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New Brunswick Institute for Research, Data and Training

Transition to Permanent Residency and Retention in New Brunswick of International Students and Temporary Foreign Workers

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Abbreviations and Definitions

Matched Individuals	Individuals whose data can be matched to (or, found in) the Citizen Data (i.e., the provincial Medicare registry). Inclusion in the Citizen Data indicates residence in New Brunswick (NB) and is used to estimate retention.
International Graduates	Post-secondary graduates of public post-secondary educational institutions in NB who are originally from outside the country and are in Canada on a study permit.
- **PGWP**	A post-graduation work permit (PGWP) is an open work permit (valid for up to three years) that allows international graduates of eligible post-secondary institutions to gain Canadian work experience after completing their studies.
Temporary Foreign Workers	Individuals who directly enter NB on work permits for work purposes (i.e., not on study permit or post-graduation work permit).
- **IMP**	The International Mobility Program (IMP) is a work permit program that may be used as a pathway for temporary foreign workers to transition to permanent residency. The IMP enables Canadian employers to hire temporary foreign workers without requiring a Labour Market Impact Assessment.
- **TFWP**	The Temporary Foreign Worker Program (TFWP) is another work permit program that may be used as a pathway to permanent residency. However, unlike the IMP, the TFWP requires employers to provide a Labour Market Impact Assessment.
Direct Permanent Residents	Permanent residents who land in NB directly from outside Canada.
PNP Immigrants	Immigrants arriving through the NB Provincial Nominee Program (PNP).
AIP Immigrants	Immigrants arriving through the Atlantic Immigration Program (AIP).

TR to PR Pathway Immigrants	Immigrants arriving through a limited-time Temporary Resident (TR) to Permanent Resident (PR) Pathway program (closed on November 2021).
Official Languages Spoken	Official NB language (English, French, Both, None) as indicated by an immigrant in the Permanent Resident Data.
Occupation	Immigrants' and temporary foreign workers' occupation under the National Occupational Classification (NOC) Level 1 (2011) indicated in the Permanent Resident Data and Transition Data, respectively.
Retention Rate	The proportion of matched individuals classified as 'retained' in NB based on Medicare eligibility status. Retention (of matched immigrants) is measured from the time of landing date as indicated in the Permanent Resident Data. An "Active" Medicare eligibility status in the Citizen Data implies that an immigrant is residing in the province. An individual is defined to have left the province if that individual's eligibility status is classified as "Left the Province" or "Left Country," or if their Medicare status was terminated for other reasons and remained as such for at least six months.

Executive Summary

Canada's reputation as a safe, welcoming country with world-class education and employment opportunities has made it a magnet for international students and temporary foreign workers. These individuals not only meet critical labour needs but also represent a potential pipeline of future permanent residents and a significant economic opportunity. Yet, for provinces like New Brunswick (NB), retaining this talent long-term remains a challenge – raising important questions about how to turn temporary migration into lasting economic and demographic growth.

This study examines the pathways to permanent residency for international graduates and temporary foreign workers in NB and compares retention rates of permanent residents in NB based on the pathway they used to obtain their permanent resident status.

Using a unique linked administrative data set that combines individual-level federal data from Immigration, Refugees and Citizenship Canada's Permanent Resident Data and Transition Data – as well as public university and college graduation data and Medicare health insurance registry data – we consider the following questions.

1. What are the transition rates to permanent residency among the following groups in NB?

    a. Temporary foreign workers, international graduates, and individuals who arrive as direct permanent residents

    b. International graduates who first obtain a post-graduation work permit[1] compared to those who transition directly to permanent residency

    c. Temporary foreign workers in NB who gain permanent residency through either the International Mobility Program or the Temporary Foreign Worker Program

2. Among temporary foreign workers in NB, which subgroups (e.g., by work permit stream, gender, or country of citizenship) are more likely to transition to permanent residency and remain in NB afterward?

3. Among international graduates of post-secondary institutions in NB, which subgroups (e.g., by institution, country of citizenship, or level of education) are more likely to obtain a post-graduation work permit and subsequently transition to permanent residency, compared to those who transition directly?

4. How do interprovincial retention rates differ by pathway to permanent residency (i.e., international graduate, temporary foreign worker, or direct permanent resident)?

[1] A post-graduation work permit is an open work permit (valid for up to three years) that allows international graduates of eligible post-secondary institutions to gain Canadian work experience after completing their studies. This differs from transitioning directly to permanent residency, which does not involve a period of post-graduation work in Canada under a temporary permit (Government of Canada [GoC], 2025c).

Highlights of Findings

Over time, the composition of permanent residents in NB has shifted, with more individuals arriving through temporary-to-permanent pathways. In earlier years, over 70% of permanent residents came directly to NB as permanent residents. By 2021, however, temporary foreign workers and international graduates together made up nearly 60% of all new permanent residents – highlighting their growing role in meeting the province's labour market needs.

International Graduates

- Among international graduates, over two-thirds of college graduates and one-third of university graduates in NB acquire post-graduation work permits.

- International graduates with post-graduation work permits exhibit notably higher permanent residency transition rates (over 60%) compared to graduates without post-graduation work permits (less than 10%).

- Among NB universities, Université de Moncton has the highest proportion of international graduates with post-graduate work permits (45.7%). Meanwhile, among NB colleges, Collège communautaire du Nouveau-Brunswick has the highest (70.3%). This likely indicates a greater interest in remaining in NB among graduates of these French language institutions.

    - These institutions also exhibit the highest permanent residency transition rates: 65.1% for Université de Moncton and 64.8% for Collège communautaire du Nouveau-Brunswick.

- Retention rates for international graduates in NB are lower than for temporary foreign workers and direct permanent residents. Only 50.8% of international graduates remain in the province five years after becoming permanent residents.

    - Statistical analysis, however, indicates that international graduates have a lower risk of exiting the province compared to direct permanent residents when controlling for factors such as age, gender, and source country of citizenship.

Temporary Foreign Workers

- Temporary foreign workers under the International Mobility Program have a higher permanent residency transition rate (44.7%) compared to those under the Temporary Foreign Worker Program (12.7%).

- Among temporary foreign workers, those in health-related occupations exhibit the highest permanent residency transition rate (62.6%).

- Retention rates of temporary foreign workers who become permanent residents also differ by work permit stream:

    - For temporary foreign workers under the International Mobility Program, average 1-year and 5-year retention rates are 77.9% and 65.1%, respectively.

    - For temporary foreign workers under Temporary Foreign Worker Program, average 1-year and 5-year retention rates are 81.5% and 66.9%, respectively.

    - Combined 1-year and 5-year retention rates for all temporary foreign workers (in both programs) are 78.6% and 65.6%, respectively.

Direct Permanent Residents

- Direct permanent residents exhibit the highest short-term retention rates, with over 80% staying in NB one year after landing, compared to international university (75.7%) and college (78.5%) graduates and temporary foreign workers (78.6%).

- However, the five-year retention rate for direct permanent residents declines to 60.6%, which is lower than that of temporary foreign workers.

Key Takeaways

NB is seeing a shift in the pathways immigrants take to become permanent residents, with a smaller share of permanent residents arriving directly from outside Canada and a growing share transitioning from temporary to permanent residency. This reflects the increasing importance of time spent in Canada – and especially time spent gaining work experience in NB – as a factor influencing decisions to pursue permanent residency and live in NB over the longer term.

For instance, international graduates who obtain a post-graduation work permit are significantly more likely to become permanent residents in NB (compared to those without a work permit), highlighting the importance of work experience in facilitating transitions to permanent residency. The increasing number of graduates with post-graduation work permits each year signals a growing interest in staying in NB to gain work experience. Cuts announced to multiple immigration programs, including international student visas, have the potential to substantially negatively impact population growth in NB, especially of people with skills in short supply.

The importance of relevant work experience is also reflected in the transition rates of temporary foreign workers, especially in the higher proportion of workers in the International Mobility Program (nearly half) who pursue permanent residency. Because the International Mobility Program includes open work permits and does not require a Labour Market Impact Assessment, workers in this pathway may have a greater variety of relevant work experience options compared to those in the Temporary Foreign Workers Program, which is employer-specific.

While a higher proportion of direct permanent residents tend to stay in NB in the short term, a higher proportion of temporary foreign workers remain in NB five years after obtaining permanent residency, suggesting the importance of prior time spent in NB. Interestingly, our statistical analysis shows that, other things constant, the permanent residents deemed most likely to stay in the longer term are international graduates. This is noteworthy because our initial descriptive results show that international graduates have lower retention rates than both temporary foreign workers *and* direct permanent residents. However, when we take into account differences in gender, marital status, age, and country of origin, we find that international graduates actually have a lower likelihood of leaving the province.

In general, transitioning to permanent residency and choosing to remain in NB appear to be influenced by pre-existing ties to the province – such as employment experiences or community networks. In other words, time spent in NB matters.

Introduction

This study examines different pathways to permanent residency in New Brunswick (NB) and their impact on retention within the province. Using a unique linked administrative data set – combining individual-level permanent resident and temporary resident data, university and college graduation records, and NB Medicare registry data – our analysis explores key factors influencing the transition from temporary to permanent residency and the retention rates of international graduates and temporary foreign workers in NB.

Background

Canada is an attractive destination for international students and temporary workers due to its safe and stable environment, high-quality education systems, and opportunities for employment and permanent residency after completing one's studies. International students and temporary foreign workers significantly contribute to the Canadian economy by filling critical labour market gaps and driving growth.

International students are often strong candidates for permanent residency due to their Canadian education credentials and local work experience, which can help ease their integration into the Canadian labour market (Dennler, 2022). Temporary foreign workers (TFWs) also bring valuable skills, particularly to sectors consistently facing labour shortages such as agriculture, construction, and health care. To support the transition of temporary residents with Canadian education and/or work experience to permanent residency, the Canadian government offers several immigration pathways.

For instance, the post-graduation work permit (PGWP) program allows international students to stay in Canada temporarily and gain valuable work experience after completing their studies. This experience can help them qualify for permanent residency through pathways such as Express Entry, which includes programs like the Federal Skilled Worker Program and the Canadian Experience Class.

Similarly, the International Mobility Program (IMP) enables Canadian employers to hire temporary foreign workers without requiring a Labour Market Impact Assessment (LMIA). This pathway opens the door for TFWs to transition to permanent residency through the Provincial Nominee Program (PNP)[2] or Express Entry.

These initiatives reflect a national commitment to utilizing immigration to support economic development. For provinces like NB, attracting and retaining skilled immigrants is crucial for meeting labour market demands and ensuring sustainable growth.

[2] TFWs under the Temporary Foreign Worker Program (TFWP) may not be eligible for PNP in NB.

According to Statistics Canada, the number of international students in Canada has steadily increased since the mid-2000s. Around 30% of those who arrived in 2000 or later became permanent residents within 10 years (Choi et al., 2021a). Among international students who graduated between 2010 and 2016, about half were still living in their province of study one year after graduation (Choi et al., 2021b).

However, retention rates vary across provinces, with the Atlantic provinces consistently exhibiting the lowest rates and Alberta the highest (Choi et al., 2021a). In NB, for instance, the 1-year conditional retention rate[3] of international students who graduated between 2010 and 2016 was just 47%, the lowest in Canada (Choi et al., 2021b).

Previous work by NB-IRDT (Beykzadeh et al., 2024) took a closer look at the retention of international students in NB after graduation. By linking provincial university and college data with NB Medicare registry data, we were able to analyze retention separately for university and college graduates. We found that about 40% of international students who graduated from NB universities between 2010 and 2021 were still living in the province one year after graduation. For international college graduates (from 2014 to 2021), the 1-year retention rate was higher – around 71% (Beykzadeh et al., 2024).

That said, 1-year retention rates for university graduates have been trending upward in more recent years. For the 2019-2021 graduating cohorts, more than 50% remained in NB one year after completing their studies (Beykzadeh et al., 2024). Looking at longer-term retention, about 10% of university graduates from 2010-2017 and 25% of college graduates from 2014-2017 were still living in the province five years after graduation (Beykzadeh et al., 2024). Despite some recent progress, this significant out-migration of international graduates remains a key challenge for NB's workforce, as it represents a loss of skilled labour trained within the province.

TFWs[4] also play a vital role in the Canadian labour force. In 2017, there were around 550,000 TFWs in the country, representing 2.9% of Canada's total employment (Lu, 2020). Their presence is especially important in certain industries. For example, in agriculture, forestry, fishing, and hunting, TFWs accounted for 15.5% of all workers (Lu, 2020), highlighting these sectors' strong reliance on the TFW labour force.

Over time, more TFWs have made the transition to permanent residency. Among those who arrived between 2000 and 2004, about 18% became permanent residents (PRs) within five years. For the 2005-2009 group, that rate rose to 25% and then remained relatively stable in the years that followed. Retention rates for TFWs who gained permanent residency followed a similar pattern. Interestingly, lower-skilled TFWs were more likely than higher-skilled ones to become PRs, although this difference has narrowed over time (Picot et al., 2022).

[3] The conditional retention rate in this Statistics Canada study (Choi et al., 2021b) is the percentage of international graduates still living in NB one year after becoming permanent residents – based on (i.e., conditional on) those who had a tax record one year after graduation. The retention rates presented in our study, however, are conditional based on those who have provincial Medicare as indicated in the Citizen Data (NB Medicare registry).
[4] These include TFWs with work permits under the IMP and the TFWP.

In NB, more than 80% of TFWs who become PRs remain in the province during their first year of permanent residency. However, only 61% remain after five years – one of the lowest long-term retention rates in Canada, only above Prince Edward Island. In contrast, larger provinces like Ontario and Alberta retain over 85% of their former TFWs after five years (Lu & Hou, 2024b).

Differences in retention rates between smaller and larger provinces may be shaped by more than just provincial policies. Factors like the size of the job market, industry composition, urban concentration, and economies of scale also play a role. While the PNP has been instrumental in helping many TFWs stay and transition to permanent residency – especially for employer-linked streams – retention is generally lower among participants in open work permit programs, like the PGWP, who are more mobile and less connected to specific regions or employers.

Understanding the characteristics and experiences of international graduates and TFWs who transition to permanent residency in NB is critical for supporting regional growth. This study explores and provides insights into the incidence (i.e., number/frequency) of these transitions and subsequent retention in the province.

By identifying the factors associated with PR transitions and long-term retention, this research offers a detailed profile of international graduates and TFWs in NB. The findings will help inform policy recommendations and strategies aimed at improving immigration pathways and retention efforts. In turn, these insights can support NB's economic development and help address demographic challenges by better retaining skilled newcomers.

Data and Methodology

Data

This study draws on multiple linked administrative data sets available through NB-IRDT, including NB's Medicare registry (i.e., Citizen Data), post-secondary graduate records from provincial universities and colleges (i.e., NB University Graduates, CCNB Student Data, NBCC Student Data, NBCCD Student Information), and immigration records (i.e., Permanent Resident Data, Transition Data).

