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### Our main offices:

- Thunder Bay on Robinson-Superior Treaty territory and the land is the traditional territory of the Anishnaabeg and Fort William First Nation.
- Sudbury is on the Robinson-Huron Treaty territory and the land is the traditional territory of the Atikameksheng Anishnaabeg as well as Wahnapiitae First Nation.
- Kirkland Lake is on the Robinson-Huron Treaty territory and the land is the traditional territory of Cree, Ojibway, and Algonquin Peoples, as well as Beaverhouse First Nation.
- Each community is home to many diverse First Nations, Inuit, and Métis Peoples.

We recognize and appreciate the historic connection that Indigenous peoples have to these territories. We support their efforts to sustain and grow their nations. We also recognize the contributions that they have made in shaping and strengthening local communities, the province, and the country as a whole.

This report was made possible through the support of our partner, Northern Ontario Heritage Fund Corporation. Northern Policy Institute expresses great appreciation for their generous support but emphasizes the following: The views expressed in this report are those of the author and do not necessarily reflect the opinions of the Institute, its Board of Directors or its supporters. Quotation with appropriate credit is permissible.

Author's calculations are based on data available at the time of publication and are therefore subject to change.

Editor: Mark Campbell

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Published by Northern Policy Institute

874 Tungsten St.

Thunder Bay, Ontario P7B 6T6

ISBN: 978-1-77868-024-3

## About the Author

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Samrul Aahad graduated with an M.A. in Economics from the University of Saskatchewan where he was the recipient of the prestigious Boving Family Scholarship. During his Masters, he was able to contrast the conventional ways of analysis popular with economists with contemporary techniques such as ones used in machine learning. He has, previously, worked as a business/data analyst for various research organizations and industries locally and internationally.



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Northern Policy Institute is Northern Ontario's independent, evidence-driven think tank. We perform research, analyze data, and disseminate ideas. Our mission is to enhance Northern Ontario's capacity to take the lead position on socio-economic policy that impacts our communities, our province, our country, and our world.

We believe in partnership, collaboration, communication, and cooperation. Our team seeks to do inclusive research that involves broad engagement and delivers recommendations for specific, measurable action. Our success depends on our partnerships with other entities based in or passionate about Northern Ontario.

Our permanent offices are in Thunder Bay, Sudbury, and Kirkland Lake. During the summer months we have satellite offices in other regions of Northern Ontario staffed by teams of Experience North placements. These placements are university and college students working in your community on issues important to you and your neighbours.



### Réseau du Nord

Réseau du Nord creates links between organizations from all regions of Northern Ontario, such as: Sudbury, Timmins, North Bay, Sault Ste. Marie and Thunder Bay, to put in place a system to facilitate the reception and integration of newcomers.

Réseau du Nord follows the objectives of the strategic plan developed by the Steering Committee:

- Increase the number of French-speaking immigrants so as to increase the demographic weight of the Francophone communities in a minority situation.
- Improve the capacity of French-speaking communities in a minority situation and strengthen welcoming and settlement structures for French-speaking newcomers.
- Ensure the economic integration of French-speaking immigrants within Canadian society and Francophone communities in minority situations in particular.
- Ensure the social and cultural integration of French-speaking immigrants within Canadian society and Francophone communities in minority situations.
- Foster regionalization of Francophone immigration outside of Toronto, Montréal and Vancouver.

### About the Northern Analyst Collective:

The Northern Analyst Collective, a project of Northern Policy Institute, will allow members to "time share" a professional policy analyst. By merging our collective resources we can ensure that the smallest municipality or local charity can access high-end skills at an affordable price.



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# Executive Summary

As the population in Northern Ontario communities continues to age out of the labour force, challenges around recruiting and retaining employees will become ever more prevalent. To alleviate some of these challenges, one solution for employers is to look externally to temporary residents to help fill these positions while enriching the communities socially and culturally. Part of the solution to this problem is attracting and retaining more temporary residents.

There are over 11,000 temporary residents working and studying in Northern Ontario. About 70 per cent are study permit holders (otherwise known as international students), and the rest are on work permits. International students, on average, paid roughly three times more in tuition than their Canadian counterparts. This additional revenue allows universities to fund a variety of programs and research initiatives.

In addition, work permit holders filled in a variety of in-need occupations such as food service supervisors, cooks, transport truck drives, welders and related machine operators, and retail sales supervisors. In 2019, work permit holders in Northern Ontario were estimated to generate approximately \$155 million in total income.

On the other hand, international students can work off-campus for up to 20 hours a week and apply for a post-graduation work permit. Their income in 2019 is conservatively estimated to be \$279 million, much of which is reinvested into their local Northern Ontario economy via tuition, rent, groceries, and other goods and services.

Thus, temporary residents not only help fill labour shortages and help sustain the local labour market but increasingly contribute economically to their Northern Ontario communities. **The economic activity generated by Northern Ontario's temporary residents exceeds half a billion dollars**, which is almost 2.1 per cent of Northern Ontario's GDP. Finally, temporary residents contribute socially and culturally to the communities in which they reside, which cannot be measured in dollars.



# Introduction

Northern Ontario post-secondary institutions are no strangers to international students. Every year, students from other countries come to study, work and live in communities such as Thunder Bay, Hearst, Sudbury and more. As Hagar (2020) noted, international students have a significant economic impact on communities where institutions exist. These international students are considered temporary residents as they are only here for a short while. However, international students are just one half of the economic impact equation for temporary residents. Work permit holders also fall under this category.

In order to understand the full picture, temporary residents have on local economies in Northern Ontario, this paper will measure the direct and total economic impact effects of this group. The results of which can inform local decision making on how to attract temporary residents to communities to not only help to fill labour market gaps, but to enrich the social health of communities.

