial and federal policy changes to promote international student entries and retention (cf. Snowdon, 2015).

The transitions of international students from study to work visa status – either directly through permanent residence or through temporary foreign work programs – have increased in number from 2002 to 2011 across Canada, but especially in Ontario. Ontario led the country in both international student entries and transitions between 2002 and 2011, and had the highest increases in both categories over the same period. This report examines study permit data obtained through Citizenship and Immigration Canada (CIC), and international student arrival and labour market transition data for the period from 2002 to 2011 from Statistics Canada. We extend this analysis by presenting a case study of international student experiences in one college setting in order to assess these transformations at the program level. We note a significant rise in the number of international students into the country, a significant rise in the number of policies catering to international students since 2000, and the increasing importance of evaluating this group's interaction with the Canadian labour market. Three research questions frame this report:

- a. How many postsecondary international students came to study in Ontario from 2000 to 2012? What were their socioeconomic characteristics, such as their country origin, language, gender, age, qualifications and level of study?
- b. After finishing their studies in Ontario, how many international students stayed in Canada? What were their socioeconomic characteristics, economic outcomes, and where did they tend to go when they finished their studies?
- c. What were the major federal and Ontario provincial policy changes influencing international student immigration during this time? How did these policies influence the number of international students arriving and remaining here after their studies?

Based on our research, we see four key trends emerging from the data:

1. Ontario is the primary destination for international students in Canada and is becoming increasingly important over time. Students who study in Ontario tend to stay in the province after finishing their studies, and this trend is increasing over time.
2. College is now the most common place for Ontario-bound international students to study. While the number of students going to university has grown over time, the number of students going to college has increased even more rapidly since the introduction of new federal policies in the first decade of the 2000s.

3. Ontario has lost gender parity in international student entries and transitions. While in 2000 there were about as many women as men coming to study in the province, by 2012 only 40% of international students were women.
4. India and China are now the dominant sources of students coming to Ontario. In 2000, the source regions for Ontario's international students were diverse and included Europe, South Korea and East Asia. By 2012, India and China were the source of over 56% of Ontario's international students. This reflects wider regional shifts in the origin of students, more of whom are now coming from South Asia, the Middle East and, to some extent, Africa.

The report is organized as follows: Section Two presents a brief review of the literature on international student recruitment, numbers, integration, transition and retention, including relevant federal and provincial policy changes. This section also contextualizes Canada's growth from a small player in international student recruitment globally to a top-tier destination in 2011-2012. Section Three outlines the three research questions related to international students in Ontario from 2000 to 2012 and the rationale for this report. Section Four presents the methodology employed, the data analysis, including the most important findings from our work, the characteristics analyzed and the limitations of our approach. Section Five shares data from a case study of one college program catering to international students from India to illustrate how the tendencies we identify at the provincial level manifest themselves at the program level. Section Six discusses our findings in the wider policy context of changing patterns of international student migration. We identify various relationships between policy changes and the numbers of international students, offer interpretations of our findings and propose areas of future research with regard to international student entry, experience and transition to the labour market in Ontario.

This policy paper will hopefully inform future studies on international students and their transition into the labour market. While our analysis answers many questions about international student entry numbers and trends, it also raises more specific questions about what happens to these students after they complete their studies. Additionally, our analysis covers 2002 to 2012, a period of intense policy change that saw the encouragement and expansion of off-campus work for international students, the introduction of the Student Partners Program (SPP) and the extension of the Post-Graduate Work Permit Program (PGWP). Our report also has relevance to more recent developments, such as the introduction of the federal express entry application management program introduced early in 2015. While our data analysis precedes this period, we do consider how this development might influence international student transition experiences.

2. Literature and Policy Review

We conducted a literature review of the current knowledge around international student transitions to the labour market, which included a search through university library search portals. A search of the Canada Gazette was also undertaken to explore federal government documents on international students, particularly in an effort to explain the changing policy landscape between 2000 and 2012. The relevant policies that affected international students from 2000 to 2012 were compiled. This section provides a description of each policy change identified and an assessment of the policies' interaction with international student attraction and retention over the period.

Federal Policy Changes Relevant to the International Student Program

The federal government's focus on international students dates back to at least the 1950s, with its strategies to link Overseas Development Assistance with international student recruitment (Trilokekar & Kizilbash, 2013). However, Canada lacked coordinated policies to oversee the recruitment of international students until the 1990s (Chandler, 1989, pp. 73-80). Rapid policy changes did occur prior to the 1990s, but these were largely instituted to handle sudden inflows of international students or take advantage of another competitor's lack of interest in the area (Snowden, 2015, pp. 4-7). In the 1990s, the creation of sustained policies for international students came on the agenda of the federal government. In 1998, a legislative review advisory group advised the Minister of Citizenship and Immigration Canada (CIC) that the CIC should facilitate the entry and transition of international students to permanent residence. The CIC's (1999) report proposed new directions in immigration and refugee policy and legislation, and prioritized the recruitment of highly skilled workers, including international students (pp. 33-37). The Government of Canada's subsequent (2001) report stated a desire to "support and facilitate a coordinated international student recruitment strategy led by Canadian universities" (p. 9) and to "significantly improve Canada's performance in the recruitment of foreign talent, including foreign students" (ibid.). The policies that were enacted after 2000 that have most heavily affected international students were driven in large part by the immigration model put forth by the federal government through the Immigration and Refugee Protection Act (IRPA) in 2002, which sought to overhaul all aspects of immigration to Canada, including bringing in greater numbers of highly skilled, qualified immigrants, while limiting the numbers of immigrants in the family and humanitarian classes. In the lead-up to the IRPA, several reports cited the need to bring economically qualified immigrants, regardless of the class under which they would enter (Legislative Review Advisory Group, 1998; Dolin & Young, 2002). The federal government thus expressed strong interest in facilitating the entry and transition of international students, who are typically highly skilled and likely to provide significant benefits to Canadian society. From 2000 to 2005, Canada signed federal/provincial agreements with each province and territory to outline their shared priorities in immigration policy, including the attraction and retention of international students (CIC, 2010a).

In each of the CIC's annual reports to Parliament between 2004 and 2012, the government stated its commitment to increasing international student numbers and pointed to the associated benefits of this approach. More recently, the federal government expanded its internationalization strategy by creating Edu-Canada, the international education division of Foreign Affairs, Trade and Development Canada (DFATD) charged with promoting international awareness of educational opportunities in Canada. Edu-Canada also published successful internationalization efforts by universities and provincial/territorial governments to demonstrate the advantages of studying in Canada (Edu-Canada, 2015). This is accompanied by the *Imagine: Education au/in Canada* brand for the international promotion of Canadian education overseas. Prior to this, marketing efforts tended to focus on provincial government identities, and the creation of a Canada brand was seen as essential to effective Canada-wide international marketing and recruitment efforts. The Edu-Canada initiative was originally funded with \$1 million per year to extend the education brand to major sending countries such as India and China (Kunin, 2012, p. 10). Indeed, a major part of the Edu-Canada initiative is to provide consulates and embassies with promotional material and funds to engage in recruitment activities, and the number of consulates and embassies receiving funding for Edu-Canada increased from 15 in 2006 to 95 in 2010 (ibid.). The Edu-Canada initiative also sought to develop bilateral partnerships with countries to facilitate better student mobility to Canada. As a result of the above policies, many institutions in Canada have

seen their international student numbers increase dramatically, and the Edu-Canada initiative and Imagine Education in Canada brands seem to have become useful steering mechanisms (Chappell, 2013; Trilokekar & Kizilbash, 2013). In 2014, the Canadian government launched its International Education Strategy, which aims to double the number of international students to 450,000 by 2022 (DFATD, 2014).

While these efforts focused on attracting international students to Canada's educational sector, there was also an appreciation of how international students might become a vital solution to some of Canada's skilled labour needs. Accompanying the deregulation and subsequent rise in university tuition fees in the latter half of the 1990s, the federal government began lauding the economic and social potential of international students (Trilokekar & Kizilbash, 2013). In 1998, a report was published advising the Minister of Citizenship and Immigration on the best future direction for Canadian immigration policy (LRAG, 1998). One of the recommendations stated that "Immigration and Citizenship legislation should allow foreign students who have successfully completed a course of postsecondary studies in Canada to apply for landed immigrant status in Canada if they have an acceptable, permanent job offer" (Ibid., p. 24). The report also recommended that "the department should facilitate the entry of foreign students [to Canada]" (ibid., p. 24). Other reports, including those published under the federal government's *Innovation Strategy 2002*, conveyed a similar message (CIC, 1999; 2001; Canada, 2001, 2002). From 2004 to 2012, CIC's Annual Reports to Parliament mentioned "foreign student" and "international student" an average of 22 times per report. More reports mentioned the need to bring in international students, pointing to their economic potential (Canada, 2002; Dolin & Young, 2002). In the next 10 years, Canada saw an overall rise in the entries of international students (CIC, 2012, pp. 89-90), indicating the success of the new Canadian education brand (CIC, 2010b; DFATD, 2012). Thus a substantial shift occurred in the 1990s and 2000s that reoriented the federal government's priorities toward the economic potential of international students.

A number of immigration policy changes instituted since 2000 also complement the expansion of educational internationalization strategies. First, the Provincial Nominee Program (PNP) was widely instituted in the late 1990s to address distinct regional labour market needs and encourage immigrant settlement beyond the three main cities of Toronto, Montreal and Vancouver. Under the PNP, provinces nominate individual applications for permanent residence on the understanding that they will settle in that province, though no measures are taken to ensure that they do settle there (Pandey & Townsend, 2010, p. 4). The PNP was used liberally by provinces such as Manitoba, New Brunswick and Saskatchewan to boost population and address labour market needs. The PNP is potentially a very useful pathway for international students seeking permanent residence in the country. In 2015, the Ontario Immigrant Nominee Program (OINP), Ontario's PNP, had set a target of 5,200 nominations, which included nominations for both the OINP and the Ontario Express Entry. MA and PhD students are eligible to apply through the OINP (Ontario Immigration, n.d.).

Second, student work visas have been developed through various policy changes to encourage international student engagement with the labour market during and after their studies. The Post-Graduation Work Permit Program (PGWPP) was introduced in 2006 and enabled international students to work for up to two and three years after they graduated. The number of off-campus work permits issued to international students has increased each year since 2006. This policy was a timely one; since the deregulation of tuition fees in 1996, there was a steady rise in tuition fees for international students in the early 2000s. The ability to make money to pay tuition fees is seen as a major advantage for international students (CBIE, 2013, p. 19). While the OCWP was in effect, most international students

made use of it, with over 90% reporting working off-campus for at least six hours per week (CBIE, 2013, p. 19). In June 2014, international students were permitted to work off-campus for a maximum of 20 hours per week without a specific permit, effectively folding this employment opportunity into the student visa. Unfortunately, no studies have looked at the direct impact of the OCWP on the labour market experiences of international students. The Post-Graduate Work Permit (PGWP) was introduced in 2006 on a pilot basis and expanded in 2007 and 2008. It was amended in 2008 to further accommodate international graduates by extending the possible length of the PGWP to up to three years after graduation if the student's program lasted two years or longer. The student must apply for a work permit within 90 days of receiving written confirmation of graduation. Since the validity of an off-campus work permit is usually the same as the student's study period (the duration of the academic program plus 90 days), they do not have to surrender their off-campus work permit to apply (CIC, 2010b). The PGWP has been cited as an important tool for international students to gain work experience before applying for permanent residency through the Canadian Experience Class (CEC), the Federal Skilled Worker Program (FSWP) or the Federal Trade Worker Program (FTWP).

Third, the Canadian Experience Class (CEC) was created in 2008 by ministerial instruction to provide a pathway for international students, recent graduates and other foreign workers with Canadian work experience in relevant sectors to transition directly to permanent residence (PR). For international students, this meant that "Foreign graduates will need to obtain 12 months of legal work experience within a 24-month period prior to making a CEC application, obtain a Canadian credential by studying in Canada full-time for at least two academic years, and meet the language benchmark for their occupation skill level" (Canada Gazette, 2008). For international students, the work they do while studying still does not count toward these 12 months, yet the work they undertake under the PGWP does. From 2008 to 2014, former international students used this pathway to transition to PR. The CEC has since been halted and international students seeking permanent residency (PR) apply directly through the Express Entry process that was introduced in 2015.