Citizen Data

The Citizen Data is a database that provides information on NB residents' eligibility for provincial health coverage (Medicare) and their Medicare status. The database indicates whether an individual – such as an immigrant – continues to live in the province or has left, as well as the duration of their stay in NB. For this study, we use Citizen Data records covering the period from the beginning of 2005 until the end of 2022.

NB University/College Graduates

This study also includes data on individuals who graduated from public universities and colleges in NB.

The NB University Graduates data set is provided by the Maritime Provinces Higher Education Commission (MPHEC), which consolidates information from the province's four publicly funded universities into one source. The community college data – CCNB Student Data, NBCC Student Data, and NBCCD Student Information – come directly from the province's three publicly colleges.

These data sets include details such as graduation dates, immigration status, gender, education level (undergraduate, graduate, certification), field of study, program completion status, and permanent province of residence.

These data sets only cover graduates from public universities and colleges in NB and exclude graduates from other provinces or private institutions in NB. Our analysis only includes years for which these institutions collected one full calendar year of data.

Permanent Resident Data

The Permanent Resident Data (also known as IRCC Landing Records) is a federal database provided by Immigration, Refugees and Citizenship Canada (IRCC). It includes landing records for all individuals approved for permanent residency in Canada – both primary applicants and their dependents. The data contain information such as landing dates, immigration stream, country of prior citizenship, occupation (based on National Occupation Classification [NOC]

codes), and official language proficiency. The database ranges from 1985 to 2021. However, to meet data disclosure requirements, some estimates are presented using pooled years (2005-2021), or year-to-year analysis is limited to 2004 onward.

Transition Data

The Transition Data file, provided by IRCC, includes information on foreign nationals entering or remaining in Canada under various temporary permits. This includes visitors and tourists, international students, temporary resident (TR) permit holders, refugees, and work permit holders.

The database contains information such as type of permit (e.g., study or work permit), the date it was issued, country of citizenship, and occupation (based on NOC codes). For work permits, the database distinguishes between different categories, including permits for study purposes (held by international students who work during their studies), for work purposes (e.g., permits held by TFWs, or for post-graduation employment), for humanitarian and compassionate reasons, or PR applications.

Like the Permanent Resident Data, the Transition Data ranges from 1985 to 2021. To meet privacy requirements, some estimates are pooled (2001-2021), or year-to-year analysis is available from 2005 to 2021.

Table 1: Data and Year Ranges

Data Type	Years Available
Medicare Eligibility and Status of Residents	
Citizen Data (Medicare registry)	2010-2022
NB Graduation Data	
NB University Graduates	2004-2021
CCNB Student Data	2014-2021
NBCC Student Data	2014-2021
NBCCD Student Information	2016-2021
Federal Immigration Database	
Permanent Resident Data	2001-2021
Transition Data	2001-2021

Methodology

This study uses both descriptive statistics and regression models to identify factors influencing the transition to permanent residency and retention in NB for two groups:

- **International graduates** who either 1) obtain a PGWP and subsequently transition to permanent residency or 2) directly obtain permanent residency.
- **Temporary foreign workers** entering NB.

Several factors are examined to understand influences on PR transition and retention, including:

- **Gender:** Comparing the proportion of male and female international graduates/workers who transition to permanent residency.
- **Country of origin:** Identifying which countries' graduates/workers are more likely to obtain permanent residency and stay in NB.
- **Level of education:** Categorizing international graduates by their post-secondary education levels: certificate/diploma, undergraduate, and post-graduate credentials.
- **Post-secondary institution:** Comparing PR transition rates for graduates from specific NB institutions.
- **Field of study:** Analyzing whether graduates in certain fields are more likely to transition to permanent residency.
- **Occupation:** Using NOC codes to explore how occupation may relate to PR transition.

Transition to Permanent Residency

International Graduates

International graduates from public post-secondary institutions in NB are flagged in the university and college graduate data sets based on their study permit category. These graduates mainly obtain permanent residency through two avenues.

1) International graduates may enter NB on a study permit and obtain a post-graduation work permit (PGWP) after completing their studies, followed by obtaining PR status.

2) International graduates may directly obtain permanent residency (e.g., through the Federal Skilled Workers program) at the conclusion of their studies.

Those who appear in the Transition Data with a PGWP are flagged as having a PGWP. International graduates with a record in the Permanent Resident Data are flagged as permanent residents – both with and without a PGWP.

Temporary Foreign Workers

In this study, "temporary foreign workers" refers to individuals who directly enter NB on work permits specifically for employment, not on study permits or PGWPs. In Canada, there are two main types of work permit programs:

- The **International Mobility Program (IMP)**
- The **Temporary Foreign Worker Program (TFWP)**

For individuals who held more than one work permit – whether over several years or within the same year – this study considers and analyzes only the stream of their most recent work permit.

The **IMP**[5] allows Canadian employers to hire temporary workers without needing a Labour Market Impact Assessment (LMIA).[6] Under this program, temporary workers may be issued open work permits to work for any employer for a specific period of time, or they may be issued employer-specific permits, which are tied to a particular employer (GoC, n.d.).

The work permit streams under the IMP include international trade agreements (like NAFTA), spouses or common-law partners of skilled workers, International Experience Canada (which includes international youth programs/co-op work opportunities), post-graduation employment (such as the PGWP), and other programs that are deemed to advance Canada's interests (such as reciprocal employment agreements with other countries).

> *For the purpose of this study, we consider the PGWP category separately from other entrants under the IMP because it is the largest category under the IMP.*

It should be noted that we exclude certain work permit categories from the IMP due to low matching rates or low PR transition rates. These categories primarily include individuals on short-term permits, such as those under trade agreements[7] or reciprocal employment arrangements,[8] where the duration of stay in NB is limited. Additionally, we exclude work permits granted for other purposes, such as study purposes, permits issued for humanitarian and compassionate reasons, or permits for PR applications,[9] as these are not specifically issued for work purposes.

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[5] For more information on the IMP, see Government of Canada [GoC] (2025a).
[6] An LMIA is a document from Employment and Social Development Canada (ESDC) that employers in Canada may need to obtain before hiring a foreign worker. A positive LMIA shows a need for a foreign worker to fill a job that no Canadian worker or PR is available to do (GoC, 2025b).
[7] Approximately 90% of individuals under trade agreements are unable to be matched to the Citizen Data (Medicare registry).
[8] Reciprocal employment arrangements include exchange professors and visiting lecturers.
[9] These individuals are in the transition phase and are captured as "direct PRs."

Altogether, the categories excluded from the IMP (not including the PGWP) make up about 35% of total IMP participants each year.

The **TFWP** allows employers to hire foreign workers to fill vacant positions – but, unlike IMP, the TFWP requires employers to provide an LMIA. All work permits issued under the TFWP are employer-specific, meaning a foreign worker is authorized to work only for the employer listed on their permit. If they wanted to change employers or work for a different company, they would need to apply for a new work permit (GoC, n.d.).

The TFWP includes various work permits streams, such as those for home health care providers (e.g., live-in caregivers), high-wage and low-wage positions, and agricultural programs.

> *Short-term permits (in terms of continuous stay in NB) – such as those used for seasonal programs like agriculture – are not included in this analysis of the TFWP. These permits typically involve only brief stays in NB, which means workers are not eligible for NB Medicare. As a result, these individuals have low matching rates and low PR transition rates.*[10]

TFWs with a record in the IRCC Landing Records are flagged as PRs. For TFWs, we provide separate estimates for each work program – the IMP and the TFWP – including the number of individuals in each program, transition to permanent residency, and retention rates.

Direct Permanent Residents

In this study, "direct PRs" refers to individuals who immigrated to NB as PRs from outside Canada without having previously held a study permit or work permit in the province.[11] In other words, they are not international graduates or TFWs. However, individuals who are in the process of transitioning to permanent residency (classified under "PR application" in the Transition Data) are included in the direct PR category.

Interprovincial Retention Rates

We limit the analysis of PR transitions and retention in NB to PRs who initially intended to settle in NB, based on their reported destination. Individuals who indicated a different province as their intended destination are excluded from the analysis. Additionally, only immigrants who could be matched to the Citizen Data are included, along with how long they stayed (i.e., duration of retention) in NB. Retention of PRs is measured from the date of landing as recorded in the IRCC Permanent Resident Data.

An individual is considered to have left NB if their eligibility status in the Citizen Data is recorded as "Left the Province" or "Left Country." Individuals whose status was "Terminated" for other

[10] These excluded categories account for about 11% of total TFWP participants each year.
[11] International graduates or TFWs from another province who become PRs in NB are also captured as direct PRs – as long as their intended destination is NB.

reasons are also considered to have left the province if their status remained unchanged for at least six months.

Retention rates after individuals are granted permanent residency are estimated for three groups:

1. **International graduates** who become PRs.[12]
2. **TFWs** who become PRs, disaggregated into two groups: those under the IMP and those under the TFWP.
3. **Direct PRs**, that is, individuals who directly arrive in NB as PRs.

Statistical Analysis

To complement the descriptive statistics described above, we also conducted a statistical analysis of outcomes that allowed us to disentangle various factors that may potentially affect the transition to permanent residency. Specifically, we employed logistic regression to analyze factors associated with international graduates and TFWs becoming PRs. We also modelled for factors associated with duration of stay in NB. Technical details of the equations used to estimate results are available in Appendix 2.

Limitations

This study only includes PRs who identified NB as their intended province of residence. As a result, it does not capture any TFWs or PRs who indicated other provinces/territories in Canada as their intended destination and then subsequently moved to NB. For example, an international graduate who studied in Ontario, acquired post-graduation employment there, and obtained permanent residency in Ontario (with Ontario listed as their intended destination in their PR application) would not be included in the study sample.[13]

[12] The number of international graduates who become permanent residents without first holding a PGWP is very small. As a result, retention rates are not broken down separately for graduates with and without a PGWP.

[13] Extending the current analysis to include PRs who land elsewhere and subsequently move to NB requires a different data linkage and will be the subject of future work.

Results

Composition of Permanent Residents by Arrival Pathway

Figure 1 shows the yearly breakdown of PRs in NB from 2005 to 2021, grouped by the pathway they used to obtain PR status:

- International graduate
- Temporary foreign worker (TFW)
- Direct PR

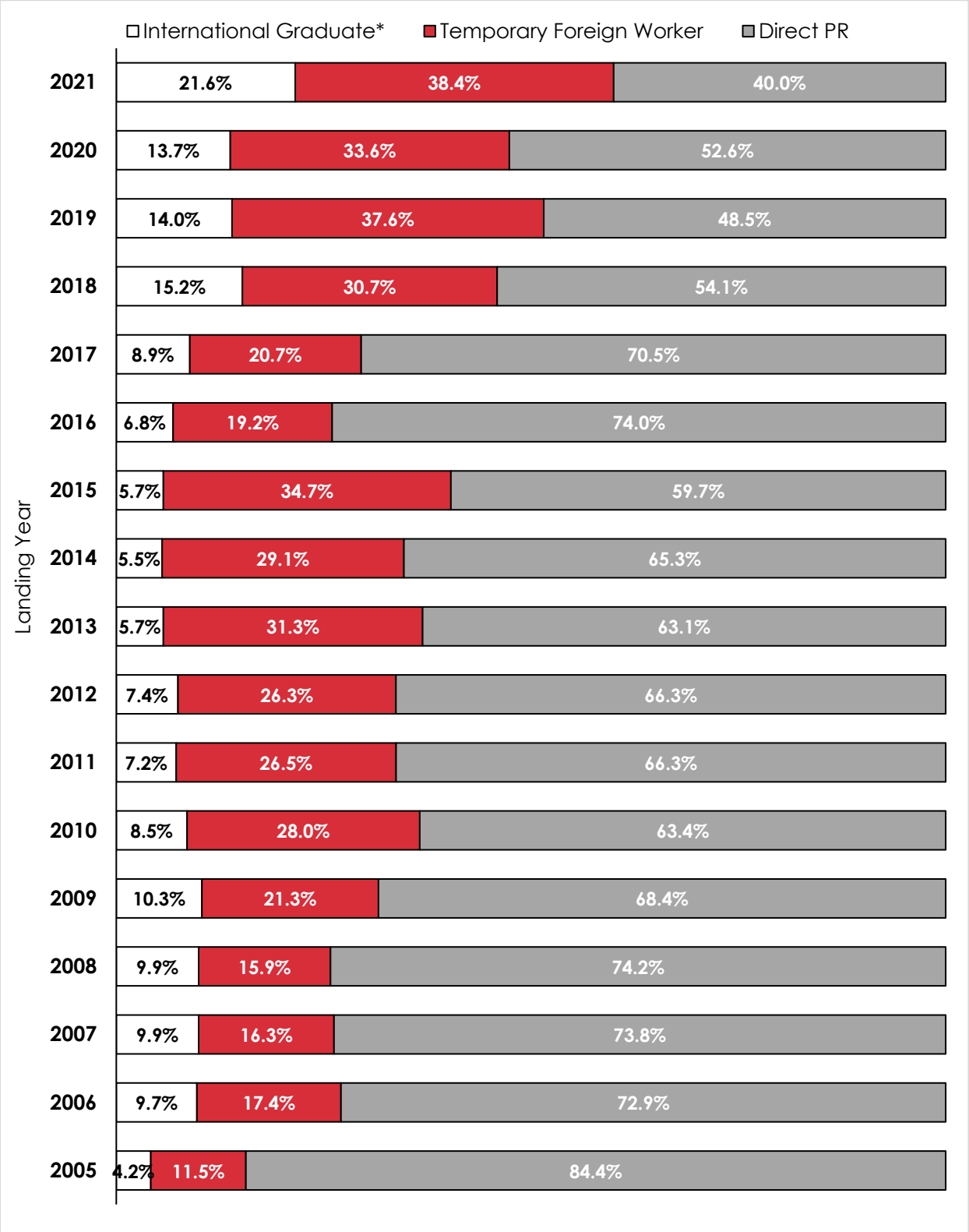
Throughout the study period, individuals who obtained permanent residence directly (i.e., direct PRs) consistently made up the largest share of PR landings, especially in the earlier years. However, their relative share gradually declined over time, with a particularly noticeable drop after 2017. By 2021, direct PRs accounted for only 40% of all new PRs, reflecting a growing shift toward temporary-to-permanent (i.e., TR-to-PR) transitions.

Meanwhile, the share of PRs transitioning from the TFW pathway has steadily grown. In 2005, TFWs made up 11.5% of all PRs, with this share reaching 38.4% by 2021.

Similarly, the international graduate pathway, while starting with a smaller share, has also shown consistent growth over the years. In 2005, international graduates made up 7.9% of all PRs. By 2021, this share had grown to 20.4%.