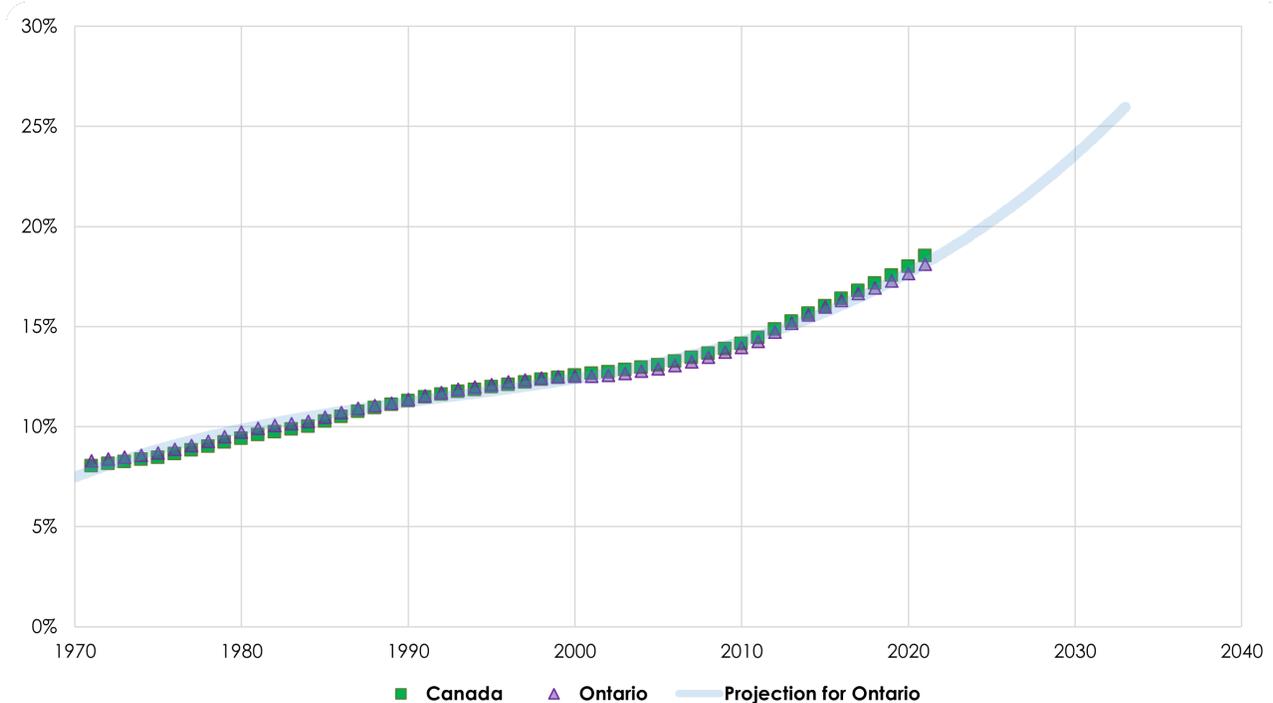


# Demographics of Temporary Residents in Northern Ontario

## Canada's aging population

The national and provincial aging population trend has been a topic of focus for policymakers. Approximately one in four people in Ontario and Canada are expected to be age 65 and older by 2034 (Table 1). The aging population concerns are particularly pronounced in Northeastern Ontario: "In 2021, the share of seniors aged 65 and over in regional population ranged from a low of 15.9 per cent in the GTA to a high of 22.9 per cent in the Northeast" (Ontario Ministry of Finance 2022).

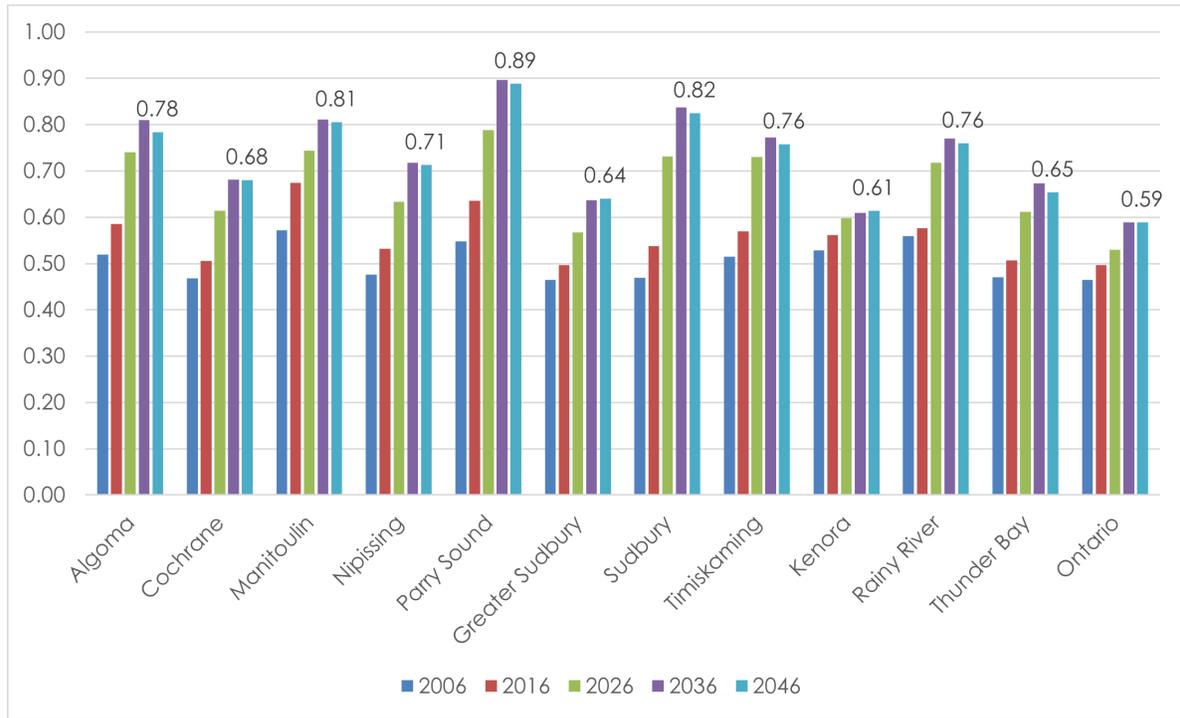
**Figure 1: Percentage of the population age 65 and older in Canada and Ontario, past and future projection**



Source: Author's calculation based on Statistics Canada population estimates, 2022 (Table: 17-10-0005-01).