Fourth, the Student Partners Program (SPP) was created as a pilot program in 2009 between the Association of Canadian Community Colleges (now CI Can) and CIC in order to streamline and simplify the student visa process for India (and later China). The SPP saw an increase in visas issued to India as a whole since its inception from 3,244 in 2008 to 5,790 in 2009, and close to 12,000 in 2010 (Walton-Roberts, 2013). The SPP established a firm recruitment mechanism for Canada to use in India, something the government had lacked to that point.

Fifth, Express Entry marks an important but very recent policy development that has some influence on the transition process of international students into PR. The Canadian government introduced Express Entry in 2015 to manage PR applications from economic classes of immigrants (this includes graduated international students on temporary work visas). As a streamlined process, Express Entry ensures timely processing of desired PR applications. Eligible candidates will be invited to apply for PR based on their Comprehensive Ranking System scores. The maximum number of points possible is 1,200: 600 through human capital and demographic factors such as age, education and work experience, and 600 either through nomination through a provincial nominee program (PNP) or a valid job offer. A valid job offer must include a positive labour market impact assessment (LMIA), which determines that the position could not be filled by an equally qualified Canadian worker. A positive LMIA-supported job offer means that the applicant receives 600 points (effectively enough to qualify). The government holds periodic draws that invite individuals to submit an application for permanent residence according to their

Comprehensive Ranking System scores. The ability of international students to succeed under the express entry process will need to be assessed over the coming year.

In sum, the Imagine Education in Canada and Edu-Canada brands are moderately successful in promoting Canada as a top destination for international students, but work is still to be done in implementing a coherent federal internationalization policy (Trilokekar & Kizilbash, 2013). The OCWP has been successful for international students and the government. The PGWP produces an additional class of temporary foreign worker and provides international student graduates the opportunity to gain work experience and income. The CEC is an effective PR pathway, but appears to be underutilized by international students. The PNP also offers potential for international students' transition to PR, but also appears to have been underutilized by the Ontario government during our study period. The SPP has been at least partly responsible for a major spike in Indian and Chinese international student entries into the college sector.

Table 1 provides a list of the key policy changes enacted at the federal level. For purposes of context, the table also notes the number of international students in Ontario for each applicable year.

Table 1: Key Policy Changes and Number of Study Permit Visas Granted to International Students in Canada, 2000-2012

Key Policy Change	Year	Canada	Ontario
-	2000	44,407	13,537
-	2001	52,809	16,257
Immigration and Refugee Protection Act – International students registered in a short-term course or program of six months or less no longer require a study permit	2002	51,787	16,638
March 31, 2003 – End of transitional period specified in IRPA (all cases not settled by this date are subject to new regulations set out in IRPA)	2003		
PGWP introduced		47,917	15,489
Off Campus Work Permit Program introduced	2004	44,375	14,542
“Streamlining” application process: “International students can obtain a study permit valid for the full length of their intended period of study, and those in postsecondary studies can transfer between programs of study and institutions (public and private) without first making an application to CIC” (CIC, 2010b, p. 3)	2005		
May 2005 – Post-Graduation Work Permit Program (PGWP) (students can work after graduation for up to one year)		45,424	15,223
April 2006 – Off Campus Work Permit Program (students can work up to 20 hours per week with this permit)	2006	47,358	15,886
Edu-Canada (International Promotion of Education in Canada)	2007	49,314	16,084
September 2008 – Canadian Experience Class (CEC)	2008	53,836	17,926
Student Partners’ Program	2009	60,512	21,172
-	2010	68,121	27,514
-	2011	71,167	30,135
-	2012	74,521	32,416
-	2013	-	-
Changes to PGWPP and OCWPP – No longer necessary to apply for OCWPP to work off-campus (max 20 hours a week limit still in effect)	2014	-	-

Sources: CIC (2004); CIC (2010b); CIC (2012; custom data tabulations)

Ontario: Provincial Policy Changes

Provincial policies also structure the international student experience. In 1994, the Ontario government introduced a policy requiring that all temporary residents in the province pay for health insurance, including international students. This had the predictable effect of reducing the numbers of applicants to universities in the province and reducing the number of enrolments. In 1995, the Ontario government announced that international student tuition grants to universities would be cut and that universities would be free to charge whatever tuition they wished for international students and keep the profits. While Ontario universities have had differential tuition fees since the 1970s, the widespread deregulation of fees in the province had a major effect on international student recruitment (Snowdon, 2015, p. 14). International student tuition fees have risen steadily since the deregulation of tuition fees.

In 2006-2007 tuition for international students ranged from \$6,900 to \$16,800 for undergraduate university programs (CEC Network, n.d.); in 2014-2015 the average university tuition for international students is about \$20,447 plus extra fees (Statistics Canada, 2015). While international student tuition has increased each year in Ontario since deregulation, tuition rates remain comparable to competitors, such as Great Britain and the US (CBC, 2013). The average cost of tuition for international students in Ontario colleges is approximately \$14,000 per year (Ontario Colleges.ca, n.d.).

The Ontario Ministry of Training, Colleges and Universities (MTCU) has published numerous reports on attracting the best and brightest international students. Ontario sought to increase the number of international students in the province through an immigration agreement with the federal government in 2005, which was supposed to have been renewed in 2011 (talks are still underway (CIC, 2011)). In 2013, the MTCU published a discussion paper addressing how proposed changes to CIC's International Student Program would affect Ontario's ability to recruit and retain international students. Ontario has three streams under its PNP that are dedicated to international students. These streams target international students with job offers, as well as master's and PhD students in Ontario and who meet stream requirements. In this process, Ontario understood its role as "to ensure that the bar is set high for postsecondary education in Ontario through the implementation of a policy framework that protects our shared, earned global reputation for quality programs, student protection, and a positive student experience" (MTCU, 2013).

International Student Transitions to the Labour Market

The literature on international student transitions to the labour market is limited. These studies estimate economic benefits and to some extent examine international student experiences post-graduation, yet they often lack comprehensive quantitative data. Such analysis is complicated in some ways by the fact that international students are categorized as temporary residents in Canada and their transition into post-graduate work includes them in the large temporary foreign worker class within CIC's data. As a result, tracking international student transition from student to worker to permanent resident has been a challenge. Faced with this complexity, it is therefore difficult to disaggregate this group further according to factors such as gender, level of study, language skill, region of origin, etc. For example, few studies examine gender differences, although van Huystee (2011) does note that international students are comprised mostly of men. There are few studies using national data on entries and transitions that seek to explore the economic outcomes of international students, aside from a few notable exceptions (Kunin and Associates, 2012; CBIE, 2013). Other than Popovic (2013), few have discussed the growing importance of the college sector for international students.

3. Research Methodology

Summary of Methodology

To address these research questions, we employed a mixed methodology using quantitative approaches to provide statistical analysis of visa and income data, and qualitative methods to explore the relevant policy evolution and influence. We also used a case study approach to illustrate how some of the key international student entry and transition factors we identified are manifest at the college program

level. The combination of these methods provides valuable insight into the changing policy context and emerging patterns of international student entry and transition into the labour market.

Data Sources

Data on international student counts, characteristics, outcomes and policies come from a variety of sources. Table 2 indicates that the three data sets used in this report come from Citizenship and Immigration Canada and Statistics Canada. Citizenship and Immigration Canada's *Temporary Resident Extracts* record the number of unique entries of international students entering Canada by quarter from 2000 to 2012. These data include all known international students in the country and can be broken down by province or census metropolitan area,¹ as well as by socioeconomic characteristics. The *Facts and Figures* data record transitions to different immigration visas by students already in the country, along with socioeconomic and geographical characteristics. Based on the transitions data, for example, we can tell how many international students remain in Ontario upon finishing their studies, and if not Ontario but within Canada, their new location in the country.

The *Longitudinal Immigration Database* from Statistics Canada is the third source of quantitative data. This database collects and stores tax records, including income information, for immigrants in Canada. While it does not explicitly identify international students, it does include the other visa statuses into which international students transition, particularly permanent resident classes. With some adjustments, we can use these income data to make estimates about international student earnings after they have transitioned to PR status based on human capital characteristics such as education.

Table 2: Summary of Quantitative Data Used

Data Set	Data Included	Time Period	Geography	Source
Temporary Resident Extracts	* International student entries * Socioeconomic characteristics of international students	2000-2012	CMAs; Provinces; Canada	Citizenship and Immigration Canada (2013a)
Immigration Facts and Figures	* International student transitions * Socioeconomic characteristics of international students	2002-2011	CMAs; Provinces; Canada	Citizenship and Immigration Canada (2013b)
Longitudinal Immigration Database	* Economic outcomes of permanent immigrants	1980-2011	Provinces; Canada	Statistics Canada (2014)

Analysis of relevant policy changes regarding international students can be gauged from various sources listed in Table 3. The first source, the *Canada Gazette*, provided lists and descriptions of policy changes enacted at the national level since 2000. Citizenship and Immigration Canada's Operational Bulletins provided more detailed descriptions of policy changes, including news releases, speeches, statements

¹ Census metropolitan areas, or CMAs, are the statistical geographic subdivisions used by the federal government to conduct the census. Because CMAs typically cluster around cities (e.g., Toronto; Ottawa), it is possible to see how many international students are moving to particular parts of the province.

and policy details from CIC. These first two forms of data collection framed the international student policy context for our report. Scholarly and university publications comprised the third source of information and provided empirical studies on international students during and after graduation. Furthermore, to add program-level context, we drew upon previous research, including a collaborative project with Conestoga College and previous research regarding internationally educated nurses who entered Canada as students and worked to gain entry into the profession in Canada (Walton-Roberts & Hennebry, 2012; Walton-Roberts et al., 2014).² This report draws upon this research to highlight the process of international student transition into the workforce in more detail.

Table 3: Summary of Qualitative Data Used in the Report

Data Set	Data Included	Time-Period	Geography	Source
Canada Gazette	* Federal policy changes	2000-2014	Canada	Government of Canada (2014)
Operations Bulletins	* Immigration policy changes	1994-2014	Canada	Citizenship and Immigration Canada (2014)
Scholarly and non-scholarly publications	* Policy review and assessment	1997-2015	Ontario; Canada	Various
Surveys and interviews	* Impact of policy	2014-2015	Conestoga College Waterloo	Conestoga College

Methodology Outline

The number of international students enrolled in Ontario's postsecondary education system is documented in the CIC and Statistics Canada databases. We analyze these data using descriptive statistics and linear modelling to describe the numbers, characteristics and trends of international students in Ontario from 2000 to 2012. The second part of the statistical analysis uses CIC's transition data and the *Longitudinal Immigration Database* to explore the number of transitions from international student visa to other visa categories (temporary worker and permanent resident). Transition rates in Canada are assessed by immigration status, geography and socioeconomic characteristics to give a picture of who stays in the province and the status to which they may transition. Second, the economic outcomes of those who stay are estimated using income data, with some statistical estimations and corrections. These results are presented in tables, graphs, maps and statistical analysis using Stata 13.

The statistical analysis noted above was complemented by qualitative searches of policies and policy changes undertaken at the federal and provincial levels between 1996 and 2015. This time frame was amended from 2000 to 2012 because of several key policy changes that occurred before 2000, and the cohort who entered in and before 2012 will graduate and not be affected by policy changes made after 2012. We complemented our content analysis with critical and scholarly publication analysis. We offer a provisional assessment of the interactions between changing policies and international student numbers

² Both of these research projects were granted research ethics approval through the research ethics board of Wilfrid Laurier University.

and trends. For example, the spike in college numbers from 2010 onward coincided with the introduction and success of the SPP. The expansion of the PGWP correlated directly with international students' abilities to transition into the workforce and gain valuable Canadian work experience. However, some data did not correlate with policy changes. The Canadian Experience Class (CEC) is commonly seen as an important stepping stone for international students to gain PR, but our data analysis reflected a very low number of international students transitioning into the CEC prior to 2012. The introduction of the SPP in 2009 may also be one factor in the increased male dominance of international student flows, since India sends more male than female students to Canada. Policy change may not explain the entire picture, but correlating policy changes to the data offers an opportunity to assess how the two might interact.

To further tease out how these macro changes at the level of national and provincial data manifest themselves at the program level, we employed data collected from earlier case study research with Conestoga College. Case studies are useful because they illustrate the numbers and policies at a specific level. While there are multiple ways to pick good case studies, this study examined nursing and health science programs at Conestoga College and provides a meaningful case to illustrate the rapid increase in international student entries from India into college-level programs. The focus on nursing is also relevant for understanding pathways into the labour market within a regulated profession and the significance of gender shifts currently evident in entry data. Conestoga College also exercised an active and early mandate to internationalize, building agreements with international recruiters in the nursing field (Walton-Roberts & Hennebry, 2012).