These trends reflect efforts to attract and retain TFWs and international graduates, highlighting changes over time in federal immigration policy to address labour market needs – such as through temporary workers and participants in the PGWP program – as well as policies specific to NB.

Figure 1: Composition of Permanent Residency by PR Pathway (Landing Years 2005-2021)



*International graduates include university (2005-2021) and college (2014-2021) graduates.

International Graduates

This section focuses on international students who graduated from post-secondary institutions in NB. It estimates the share of international graduates who acquire a PGWP after graduation and later transition to permanent residency in the province. The analysis is broken down by gender, post-secondary institution, level of education, country of citizenship, and field of study. It also explores the distribution of occupations these graduates take, the immigration streams they use to become PRs, and the retention rates of matched PRs[14] in NB.

Graduates by Post-Graduation Work Permit Status and Transition to Permanent Residency

Table 2 below shows the number of international students who graduated each year from post-secondary institutions in NB, along with the percentage who obtained a PGWP. The data indicate that around one-third of university graduates obtained a PGWP after graduating. This proportion has steadily grown over time – from just 15.6% in 2004 to more than 50% for students who graduated after 2019.

For college graduates, about two-thirds received a PGWP after graduation. As the number and proportion of international graduates from NB colleges has grown,[15] so has the proportion of international graduates obtaining PGWPs. By 2021, three out of four college graduates held a work permit after graduation – a significant increase compared to fewer than half in 2014.

[14] As a reminder, matched PRs are PRs whose information can be "matched" to, or found in, the Citizen Data (Medicare registry). Inclusion in the Citizen Data is necessary for calculating retention, as this data set allows us to see whether PRs settled in NB as well as the date of departure for those who leave.
[15] In the graduating class of 2014, only 5.1% of graduates were from outside Canada. However, by 2021, the percentage of graduates from outside Canada had increased six-fold to 29.7% (Beykzadeh et al, 2021).

Table 2: Number of International Graduates by Post-Graduation Work Permit Status (Graduation Years 2004/2014-2021)

Graduation Year	University (2004-2021)			College (2014-2021)		
	N	No PGWP	PGWP	N	No PGWP	PGWP
2004	320	84.4%	15.6%			
2005	425	76.5%	23.5%			
2006	470	73.4%	26.6%			
2007	445	79.8%	20.2%			
2008	415	74.7%	25.3%			
2009	430	75.6%	24.4%			
2010	380	73.7%	26.3%			
2011	335	68.7%	31.3%			
2012	375	69.3%	30.7%			
2013	450	71.1%	28.9%			
2014	560	73.2%	26.8%	75	53.3%	46.7%
2015	545	70.6%	29.4%	80	43.8%	56.3%
2016	555	69.4%	30.6%	155	35.5%	64.5%
2017	535	61.7%	38.3%	170	44.1%	55.9%
2018	495	50.5%	49.5%	205	36.6%	63.4%
2019	570	46.5%	53.5%	290	34.5%	65.5%
2020	550	47.3%	52.7%	655	30.5%	69.5%
2021	570	49.1%	50.9%	880	25.0%	75.0%
Total	**8425**	**66.3%**	**33.7%**	**2510**	**32.1%**	**68.1%**

Overall, over 60% of international **university** graduates with a PGWP transitioned to permanent residency. In contrast, only 2.3% without a PGWP obtained PR status in the province. Although the transition rate from PGWP to PR fluctuates from year to year, it typically stays above 50%. However, the 2021 graduate cohort saw a notable drop: only 34.5% of PGWP holders in that group became PRs – the lowest rate recorded among all graduate cohorts (see Table 3 below).

Similarly, over 60% of international **college** graduates with a PGWP transitioned to PR status. The 2021 international college graduate cohort also had the lowest transition rate: 43.9% of PGWP holders in that group became PRS.

The lower transition rates to PR for both university and college graduates in 2021 are likely due to limitations in the observable data. For example, **university** graduates from 2021 with a 3-year PGWP can apply for permanent residency or for a temporary work permit up until 2024. In addition, a PGWP extension was granted to international graduates in 2022 as part of Canada's

COVID-19 response (GoC, 2022). Some graduates may still be in the process of working towards or applying for permanent residency, and their outcomes are not yet reflected in the data.

College graduates, who typically receive shorter PGWPs,[16] are more likely to have completed their transition within the available timeframe. This could help explain the differences between the cohorts. Application processing backlogs at IRCC during the pandemic (El-Assal & Thevenot, 2022) also may have impacted transition rates. Taken together, these factors suggest that the drop in 2021 likely reflects limited data and processing delays rather than a long-term trend.

PR transition rates are consistently low for graduates without PGWPs – a trend seen across all categories in the study. This indicates that international graduates in NB are more likely to first acquire a PGWP in the province and later transition to permanent residency, rather than directly obtaining permanent residency.

Table 3: PR Transition Rates Among International Graduates (Graduation Years 2004/2014-2021)

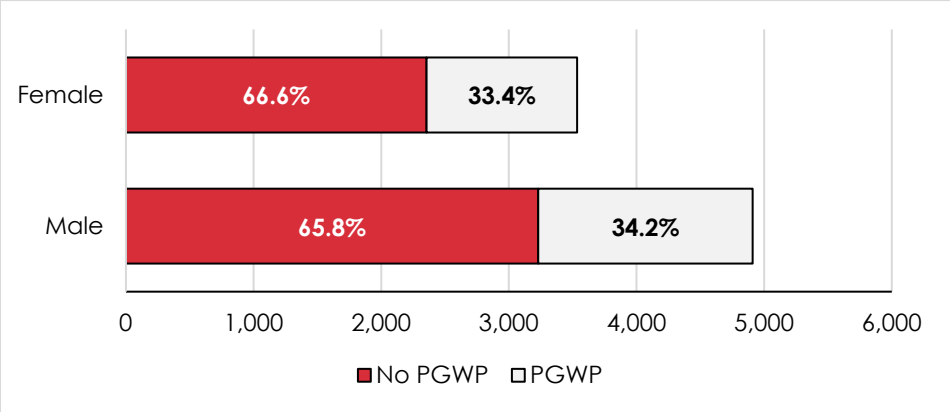
Graduation Year	University (2004-2021)		College (2014-2021)	
	Became PR		Became PR	
	No PGWP	PGWP	No PGWP	PGWP
2004	1.9%	90.0%		
2005	1.5%	85.0%		
2006	1.4%	76.0%		
2007	4.2%	77.8%		
2008	3.2%	71.4%		
2009	3.1%	57.1%		
2010	3.6%	55.0%		
2011	4.3%	42.9%		
2012	1.9%	52.2%		
2013	0.0%	57.7%		
2014	1.2%	66.7%	0.0%	85.7%
2015	1.3%	75.0%	0.0%	88.9%
2016	1.3%	76.5%	0.0%	85.0%
2017	1.5%	78.0%	6.7%	78.9%
2018	6.0%	63.3%	13.3%	69.2%
2019	3.8%	62.3%	5.0%	76.3%
2020	1.9%	51.7%	5.0%	67.0%
2021	1.8%	34.5%	11.4%	43.9%
Total	**2.3%**	**62.3%**	**6.8%**	**62.0%**

[16] For college programs lasting between eight months to less than two years, a PGWP may be issued for up to the same length as the program. For programs of two years or more, a 3-year PGWP may be issued.

Gender

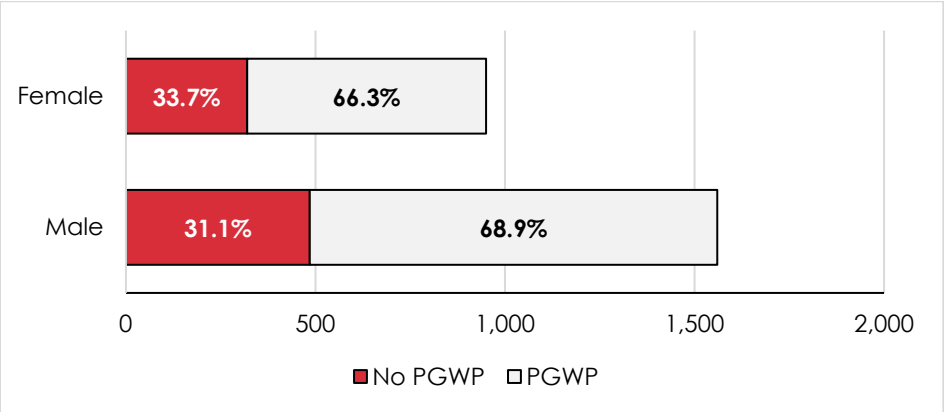
Figure 2 below shows that male and female university graduates[17] follow similar patterns in obtaining a PGWP, with about two-thirds of graduates from each group receiving one. Over time, the overall share of graduates with a PGWP has increased for both genders. In 2004, only about 16% of male and female graduates held a PGWP. By 2021, that share had risen to 47% for males and 55% for females (result not shown in graph).

Figure 2: Number of International University Graduates by Gender and Post-Graduation Work Permit Status (Pooled Graduation Years 2004-2021)



Among international college graduates,[18] a slightly higher proportion of males (68.9%) hold a PGWP compared to females (66.3%) (see Figure 3). Between 2014 and 2021, the share of PGWP holders increased significantly for both genders. For males, the share rose from 50% to 77.1%, while for females it increased from 41.7% to 71.7% (result not shown in graph).

Figure 3: Number of International College Graduates by Gender and Post-Graduation Work Permit Status (Pooled Graduation Years 2014-2021)



[17] Approximately 42% of international graduates from NB public universities are female.
[18] Around 38% of international graduates of NB public colleges are female.

Table 4 shows that male and female **university** graduates with PGWPs transition to permanent residency in NB at similar rates. However, among college graduates with PGWPs, females have higher PR transition rates – about 6 percentage points higher than their male counterparts.

Table 4: PR Transition Rates of International Graduates by Gender (Pooled Graduation Years 2004/2014-2021)

Gender	University (2004-2021)		College (2014-2021)	
	Became PR		Became PR	
	No PGWP	PGWP	No PGWP	PGWP
Male	2.5%	62.2%	8.2%	59.5%
Female	2.1%	62.1%	9.2%	65.4%

NB Post-Secondary Institutions[19]

Table 5 shows that, among international graduates from NB's post-secondary institutions, those from CCNB have the highest proportion of PGWP holders, at 70.3%. In contrast, graduates from MTA have the lowest proportion, at 10.7%.

Among the universities, international graduates from UMoncton have the highest proportion of PGWP holders. These differences likely reflect variations in the extent to which international student graduates intend to stay in NB after graduation.

Table 5: Number of International Graduates and Proportion of Post-Graduation Work Permits by NB Post-Secondary Institution (Pooled Graduation Years 2004/2014-2021)

Institute	Pooled Graduation Years	N	No PGWP	PGWP
CCNB	2014-2021	1180	29.7%	70.3%
NBCC	2014-2021	1325	34.3%	65.7%
NBCCD	2014-2021	15	66.7%	33.3%
MTA	2004-2021	560	89.3%	10.7%
STU	2004-2021	395	77.2%	22.8%
UNB	2004-2021	5605	67.0%	33.0%
UMoncton	2004-2021	1880	54.3%	45.7%

[19] The publicly funded post-secondary institutions observed in this report include Collège communautaire du Nouveau-Brunswick (CCNB), New Brunswick Community College (NBCC), the New Brunswick College of Craft and Design (NBCCD), Mount Allison University (MTA), St. Thomas University (STU), the University of New Brunswick (UNB), and Université de Moncton (UMoncton).

Table 6 breaks down the transition rate from temporary resident (TR) to PR by institution. Among graduates **with** a PGWP, francophone institutions show the highest transition rates: 65.1% for UMoncton and 64.8% for CCNB. In contrast, graduates **without** a PGWP generally have much lower TR to PR transition rates – below 5% – with the exception of NBCC, where the rate is relatively higher, at 10%.

Among **university** graduates who become PRs directly after graduation, about one-third do so through the Federal Skilled Worker immigration stream, while approximately 22% use the NB Provincial Nominee Program (PNP). For **college** graduates without a PGWP who transition directly to permanent residency, about 38% do so through the PNP.

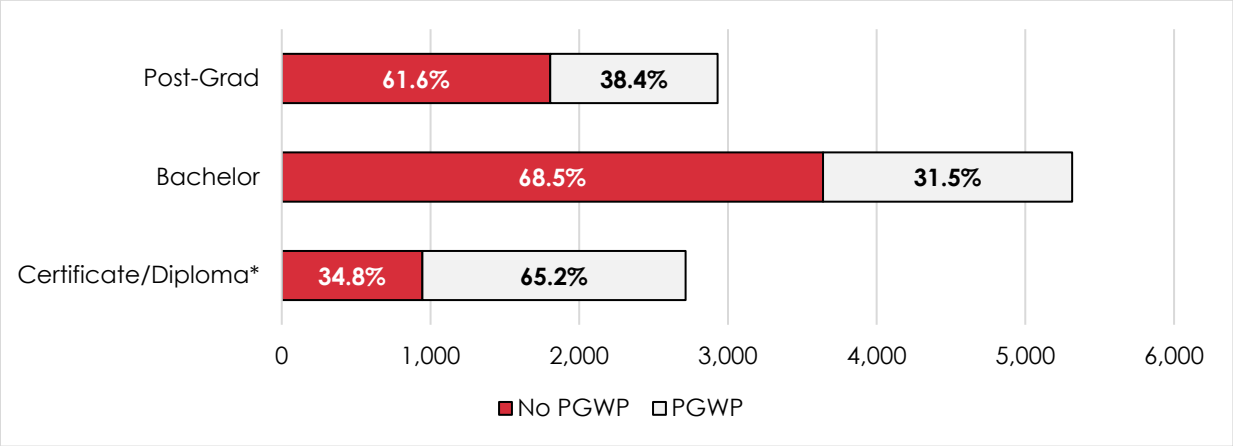
Table 6: PR Transition Rates of International Graduates by NB Post-Secondary Institution (Pooled Graduation Years 2004/2014-2021)

Institution	Pooled Graduation Years	Became PR	
		No PGWP	PGWP
CCNB	2014-2021	4.3%	64.8%
NBCC	2014-2021	10.0%	58.9%
NBCCD	2014-2021	0.0%	50.0%
MTA	2004-2021	1.0%	50.0%
STU	2004-2021	3.3%	52.6%
UNB	2004-2021	2.3%	61.7%
UMoncton	2004-2021	2.9%	65.1%

Education Level

Figure 4 shows that about two-thirds of international graduates with certificates or diplomas hold a PGWP. Among university graduates in NB, 31.5% of those with undergraduate degrees and 38.4% of those with postgraduate degrees hold a PGWP.