More importantly, as older people retire, they typically stop participating in the labour force and stop paying income taxes. This is the time when they need more social and health services (Huart and Fennelly 2010). If the dependent population—people age 65 and older and children age 14 and younger—increases faster than the working-age population (ages 15-64), that puts an additional burden on the working population to support themselves and others. Demographers measure the burden on the working population using the Demographic Dependency Ratio (DDR). The DDRs for Northern Ontario's 11 census districts are provided below.

Figure 2: Demographic dependency ratio by Northern Ontario district, 2006 to 2046



Source: Author's calculation based on Ontario Ministry of Finance Population Projections, 2021.

DDR projections suggest that Northern Ontario has a growing dependent population and not enough working-age individuals to replace those who are retiring. This trend could have significant economic consequences and, therefore, it is important to plan for the resulting challenges.

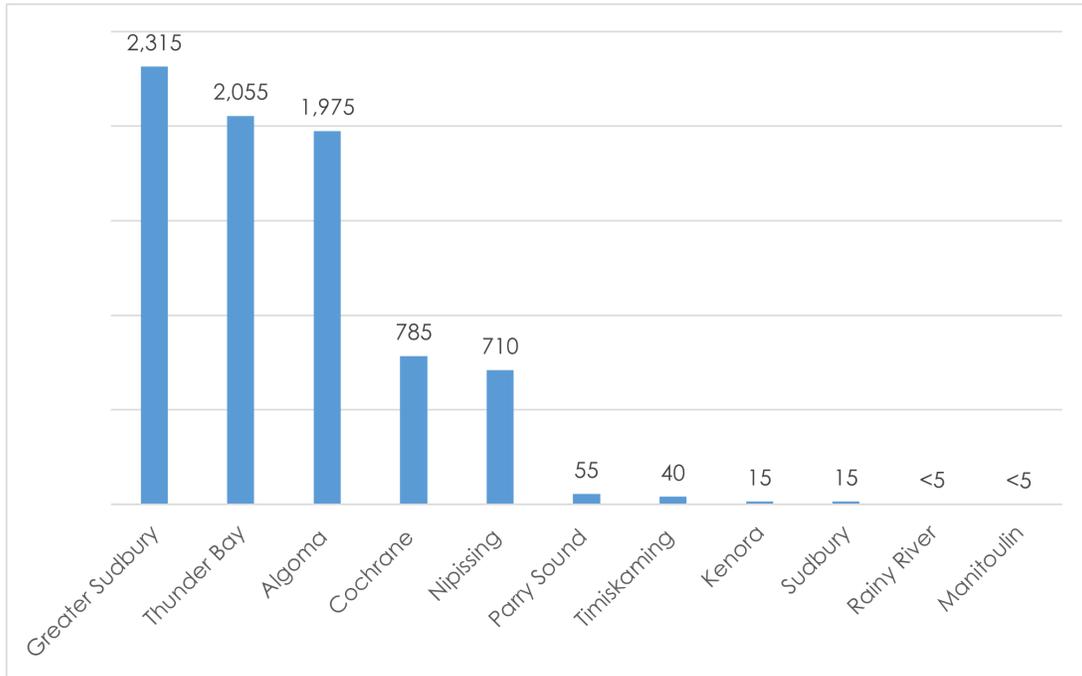
## International students in Northern Ontario

Globally, the number of students studying abroad has increased considerably in recent decades, with the majority travelling from Asian and African countries to Europe and North America (Statistics Canada 2022). In recent years, Canada has experienced higher growth than other Western nations in terms of hosting international students (Crossman, Lu, and Hou 2022). In the 2019-2020 academic year, 153,360 and 168,606 international students enrolled at Canadian colleges and universities, respectively (Statistics Canada 2021a). In general, 19.3 per cent of college students and 17.1 per cent of university students were international students (Statistics Canada 2021a). Additionally, both colleges and universities experienced growth rates higher than 10 per cent for year-over-year enrollments for international students from 2019 to 2022. By contrast, postsecondary enrollment decreased among Canadian students by 1.8 per cent and 0.4 per cent for colleges and universities, respectively (Statistics Canada 2021a).



In 2019, 7,980 study permit holders (international students) resided in Northern Ontario (Immigration, Refugees, and Citizenship Canada (IRCC), 2020). Greater Sudbury had the highest number of study permit holders, followed by Thunder Bay and Algoma. The reason for using the 2019 data is that they help illustrate the impact of COVID-19 on in-person classes and the rise of virtual options for students here and abroad.