4. Data Presentation and Analysis

Who Came to Ontario: International students, 2000-2012

In our first research question, we wanted to estimate the number of international students who came to Ontario since 2000. To do this, we collected CIC visa data on entries for international students to Canada and describe student characteristics, such as gender, age, country of origin, level of study and location of residence in Ontario. Finally, we analyze relationships within the data using statistical analysis.

Between 2000 and 2012, up to 253,000 international students came to Ontario, which was more than to any other province or territory in Canada. Ontario's annual share of students increased from 31% of the national total in 2000 to 44% by 2012. From 2000 to 2012, male international student entries to Ontario grew at a faster rate than female entries, so that by 2012 60% of international students were male. The average international student who came to the province was between ages 20 and 24, with notable numbers of students aged 18 to 19 or 25 to 29. During their stay, the vast majority of international students did not work off-campus, though there was a noticeable growth in the number of those who did over the 2000 to 2012 period, likely due to new work permit programs. The most important findings relate to where students came from and where they studied in Ontario. While international students arrived from multiple developed countries in 2000, by 2012 the majority came from India and China. Over the same period, African and some Asian source regions saw an increase in entry numbers, especially from Nigeria and Pakistan. This shift in regions of origin accompanies changes in the gender, level of study and location of study of international students in Ontario. In 2000 the majority of international students were enrolled in universities, but by 2012 the majority attended public colleges.

Finally, most international students who came to Ontario studied in Toronto and its neighbouring municipalities. Other notable locations of study in the province included Ottawa, Hamilton, London, Kitchener-Waterloo and Windsor.

The Big Picture: Ontario mattered and became more important over time

When someone from another country wishes to study in Canada but is not currently a legal resident or citizen, they must apply for a study permit. Upon review by a CIC officer, the applicant is either issued or refused permission to come to Canada on a temporary basis under an international student visa. With this visa, an international student may legally enter Canada, subject to its terms and conditions. When an international student with a valid visa is granted entry into Canada at the border, CIC records that entry, along with information about that student. Some of this information is published by the CIC in its annual *Facts and Figures* (CIC, 2014); however, these published statistics do not offer detailed information on international students. We therefore requested and made use of a specific CIC data set on temporary residents, which we accessed in conjunction with Ontario's Ministry of Citizenship, Immigration, and International Trade (CIC, 2013a). These data, which track all of the students who enter Canada to study, provided a unique opportunity to estimate the numbers and outcomes of international students in Ontario. To do this, we had to filter the data. First, we only included international students in Ontario. Second, since our interest was only in postsecondary students, we excluded international students who were not studying at the postsecondary level, which removed about 33% of the sample.

Over the entire period of 2000 to 2012, Canada received 711,548 international students, 252,819 (or 35%) of whom came to Ontario (Table 4). This made Ontario the largest recipient of international students of all the provinces and territories over the period. Total annual entries to the province increased from 13,357 in 2000 to 32,416 by 2012. Two ways of measuring the size of this change are its growth rate and linear trend. A growth rate compares the total size of a group in an initial time period to its size somewhere in the future. The change in percentage between these numbers represents its growth during that time. The average annualized growth rate of international students coming to Ontario was about 1.9% ($\pm 0.8\%$; $p < 0.01$) during 2000-2012, meaning that there were about 1.9% more students entering each year than the year before.³

Like a growth rate, a linear trend measures the change in the size of a group over time, but does so in absolute terms. The 2000-2012 annualized linear trend for international students coming to Ontario, for example, was about 1,308 (± 132 ; $p < 0.001$). This means that, each year, about 1,308 more international students come to the province than the previous year. Over time, then, the number of international students who came to Ontario increased at a statistically significant rate. In Figure 1, we can also see that Ontario's share of all international students coming to Canada grew from 27% in the first quarter of 2000 to 50% in the last quarter of 2012, or from 31% during 2000 to 44% in 2012. These facts show that Ontario has been the key location for international students coming to Canada and that over time Ontario has become more important with regards to this flow.

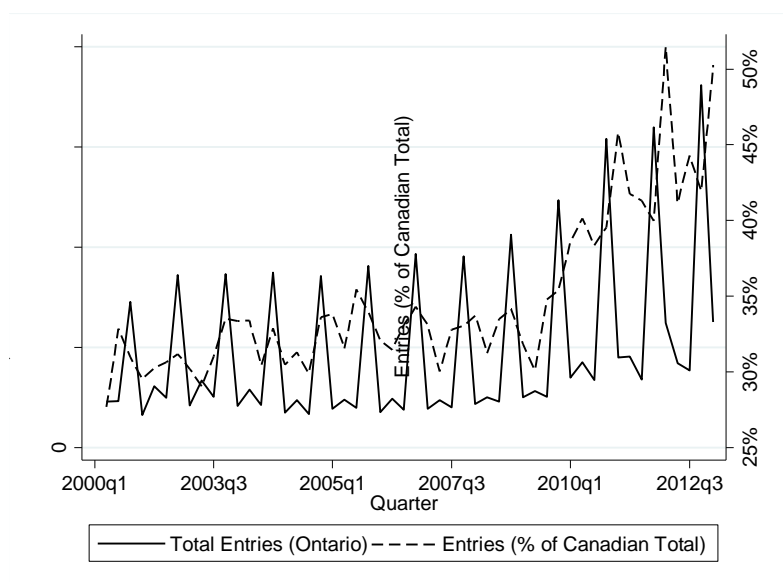
³ The plus-or-minus symbol, in this case, represents a 95% region of confidence in the annual growth estimate.

Table 4: Entries of International Students to Canada by Province/Territory, 2000-2012 (n = 711,548)

Region	Total	Percent
Ontario	252,819	35.5%
British Columbia	201,703	28.4%
Quebec	144,390	20.3%
Alberta	45,842	6.4%
Nova Scotia	22,458	3.2%
Manitoba	15,637	2.2%
New Brunswick	11,452	1.6%
Saskatchewan	10,820	1.5%
Newfoundland and Labrador	4,538	0.7%
Prince Edward Island	1,749	0.3%
Yukon Territory	92	0.01%
Northwest Territories	32	< 0.01%
Nunavut	4	< 0.01%
Province not stated	12	< 0.01%
Total	711,548	100%

Source: CIC (2013a)

Figure 1: Ontario's Share of Total Canadian International Student Entries by Quarter, 2000-2012



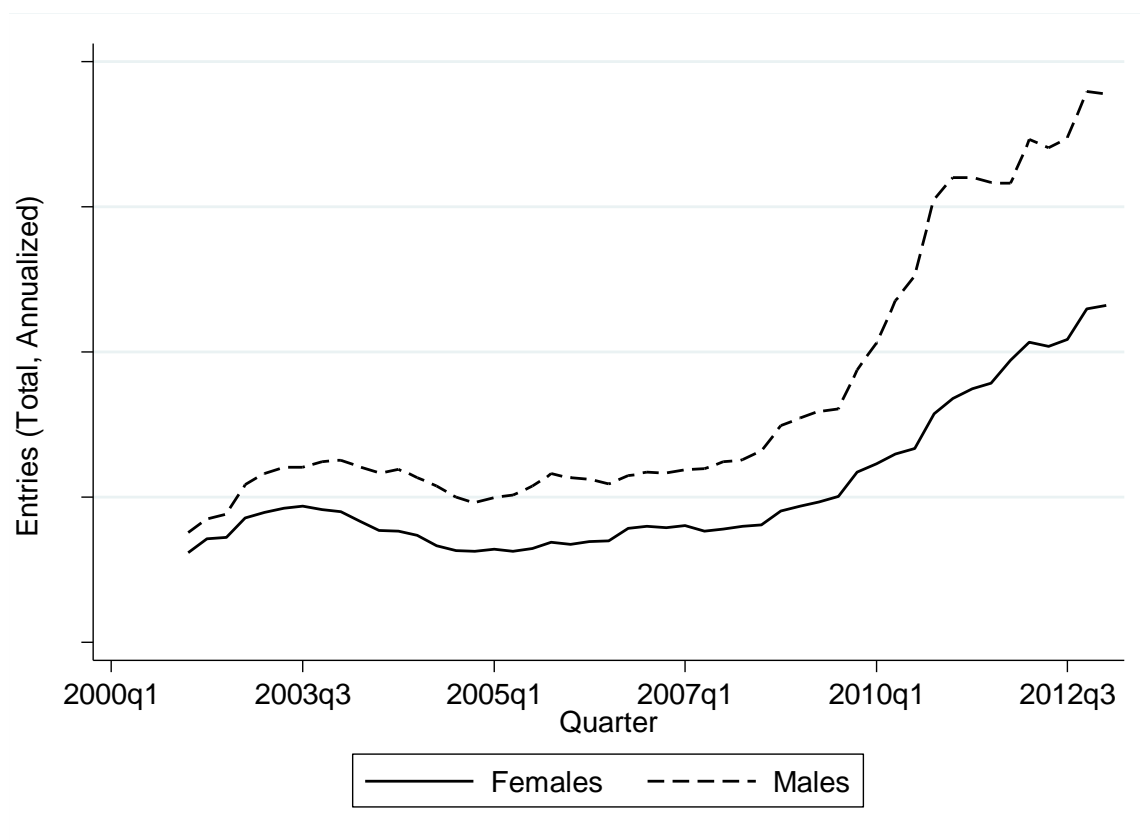
Notes – q1: First quarter of the year; q3 – Third quarter of the year. Source: CIC (2013a)

Gender and Age: We have lost gender parity

Of the 253,000 international students who came to Ontario from 2000 to 2012, 43% (or 109,107) were female and 57% (or 143,690) were male. Looking at Figure 2, we can see that, in 2000, there were about as many females as males, meaning that there was gender parity in international student entries. As time goes on, however, the dashed (male) line becomes increasingly higher than the solid (female) line, which shows that more males were entering than females. Male international student entries grew nearly twice as quickly as female entries. This gap in growth resulted in female entries only increasing by 105% during 2000-2012, while male entries increased by 171%.

One explanation for this change is the shift in the most important countries of origin for Ontario-bound international students. In 2000, international students came mainly from China, South Korea and France, countries that are as likely to send females as males to study in Ontario. By 2012, however, countries like India, Saudi Arabia, Pakistan and Nigeria became important source regions, and they were much less likely to send female students. Only 21% of all students from Pakistan, for example, were female over the period 2000-2012. This trajectory is the reverse of the Ontario postsecondary sector as a whole, where women accounted for 60% of recent graduates in 2006 (Card et al., 2011).

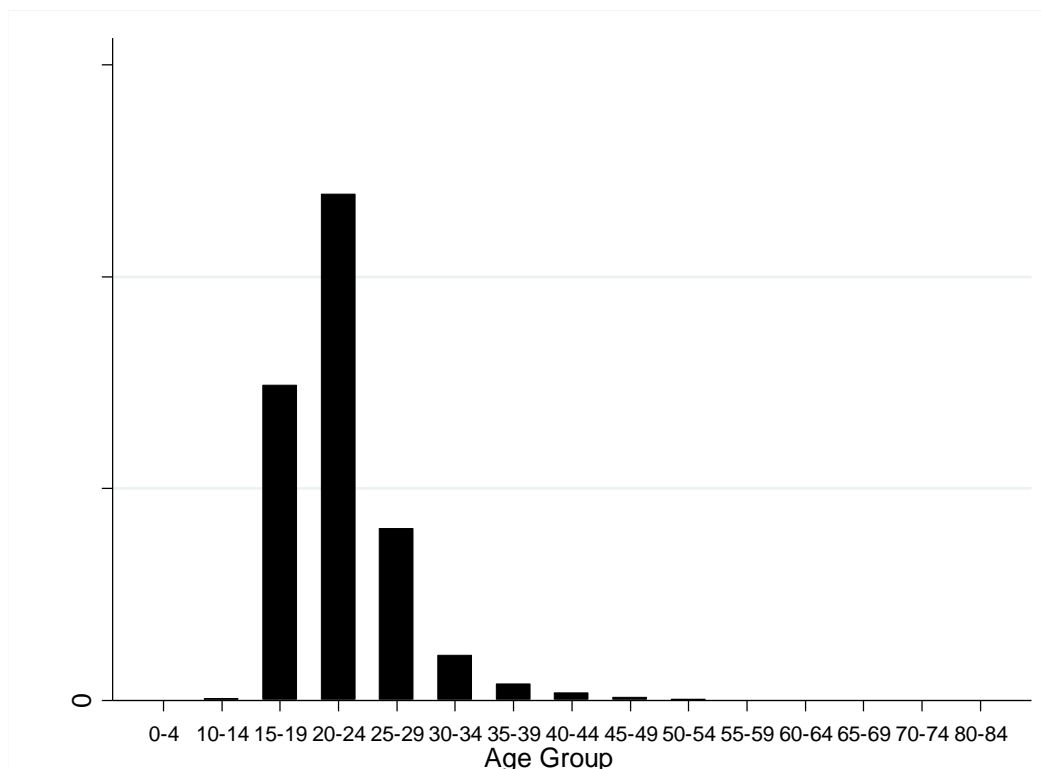
Figure 2: International Student Entries into Ontario by Gender and Quarter, 2002-2012



Notes – q1: First quarter of the year; q3 – Third quarter of the year. “Annualized” means that each point is the average of international student entries in the previous four quarters. Source: CIC (2013a)

Most international students who came to Ontario during 2000-2012 were between 20-24 years of age (Figure 3). About 93% (or 194,352) of all students who came to Ontario were aged 18-29, with 47% (or 119,480) between the ages of 20-24, 29% (or 74,426) between 18-19 and 16% (40,628) between 25-29. Another 6% (or 17,620) were 30-49 years of age. Therefore the average international student who came to Ontario was relatively young. Because the growth in nearly all age groups was equal over the period 2000-2012, the relative size of each age group did not change significantly.