Figure 4: Number of International Graduates and Proportion of Post-Graduation Work Permits by Education Level (Pooled Graduation Years 2004-2021 for University, 2014-2021 for College)



**College Pooled Graduation Years: 2014-2021*

Table 7 shows that among international graduates **with** a PGWP, PR transition rates are relatively consistent across all education levels, with undergraduate degree holders exhibiting the highest rate at 63.6%. In contrast, among international graduates **without** a PGWP, those with undergraduate degrees have a much lower PR transition rate of just 1.5% while graduates with certificates or diplomas have the highest rate at 7.4%.

Table 7: PR Transition Rates by Education Level and Post-Graduation Work Permit Status (Pooled Graduation Years 2004/2014-2021)

Education Level	Became PR	
	No PGWP	PGWP
Certificate/Diploma (2014-2021)	7.4%	62.0%
Undergraduate (2004-2021)	1.5%	63.6%
Postgraduate (2004-2021)	3.6%	59.8%

Country of Citizenship

The category "country of citizenship" includes countries with at least 200 university or graduates in NB between 2004 and 2021. Countries with fewer than 200 graduates are grouped under the "Other" category.

Table 8 shows that NB **university** graduates from India – the second-largest source country – have one of the highest PGWP rates, at 56.3%. In contrast, only about one-third of university graduates from China – the largest source country – hold a PGWP. Saudi Arabia has the lowest PGWP rate among NB university graduates, at just 8.8%.

For **college** graduates, India has both the highest number of graduates and the second-highest PGWP rate (77.8%) among all source countries.

Table 8: Number of International Graduates and Proportion of Post-Graduation Work Permits by Country of Citizenship (Pooled Graduation Years 2004/2014-2021)

Country	University (2004-2021)			College (2014-2021)		
	N	No PGWP	PGWP	N	No PGWP	PGWP
China	2340	68.8%	31.2%	40	50.0%	50.0%
India	630	43.7%	56.3%	405	22.2%	77.8%
Cameroon	115	47.8%	52.2%	375	29.3%	70.7%
Saudi Arabia	455	91.2%	8.8%	5	100.0%	0.0%
Nigeria	260	44.2%	55.8%	50	30.0%	70.0%
Morocco	210	40.5%	59.5%	125	20.0%	80.0%
US	330	86.4%	13.6%	20	75.0%	25.0%
Mali	205	46.3%	53.7%	80	25.0%	75.0%
Other	3915	67.9%	32.1%	1425	36.1%	63.9%

Note: All named source countries have a minimum of 200 college and university graduates in NB.

Table 9 presents the PR transition rates of international graduates by country of citizenship, broken down by PGWP status, for graduates from 2004 to 2021.

Among those with a PGWP, graduates from countries such as Nigeria and Morocco had the highest PR transition rates – 85.7% and 70.8%, respectively.

Among **university** graduates with a PGWP, PR transition rates vary significantly by country of citizenship. Graduates from Nigeria have the highest PR transition rate at 79.3%, followed by graduates from Morocco at 70.8%. Graduates from China and India have transition rates of 63.4% and 60.0%, respectively. In contrast, graduates from Saudi Arabia have the lowest transition rate among this group, at 37.5%.

Among **college** graduates with a PGWP, those from Nigeria have the highest PR transition rate at 85.7%, followed closely by graduates from Mali at 75.0% – though this reflects a smaller sample size. Among source countries with larger numbers of graduates, India and Cameroon have transition rates of 46.9% and 60.4%, respectively (Table 9).

Table 9: PR Transition Rates of International Graduates by Country of Citizenship and Post-Graduation Work Permit Status (Pooled Graduation Years 2004/2014-2021)

Country	University (2004-2021)		College (2014-2021)	
	Became PR		Became PR	
	No PGWP	PGWP	No PGWP	PGWP
China	1.9%	63.4%	20.0%	50.0%
India	5.5%	60.0%	17.6%	46.9%
Cameroon	0.0%	58.3%	0.0%	60.4%
Saudi Arabia	0.0%	37.5%	0.0%	0.0%
Nigeria	4.5%	79.3%	0.0%	85.7%
Morocco	5.9%	70.8%	0.0%	63.2%
US	1.8%	55.6%	0.0%	0.0%
Mali	5.3%	63.6%	25.0%	75.0%
Other	2.6%	60.6%	6.8%	65.9%

Note: All named source countries have a minimum of 200 college and university graduates in NB.

Field of Study

Table 10 breaks down the distribution of international graduates by field of study[20] and their post-graduation work permit status.

Among NB **university** graduates, the data show wide variation in the proportion of PGWP holders by field of study. For example, 41.1% of graduates in "Mathematics, Computer, and Information Sciences" and 40.8% in "Health and Related Fields" received a PGWP – the highest rates observed. In contrast, only 10.5% of "Education" graduates and 24.0% of "Humanities" graduates held a PGWP. Graduates in "Business, Management, and Public Administration" – the largest group with 3805 individuals – had a PGWP uptake rate of 36.4%.

Among **college** graduates, PGWP uptake is generally higher across most fields of study. Graduates in "Health and Related Fields" show the highest uptake, with 75.0% holding a PGWP. This is followed closely by those in "Architecture, Engineering, and Related Trades" (70.7%) and "Business, Management, and Public Administration" (69.4%). On the lower end, the "Other" category and "Personal, Protective, and Transportation Services" have uptake rates of 57.7% and 57.1%, respectively (Table 10).

[20] The field of study is based on primary groupings of the Classification of Instructional Programs (CIP) (Statistics Canada [StatCan], 2022).

Table 10: Number of International Graduates by Field of Study and Post-Graduation Work Permit Status (Pooled Graduation Years 2004/2014-2021)

Field of Study	University (2004-2021)			College (2014-2021)		
	N	No PGWP	PGWP	N	No PGWP	PGWP
Education	190	89.5%	10.5%	10	50.0%	50.0%
Humanities	250	76.0%	24.0%	0	NA	NA
Social and Behavioural Sciences and Law	935	73.8%	26.2%	105	38.1%	61.9%
Business, Management, and Public Administration	3805	63.6%	36.4%	1080	30.6%	69.4%
Physical and Life Sciences and Technologies	365	76.7%	23.3%	15	33.3%	66.7%
Mathematics, Computer, and Information Sciences	900	58.9%	41.1%	275	38.2%	61.8%
Architecture, Engineering, and Related Trades	1445	67.1%	32.9%	615	29.3%	70.7%
Health and Related Fields	245	59.2%	40.8%	140	25.0%	75.0%
Personal, Protective, and Transportation Services	10	0.0%	100.0%	140	42.9%	57.1%
Other	315	63.5%	36.5%	130	42.3%	57.7%

Table 11 shows the rates at which international graduates transition to permanent residency, broken down by field of study. Among **university** graduates, those in "Mathematics, Computer, and Information Sciences" have the highest transition rate at 70.3%, followed closely by "Health and Related Fields" (65.0%) and "Business, Management, and Public Administration" (64.6%). In contrast, graduates without a PGWP have notably lower transition rates across most fields – typically below 5%.

For **college** graduates, the highest PR transition rate is among those in "Health and Related Fields" at 68.2%, followed closely by "Mathematics, Computer, and Information Sciences" (64.7%) and "Social and Behavioral Sciences and Law" (61.5%).

Table 11: PR Transition Rates of International Graduates by Field of Study and Post-Graduation Work Permit Status (Pooled Graduation Years 2004/2014-2021)

Field of Study	University (2004-2021)		College (2014-2021)	
	Became PR		Became PR	
	No PGWP	PGWP	No PGWP	PGWP
Education	0.0%	50.0%	0%	0%
Humanities	2.6%	63.6%	NA	NA
Social and Behavioural Sciences and Law	2.9%	57.1%	22.2%	61.5%
Business, Management, and Public Administration	1.4%	64.6%	7.8%	63.6%
Physical and Life Sciences and Technologies	3.6%	47.1%	0.0%	33.3%
Mathematics, Computer, and Information Sciences	3.8%	70.3%	4.5%	64.7%
Architecture, Engineering, and Related Trades	4.1%	54.7%	5.7%	58.0%
Health and Related Fields	0.0%	65.0%	0.0%	68.2%
Personal, Protective, and Transportation Services	NA	50.0%	15.4%	62.5%
Other	0.0%	56.5%	0.0%	60.0%

Distribution of International Graduates Who Became PRs

Immigration Stream

For international **university** graduates, the Provincial Nominee Program (PNP) is the most common immigration stream for transitioning to permanent residency, accounting for 43.2% of university graduate transitions. The Canadian Experience Class (CEC) is the second most common stream, representing 21.7% of PR transitions among this group. However, when we narrow the study period to graduates who arrived in NB more recently (between 2017 and 2021; see Table 28 in Appendix 1) we see that 29.1% transitioned to permanent residency through the Atlantic Immigration Program (AIP), which was first introduced in 2017.

Among **college** graduates the PNP remains the largest pathway to PR, representing 35.4% of all PR transitions among college graduates. The AIP also emerges as a significant stream, accounting for 31.8% of transitions to PR. However, as shown in Table 28 in Appendix 1, after the AIP was introduced in 2017, 36.2% of college graduates who became PRs between 2017 and 2021 opted to transition to permanent residency through the AIP.

Overall, these results highlight the importance of the PNP as the dominant pathway for both university and college graduates transitioning to permanent residency, as well as the importance of the AIP among recent cohorts (2017-2021).

Table 12: Distribution of International Graduates Who Became PRs by Immigration Stream (Pooled Education Years 2004/2014-2021)

Immigration Stream	University (2004-2021)		College (2014-2021)	
	Became PR		Became PR	
	N	% of Total	N	% of Total
Provincial Nominee Program*	825	43.2%	395	35.4%
Sponsored Family**	115	6.0%	40	3.6%
Atlantic Immigration Program*	240	12.6%	355	31.8%
Skilled Worker**	180	9.4%	5	0.4%
Other**	10	0.5%	0	0.0%
Canadian Experience Class**	415	21.7%	55	4.9%
TR to PR Pathway**	125	6.5%	265	23.8%
Total	1910		1115	

NB Provincial Streams
****Federal Steams***

Occupation

Table 13 shows the occupations reported by international graduates who become PRs, based on the information provided in their applications. Among **university** graduates, the largest share of PRs – about one in four – are employed in "Sales and Services" occupations. This is followed by "Natural and Applied Sciences" at 23.9% and "Business, Finance, and Administration" at 16.8%.

Similarly, among **college** graduates, the largest share of PRs – nearly one-third – are employed in "Sales and Services." This is followed by "Natural and Applied Sciences" (14.2%) and "Other" occupations (14.6%).

A substantial share of university and college graduates who become PRs and work in "Sales and Services" report working as "Customer and Information Services Representatives." This occupation group accounts for approximately 37% of university graduates and 41% of college graduates in this category.

These individuals may work in retail, contact centers, and a variety of public and private organizations. Some positions within this occupation require post-secondary education (PSE) or

relevant experience. It is possible that graduates who apply for PR under this occupation category – based on NOC codes – would accumulate more points for a successful PR application by combining work experience with a PSE degree or diploma. This may be one of the reasons behind the large share of graduates working as "Customer and Information Service Representatives."

Table 13: Distribution of International Graduates Who Became PRs by Occupation (Pooled Graduation Years 2004/2014-2021)

Occupation	University (2004-2021)		College (2014-2021)	
	Became PR		Became PR	
	N	% of Total	N	% of Total
Management	140	7.3%	35	3.1%
Business, Finance, and Administration	320	16.8%	100	8.8%
Natural and Applied Sciences	455	23.9%	160	14.2%
Health	60	3.1%	115	10.2%
Education, Law, and Social Services	135	7.1%	70	6.2%
Art, Culture, Recreation, and Sport	10	0.5%	5	0.4%
Sales and Services	480	25.2%	370	32.7%
Trades, Transportation, and Equipment	5	0.3%	55	4.9%
Natural Resources, Agriculture, and Related Production	0	0.0%	0	0.0%
Manufacturing and Utilities	10	0.5%	55	4.9%
Other	290	15.2%	165	14.6%
Total	1905		1130	

Landings and Retention Rates

Table 14 shows the yearly landings and retention rates of international **university** graduates who obtained permanent residency in NB between 2005 and 2021. On average, about three-quarters (75.7%) of these international graduates remained in NB one year after becoming PRs. While earlier landing years show lower 1-year retention rates that fluctuated due to the smaller number of landings, retention rates have been higher in more recent years. Since 2017, 1-year retention rates of international university graduates have been above 70%, with graduates who landed in 2021 showing retention rates near 80%.

On average, 57.7% of international university graduates remain in NB three years after obtaining permanent residency. In the earlier years of the data, rates fluctuate due to small sample sizes.

However, for more recent cohorts (2017-2019) the 3-year retention rate is more stable, at around 60%. Notably, more than half of international graduates with permanent residency are still living in the province five years after landing.

Table 14: Annual Matched Landings and Retention Rates of International University Graduates Who Became PRs (Landing Years 2005-2021)

Landing Year	N	1-Year Retention	3-Year Retention	5-Year Retention
2005	20	50.0%	50.0%	25.0%
2006	70	78.6%	42.9%	42.9%
2007	70	71.4%	42.9%	35.7%
2008	75	73.3%	40.0%	33.3%
2009	80	75.0%	68.8%	56.3%
2010	70	64.3%	35.7%	28.6%
2011	60	83.3%	66.7%	66.7%
2012	65	84.6%	69.2%	69.2%
2013	50	80.0%	80.0%	70.0%
2014	55	90.9%	72.7%	63.6%
2015	50	70.0%	60.0%	50.0%
2016	90	66.7%	55.6%	55.6%
2017	110	72.7%	59.1%	54.5%
2018	185	73.0%	59.5%	
2019	215	79.1%	60.5%	
2020	90	72.2%		
2021	270	79.6%		
Total	**1625**	**75.7%**	**57.7%**	**50.9%**

Note: Landing year refers to the year in which an individual obtained permanent residency in NB. While they may have been physically present in NB beforehand, the year in which they transitioned to permanent residency is considered the year they 'landed as a PR' in the province.

Table 15 presents the annual landings and retention rates of international **college** graduates who became PRs in NB between the years 2016 and 2021.

The 1-year retention rates remain relatively high across all landing cohorts, with over 75% of college gradates with permanent residency still living in NB after one year, on average. Three years after becoming PRs, nearly two-thirds (65.2%) remain in the province. The 5-year retention rates, available only for the 2016 and 2017 cohorts with small counts, are at 50%.

Table 15: Annual Matched Landings and Retention Rates of International College Graduates Who Became PRs (Landing Years 2016-2021)

Landing Year	N	1-Year Retention	3-Year Retention	5-Year Retention
2016	10	100.0%	50.0%	50.0%
2017	10	50.0%	50.0%	50.0%
2018	85	76.5%	64.7%	
2019	125	80.0%	68.0%	
2020	55	81.8%		
2021	320	78.1%		
Total	**605**	**78.5%**	**65.2%**	**50.0%**

Note: Landing year refers to the year in which an individual obtained permanent residency in NB. While they may have been physically present in NB beforehand, the year in which they transitioned to permanent residency is considered the year they 'landed as a PR' in the province.