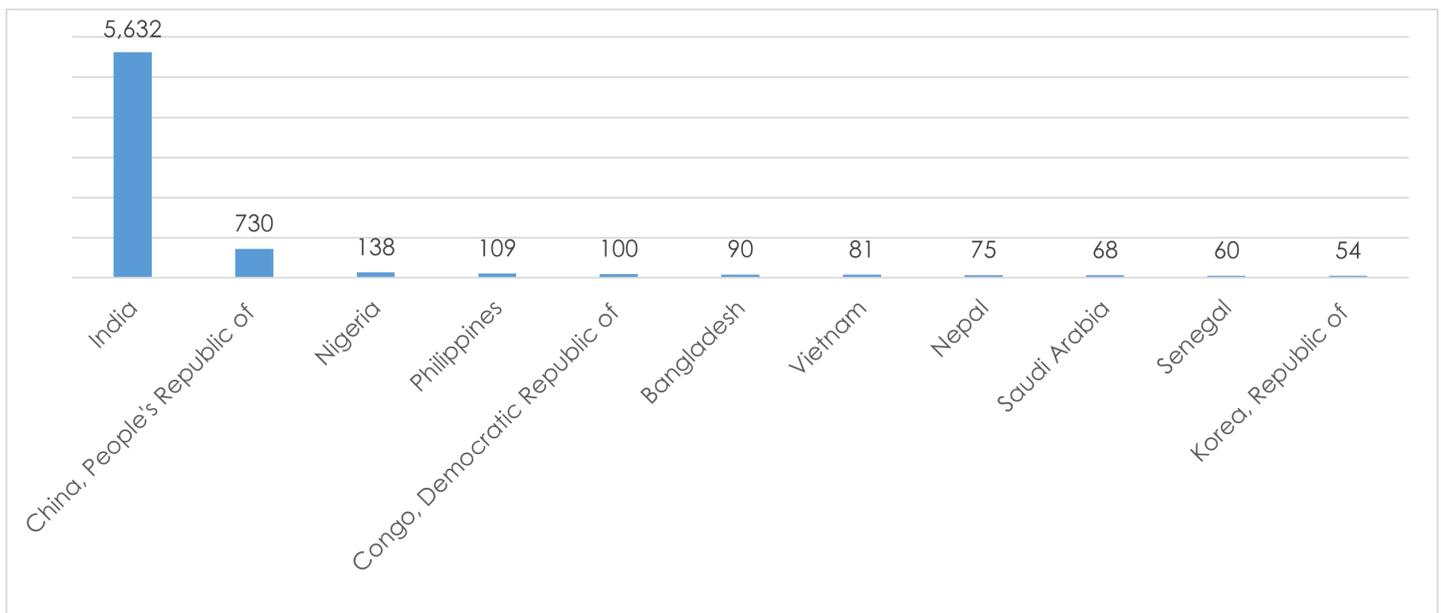
**Figure 3: Number of study permit holders by Northern Ontario district, 2019**



Source: Author's calculations based on Immigration, Refugees and Citizenship Canada (IRCC) data, 2019.

Noticeably, there is not much diversity in the country-of-origin among study permit holders residing in Northern Ontario. More than two in three international students (68.8 per cent) are from India. The second-largest cohort is from China (8.9 per cent).

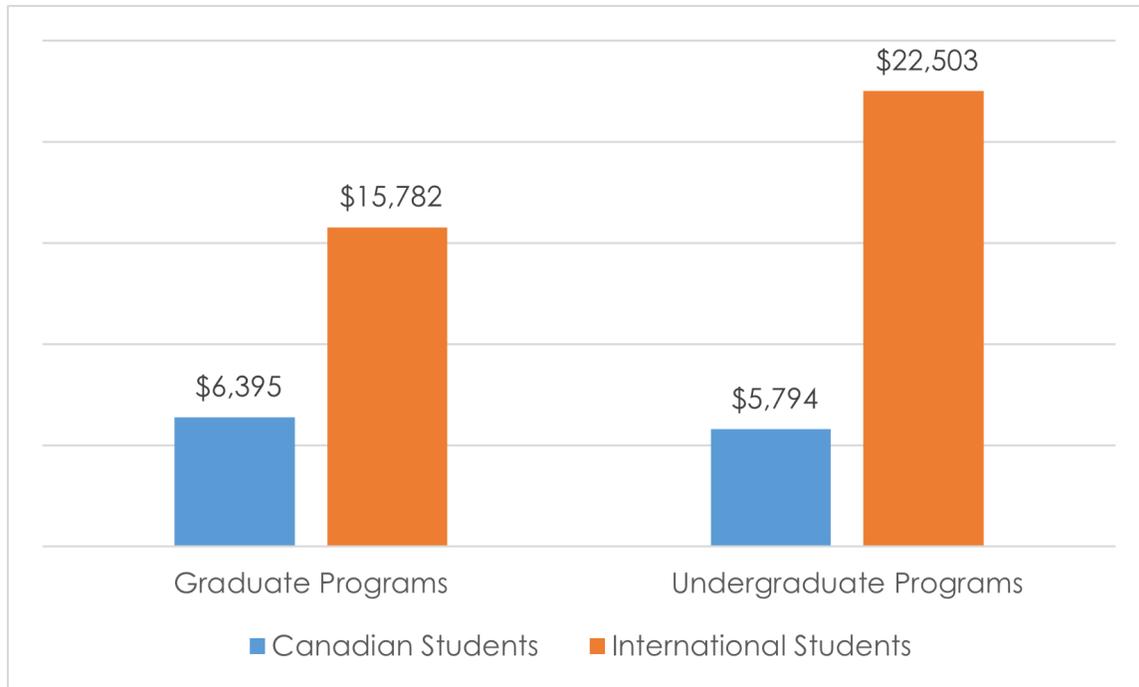
**Figure 4: Top 10 countries of origin for study permit holders in Northern Ontario, 2019**



Source: Author's calculations based on Immigration, Refugees and Citizenship Canada (IRCC) data, 2019.

In terms of tuition fees, international students tend to pay more. For university undergraduate programs for the 2021-2022 academic year, the annual average tuition fee<sup>1</sup> for international students in Northern Ontario was \$22,503 (Universities Canada 2022). By contrast, Canadian students paid \$5,794 on average for the same programs (Statistics Canada 2021a). Similarly, international students paid \$15,782 on average for graduate programs in Northern Ontario while their Canadian counterparts paid \$6,395 (Universities Canada 2022). The additional markup international students pay to postsecondary institutions is invested back into Northern Ontario's economy in various ways.