Figure 3: Total International Student Entries into Ontario by Age Group, 2000-2012



Source: CIC (2013a)

Work Permits: More students were working off-campus over time

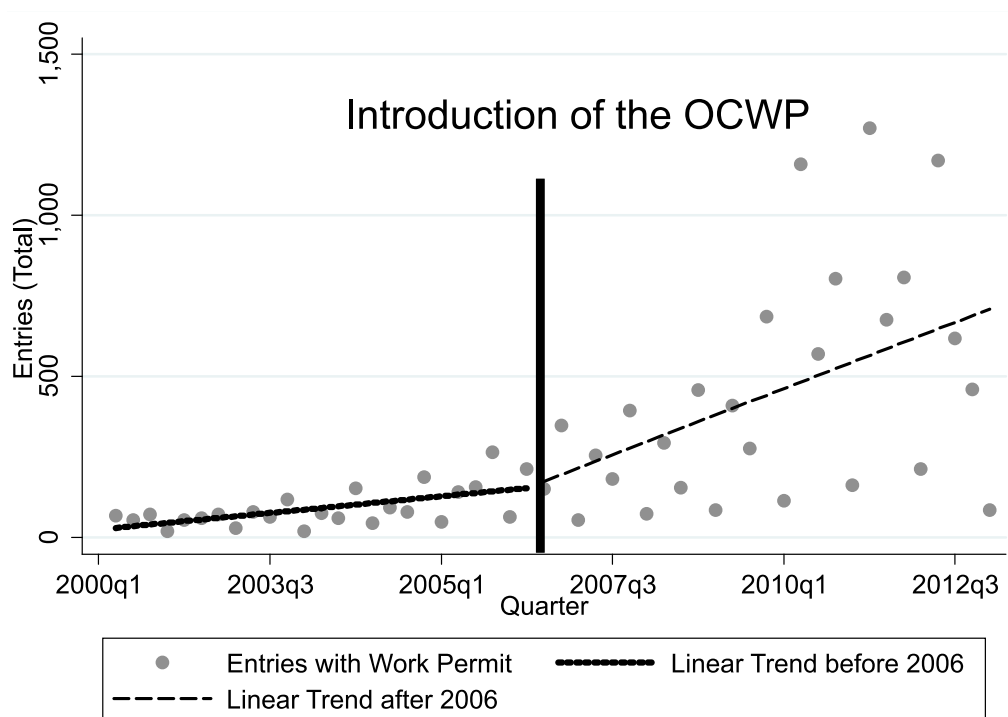
CIC differentiates study permits according to a few types, the most important of which involves having a work permit. Prior to June 2014, students who came to Ontario could only legally work off-campus if they had a valid work permit. Based on CIC data, we cannot say how many of those with a work permit actually worked off campus, but of the 253,000 international students who came to Ontario between 2000-2012, only 5.7% (or 14,395) applied for and received an off-campus work permit, meaning that most students worked on campus, informally or not at all. The overall growth during the time period in students with work permits (991%) was much larger than for those without one (127%). More students were securing visas allowing off-campus work than ever before.⁴ By 2014, all study permit holders in Canada were permitted to gain work experience by working off campus.

By 2012, there were 2,334 (7%) international students with a work permit in Ontario, compared to only 214 (2%) in 2000. As we can see in Figure 4, the shift in the linear trend of entries with work permits

⁴ This change is supported by each group's linear trend, according to which students with permits grew at about 61 (± 4 ; $p < 0.01$) more entries each year and those without grew at 266 (± 29 ; $p < 0.01$). Although, in this case, the linear trend of those with permits is smaller, it is much larger than would be expected given the size of the group. To be more specific, even though there were 17 times fewer international students with work permits than those without, their linear trend was only four times smaller, meaning that the group grew much faster proportionally to its size.

after 2006 supports the notion that the formal introduction of the Off-Campus Work Permit Program had a significant impact on the numbers of students receiving work permits in Ontario. With the removal of the need to apply for the off-campus work permit as of June 2014, it seems likely that these numbers will continue to increase and international students will have more opportunity to develop Canadian work experience.

Figure 4: Total International Student Entries with a Work Permit in Ontario by Quarter, 2000-2012 (n = 52)



Notes – q1: First quarter of the year; q3 – Third quarter of the year. Source: CIC (2013a)

Country of Origin: Rapid growth from India and other Asian and African countries

The data we used includes three measures of origin for international students: country of birth, country of citizenship and country of last residence. Since we wanted to measure exactly where students came from before entering Ontario, we looked at country of last residence. While it is possible to be born in or be a citizen of a country where one does not live, last residence most accurately records where people lived before coming to Ontario as an international student. Using the country of last residence measure between 2000-2012, about 63% (or 160,320) of international students came from Asia and the Pacific (excluding the Middle East), 12% from Africa and the Middle East, 11% from Europe, 8% from Latin America and the Caribbean, and 5% from the USA. All regions grew in size during this time period, though the largest trends were in Asia and the Pacific, and Africa and the Middle East.

Figure 5 illustrates that, for the entirety of 2000-2012, more than half of all international students who came to Ontario came from China, India, South Korea or the USA. Importantly, the profile of countries

students typically came from changed dramatically over the 2000-2012 period. In 2000, for instance, eight of the top 10 countries of origin were members of the Organisation for Economic Co-operation and Development (OECD), a group that includes many of the richest countries on Earth, but only four of the top 10 were members in 2012. This shift reflects the declining importance of European and richer East Asian countries (such as Japan, South Korea and Taiwan) as source regions for Ontario's international students in favour of other Asian and African countries. In Table 5, we can see that in 2012 the most important countries of origin for international students in Ontario were India and China, with notable amounts from other Asian countries and Nigeria. The move towards these countries had a significant impact on the gender and level of study of international students, since they were much more likely to be male and attend college as opposed to university. Of all countries reported, growth was largest by far (2,311%) from India, which became the most common country of origin for international students to Ontario by 2009, but other notable increases occurred from Saudi Arabia and Nigeria (Figure 6). China, the second most common country of origin in 2012, was also important during 2000-2012. By 2012, international students were predominantly Asian, with the majority being of Indian or Chinese origin.

Table 5: Top 10 Countries of last residence for International Students Entering Ontario, 2012

Country	Total Entries	% of Total
India	9,620	29.7%
China	8,557	26.4%
South Korea	1,770	5.5%
Saudi Arabia	1,398	4.3%
USA	997	3.1%
Nigeria	621	1.9%
Pakistan	491	1.5%
UK	481	1.5%
Iran	424	1.3%
France	404	1.2%
Total	32,416	100.0%

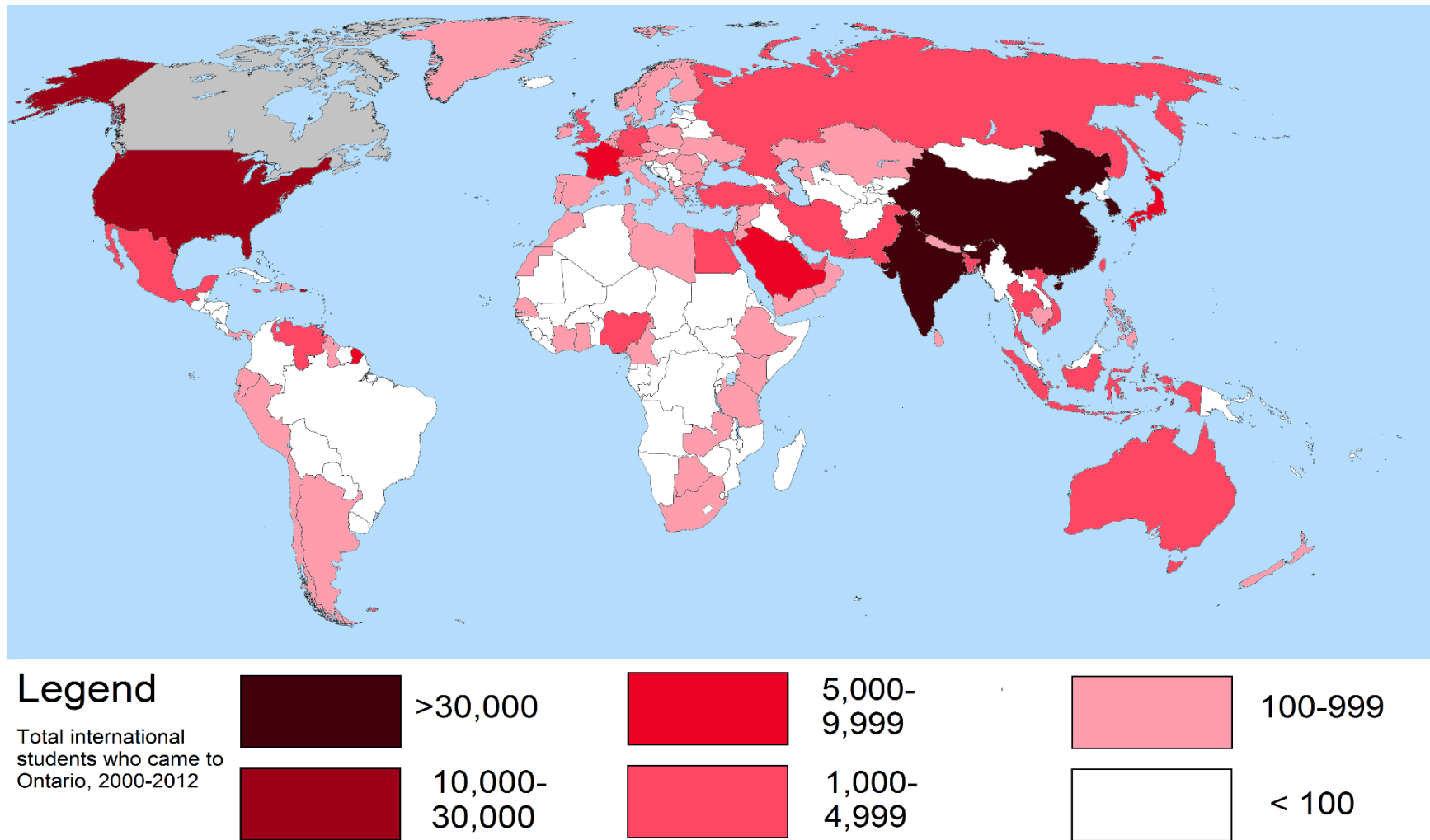
Source: CIC (2013a)

Level of Study: College became the most important place of study for international students

Another important change to the composition of international students who came to Ontario was their level of study. When a student is issued a study permit, their "level of study" is recorded by CIC, which describes the type of postsecondary program in which they are registered. In our data, we effectively have three levels of studies: university, trade school and college. From 2000 to 2012, about 52% (or 131,584) of international students who came to Ontario studied in a university or equivalent program, 27% (or 70,365) studied in a non-trade program in college and 21% (or 50,709) studied in a trade program. Changes during 2000-2012, however, tell a different story than this overall picture. In Figure 7, we see that by 2012 the majority of students were studying in a non-trade college program. This came about as the result of a sharp increase in the numbers of college-level students from India after 2008,