Temporary Foreign Workers

Table 16 presents the yearly number of Temporary Foreign Workers (TFWs) in NB from 2005 to 2021, categorized by work permit stream: the International Mobility Program (IMP) and the Temporary Foreign Worker Program (TFWP).

These counts reflect the number of work permits issued each year, meaning that individuals with permits in multiple years are counted more than once. However, within a single year, each TFW is counted only once and is classified under just one of the two program categories.

The data show that the TFWP consistently had more workers than the IMP until 2017. Starting in the mid-2010s, however, the number of IMP workers began to grow steadily. In 2018, the IMP surpassed the TFWP for the first time, with 1355 workers under the IMP compared to 1290 under the TFWP. This upward trend continued in the following years, reaching a peak in 2021: 2515 workers under the IMP and 2260 under the TFWP. Compared to 2020, this represents a significant increase of 44% for both programs.

> *It is important to note that the annual counts shown in Table 16 exclude certain types of workers under both the IMP and the TFWP. For example, workers employed through trade agreements, reciprocal employment arrangements, or agricultural programs are not included. Additionally, PGWP holders are presented separately in this study. As a result, the annual counts of TFWs by work permit stream shown in Table 16 may differ from publicly available data.*

For more comprehensive annual counts of TFWs – including these excluded categories – refer to Table 29 in Appendix 1.

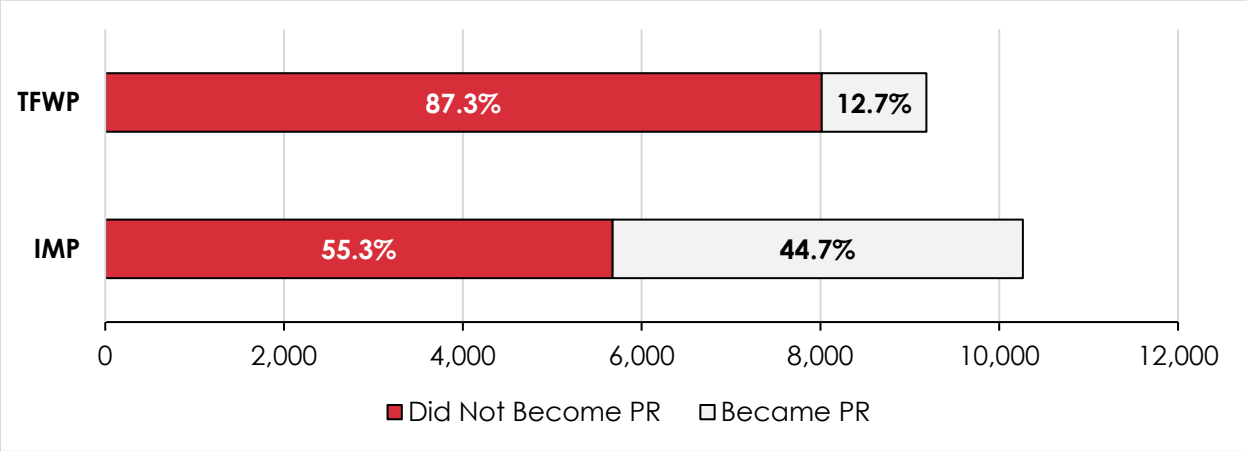
Table 16: Annual Counts of Temporary Foreign Workers by Work Permit Stream (2005-2021)

Year	International Mobility Program	Temporary Foreign Worker Program	Total
2005	340	440	780
2006	410	480	890
2007	400	760	1160
2008	395	1015	1410
2009	425	1140	1565
2010	545	1080	1625
2011	600	1360	1965
2012	555	1625	2180
2013	715	1780	2495
2014	745	1540	2285
2015	790	1005	1795
2016	740	1110	1845
2017	915	1230	2145
2018	1355	1290	2650
2019	1785	1620	3410
2020	1410	1280	2690
2021	2515	2260	4775
Total	**14 640**	**21 015**	**35 665**

Figure 5 compares the rates at which TFWs transitioned to permanent residency under the two work permit streams – the TFWP and the IMP – using pooled data from 2005 to 2021.

The results highlight significant differences between the two streams. Only 12.7% of TFWs under the TFWP became PRs, while a large majority (87.3%) did not. In contrast, 44.7% of workers under the IMP transitioned to permanent residency – a much higher transition rate.

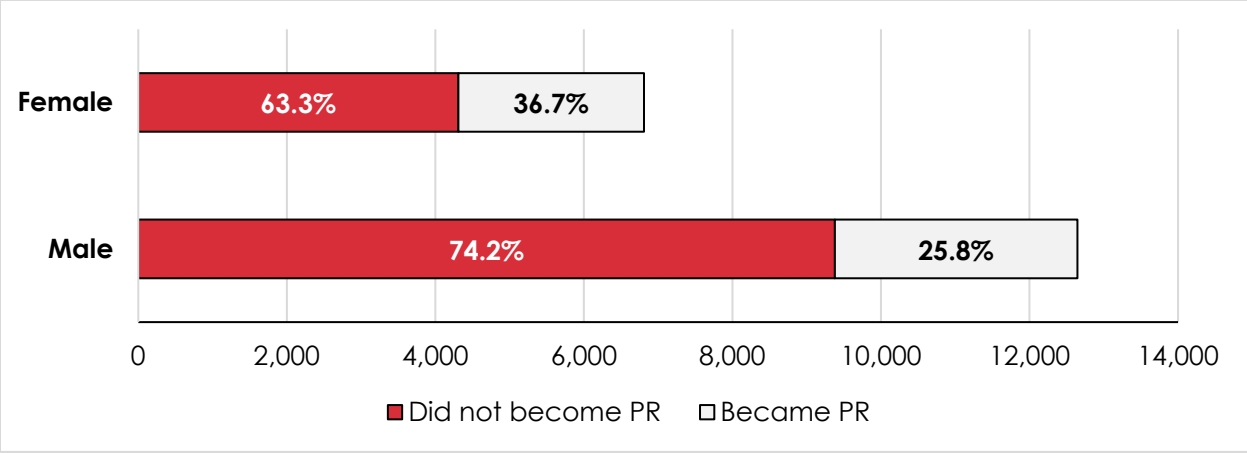
Figure 5: PR Transition Rates of Temporary Foreign Workers by Work Permit Stream (Pooled Years 2005-2021)



Gender

Figure 6 shows both the number and the PR transition rates of TFWs by gender. Overall, female TFWs exhibit notably higher PR transition rates (36.7%) than males (25.8%).

Figure 6: PR Transition Rates of Temporary Foreign Workers by Gender (Pooled Years 2005-2021)



Gender and Work Permit Stream

Table 17 shows that under the IMP, female TFWs are more likely to transition to permanent residency than their male counterparts. Specifically, 52% of female IMP workers become PRs, compared to 40% of males. In contrast, the PR transition rate under the TFWP is much lower and is similar across genders, at 13% for both men and women.

Table 17: Temporary Foreign Workers by Gender and Work Permit Stream (Years 2005- 2021)

Gender	International Mobility Program		Temporary Foreign Worker Program	
	N	% Became PR	N	% Became PR
Male	6160	40%	6485	13%
Female	4105	52%	2700	13%

Country of Citizenship

Table 18 shows the number of TFWs and their transition to permanent residency, broken down by country of citizenship. The country of citizenship category includes only countries that had at least 350 TFWs in NB. Countries with fewer than 350 TFWs are combined and labelled "Other."

The data show that 71.7% of TFWs from Ukraine transition to permanent residency. This is the highest PR transition rate, followed by TFWs from Romania at 63.7%. The source countries with relatively large numbers of TFWs in NB – like the Philippines and India – show relatively high PR transition rates 42.1% and 35.4%, respectively. In contrast, TFWs from North American countries have the lowest PR transition rates. For instance, the US had 2880 TFWs, but only 3.8% transitioned to permanent residency. Similarly, Mexico had 1905 workers, but only 3.4% became PRs.

Table 18: Temporary Foreign Workers by Country of Citizenship (Pooled Years 2005-2021)

Country	N	% Became PR
Philippines	2815	42.1%
India	1780	35.4%
Ukraine	565	71.7%
US	2880	3.8%
Mexico	1905	3.4%
China	740	26.4%
Jamaica	555	11.7%
UK	760	32.2%
France	570	30.7%
Brazil	425	28.2%
Romania	510	63.7%
South Korea	380	57.9%
Germany	535	32.7%
Other	5045	36.6%

Note: Source countries wither fewer than 350 TFWs in NB are combined under the category "Other."

Country of Citizenship and Work Permit Stream

Table 19 breaks down TFWs by source country and work permit stream, revealing notable differences in PR transition rates. Under the **IMP**, TFWs from Ukraine have the highest PR transition rate at 91.5%, followed closely by those from Romania (85.7%) and the Philippines (80.3%). In contrast, workers from the US have one of the lowest PR transition rates, at just 4.8%.

Under the **TFWP**, TFWs from France and Romania also show relatively high PR transition rates, at 37.0% and 38.3%, respectively. However, workers from the Philippines have a lower PR transition rate under the TFWP (14.5%) compared to their rate under the IMP (80.3%). Notably, TFWs from the US and Mexico have the lowest PR transition rates under the TFWP, at 3.1% and 1.1%, respectively.

Table 19: Temporary Foreign Workers by Country of Citizenship and Work Permit Stream (Pooled Years 2005-2021)

Country	International Mobility Program		Temporary Foreign Worker Program	
	N	% Became PR	N	% Became PR
Philippines	1190	80.3%	1625	14.5%
India	1195	43.5%	585	18.8%
Ukraine	410	91.5%	155	19.4%
US	1445	4.8%	1440	3.1%
Mexico	125	36.0%	1780	1.1%
China	425	36.5%	310	12.9%
Jamaica	80	62.5%	475	2.1%
UK	415	41.0%	345	21.7%
France	430	29.1%	135	37.0%
Brazil	380	28.9%	45	22.2%
Romania	280	85.7%	235	38.3%
South Korea	270	68.5%	105	28.6%
Germany	355	36.6%	180	25.0%
Other	3265	44.6%	1785	21.8%

Note: Source countries wither fewer than 350 TFWs in NB are combined under the category "Other."

Occupation

Table 20 shows that TFWs employed in health-related occupations have the highest rate of transition to permanent residency, at 62.6%. This suggests that workers in the health sector often

have strong pathways to permanent residency. In contrast, PR transition rates are much lower for TFWS in certain other sectors – for example, just 7.9% in "Art, Culture, Recreation, and Sport" and 14.8% in "Manufacturing and Utilities."

Table 20: Temporary Foreign Workers by Occupation (Pooled Years 2005-2021)

Occupation	N	% Became PR
Management	635	34.6%
Business, Finance, and Administration	260	28.8%
Natural and Applied Sciences	2180	14.9%
Health	495	62.6%
Education, Law, and Social Services	1145	17.9%
Art, Culture, Recreation, and Sport	955	7.9%
Sales and Services	1615	50.8%
Trades, Transportation, and Equipment	3180	30.7%
Natural Resources, Agriculture, and Related Production	330	25.8%
Manufacturing and Utilities	4280	14.8%
Other	4375	46.5%

Note: "Occupation" only refers to occupation during a work permit.

Occupation and Work Permit Stream

Table 21 breaks down TFWs employed in different occupations according to work permit stream. Under the **IMP**, PR transition rates are notably higher across most occupations. For example, TFWs in "Manufacturing and Utilities" report the highest transition rate at 76.6%, followed closely by those in "Sales and Services" (70.5%) and "Health" occupations (69.7%). In contrast, TFWs in "Education, Law, and Social Services" and "Art, Culture, Recreation, and Sport" have lower transition rates at 16.0% and 8.9%, respectively.

For workers under the **TFWP**, PR transition rates are significantly lower across all occupations. TFWs employed in "Health" have the highest transition rate at 58.2%, followed by those in "Business, Finance, and Administration" (25.0%) and "Management" (23.7%). TFWs employed in "Trades, Transportation, and Equipment" and "Manufacturing and Utilities" – which are the largest occupational groups – report transition rates of 13.5% and 3.8%, respectively.

Table 21: Temporary Foreign Workers by Occupation and Work Permit Stream (Pooled Years 2005-2021)

Occupation	International Mobility Program		Temporary Foreign Worker Program	
	N	% Became PR	N	% Became PR
Management	435	39.1%	190	23.7%
Business, Finance, and Administration	185	35.1%	80	25.0%
Natural and Applied Sciences	1240	16.9%	950	12.6%
Health	165	69.7%	335	58.2%
Education, Law, and Social Services	780	16.0%	370	21.6%
Art, Culture, Recreation, and Sport	505	8.9%	455	6.6%
Sales and Services	865	70.5%	755	28.5%
Trades, Transportation, and Equipment	1285	55.6%	1895	13.5%
Natural Resources, Agriculture, and Related Production	145	48.3%	180	5.6%
Manufacturing and Utilities	640	76.6%	3645	3.8%
Other	4020	49.0%	360	19.4%

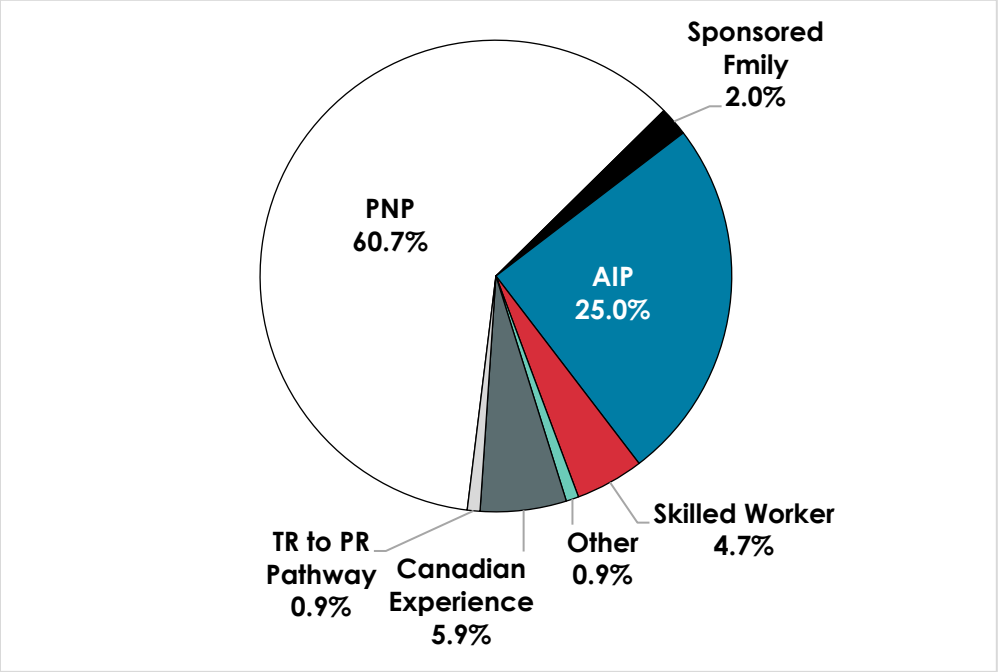
Note: "Occupation" only refers to occupation during a work permit.