**Figure 5: Average tuition fee by student status for Northern Ontario, 2021-2022**



Source: Tuition fees for degree programs, Statistics Canada, 2021/2022.

Furthermore, international students also actively participate in the labour supply on- and off-campus. For example, many work as teaching assistants, research assistants, and lab assistants at their postsecondary institutes. Additionally, eligible international students with work permits are allowed to work 20 hours off-campus while classes are in session and full-time during scheduled breaks (Government of Canada, 2022). A significant number of international students take advantage of this opportunity to gain income or work experience. According to a report published by Statistics Canada in 2015, among both Canadian and international full-time students, two in five (40.8 per cent) were working part-time (Statistics Canada 2015). Most of these students were working in low-skill jobs, such as “retail salespeople, cashiers, clerks, cooks, food counter and kitchen helpers, food and beverage servers, or grocery shelf stockers” (Statistics Canada 2015).

The Government of Canada provides international students with the option to prolong their stay and work in Canada by applying for a work permit through the Post-Graduation Work Permit (PGWP) program. The length of a PGWP depends on the length of the student's post-secondary program. The PGWP allows employers to hire new graduates and provide them with much-needed professional training and work experience. At the same time, the program provides a major boost to the labour market by enabling young and Canadian-educated individuals to work in Canada. PGWP has been a huge success, as reflected in Statistics Canada's International Students as a Source of Labour Supply report:

<sup>1</sup> The average tuition fee is calculated by taking an average of the tuition fees provided by Universities Canada for Algoma University, Nipissing University, Laurentian University, and Lakehead University. UdeHurst tuition information was not provided by Universities Canada. University tuition fees are largely comparable to college tuition fees in Northern Ontario

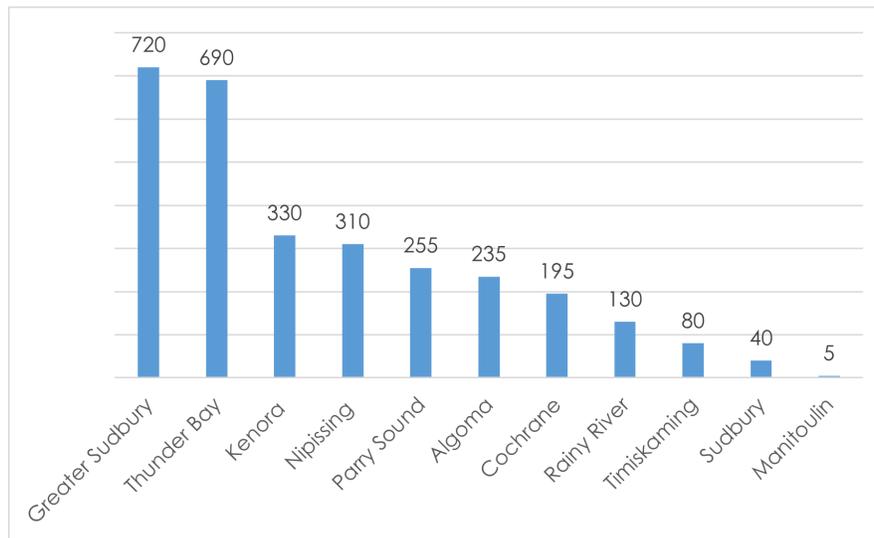
“The labour market participation of PGWP holders (defined as the share of PGWP holders with positive T4 earnings) remained fairly stable from 2008 to 2018, with roughly three-quarters reporting T4 earnings annually. With rising numbers of PGWP holders, this equated to the number of PGWP holders with T4 earnings growing more than 13 times in size, from 10,300 in 2008 to 135,100 in 2018. Median annual earnings received by PGWP holders with employment income also rose over this period, from \$14,500 (in 2018 dollars) in 2008 to \$26,800 in 2018, suggesting an increase in the average amount of labour input. Almost three-quarters of all PGWP holders became permanent residents within five years of having obtained their PGWP” (Crossman, Lu, and Hou 2022).

To summarize, from an economic standpoint, international students are an incredible source of income, low-and-high-skill labour, and potential permanent residents. These students, who often become work permit holders, can help fill the labour market gap created by an aging population.

## Work permit holders in Northern Ontario

In 2019, there were 3,320 work permit holders in Northern Ontario. Most of them lived in the Greater Sudbury area, followed by Thunder Bay and Kenora.

**Figure 6: Number of work permit holders by Northern Ontario district, 2019**

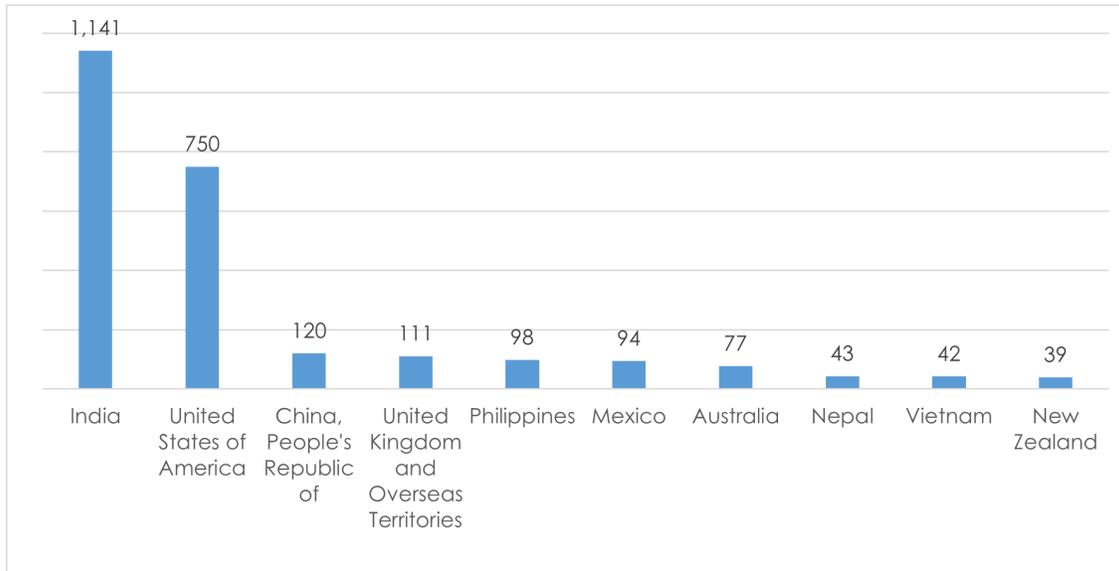


Source: Author's calculations based on IRCC data, 2019<sup>2</sup>.