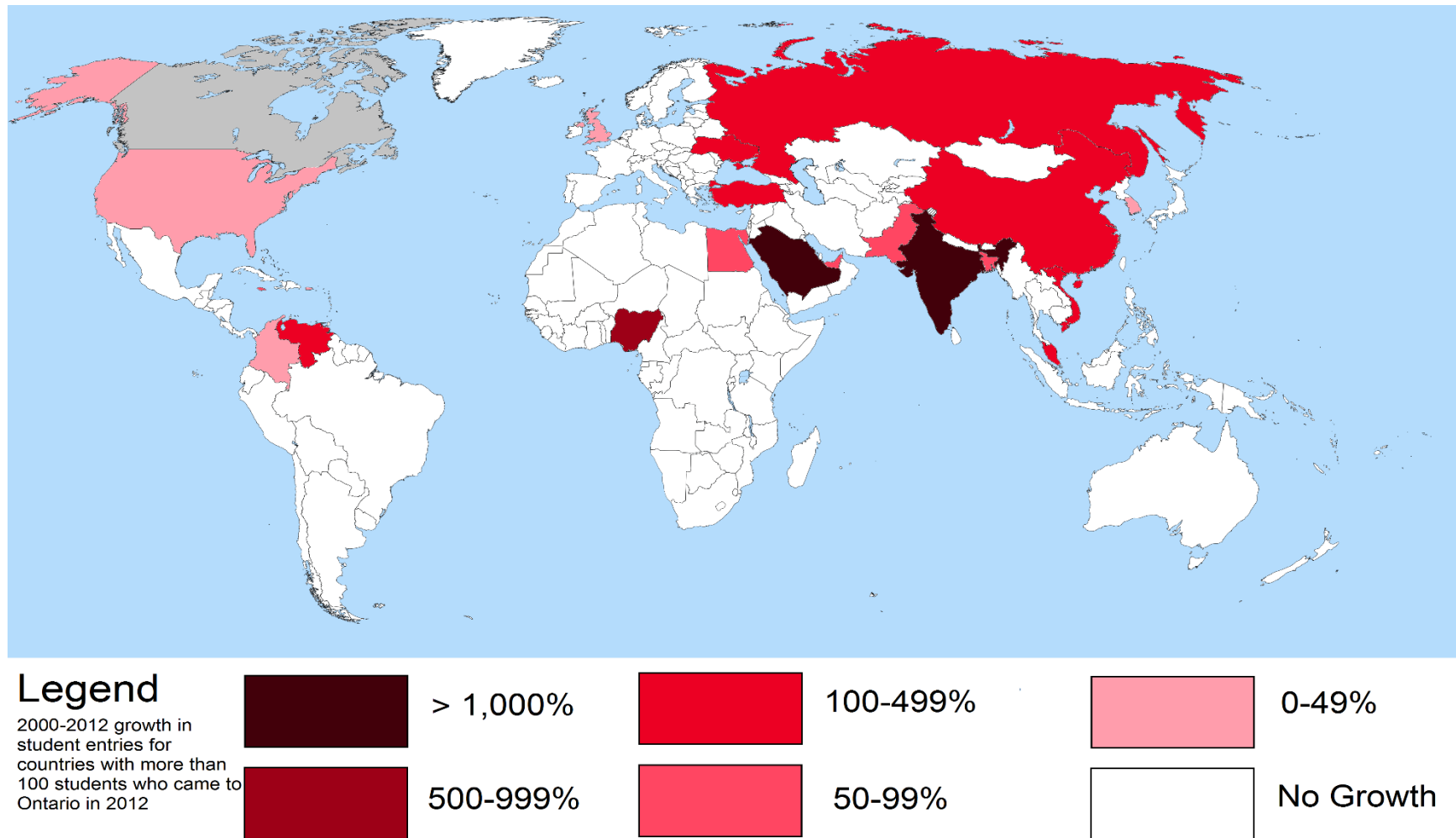
which we suggest is the result of the SPP. We can also observe a decline in international students coming to Ontario for trade-level programs. Growth trends match these findings, with college-level students growing most quickly, followed by university and trade-level. The difference in changes is more dramatic if we consider overall growth during the period, which was 784% for college-level compared to 77% for university and -43% for trade. These results mean that, while university remained important, by the end of 2012, a non-trade college program was the most common level of study for international students in Ontario.

Figure 5: Total International Student Entries into Ontario by Country of Origin, 2000-2012



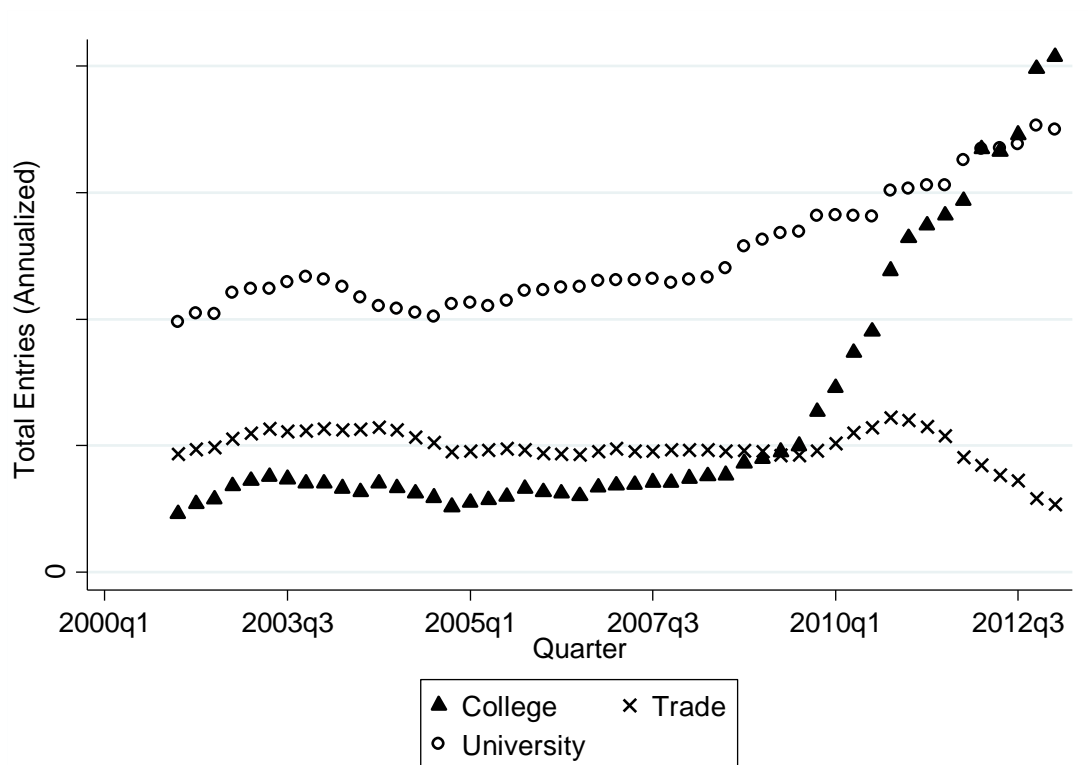
Source: CIC (2013a)

Figure 6: Growth in Total International Student Entries into Ontario by Country of Origin, 2000-2012



Source: CIC (2013a)

Figure 7: Total International Student Entries into Ontario by Level of Study and Quarter, 2000-2012 (n = 52)



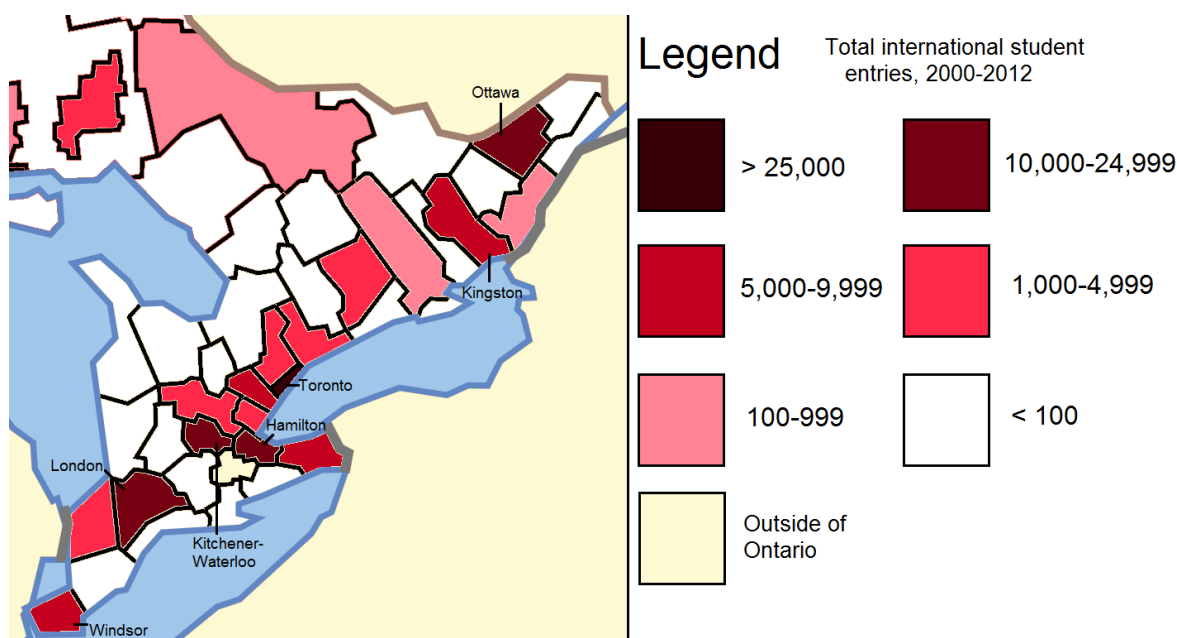
Notes – q1: First quarter of the year; q3 – Third quarter of the year. “Annualized” means that each point is the average of international student entries in the previous four quarters. Source: CIC (2013a)

Location of Study in Ontario: Toronto dominates

CIC records the location of study for international students who are issued a study permit based on the location of their school. These numbers are matched to the census divisions of Ontario. We wanted to know as precisely as possible where international students study in Ontario, so we looked at each of Ontario's counties, divisions, districts and regional municipalities. Figure 8 gives an overview of the results for 2000 to 2012, excluding Northern Ontario. If the map were extended to include Northern Ontario, then Thunder Bay District and Algoma District would also be coloured in the 100-999 entries category. This map demonstrates that international students tend to be concentrated in particular areas of the province, especially those with major colleges and universities. For example, the most common location of study for international students during 2000-2012 was overwhelmingly Toronto (54% or 116,294 of the total), followed by Ottawa (10% or 21,131) and Middlesex County, Waterloo Region and Hamilton (5% each). Nearly every region with over 100 entries has at least one campus of a public university (excluding Leeds-Grenville, Halton, Hastings and Lambton – all of which are home to a public college). Only Toronto and Essex County (Windsor), however, have more students than would be expected given their population size.

From 2000-2012, all regions in the province except Frontenac County (Kingston) saw growth in the numbers of international students. The largest total growth during this period was in Essex County (429%) and Toronto (160%), with the largest linear trends in Toronto, Hamilton, Waterloo Region and Essex County. To help understand these changes, we considered entries of international students by country of origin and level of study to each region. Indian and Chinese students, who formed nearly 60% of entries in 2012, tend to be clustered in and around Toronto, with notable populations in Ottawa, Waterloo, London and Windsor. Students from the other top 10 countries of origin in 2012 reflected a more dispersed geography, which included Peterborough, Kingston, Barrie, Oshawa-Whitby, Guelph, Sudbury and Thunder Bay, in addition to the dominant regions of study. Looking at level of study, there was little variation in the most common locations of study between university, trade and college. For the trade and college levels, one important difference was the inclusion of regions that did not have universities but did have colleges, such as Lambton (Lambton College) and Halton (Sheridan College). Overall, however, international students pursuing trade- or college-level programs tend to go to the same areas of Ontario as university-bound international students.