Distribution of Temporary Foreign Workers Who Became PRs

Immigration Stream

Figure 7 below shows the distribution of TFWs who transitioned to permanent residency by immigration stream between 2005 and 2021. The NB PNP is the most common pathway used by TFWs to gain PR status. About one in five TFWs become PRs through the AIP. Notably, among those who obtained PR status between 2017 and 2021 – when the AIP was introduced – nearly half (45.9%) became PRs through the AIP stream (see Table 30 in Appendix 1).

Figure 7: Distribution of Temporary Foreign Workers Who Became PRs by Immigration Stream (Pooled Landing Years 2005-2021)

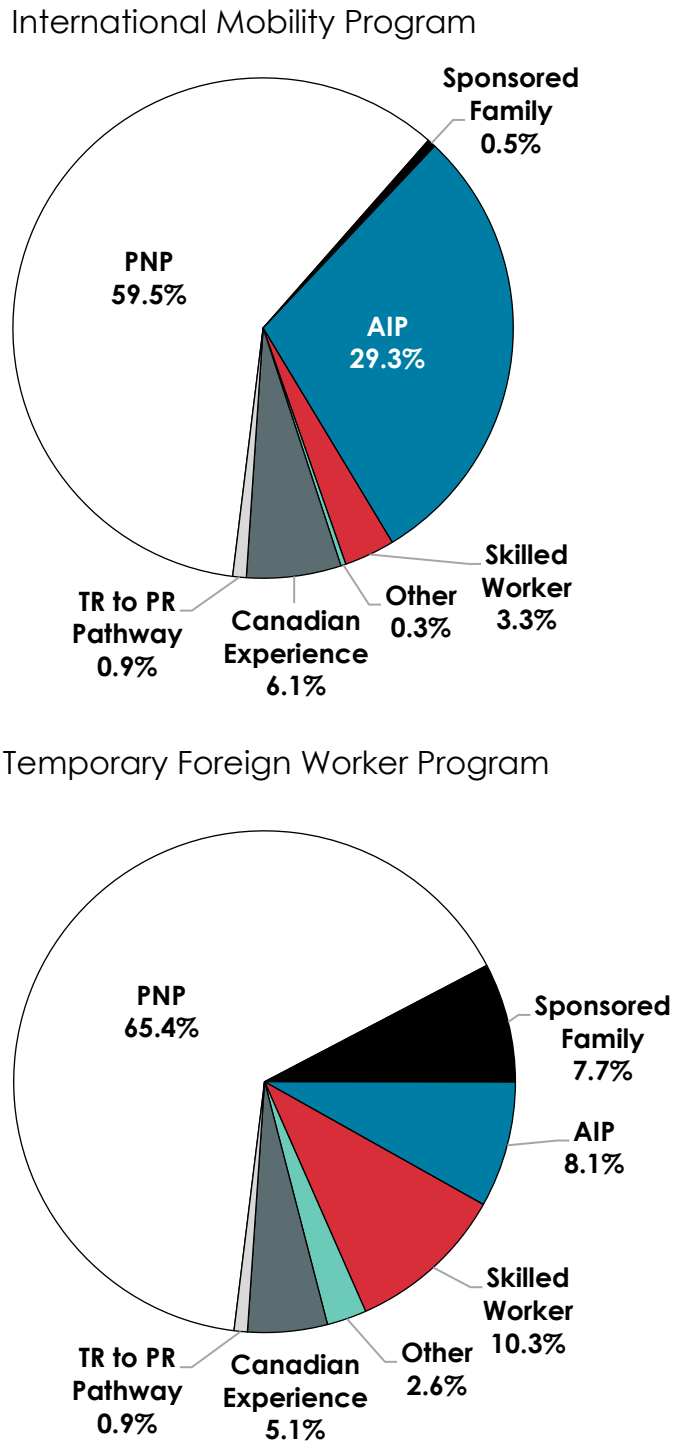


Note: "Immigration Stream" refers to immigration stream on the PR application. Landing year refers to the year in which an individual obtained permanent residency in NB.

Figure 8 further breaks down the immigration pathways used by TFWs, based on their work permit stream – either the IMP or the TFWP. Among **IMP** workers who became PRs, the most common pathways were the NB PNP at 59.5% and the AIP at 29.3%. Notably, between 2017 and 2021, nearly half (46.6%) of those who transitioned to permanent residency under the IMP did so through the AIP stream (see Table 31 in Appendix 1).

Among **TFWP** workers who became PRs, about two-thirds use the PNP stream to become PRs in NB. Fewer temporary workers utilize other immigration streams. However, after the AIP was introduced in 2017, 38% of individuals who transitioned to permanent residency under the TFWP did so through the AIP (see Table 31 in Appendix 1).

Figure 8: Distribution of Temporary Foreign Workers Who Became PRs by Immigration Stream and Work Permit Stream (Pooled Landing Years 2005-2021)



Note: "Immigration Stream" refers to immigration stream on the PR application. Landing year refers to the year in which an individual obtained permanent residency in NB.

Occupation

As shown in Table 22, the largest share of TFWs who transition to permanent residency are employed in "Sales and Services" occupations. A significant proportion (17.0%) also work in "Trades, Transportation, and Equipment."

Table 22: Distribution of Temporary Foreign Workers Who Became PRs by Occupation (Pooled Landing Years 2005-2021)

Occupation	Became PR	
	N	% of Total
Management	225	3.9%
Business, Finance, and Administration	100	1.7%
Natural and Applied Sciences	380	6.6%
Health	285	4.9%
Education, Law, and Social Services	200	3.5%
Art, Culture, Recreation, and Sport	75	1.3%
Sales and Services	855	14.8%
Trades, Transportation, and Equipment	980	17.0%
Natural Resources, Agriculture, and Related Production	80	1.4%
Manufacturing and Utilities	595	10.3%
Other	1990	34.5%
Total	5765	

Note: "Occupation" refers to occupation during PR application.

Table 23 provides a more detailed breakdown of permanent residency transitions by occupation and work permit stream. For workers under the **IMP**, a significant share of PR transitions occurs in "Sales and Services" (14.7%), "Trades, Transportation, and Equipment" (16.2%), and the "Other" category (38.1%).

Among those in the **TFWP**, the most PR transitions – one in five – are concentrated in "Manufacturing and Utilities" (21.5%), followed by "Trades, Transportation, and Equipment" (20.2%) and "Sales and Services" (15.5%).

Table 23: Distribution of Temporary Foreign Workers Who Became PRs by Occupation and Work Permit Stream (Pooled Landing Years 2005-2021)

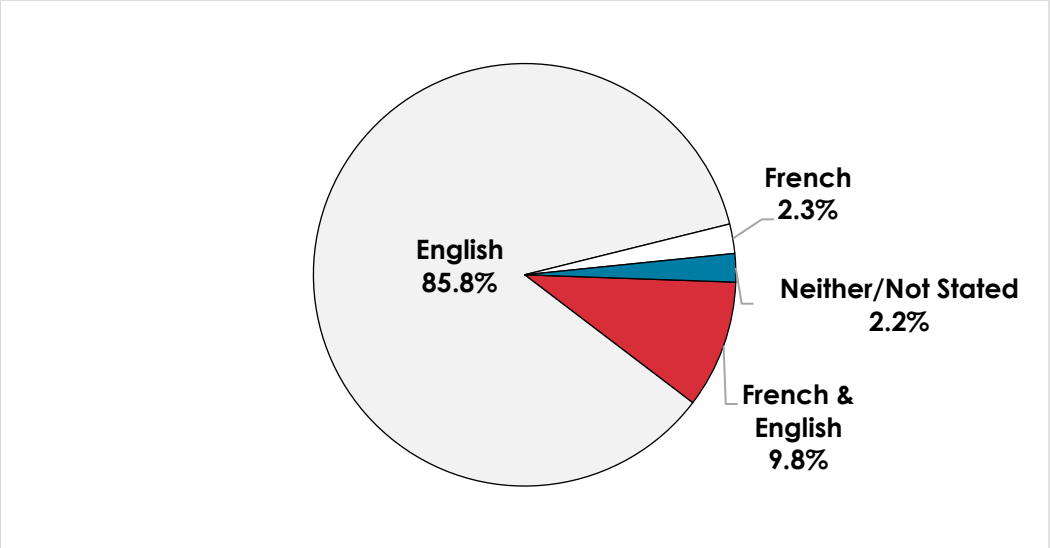
Occupation	International Mobility Program		Temporary Foreign Worker Program	
	Became PR		Became PR	
	N	% of Total	N	3.4%
Management	185	4.0%	40	1.3%
Business, Finance, and Administration	75	1.6%	15	10.7%
Natural and Applied Sciences	255	5.6%	125	12.4%
Health	140	3.1%	145	4.3%
Education, Law, and Social Services	145	3.2%	50	2.1%
Art, Culture, Recreation, and Sport	45	1.0%	25	15.5%
Sales and Services	675	14.7%	180	20.2%
Trades, Transportation, and Equipment	740	16.2%	235	0.9%
Natural Resources, Agriculture, and Related Production	70	1.5%	10	7.7%
Manufacturing and Utilities	505	11.0%	90	21.5%
Other	1745	38.1%	250	3.4%
Total	4580		1165	1.3%

Note: "Occupation" refers to occupation during PR application.

Language

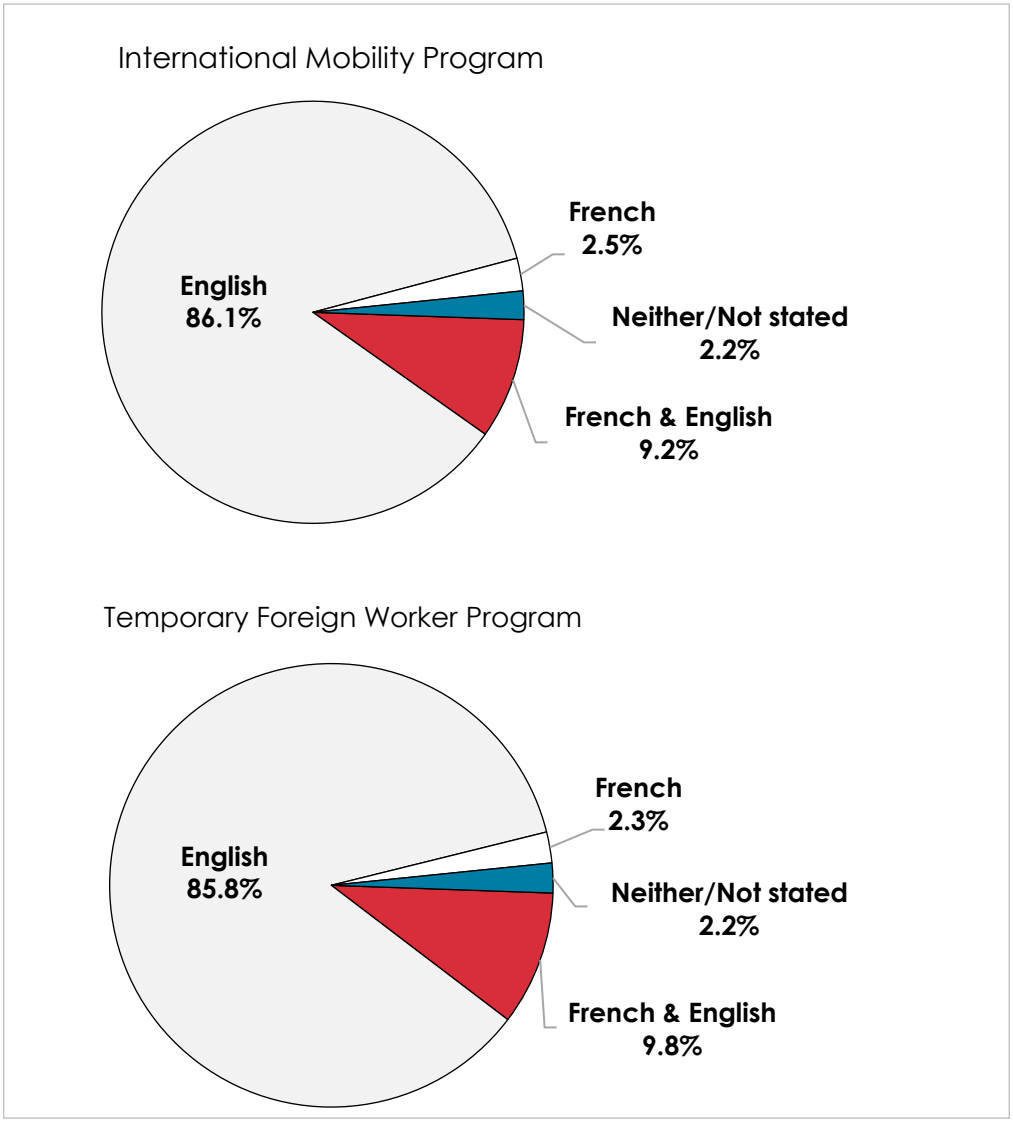
Figures 9 and 10 below show that English-speaking TFWs make up the majority of those who transition to permanent residency under both the IMP and TFWP streams. Bilingual workers – those who speak both English and French – represent approximately one in ten PR transitions.

Figure 9: Distribution of Temporary Foreign Workers Who Became PRs by Language (Pooled Landing Years 2005-2021)



Note: "Language" is presented as indicated during PR application.

Figure 10: Distribution of Temporary Foreign Workers Who Became PRs by Language and Work Permit Stream (Pooled Landing Years 2005-2021)



Note: "Language" is presented as indicated during PR application.

Landings and Retention Rates

The landings and retention rates discussed in this section are based on TFWs who became PRs and were successfully matched[21] to the Citizen Data (Medicare Registry). Table 24 shows that, on average, 78.6% of TFWs remain in NB one year after obtaining PR status. This includes TFWs under both the IMP and TFWP streams. However, this retention rate declines to 69.6% after three years and further to 65.6% after five years. While there is a noticeable drop between the first and

[21] Among those who become permanent residents, the matching rate is generally high across various streams such the AIP (89.6%), the NB PNP (84.2%), and the Sponsored Family stream (84.5%). Skilled Workers demonstrate lower matching rates at 67.6% (McDonald & Miah, 2024)

third years, the decline between the third and fifth years is more gradual, with nearly two-thirds of former TFWs still living in the province after becoming PRs.