Mirroring the study permit data, India is the leading country of origin among work permit holders in Northern Ontario—approximately two in five (38.8 per cent). Notably, the second-largest cohort is from the United States, followed by China.

<sup>2</sup> IRCC does not report data if the value is more than 0 and less than 5, and only indicates that the number is between 1 and 4. This paper assumes each of these data points to be 3 for analysis purposes.

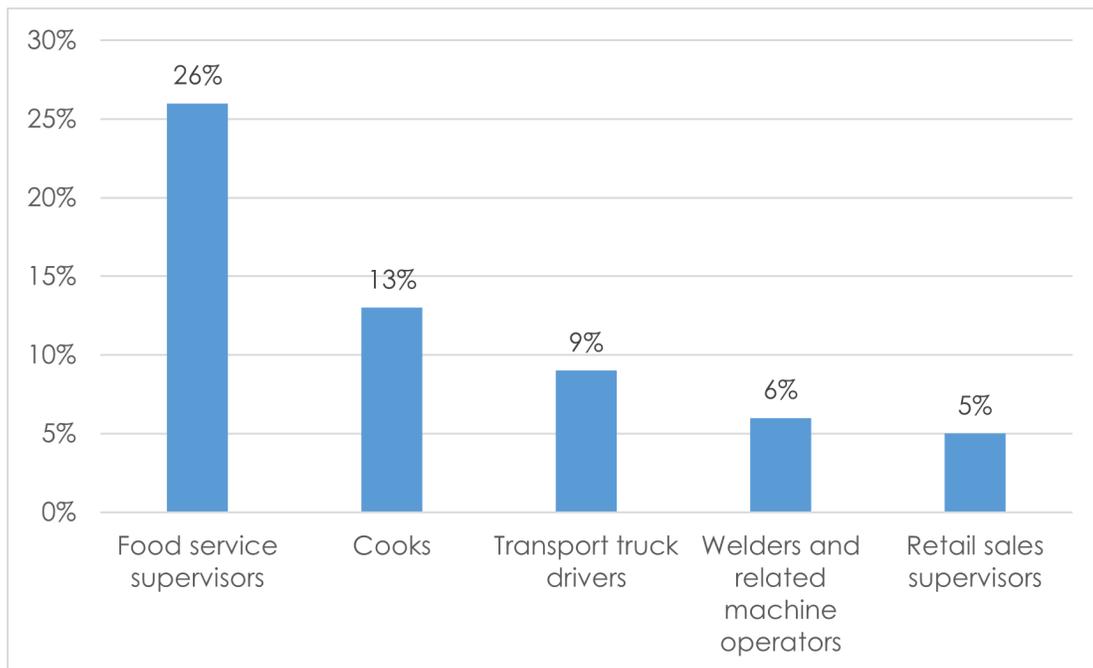
**Figure 7: Top 10 countries of origin for work permit holders in Northern Ontario, 2019**



Source: Author's calculations based on IRCC data, 2019.

Additionally, Labour Market Impact Assessment (LMIA) data provide insight into the type of jobs foreign workers are getting. It is not an absolute measure, but it does provide an informed estimate. Specifically, a positive LMIA will show that there is a labour shortage that cannot be filled by a Canadian worker or permanent resident, indicating the need for a foreign worker to fill the job. Of the 103,458 LMIA issued during 12 months in Canada (2020 Q4 – 2021 Q3), 324 were issued for addresses in Northern Ontario (Author's calculations based on LMIA data 2022). The figure below shows the top occupations and their relative share of the total jobs.

**Figure 8: Top 5 approved LMIA occupations in Northern Ontario, Q4 2020 to Q3 2021**



Source: Author's calculations based on LMIA data, 2019.

Most of the LMIA went to low-skill and trade jobs. However, there were some exceptions, such as healthcare specialists, which include veterinarians, family physicians, and specialist physicians.<sup>3</sup>