Figure 8: Total International Student Entries into Ontario by Location of Study, 2000-2012



Notes: Locations are census divisions taken from Statistics Canada. They correspond to Ontario's regional municipalities and counties. Excludes Northern Ontario, which is explained in the previous paragraph. Source: CIC (2013a)

What Happened Post-Graduation: Transitions by international students, 2002-2011

In our second research question, we wanted to explore what happened to international students once they had finished their studies. Did they stay in Ontario or did they go elsewhere? And, if they stayed, what did they do? How did they fare economically? To answer these questions, we used data from two sources. First, we collected CIC data on international student transitions. Transitions record changes from one visa status to another, which allow us to estimate how many people stayed and their characteristics, including their

new visa status, gender, age, previous location in the province, new location in Canada and their study level upon transition. Second, we collected data on the income of immigrants from Statistic Canada's Longitudinal Immigration Database. By accounting for the characteristics of international students who transitioned to another visa status in Ontario, we are able to compare them to the wider immigrant population and develop income estimates based on their characteristics. Using statistical analysis, we could estimate this during and up to 10 years after their transition.

The data tell us that in 2011, the latest year data are available, about 53% of international students who came to Ontario transitioned to a new immigration class, which allowed them to stay in Canada. Overall, and by multiple measures, transitions increased at a statistically significant rate, meaning that more students were staying in Ontario upon completion of studies than ever before. A total of 66,425 transitions were made between 2002-2011, the vast majority of which were to a temporary foreign worker visa, which reflected the creation and growth of the PGWP. For international students who made a direct transition to PR, most stayed in Canada as skilled workers. The most common countries of origin for those who transitioned to another visa were China, India, Korea and the United States of America – a list which roughly matched the top sources of entries in the late 2000s. Gender and age findings were similar to those of international student entries overall, except that students who transitioned tended to be 2-4 years older than those who entered, which makes sense when you calculate the typical length of their program of study. The locations of study from which international students tended to transition basically matched the locations of their entry, except that Toronto was even more heavily represented and Windsor became much less important. Windsor's decreased importance can likely be explained by the time gap between entry and transition, since it did not experience significant growth in entries until sometime later in the 2000s. At least 88% of Ontario international students who remained in the country stayed in Ontario, with another 4% moving outside of the province; the location of the other 8% is unstated. For those who stayed in Ontario, top locations were Toronto (64% of the total), Ottawa (8%), Hamilton (4%), London (3%) and Kitchener-Waterloo (3%). Finally, for the transition groups for which data were available and based on their transition pathways, we found that international students probably tended to make about the same income as the average PR immigrant immediately after their transition. However, over time, they made about \$2,850 a year more than the average PR immigrant.

How Many Stayed: More students were staying in Ontario over time

Since study permits are temporary visas, they do not allow an international student an indefinite stay in Ontario. Instead, at the end of their visa, they must either acquire a new visa that permits a renewed stay in Canada or leave. When an international student acquires a new visa prior to or during the end of their visa's duration, CIC records this change, or 'transition,' from one visa and stores it in a database. Importantly, only those who successfully stay in Canada with their new visa are counted as transitioning. As we will discuss further in the paper, one limit of these data is that they only record those who continually stay in the country. An international student who leaves, for example, and returns years later with a new status will not be counted as having transitioned. For this reason, we suggest that the findings presented in this section are likely conservative estimates of the total number of those who come back to Canada post-graduation.

We were able to estimate how many students from a given group entering in a specific year transitioned at some time to a different immigration status and thereby remained in Canada. We term this the "transition rate." To do this, we had to assume how long an international student would study in Ontario before they

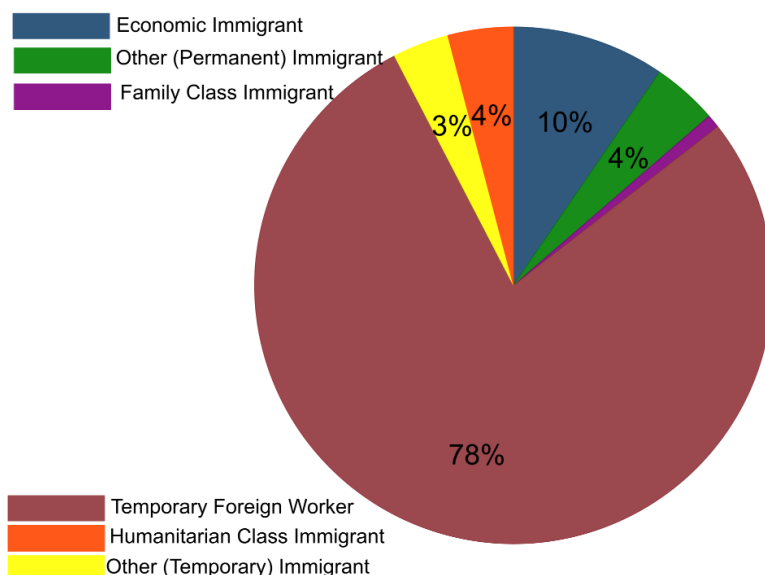
finished and therefore might transition. Since we did not wish to assume a specific amount of time, we made same-year, one-year, two-year, three-year and four-year period estimates for the start to end of studies. What this means is that we considered how transition rates might change if we assume that students take more or less time to complete their studies, and in so doing we account for programs of varying lengths. The results of these estimates over time reveal two key findings. First, we find that students who come for longer study periods become more likely to transition to a new visa. Second, regardless of how long they take to finish their studies, there is a significant linear trend to transition rates, meaning that more international students who came to Ontario are staying in Canada over time. If we assume, moreover, that students took between two and four years to finish their studies, then transition rates were increasing by about 3.8% ($\pm 0.8\%$; $p < 0.01$) per year between 2002 and 2011, and over 55% of those who came to Ontario two to four years earlier as international students transitioned to a new visa compared to 29% in 2006. This means that increasingly more students were staying in Canada after their studies in Ontario.

In Ontario from 2002 to 2011, there were 66,426 total transitions by international students to other visas, and 10,025 of these transitions occurred in 2011. This represents a 264% increase from the 2,750 recorded in 2002. There is an extremely strong relationship between transition growth and time. As we will show, this growth is nearly entirely accounted for by increases in transitions to temporary foreign worker visas, which include the Post-Graduate Work Permit.

How International Students Stayed in Canada: The Post-Graduate Work Permit

We looked at every type of visa to which an international student could transition, including permanent resident visas that allow the holder to stay in Canada indefinitely subject to meeting specific conditions. As illustrated in Figure 9, we found that the vast majority of transitions occurred to the Temporary Foreign Worker Program permit, visas meant for temporary employment in Canada. The second largest category for transitions in 2011 was permanent economic immigrants. Overall, permanent resident visas have declined in importance, making up 15% of Ontario's international student transitions compared to 35% in 2002.

Figure 9: International Student Transitions by New Visa Type, 2011 (n = 10,025)



Source: CIC (2013b)

When we further examined the visa data, we discovered that there were two specific visa types that composed over 75% of all transitions during 2002-2011: the Canadian Interests Class and the Federal Skilled Worker Class. The Federal Skilled Worker Class allows its holder to stay permanently in Canada. During 2002-2011, 62% (or 8,345) of all international students in Ontario who transitioned to a permanent resident visa did so as the principal applicant for a Federal Skilled Worker visa, with another 15% (or 2,980) as spouses or dependants of a Federal Skilled Worker principal applicant. Principal applicants in the Federal Skilled Worker Class were the only permanent resident group to increase at a statistically significant rate ($p < 0.05$) between 2002 and 2011.

The Canadian Interests Class is a temporary visa that permits its holder to work in the interest of the Canadian public. All transitions by students to the PGWP, which was introduced after 2006, are designated as Canadian Interests visas. In 2011, this group alone made up 70% (or 7,065) of all transitions by international students in Ontario. The large numbers of transitions by international students to the temporary foreign worker class are therefore likely explained by the existence of the PGWP. This group also accounts for most of the increase in transitions overall from 2002 to 2011. In sum, then, PGWP transitions are by far most common for international students who remain after finishing their studies, with skilled worker visas being the most common pathway to PR.

Country of Origin: Rapid growth from India other Asian and African countries

Of all transitions by international students in Ontario during 2002-2011, 95% (or 57,600) reported a country of origin. The top 10 countries of origin (based on country of last residence) for those who stayed after completing their studies were China (20,265 transitions), India (9,270), South Korea (5,735), the USA (2,125), Iran (1,400), Japan (1,290), Pakistan (1,195), Hong Kong (1,150), Bangladesh (1,090) and the United Kingdom

(960). The most obvious change in country of origin during this time period was the increase in entries from China and India, which comprised over half of all transitions by 2011 compared to only one-fifth in 2002. Specific changes over time reveal a spike in Indian transitions beginning around 2010, about two to three years after the spike in Indian international student entries. This makes sense given the higher incidence of college-level study by Indians. If this trend continued, we would expect even higher increases in Indian transitions since 2011, which eventually might overtake those by students from China. The list of top 10 countries for transitions was also very similar to the top 10 list of entries in 2008, which additionally supports a time gap of about two to four years between entry for study and post-graduation visa transition. It also highlights the relationship between the top international student sending countries and transition and resident rates in Canada. Put simply, the students we attract to Ontario today become our potential labour market entrants two to four years from now.

Transitions: Gender and age

Like country of origin, the typical gender and age profile of international students who stayed in Ontario echoed entries from the previous time cohorts. In 2002, for example, there was near gender parity (1,380 female transitions to 1,405 males), but by 2011 only 43% (or 4,305) of transitioning students were female. While female transitions grew during the period, they were overshadowed by the growth in male transitions, which in turn were assisted by higher transition rates from countries with lower rates of female entry, including India, Pakistan and Bangladesh. Looking at age, 88% of all transitions fell between the ages of 20-34, with the average international student who transitioned aged 25-29. Like the age of international student entries, then, those who stayed after completing their studies were relatively young (but about two to four years older than when they first came to Ontario). These data provide further support to the assumption of a two- to four-year link between international student entries and the potential transition population that will seek labour market entry.

Pre- and Post-Transition Locations: Toronto dominates

The location of the majority of students who transitioned to a new visa in Ontario was Toronto. Toronto was even more important as a location for transitions than for entries, with 60% (or 38,795) of the total from 2002 to 2011. The four next largest regions by total transitions were Ottawa (9% or 6,030), Hamilton (8% or 5,410), Waterloo Region (4% or 2,865) and Middlesex County (4% or 2,850). While all regions of the province showed growth in total transitions during this time period (including Frontenac), the fastest growing regions were Essex County (360%), Middlesex County (300%), Toronto (278%), Waterloo Region (200%) and Hamilton (189%). Essex, the anomaly, can likely be explained by the time gap between entries and transitions, as well as the fact that the data end in 2011 rather than 2012. Like the case of India in the country of origin data, if trends continue we would expect transitions from Essex County and Toronto to grow more quickly than in other regions.

After they completed their transition to a new visa, the vast majority of former international students remained in Ontario. Specifically, of the 66,425 transitions we studied during 2002-2011, about 88% (or 55,160) resulted in the former student moving to somewhere in Ontario, with another 4% moving somewhere else in Canada. The final 8% of students who transitioned had no stated census division for their move. For the 4% who left Ontario, the top places to move included Canada's largest cities, such as Vancouver, Montreal, Calgary, Edmonton and Regina. For those who stayed in the province, the most

frequent locations for their residence were Toronto (64% or 39,925 of the total), Ottawa (8% or 5,185), Hamilton (4% or 2,240), Middlesex County (3% or 2,090) and Waterloo Region (3% or 1,660). The increased numbers in Toronto typically came at the expense of smaller regions in the province, meaning that many regions (for example, Leeds-Grenville, Lambton and Hastings Counties), which recorded international student entries between 2000 and 2012, had nearly zero transitions residing there. In general, then, most international students in Ontario who transitioned stayed in Ontario and tended to move to the biggest cities, even if they went to school outside of those cities.