Table 24: Annual Landings and Retention Rates of Temporary Foreign Workers Who Became PRs (Landing Years 2005-2021)

Landing Year	Number of Landings	1-Year Retention	3-Year Retention	5-Year Retention
2005	55	72.7%	54.5%	54.5%
2006	125	88.0%	84.0%	72.0%
2007	115	82.6%	73.9%	65.2%
2008	120	91.7%	79.2%	70.8%
2009	165	84.8%	78.8%	63.6%
2010	230	84.8%	78.3%	69.6%
2011	220	81.8%	70.5%	68.2%
2012	230	80.4%	69.6%	63.0%
2013	275	83.6%	74.5%	67.3%
2014	290	74.1%	65.5%	60.3%
2015	305	78.7%	72.1%	65.6%
2016	280	78.6%	71.4%	69.6%
2017	280	75.0%	62.5%	60.7%
2018	545	77.1%	67.0%	
2019	915	77.6%	65.0%	
2020	355	73.2%		
2021	1050	76.7%		
Total	**5555**	**78.6%**	**69.6%**	**65.6%**

**Note: Table 24 combines TFWs under the IMP and the TFWP.*

Table 25 shows the annual landings and retention rates of TFWs under the **IMP** who transitioned to permanent residency. The data show a steady increase in the number of landings over time, with a sharp decline observed in 2020 due to the COVID-19 pandemic. However, in 2021, PR landings rebounded to pre-pandemic levels.

On average, 77.9% of former TFWs remain in NB one year after obtaining permanent residency through the IMP. The 3-year retention rate drops to an average of 68.5%, while the 5-year retention rate declines more gradually to an average of 65.1%.

Table 25: Annual Landings and Retention Rates of Temporary Foreign Workers Who Became PRs Through the International Mobility Program (Landing Years 2005-2021)

Landing Year	Number of Landings	1-Year Retention	3-Year Retention	5-Year Retention
2005	30	83.3%	66.7%	66.7%
2006	85	88.2%	82.4%	70.6%
2007	65	84.6%	76.9%	69.2%
2008	50	90.0%	80.0%	70.0%
2009	80	81.3%	75.0%	62.5%
2010	145	82.8%	75.9%	65.5%
2011	150	83.3%	73.3%	70.0%
2012	160	81.3%	71.9%	65.6%
2013	185	86.5%	75.7%	70.3%
2014	195	74.4%	64.1%	59.0%
2015	235	74.5%	70.2%	61.7%
2016	255	78.4%	70.6%	68.6%
2017	255	74.5%	60.8%	58.8%
2018	490	76.5%	66.3%	
2019	845	77.5%	64.5%	
2020	330	74.2%		
2021	975	76.4%		
Total	**4530**	**77.9%**	**68.5%**	**65.1%**

The annual landings of TFWs under the **TFWP** in Table 26 is notably less than those who transferred to permanent residency through the IMP (in Table 25). Due to low numbers, there are some fluctuations in the annual retentions rates.

The data show that 1-year retention rates are consistently high, with an average of 81.5% of TFWs remaining in NB one year after obtaining permanent residency – across all cohorts. Three years after landing, the retention rate drops by about eight percentage points. Similar to the IMP, five years after becoming PRs, more than two-thirds of TFWs under the TFWP still reside in NB.

Table 26: Annual Landings and Retention Rates of Temporary Foreign Workers Who Became PRs Through the Temporary Foreign Worker Program (Landing Years 2005-2021)

Landing Year	Number of Landings	1-Year Retention	3-Year Retention	5-Year Retention
2005	25	60.0%	40.0%	40.0%
2006	40	87.5%	87.5%	75.0%
2007	50	80.0%	70.0%	60.0%
2008	70	92.9%	78.6%	71.4%
2009	85	88.2%	82.4%	64.7%
2010	85	88.2%	82.4%	76.5%
2011	70	78.6%	64.3%	64.3%
2012	70	78.6%	64.3%	57.1%
2013	90	77.8%	72.2%	61.1%
2014	95	73.7%	68.4%	63.2%
2015	70	92.9%	78.6%	78.6%
2016	25	80.0%	80.0%	80.0%
2017	25	80.0%	80.0%	80.0%
2018	55	81.8%	72.7%	
2019	70	78.6%	71.4%	
2020	25	60.0%		
2021	75	80.0%		
Total	**1025**	**81.5%**	**73.5%**	**66.9%**

Direct Permanent Residents

This section presents estimates of the annual landings and retention rates of direct permanent residents (direct PRs) – individuals who immigrate to NB directly from outside Canada as PRs, without first coming as international graduates or TFWs.

Landings and Retention Rates

Table 27 shows that 1-year retention rates for all direct PRs have remained relatively high, with an average of 80.9% across all cohorts. The highest short-term retention is seen in earlier years, such as 2007 (86.5%) and 2008 (88.4%). More recent cohorts, like those in 2020 (74.8%) and 2021 (71.7%), show a decline in retention. Three years after landing, about 69% of direct PRs continue to reside in the province. Five-year retention drops further, averaging 60.6% overall, though cohorts from 2015 to 2017 demonstrate stronger long-term retention, with rates exceeding 70%.

Table 27: Annual Landings and Retention Rates of Direct PRs (Landing Years 2005-2021)

Landing Year	Number of Landings	1-Year Retention	3-Year Retention	5-Year Retention
2005	405	84.0%	73.7%	68.4%
2006	525	83.8%	74.8%	65.9%
2007	520	86.5%	78.7%	70.5%
2008	560	88.4%	78.1%	69.3%
2009	530	84.9%	76.5%	67.4%
2010	520	80.8%	77.0%	68.1%
2011	550	81.8%	72.6%	65.9%
2012	580	81.0%	72.1%	63.6%
2013	555	82.9%	75.9%	67.7%
2014	650	80.0%	71.1%	64.5%
2015	525	81.0%	75.8%	70.5%
2016	1080	80.6%	75.0%	71.7%
2017	955	81.2%	76.1%	70.8%
2018	960	83.3%	79.9%	
2019	1180	79.2%	75.2%	
2020	555	74.8%		
2021	1095	71.7%		
Total	**11 745**	**80.9%**	**68.8%**	**60.6%**

Retention Rates by Pathway to Permanent Residency

Figure 11 shows the 1-year, 3-year, and 5-year retention rates for the three groups of PRs this study has observed – international graduates, TFWs (combining those in the IMP and TFWP streams), and direct PRs – based on combined landing years from 2005 and 2021.

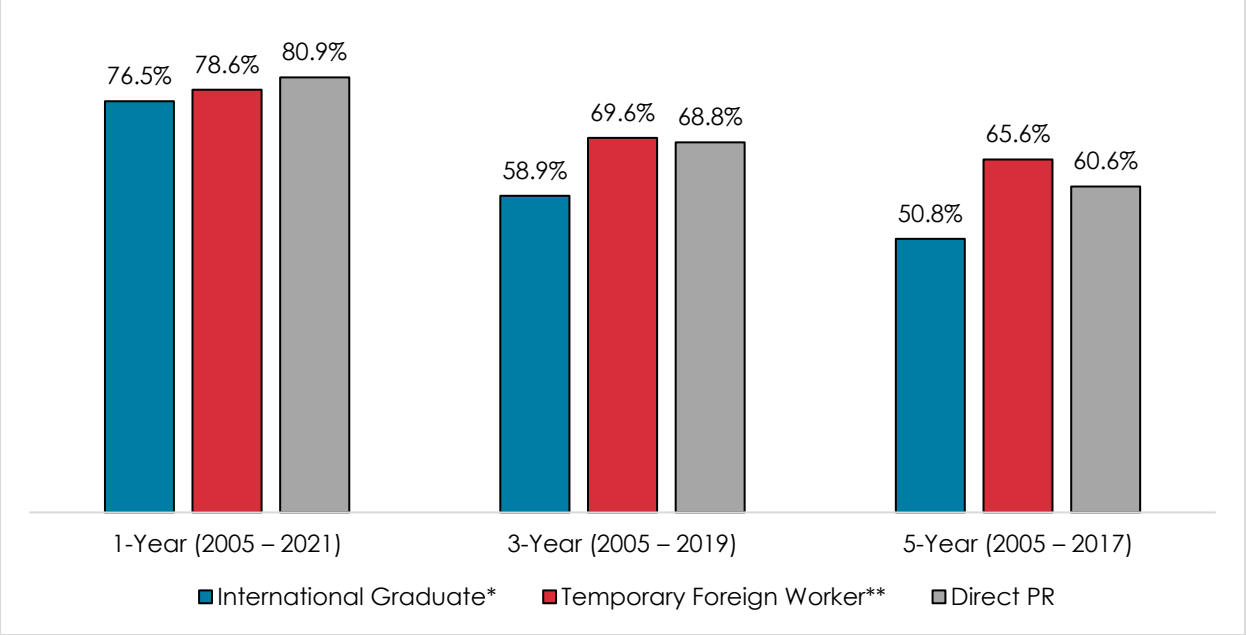
Between 2005 and 2021, direct PRs had the highest 1-year retention rate at 80.9%, followed closely by TFWs at 78.6%.

At the 3-year mark (2005-2019), retention rates for TFWs and direct PRs remain similar, at 69.6% and 68.8%, respectively, However, international graduates show a noticeably lower retention rate of 58.9%.

By the 5-year mark (2005-2017), TFWs report the highest retention at 65.6%, followed by direct PRs at 60.6%, while international graduates have the lowest retention rate at 50.8%.

The data suggest that direct PRs have the highest short-term retention – during the first year. However, over time, TFWs have stronger long-term retention, with the highest rate after five years. In contrast, international graduates consistently show the lowest retention rates at every time point.

Figure 11: Comparison of Retention Rates by Pathway to Permanent Residency (Pooled Landing Years 2005-2021)



**University and college graduates combined*
***Combines workers under the IMP and the TFWP*

Statistical Analysis

Factors Associated With International Graduates Becoming PRs

We also conducted a logistic regression to estimate the likelihood of international graduates transitioning to permanent residency based on various factors.

The full results of this logistic regression are available in Table 32 (see Appendix 1).

Holding other factors constant, our findings reveal that:

- Graduates with a PGWP are nearly 50 times more likely to become PRs compared to those without a PGWP. This suggests that if individuals do not pursue a PGWP after graduation, they are very unlikely to subsequently become PRs in NB. In other words, a PGWP is a very strong predictor of an individual's intent to remain in NB and seek PR status.

- Graduates from UMoncton have 1.4 times higher odds of becoming PRs compared to those from UNB. In contrast, graduates from MTA have only 0.6 times the odds of transitioning to PR compared to UNB graduates.

    - Descriptive statistics show that among those who become PRs, a high percentage hold a PGWP: 97% of CCNB graduates, 94% of UMoncton graduates, 93% of UNB graduates, 91% of NBCC graduates, 84% of STU graduates, and 78% of MTA graduates.

    - An additional model with interaction terms (see

- Table 33 in Appendix 1) examined the relationship between institutions and PGWP status. The results show that graduates from CCNB and NBCC with a PGWP have statistically significant lower odds ratios compared to UNB graduates with a PGWP – meaning they have lower odds of becoming PRs in comparison. The outcomes for other institutions are not statistically significant, suggesting that the impact of having a PGWP varies by institution and is less pronounced for CCNB and NBCC graduates.

Factors Associated With Temporary Foreign Workers Becoming PRs

We also ran a logistic regression to estimate factors associated with TFWs becoming PRs in NB.

The full results of this logistic regression are available in

Table 34 (see Appendix 1).

Other things equal, our findings indicate the following (overall):

- Female TFWs are 1.4 times more likely to become PRs than male TFWs.
- TFWs under the TFWP are significantly less likely to transition to permanent residency compared to those under the IMP, with odds only 0.15 times those under the IMP.
- Country of citizenship plays a critical role in transitions to permanent residency, with wide variation across countries. Relative to TFWs from the Philippines, TFWs from Ukraine are 3.2 times more likely to become PRs, while TFWs from Mexico are the least likely – with odds only 0.075 times those of TFWs from the Philippines.
    - The regression on PR transition is adjusted for occupation (results not shown in Table 30). Thus, the effects of country of citizenship reflect additional factors (net effect) beyond occupation.
    - Cross-tabulation of source country and occupation (table not released) reveal that 48% of TFWs from Ukraine are in the "Trades, Transportation, and Equipment" category, while 88% of TFWs from Mexico are in "Manufacturing and Utilities."

Factors Associated With Duration of Stay in NB

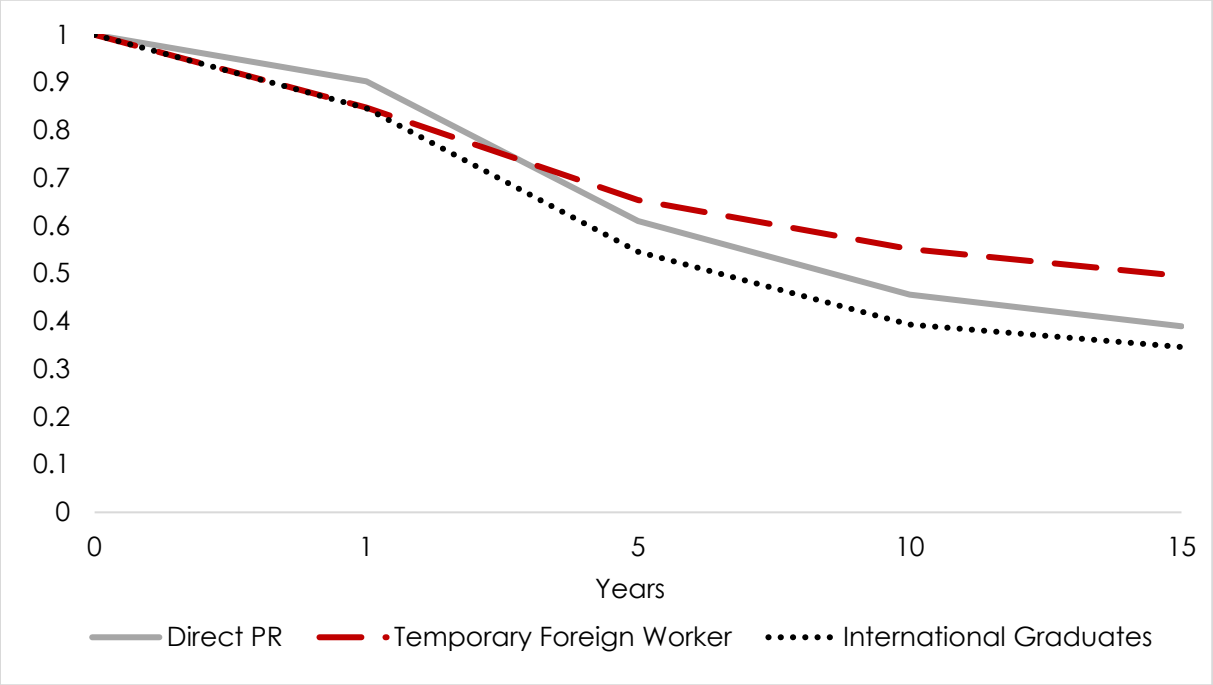
The Kaplan-Meier survival analysis presented in Figure 12 below illustrates the likelihood of PRs staying in NB over time, based on their pathway to permanent residency.