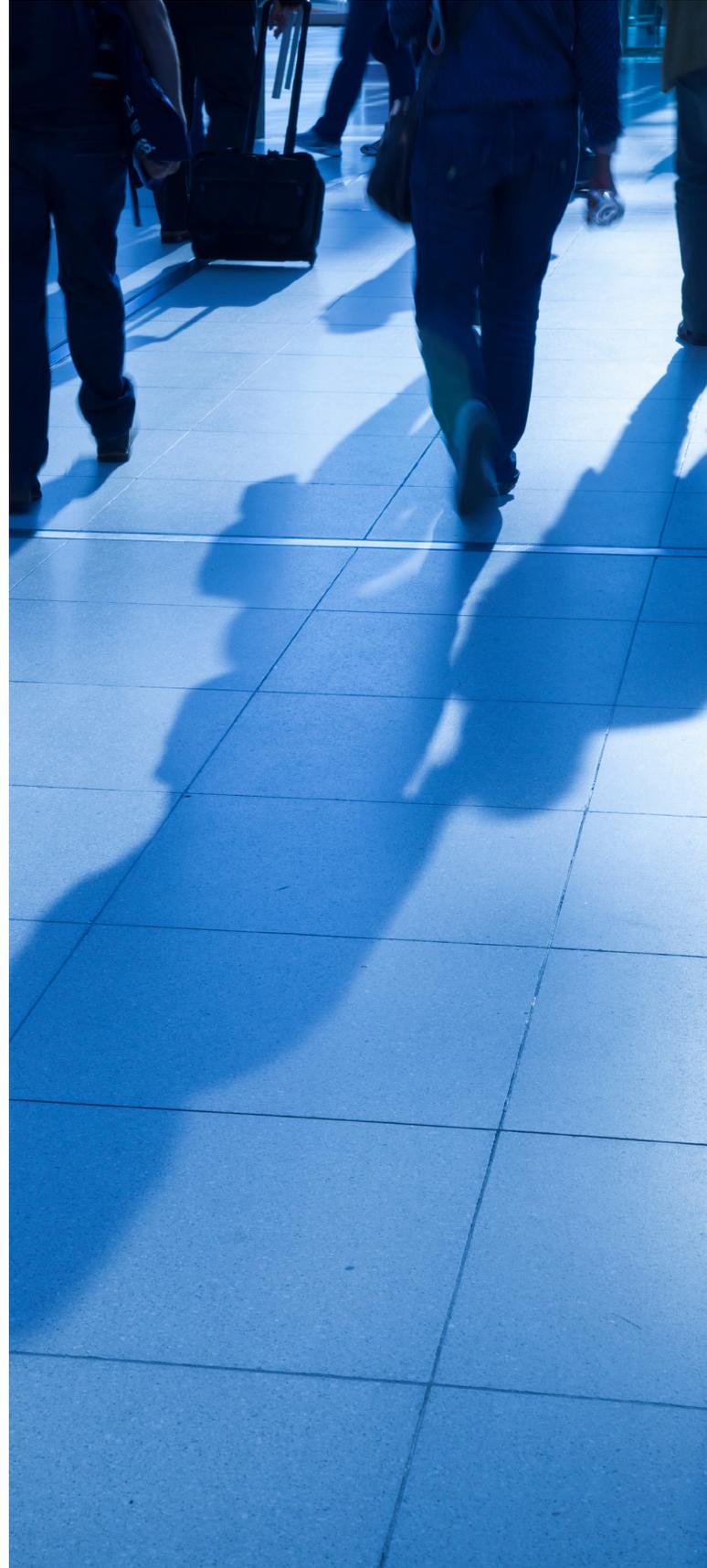
<sup>3</sup> Of note, the number of people in these positions were too low and following NPI's data privacy protocol, any number less than five is suppressed or not reported publicly.

# Economic Impact Analysis

## What is an economic impact analysis?

This section defines an economic impact analysis based on a paper published in 2019 by Northern Policy Institute and authored by Dr. Bahktiar Moazzami.<sup>4</sup> In short, it is an attempt to capture the total effect of an initial investment. For example, what is the impact of a \$1 million investment on Company X's employees, taxes, suppliers (and by extension the suppliers' suppliers), the nearby Tim Hortons, and so on? There are three different ways to measure economic impact: direct, indirect, and induced effects. As previously mentioned, this analysis will focus on the direct and total effects of temporary residents.

- **Direct Effects:** immediate outcomes, such as increased hiring by the company, output, earnings of company employees, revenue/sales, and construction.
- **Indirect Effects:** the spin-off economic impact due to increased procurement of raw materials and increased purchase of goods and services. This would lead to extra demand for suppliers' products and, therefore, provide additional business, employment, and earnings to the suppliers.
- **Induced Effects:** "the increase in business output, employment, and earnings over and above the direct and indirect impacts" (Moazzami 2019). For example, when the barista at the Tim Hortons next to Company X buys milk from the grocery store, a portion of that purchase would be considered an induced effect because part of the barista's earnings comes from serving Company X's employees.
- **Total Effect:** This is the sum of all three effects, which are direct, indirect, and induced effects.



<sup>4</sup> See "Income and Employment Multipliers for 20 Industries in 11 Census Divisions in Northern Ontario"

## Economic impact of study permit holders

IRCC data show that there were 7,980 international students in Northern Ontario in 2019: 593 in master's programs and 7,467 in undergraduate programs. Assuming that these graduate students pay an average of \$15,782 in tuition fees annually and that each international undergraduate student<sup>5</sup> pays \$22,503 per academic year, the total tuition revenue from all of these students would be almost \$176 million. This figure becomes much larger when different multipliers are added.

## Economic impact of work permit holders

Using the average wage figures provided by Job Bank Canada, along with LMIA job dispersity and work permit holders data, a weighted average total sum of all salaries can be calculated for all workers. For example, a food service supervisor in Northern Ontario makes \$15.75/hour or \$32,760 annually. 26 per cent of LMIAs issued in Northern Ontario were for food service supervisors, and there are 3,320 work permit holders in this region. Thus, the total income generated by the 863 work permit holders employed as food service supervisors (26 per cent) in Northern Ontario is almost \$28 million. The total income generated by 3,320 work permit holders living in Northern Ontario is approximately \$155 million.

Regarding international students who can also work, it was noted elsewhere in this report that they can do so on a part-time basis. For this paper, it is assumed that each international student works 20 hours per week year-round. This is very conservative, given that students' on-campus work is exempt from the 20-hour limit set by the federal government for off-campus employment. As well, international students can and do work full-time during scheduled breaks. Since most students work in low-paying jobs (Statistics Canada 2015), their average hourly wage is conservatively assumed to be \$15, which is the provincially mandated minimum wage.

Using these assumptions, when the incomes of international students in Northern Ontario are added to those of the region's work permit holders, the total is approximately \$279 million. The income earned by these temporary residents goes back into the Canadian economy in various ways, such as paying rent and buying groceries.