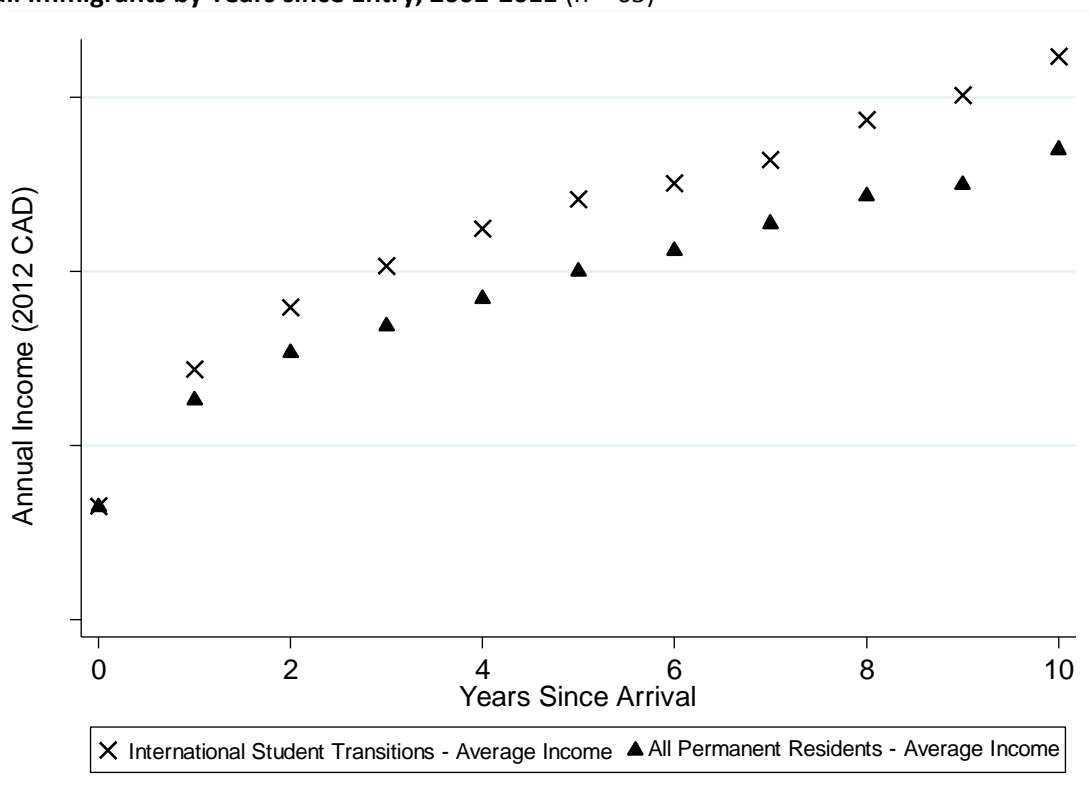
Economic Outcomes: Students who transition directly to permanent residence likely made more income than other immigrants

We estimated that about 55% of the students who came to study in Ontario from 2007-2009 transitioned to another visa status in 2011, the last year for which data are available. Of those students who transitioned to another visa status, about 88% stayed in Ontario and generally moved to the biggest cities in the province. Related to our research questions about where students went after completing their studies and what happened to them, we wanted to give a rough estimate of their economic outcomes. Statistics Canada has published data during the same time period on the income of immigrants in Canada. However, these data are only available for permanent residents, meaning that we could only estimate the income of international students who transitioned to permanent residence; this represented 31% (or 20,180) of the international student population in Ontario. As explained in the next sub-section, this approach has a number of limitations and should be used only as a first step towards more robust estimates of student income after transition.

In Figure 10, we can see that international students who transitioned into permanent residents between 2002 and 2011 were expected to have a higher income than immigrants in general based purely on their transition pathways. When they first transitioned, or when “Years Since Entry” is equal to 0, there was no statistical difference between how much money we expect a transitioned international student to earn compared to an average immigrant.⁵ Over time, however, the average income of the international student who had transitioned is expected to increase more quickly than the average immigrant. This means that by 10 years after transitioning, the former international student made over \$5,300 more than the average immigrant. The average gap between the income of former international students and all immigrants was \$2,848 (\pm \$299), which was statistically significant ($p < 0.01$). This gap increased when considering the median income, or income of the middle person in a group of people ordered by income, to \$3,170 (\pm \$377; $p < 0.01$). However, the gaps were not statistically different from each other. For both groups, the median income was about \$7,000-8,000 lower than the average income, which suggested that a group of high-income earners made the average income higher than what most people earned. So, while all immigrants tended to improve their income over time, evidence suggests that former international students who transition to PR earn more income than the average PR immigrant arriving in the same year.

⁵ We included both principal applicants and spouses/dependents when producing our estimates. We believe this to be more accurate since it accurately reflects the proportion of students who enter as a spouse/dependent compared to all PRs. We were unable to compare international student to a non-student benchmark in the data set we used.

Figure 10: Estimated Income of International Students who transitioned directly to Permanent Residence versus all Immigrants by Years since Entry, 2002-2011 (n = 65)



Notes – Results displayed in constant 2012 Canadian dollars. Source: Statistics Canada IMDB (2015)

Limitations and Future Research

Looking at Ontario as a whole, there are three major limitations to our analysis of international students numbers, trends and outcomes. First, visa transitions only count international students who stay in Canada immediately after their studies. Therefore, we could not count students who might return to Canada after leaving the country. All of our estimates of international students who studied in Ontario and ended up in Canada are thus likely to be conservative. The second major limitation revolves around our transition data. As we noted, we were only able to track the transition of students to their first new visa after finishing their studies. This meant that we were unable to say what happened to the students who went to the PGWP, and then following the end of their three-year work permit moved into a PR visa. If we had these data, we likely would have been able to track the journey of international students over time through the different visa categories and, if data were linked to income, understand in more detail their career and earning trajectories. Tracking how these immigrants enter the labour market and their long-term earning experiences is becoming an increasingly important area of research and policy evaluation.

The last major limitation to our analysis deals with the income data from Statistics Canada. These data did not specifically identify which permanent immigrants were students, so we had to estimate income differences based on different immigration pathways. While the different pathways international students

use undoubtedly influence their income, there are many other factors that are also important, such as language ability, occupational match rates (are their educational credentials recognized) and experiences of discrimination in the labour market. We currently cannot estimate or incorporate these effects solely using the available data. We were able to compare our overall estimates to a sample of international students who transitioned to the Canadian Experience Class between 2009 and 2010. We found that the average income of this group during this time was about \$20,450. This was not statistically different from our estimate of \$21,500 ($\pm \$3,030$) for the overall group at the same time. While this evidence does not refute our method, we argue that a more detailed analysis is needed and that a larger sample would provide stronger evidence for assessing the economic outcomes of international student transitions.

Based on our data limitations, we propose two major avenues for future research. One would be to study what happens to the students who transition from international student status to the Post-Graduate Work Permit. The other would be to develop a stronger and more comprehensive method for measuring international student economic outcomes after transition, particularly by making use of data from Statistics Canada. We believe that both projects would be feasible given current data availability. For these projects, it would likely be helpful to use additional tools in order to get direct feedback from international students on their experience and outcomes. This information would greatly complement the large-scale picture and put a human face on the numbers. Either project will be very timely and relevant due to the introduction of the Express Entry System on January 1, 2015.

5. Case Study of International Students in Ontario

In order to consider how the main findings above relate to international students in Ontario, we now turn to a case study of one college program in Ontario. This case is illustrative of the major tendencies we have identified regarding international students in Ontario, especially the increased attraction of the college sector, India's increasing importance as a source of international students, and the gender dimensions of changing international student entries.

Background

Our case study draws from a research partnership with Conestoga College, a public college in Ontario that has been actively involved in international student recruitment. Based on previous research focused on internationally educated nurses and their pathways into the Canadian labour market, we partnered with the Health & Life Sciences and Community Services School at Conestoga College to examine the experiences of international students enrolled in their Enhanced Professional Practice – Gerontology and Chronic Illness (Graduate Certificate). This one-year program is geared toward internationally educated nurses holding a four-year bachelor's degree in nursing. With our Conestoga partners we conducted surveys and semi-structured interviews with 95 international students in order to better understand their backgrounds and their plans regarding post-graduation. During the first four years of our joint research (2010-2014), the college program recruited Indian-trained nurses through an exclusive recruiter based in India; we surveyed 95 of these students. The respondents on average had 1.8 years of previous work experience. Ninety-one respondents had come to Canada directly from India, while the remaining respondents reported having worked in the United Kingdom and Kuwait before coming to Canada. With regard to post-graduation plans, equal numbers (42) answered either yes or maybe when asked if they intended to remain in Canada.

Females were more likely than males to state that they did not intend to remain in Canada.

The literature is clear that nursing is an attractive occupation for those in lower-income countries because migration opportunities to high-income nations can lead to higher salaries, better professional status and greater opportunities for advancement (Buchan et al., 2008; Connell, 2014). Indeed, Connell (2014, p. 80) makes plain: "Acquiring education and training in the health sector is tantamount to acquiring cultural migratory capital. In many places it may be the most effective means of acquiring a 'passport'." In order to explore the nature of the intersection between nursing and the growth of overseas and international migration opportunities, we asked students why they had entered the nursing profession. Factors associated with income and status ranked highly with the respondents (22% noted the potential for increased salary, 20% improved status), and 20% also indicated they had entered the profession with the intention to emigrate overseas.

The Case Study's Relation to the Report's Findings

Indian country of origin and college enrollment growth

The establishment of the federal government's Student Partners Program in 2009 intersected with internationalization strategies at Conestoga College. Working exclusively with one Indian recruiter with expertise in the nursing sector, Conestoga developed an Enhanced Nursing Practice-Clinical and Critical Care Program specifically aimed at Indian trained nurses. The Indian recruiter was initially based in Punjab (northern India) and Kerala (southern India). Many states in India have seen growth in those seeking employment in the nursing profession; however, Kerala remains the primary source region (Bhutani et al., 2013). The majority (67%) of students enrolled in this program came from Kerala. Between 2010 and 2012 annual enrolments in the program from India doubled from 24 to 49. The first cohort into the program in the fall of 2010 saw enrolment of 24 students. The subsequent creation of the Gerontology and Critical Illness certificate program, in response to a recognized demand for nurses in that sector, allowed students to complete the equivalent of two years of study in Canada, enabling them to adhere to policy guidelines in order for graduates to be granted a three-year post-graduate work permit (Conestoga College, personal communication, 2015).

Labour Market Transition

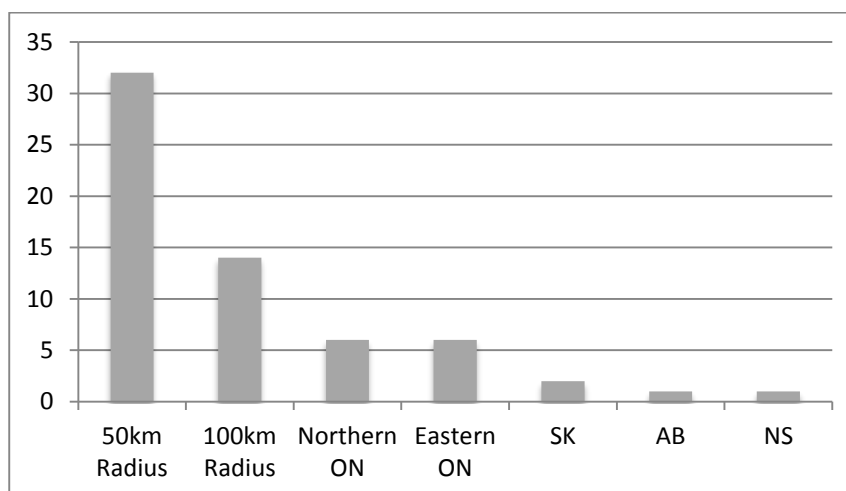
In our research, the first cohort of the Indian sample of internationally educated nurses coming through Conestoga College's program had a fairly successful pass rate in the College of Nurses of Ontario (CNO) registration exam. The CNO is the professional regulator for the nursing profession in Ontario. Fourteen students in the first cohort took the exam and nine passed. However, this first cohort of students had to contend with inconsistencies between the CNO's reading of a one-year post-graduate visa as not being considered "proof of Canadian Citizenship, permanent resident status, or authorization under the Immigration and Refugee Protection Act (Canada)" as demanded by CNO requirements. This suggested a discrepancy between CNO and CIC with regard to international student programs that were intended to create a coherent pathway from education to relevant labour market entry.⁶ These visa inconsistencies were eventually worked out, but this cohort's experiences do indicate the complexities international students will

⁶ Based on personal communication with faculty at Conestoga College, March 2012.

face in transitioning between visas as they attempt to enter regulated sectors of the labour force. Furthermore, subsequent cohorts in 2012, 2013 and 2014 faced the increasing complexity of the CNO registration process, including the new Objective Structured Competencies Exam (OSCE) and the RNCLEX registration exams. The RNCLEX is the national nursing registration exam; this examination is mandatory for those who wish to practice nursing in Canada. The OSCE, also known as the Internationally Educated Nurses Competency Assessment Program (IENCAP), was adopted by the CNO in early 2013 and is administered by the Touchstone Institute (CARE, 2013; Touchstone Institute, n.d.). The exam's objective is to identify competency gaps regarding "client interactions, ethics, professionalism, language proficiency and comprehension" (Touchstone Institute, n.d.). Anecdotal evidence from nursing faculty suggests that the success rate of international students in passing these tests have been very low. In addition, the Ontario Office of the Fairness Commissioner has flagged the OSCE as a concern in its 2014 evaluation of the CNO's practices of international professional assessment (OFC, 2014). Entering regulated professions in Canada involves specific qualification processes, and indirect immigration pathways, such as the international student route, delay the permanent residence application process as candidates have extended study and qualification demands.