## Total economic impact

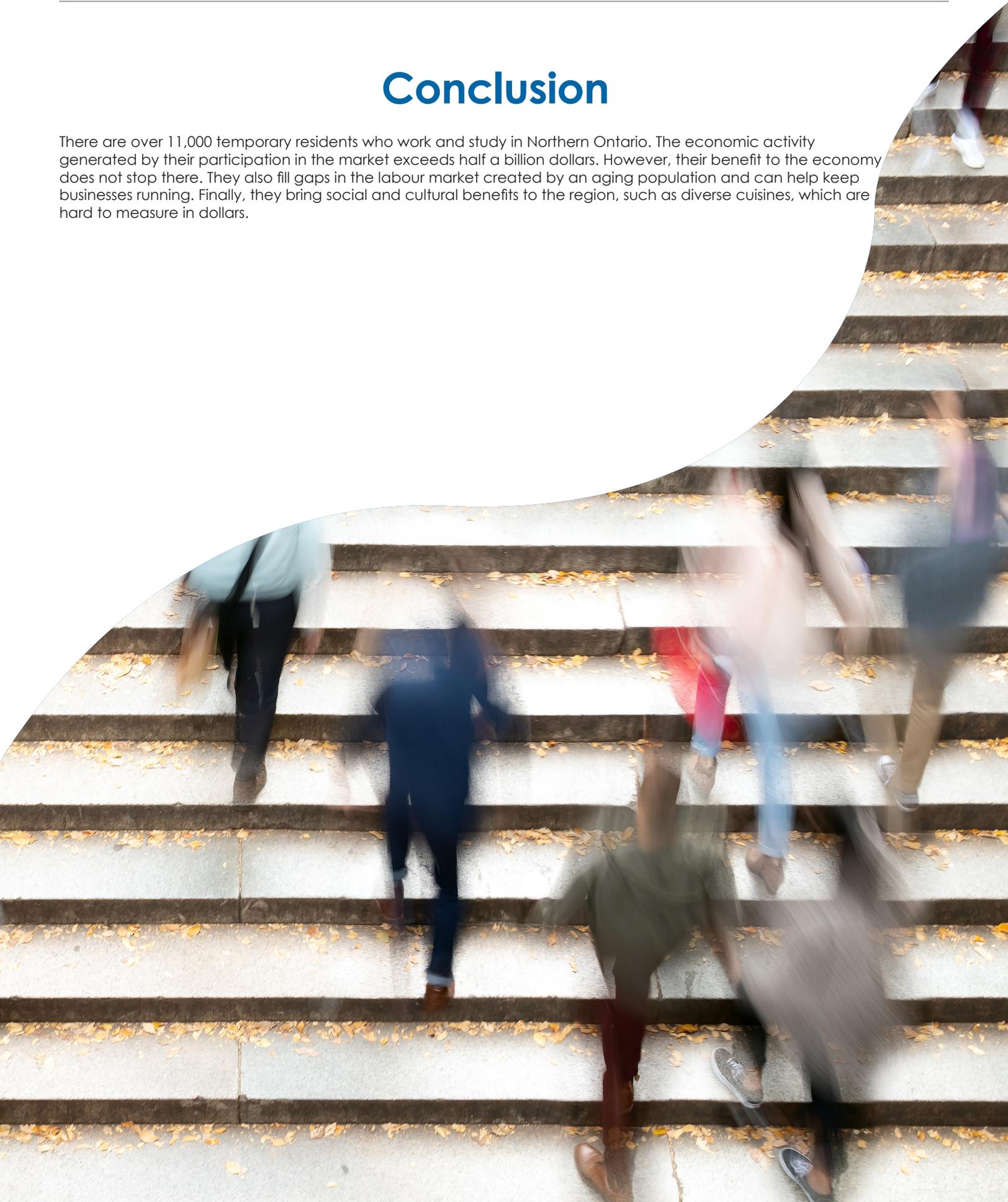
The direct income generated by temporary residents in Northern Ontario in a year is assumed to be the sum of their wages and total tuition paid. The total is approximately \$455 million. However, the total effect is greater and to calculate it, multipliers are used. Dr. Moazzami (2019) created regional multipliers for various census districts of Northern Ontario. For example, if a dollar is invested in Northwestern Ontario or Northeastern Ontario, the total multiplier effect on the gross domestic product (GDP) within each region is \$1.463 and \$1.449, respectively (Moazzami 2019). This paper uses Dr. Moazzami's (2019) regional multipliers for Northern Ontario<sup>6</sup>. Therefore, the \$455 million in the income generated by temporary residents of Northern Ontario would result in an increase in GDP of approximately \$206 million for the region. Hence, the total contribution to Northern Ontario's GDP by temporary residents is approximately \$661 million. Moreover, Northern Ontario's GDP in 2021 was \$31.5 billion (author's calculation based on data provided by Statistics Canada) and the GDP contribution by temporary residents was almost \$661 million, or 2.1 per cent of total GDP.

<sup>5</sup> Undergraduate students include both university undergraduate students and college students.

<sup>6</sup> Northern Ontario's total multiplier is calculated by taking the weighted average of Northeastern and Northwestern Ontario's specific multiplier using temporary residents living in each region as weights.

## Conclusion

There are over 11,000 temporary residents who work and study in Northern Ontario. The economic activity generated by their participation in the market exceeds half a billion dollars. However, their benefit to the economy does not stop there. They also fill gaps in the labour market created by an aging population and can help keep businesses running. Finally, they bring social and cultural benefits to the region, such as diverse cuisines, which are hard to measure in dollars.



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*Northern Policy Institute is Northern Ontario's independent, evidence-driven think tank. We perform research, analyze data, and disseminate ideas. Our mission is to enhance Northern Ontario's capacity to take the lead position on socio-economic policy that impacts our communities, our province, our country, and our world.*

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ISBN: 978-1-77868-024-3

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