In terms of the locational profile of international students who graduated and subsequently worked in Canada, our case study is reflective of some of the macro tendencies identified in this report. Our case study data suggest that 93% (57) of those who remained after their studies stayed in Ontario. Just over half of those working in Ontario chose to stay within 50 kilometres of Conestoga College (Waterloo Region, Brantford, Guelph and Stratford), and 10.5% (14) found employment within 100 kilometres. This includes the GTA, where 5% (3) of postgraduates found employment. The remainder were evenly split between Eastern Ontario (Ottawa, Lunenburg, Belleville) and Northern Ontario (Kirkland Lake, Red Lake, Elliot Lake, Manitouwadge). The locations of employment likely reflect the presence of nursing homes in rural regions, where the attraction and retention of Canadian trained nursing staff may be difficult. Of those who ventured outside of the province (4), two went to Saskatchewan, one to Calgary and one to Halifax. However, the majority (22) of postgraduates who found employment remained in the Waterloo region. These data suggest that in this case, the majority of graduates found employment relatively close to their training institution, suggesting that the role colleges play in directing international students into their local labour markets is important to examine. In this case, the training received included a significant amount of workplace clinical mentoring and preceptor training within a hospital setting in Waterloo Region. In addition to promoting excellence in nurse training and professional development (CNA, 2004), mentoring and preceptorships likely improve connection with possible local employment opportunities.

Figure 11: Post-Graduate Employment Location for IENs registered in the Conestoga College Program



Gender

Gender is one of the more important characteristics of this sample. Not only are the overall male-dominant trends of international students significant on a macro level when we look at Ontario as a whole, but they are particularly interesting in this case study due to the feminized nature of the nursing profession in Canada. The overall percentage of male students in the sample was 41%. When compared to the gender dimensions of the nursing profession in Canada, the male presence in the sample is immense. Consider, for instance, that only 7.3% of all working RNs in Ontario are male (CNO, 2015). This difference in gender balance illustrates the changing gender tendencies evident in Canada's international student population. Even in a highly feminized occupation such as nursing, Indian male students are registering in numbers much closer to parity than is represented in the occupation within Canada. Further assessment of gendered difference indicate that males in this sample had a slightly higher success rate obtaining licensure to practice in Canada: 88% (35) of all males in the sample passed either the nursing or practical nursing registration exam, compared to 84% (56) of all females. However, there was a much greater discrepancy of those registering to practice and then going on to find employment: 74% of the registered males were employed as either a RN or RPNs, compared to 63% of females. The case study suggests that male international nursing students saw greater success rates in their career formation and employment trajectory post-graduation. Geographical location also varied between the genders. Males were more likely to find employment 100 kilometres or more from Conestoga College, compared to 43% of female postgraduates. This suggests that males either have a harder time finding employment close to their educational hub or that they are more likely to venture further afield for employment opportunities that offer better returns to their professional training.

6. Discussion

Policy changes at the federal, provincial and institutional level have correlated with increased numbers, and changing characteristics and labour market outcomes of international students. This is particularly true of Ontario, where the largest share of international students reside and transition between different visa

categories. This study explored the number of international students entering the province between 2000 and 2012, and assessed to what extent they were successful in transitioning into the labour market. Many of the conclusions of our research are consistent with previous research undertaken on the topic (i.e., CBIE, 2013). The study addressed many aspects of international student transitions that had not been addressed in previous research, and built on previous studies to assess how policy changes interact with international student outcomes.

The Numbers of International Students Transitioning in Ontario

About 252,000 international students came to Ontario between 2000 and 2012. This comprised 35% of the total number of international students in Canada over the period. Ontario is increasing its share of international students in Canada both as a percentage and as a total number. Within Ontario, international students are generally moving away from rural areas after they transition and are going to major metropolitan centres, particularly Toronto. Some occupational niches may demonstrate variations to this tendency when employment demand is present in more rural areas, as our nursing case study demonstrates.

Ontario is a leader in the attraction and retention of international students, and both the federal and provincial governments have shown significant interest in attracting and retaining even more international students. The fact that so many more students are entering the higher education sector indicates their interest in international education when combined with opportunities for employment and PR status, and the quality of the education offered. Maintaining both of these dimensions (educational quality and employment/ settlement opportunity) will be vital to sustaining international student interest in Ontario.

More International Students are Transitioning to Temporary Status

The numbers transitioning to other temporary visa types from student status have increased markedly between 2002 and 2011. Overall, the number of international students transitioning directly to PR declined considerably from 35% in 2002 to about 15% in 2011. This is largely explained by international students' transition through the PGWP, which was created and expanded by the federal government in recent years. International students are becoming an important component of the Temporary Foreign Worker Program in Ontario and Canada, making up 15% of all temporary workers in 2012 and growing by 1% each year.

Until 2015, former students could work for two years in the PGWP and be eligible for permanent residence (PR) if they met specific eligibility requirements. If they met eligibility requirements through a main immigration stream, such as the Canadian Experience Class (CEC) or the Federal Skilled Worker Program (FSWP), they would have gained PR. Normally, they would have met specific requirements and been put into a queue for processing. Recent changes to the immigration system, however, include the introduction of the Express Entry system, which is meant to make PR easier to obtain for 'qualified candidates.' However, international students who may have little job experience, less in-demand skills and less language training may struggle to gain PR through this process. The PGWP may then become a pathway to a new class of temporary foreign worker rather than a path to PR for international students. The temporary status of this pathway, moreover, introduces a new level of uncertainty into the lives of international students as they determine whether they can stay in Canada. While employers can sponsor their employees for PR, it is costly and difficult, and international students may be rendered more vulnerable by a tenuous employee-employer

relationship. Recruitment and attraction efforts may be severely affected over the medium to long term should the international student transition to PR be restricted through the Express Entry System.

Gender Shift

The gender of international students has fluctuated over the past several decades. In 1992, only 39% of international students were female, while in 2000 the number was between 45% and 50% (McMullen & Elias, 2011). In 2002, there was near-gender parity between male and female international students both entering the province and transitioning to other visa types. By 2011, this parity had been lost and only 43% of international students were female. We also saw this gender shift in our Conestoga case study, where males comprised nearly half of the total sample in a profession that is generally highly feminized, indicating profound gender shifts at work in international student migration from India. There are a number of variables that may help explain the decrease in female international students as a percentage of the total number both entering the country and transitioning to another visa type. Some of the countries with the greatest increase over time in international student flows into Canada, such as India, Pakistan and Saudi Arabia, tend to send more males than females, which could help explain the gender shift. These ideas, however, have not been thoroughly investigated and further study should take advantage of these data and explore the underlying reasons for this change. A significant portion of population growth in Canada presently and into the future is due to immigration; a gender imbalance in an immigration program that is prioritized for growth skews demographics in the labour market over time. This gender shift should be examined by researchers and policy-makers.

International Students are Working more Off-Campus

More international students were working off-campus each year between 2002 and 2012. This was likely due to the introduction and expansion of the Off-Campus Work Permit Program. In 2014, the OCWP was removed and international students no longer need a work permit in order to work off-campus. This is a major boon to the international student community and serves to advance the experience and integration of international students in Canada. There is a need to assess international students and their labour market entry as part of a larger analysis of highly educated youth employment rates and experiences.

Country of Origin: India becomes the major contributor of international students

India has become the major contributor of international students. Our data noted that after 2009, India's share of international students entering Canada rose by a significant margin. As of 2012, India is the most significant source country for international students, with China second. Other major source countries include South Korea, Saudi Arabia and the US. The rise of India as a source country accompanies the expansion and success of the SPP. The rising number of international students from India also accompanies the ongoing shift in the gender distribution of this flow. Monitoring this process will be important for understanding how the growth of international students as a factor of immigrant intake will alter the overall gendered division of newly accepted immigrants. It will also be relevant in terms of labour market entry and outcomes as this population transitions into employment. The program-level case study indicated that male nurses graduating from the program exhibit better labour market outcomes. Understanding what shapes these differential labour market outcomes is an area for ongoing research.

Rise of College as a Choice for International Students

Our analysis reveals a distinct rise in the numbers of international students entering the country to enrol in the college rather than the university sector, such that by 2010 the number of international students attending college surpassed those attending university. This was at least partially a result of the introduction of the SPP in 2009. Colleges usually offer lower-cost education for a shorter period of time that is more orientated to the labour market. Current policy regulations permit the maximum PGWP visa to last the length of the program of study up to a maximum of three years, which offers an advantage to colleges over universities if entry into the labour market is a major factor in the decision of international students. This is a rather important shift for all postsecondary institutions and levels of government to bear in mind. International students are now seeing colleges as a viable alternative to universities. This shift may also be reflective of the rising tuition costs that international students must incur. There is less financial risk associated with undertaking a two-year college program than a four year undergraduate university degree. Colleges may be particularly attractive because of their focused program content and international recruitment efforts.

New Policy Changes will have a Profound Effect on International Student Numbers

While numerous immigration policy changes have been enacted between 2000 and 2012, particularly since the passing of the Immigration and Refugee Protection Act in 2002, the introduction of the Express Entry processing system introduced in January of 2015 is notable. Leading up to its introduction, CIC went into talks with nine employer groups to receive feedback on the new applicant management system (Mas, 2014). This suggests that Express Entry has been established as a tool for employers to select potential immigrants from those vying for PR from a pool of qualified candidates. The quality of education and training international students receive from the programs they enter and their post-graduate work experience will increasingly structure their success in the Express Entry process. As provinces are now responsible for determining the list of designated learning institutes that may accept international students, how international students fare in the express entry process must be monitored. If the education and work experiences international students gain in Ontario's postsecondary education sector are not adequate enough to secure their ability to gain PR status, the province's attraction to the international student market, and the experiences of these students, may be negatively affected.

7. Conclusion

In this report, we analyzed the numbers, transitions and policies surrounding international students who came to Ontario between 2000 and 2012, and offered a case study to contextualize these processes at the program level. From statistical analysis of visa data from Citizenship and Immigration Canada, we found that:

- Ontario is the primary destination for international students in Canada and has become increasingly important over time. Students who study in Ontario tend to stay here after their studies end.
- College is now the most common place for international students to study in the province.
- Ontario has lost gender parity in international student entries and transitions.

- India and China are the dominant sources of international students coming to Ontario. This was a major shift from the origin of students in 2000.

These findings reflect a number of important policy changes by the governments of Canada and Ontario that generally sought to promote the recruitment of international students as a method to raise funds for the postsecondary sector and build a pool of potential skilled migrants. Few researchers, however, have analyzed the results of these policies, particularly international student transitions to the labour market. We addressed this research gap using a mixed methodology. We gathered visa data from Citizenship and Immigration Canada, reviewed federal and provincial policy, and documented these large-scale changes on a smaller scale through one college sector case study.

While we answered our research questions, a number of questions remain, specifically with regard to what happens to students after they finish their studies here. While we identified, for example, that the PGWP is the major pathway by which students stay in Canada, we were unable to determine what happens to these students after this temporary visa expires. With respect to economic outcomes, although we found some evidence indicating that students fared better than other permanent immigrants, existing data are limited and further study is needed. Furthermore, the introduction of new immigration policies since 2012 likely has influenced the decisions of international students regarding whether they will stay in Ontario after their studies. These changes include the elimination of the OCWP, the extension of the PGWP and the creation of the Express Entry system. We expect that these changes will lead to more students working in the labour force during and after their studies, resulting in this population becoming an increasing component of the Temporary Foreign Worker Program. In sum, these ongoing changes in international student policies, populations and labour market entry processes have important implications for Ontario's postsecondary education system, labour market and economy.

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