The results are similar to the retention rates discussed earlier in the descriptive statistics. TFWs show the highest long-term retention, maintaining stronger connections to NB compared to the international graduates and direct PRs.

International graduates have the lowest retention rates over time, with a steeper decline in their likelihood of staying in the province.

Direct PRs, while initially showing high retention rates, gradually become less likely to be retained after several years when compared to TFWs.

Figure 12: Kaplan-Meier Survival Analysis of Permanent Residents by Pathway to Permanent Residency



We also ran a Cox Proportional Hazard model (see Appendix 2 – Statistical Analysis Methodology) to estimate the likelihood that a PR will leave NB. A hazard ratio greater than 1 indicates a higher risk of exit (shorter duration in NB), while a ratio less than 1 indicates a lower risk of exit (longer retention).

The full results of the model are available in ***$p<0.01$, **$p<0.05$, $p<0.1$

Table 35 (Appendix 1).

When other factors are held constant, the estimates indicate that:

- Females, married individuals, and younger PRs are more likely to remain in NB.
- PRs under the Sponsored Family stream have the lowest exit risk with a hazard ratio of 0.566, while PRs under the TR to PR Pathway and the AIP are at a higher risk of leaving NB.
- Compared to PRs from China, those from the Philippines have the lowest likelihood of leaving the province.
- TFWs have 14% lower odds of exit (HR = 0.860), suggesting longer retention in NB.

In contrast to what was observed in the descriptive statistics, Cox Proportional Hazard estimates show that, other things equal, international graduates have a 17.1% lower risk of exiting NB (HR = 0.829) compared to direct PRs, indicating that international graduates tend to stay longer in the province relative to direct PRs.
This suggests that observable factors such as gender, marital status, age, immigration stream, and source country affect retention rates and that after controlling for these factors, the direct PR pathway does exhibit greater likelihood of remaining in NB.

For instance, 10% of direct PRs are from South Korea, compared to less than 0.5% of international graduates from South Korea who transition to PR. A previous NB-IRDT study shows that PRs from South Korea exhibit one of the lowest 10-year retention rates among source countries (37.5%) (McDonald & Miah, 2024).

Additionally, the lower risk of exit for international graduates in the model likely suggests that former work permit holders (i.e., the majority of international graduates who become PRs hold a PGWP) are more likely to stay in their intended province than individuals without any prior Canadian experience.

Discussion of Findings

This study provides a comprehensive analysis of international graduates and TFWs transitioning to permanent residency in NB, as well as their retention in the province. The findings underscore key trends and implications for the province's labour market and immigration pathways.

The findings indicate that direct PRs made up the majority of new PRs in earlier years (over 70%). However, this share declined to 40% by 2021, reflecting a growing reliance on temporary-to-permanent pathways. During the same period, the number TFWs and international graduates steadily increased, representing 38.4% and 20.4% of PRs, respectively, by 2021. These shifts reflect the province's emphasis on leveraging temporary workers and international graduates to meet labour market demands. The decline in direct PRs and the increasing use of temporary-to-permanent pathways align with national trends observed over the same period, as noted in studies such as Lu & Hou (2024a).

International Graduates

International graduates play a vital role in NB's immigration and workforce strategies. A significant proportion of these graduates acquire PGWPs, with over two-thirds of college graduates and one-third of university graduates receiving these permits. The uptake of PGWPs has steadily increased across graduating cohorts, reflecting a growing interest in staying in the province to gain work experience. Graduates with PGWPs are significantly more likely to transition to PR compared to those without, highlighting the importance of work experience in facilitating PR transitions. This finding is consistent with national trends, where work permits such as the PGWP have been shown to enhance PR transitions through work experience and local integration (Lu & Hou, 2024a).

Retention rates after PR transition show that, over time (one year, three years, and five years later), international graduates have lower retention rates compared to other groups such as TFWs and direct PRs. For instance, around half (50.8%) of international graduates remain in NB five years after obtaining permanent residency. However, the statistical analysis in this study suggests that after accounting for differences in gender, marital status, and age, international graduates have a lower likelihood of leaving the province compared to direct PRs.

These findings imply that former work permit holders are more likely to remain in their intended province compared to immigrants without prior Canadian experience – a result consistent with Lu and Hou (2024b). This may be due to their more informed decision-making when choosing their destination, which could have contributed to higher likelihood of staying (Lu & Hou, 2024b).

Temporary Foreign Workers

TFWs transitioning to permanent residency demonstrate varying outcomes based on their work permit stream. Workers under the IMP have higher PR transition rates and longer retention in NB compared to those under the TFWP. Similar trends have been observed nationally, where IMP workers have consistently achieved higher PR transition rates and retention compared to TFWP

participants (Lu & Hou, 2024a). This may be because the TFWP is an employer-specific program requiring an LMIA, while the IMP includes both open and employer-specific work permits and does not require an LMIA. As a result, the TFWP may not be primarily seen as a pathway to permanent residency.

Retention rates among TFWs who transition to permanent residency are notable, with approximately 80% remaining in NB one year after becoming PRs and 65.6% still residing in the province after five years. These rates suggest that TFWs contribute to medium-term workforce stability in NB. However, NB's 5-year retention rates for TFWs are still markedly lower than in provinces like Ontario and Alberta, where retention rates exceed 85% (Lu & Hou, 2024b).

Direct Permanent Residents

Direct PRs who immigrate to NB without having had a prior PGWP exhibit the highest 1-year retention rate, with over 80% remaining in the province after one year. However, five-year retention rates decline to 60.6%, suggesting substantial out-migration over time.

Statistical analysis reveals that direct PRs are less likely to remain in the province than those with a prior work permit status in NB (i.e., international graduates and TFWs). Compared to TFWs and international graduates, direct PRs often have fewer pre-existing ties to the province, such as employment or community networks, which may influence long-term residency.

Nationally, similar trends are observed by Lu and Hou (2024b), where former work permit holders were much more likely to stay in their intended province than economic immigrants without prior Canadian experience (direct PRs). The 5-year retention rate for direct PRs in NB is lower than those in larger provinces, like Alberta and Ontario, where about 75% are retained (Lu & Hou, 2024b). This could be due to factors such as economies of scale, industry composition, job market size, and urban concentration differing in smaller vs. larger provinces.

Looking Forward

Additional research could supplement the current study in a number of ways using the administrative data that are available. Such future work could include the following:

- Using Statistics Canada's Longitudinal Immigration Database (IMDB) to investigate the importance of temporary residence in NB on earnings and labour market outcomes after transition to permanent residency.

- A report on the labour market participation of immigrant newcomers in their level of education using the IMDB linked to 2021 Census data.

- A study on the impact of immigrant employment services usage on immigrant retention in NB by collecting administrative data from the employment services in the province.

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Appendix 1 – Supplementary Results

Table 28: Distribution of International Graduates Who Became PRs by Immigration Stream Post-2017 (Pooled Landing Years 2017-2021)

Immigration Stream	University (2017-2021)		College (2017-2021)	
	Became PR		Became PR	
	N	% of Total	N	% of Total
Provincial Nominee Program*	195	23.6%	285	29.1%
Sponsored Family**	25	3.0%	20	2.0%
Atlantic Immigration Pilot*	240	29.1%	355	36.2%
Skilled Worker**	25	3.0%	0	0.0%
Other**	5	0.6%	0	0.0%
Canadian Experience Class**	210	25.5%	55	5.6%
TR to PR Pathway**	125	15.2%	265	27.0%
Total	**825**		**980**	

**NB Provincial Streams*
***Federal Steams*

Table 29: Annual Counts of Temporary Foreign Workers by Work Permit Stream (All Categories) (2005-2021)

Year	International Mobility Program	Temporary Foreign Worker Program	Total
2005	645	465	1110
2006	750	545	1290
2007	745	840	1585
2008	785	1150	1930
2009	850	1230	2080
2010	1010	1200	2205
2011	1055	1480	2535
2012	1045	1760	2805
2013	1200	1915	3115
2014	1195	1680	2880
2015	1240	1155	2395
2016	1275	1350	2615
2017	1415	1390	2805
2018	1965	1485	3450
2019	2410	1860	4265
2020	1960	1515	3475
2021	3075	2545	5625
Total	**22 620**	**23 565**	**46 165**

Table 30: Distribution of Temporary Foreign Workers Who Became PRs by Immigration Stream Post-2017 (Pooled Landing Years 2017-2021)

Immigration Stream	Temporary Foreign Worker	
	Became PR	
	N	% of Total
Provincial Nominee Program*	1365	43.5%
Sponsored Family**	35	1.1%
Atlantic Immigration Pilot*	1440	45.9%
Skilled Worker**	20	0.6%
Other**	15	0.5%
Canadian Experience Class**	210	6.7%
TR to PR Pathway**	50	1.6%
Total	**3135**	

**NB Provincial Streams*
***Federal Steams*

Table 31: Distribution of Temporary Foreign Workers Who Became PRs by Immigration Stream Post-2017 and Work Permit Stream (Pooled Landing Years 2017-2021)

Immigration Stream	International Mobility Program (2017-2021)		Temporary Foreign Worker Program (2017-2021)	
	Became PR		Became PR	
	N	% of Total	N	% of Total
Provincial Nominee Program*	1290	44.7%	75	30.0%
Sponsored Family**	5	0.2%	30	12.0%
Atlantic Immigration Pilot*	1345	46.6%	95	38.0%
Skilled Worker**	15	0.5%	5	2.0%
Other**	5	0.2%	10	4.0%
Canadian Experience Class**	185	6.4%	25	10.0%
TR to PR Pathway**	40	1.4%	10	4.0%
Total	**2885**		**250**	

**NB Provincial Streams*
***Federal Steams*

Table 32: Factors Associated With International Graduates Becoming PRs

Variables	Odds Ratio	Confidence Interval
Comparison Category: Gender = Male		
Female	1.115*	0.994 - 1.251
Comparison Category: Temp Work Permit Status = No Post-Grad Work Permit		
Post-Grad Work Permit	49.96***	42.34 - 58.95
Comparison Category: Education Level = Undergraduate		
Certificate/Diploma	1.209	0.761 - 1.920
Post-Graduate	1.008	0.854 - 1.188
Age at graduation	1.123***	1.042 - 1.211
Age at graduation (square)	0.999**	0.997 - 1.000
Comparison Category: NB Institute = UNB		
CCNB	1.329	0.809 - 2.184
NBCC	1.084	0.661 - 1.777
NBCCD	0.167	0.0180 - 1.547
MTA	0.639**	0.417 - 0.980
STU	0.908	0.614 – 1.343
UMoncton	1.366***	1.157 - 1.614
Comparison Category: Graduation Year = 2016 – 2021		
2004-2009	1.743***	1.452 - 2.092
2010-2015	1.081	0.927 - 1.260

****p<0.01, **p<0.05, p<0.1*

Table 33: Factors Associated With International Graduates Becoming PRs: Interaction Effects of Post-Secondary Institutions and Post-Graduation Work Permits

Variables	Odds Ratio	Confidence Interval
Comparison Category: Gender = Male		
Female	1.109*	0.987 - 1.244
Comparison Category: Temp Work Permit Status = No Post-Grad Work Permit		
Post-Grad Work Permit	77.837***	61.192 - 99.010
Comparison Category: Education Level = Undergraduate		
Certificate/Diploma	1.267	0.778 - 2.066
Post-Graduate	1.016	0.856 - 1.206
Age at graduation	1.126***	1.046 - 1.212
Age at graduation (square)	0.999**	0.997 - 0.999
Comparison Category: NB Institute = UNB		
CCNB	11.669***	5.261 - 25.884
NBCC	5.508***	2.975 - 10.199
NBCCD	0.160	0.017 - 1.520
MTA	0.735	0.337 - 1.605
STU	1.422	0.704 - 2.869
UMoncton	1.385	0.905 - 2.119
Comparison Category: Interaction Term: UNB*PGWP		
CCNB*PGWP	0.098***	0.051 - 0.187
NBCC*PGWP	0.153***	0.102 - 0.229
MTA*PGWP	0.914	0.358 - 2.334
STU*PGWP	0.566	0.250 - 1.281
UMoncton*PGWP	0.985	0.622 - 1.560
Comparison Category: Graduation Year = 2016 – 2021		
2004-2009	1.932 ***	1.593 - 2.343
2010-2015	1.111	0.951 - 1.299

****p<0.01, **p<0.05, p<0.1*

Table 34: Factors Associated With Temporary Foreign Workers Becoming PRs

Variables	Odds Ratio	Confidence Interval
Comparison Category: Gender = Male		
Female	1.339***	1.228 - 1.459
Comparison Category: Marital Status = Married		
Single	0.509***	0.460 - 0.562
Separated/Divorced	0.985	0.776 - 1.250
Not Stated	0.112***	0.0903 - 0.139
Comparison Category: Work Permit Stream = IMP		
TFWP	0.145***	(0.130 - 0.161)
Age at work permit-most recent	1.113***	1.079 - 1.148
Age at work permit-most recent (square)	0.998***	0.998 - 0.999
Comparison Category: Work Permit Duration = Less than 1 year		
1 Year	1.623***	1.455 - 1.810
2 Years	2.848***	2.556 - 3.174
3 Years	3.113***	2.697 - 3.593
4 Years	2.729***	2.295 - 3.244
>= 5 Years	2.197***	1.894 - 2.547
Comparison Category: Source Country = Philippines		
India	0.524***	0.450 - 0.610
Ukraine	3.230***	2.566 - 4.065
USA	0.114***	0.0900 - 0.143
Mexico	0.0751***	0.0575 - 0.0981
China	0.479***	0.392 - 0.585
Jamaica	0.235***	0.177 - 0.312
UK	0.768**	0.626 - 0.943
France	0.634***	0.506 - 0.794
Brazil	0.239***	0.186 - 0.307
Romania	2.310***	1.861 - 2.867
South Korea	1.066	0.836 - 1.359
Germany	0.841	0.667 - 1.060
Other	0.714***	0.632 - 0.806

****p<0.01, **p<0.05, p<0.1*

Table 35: Cox Proportional Hazard Model on Factors Associated With Duration of Retention in NB

Variables	Hazard Ratio	Confidence Interval
Comparison Category: Gender = Male		
Female	0.970**	0.941 - 1.000
Comparison Category: Marital Status = Married		
Single	1.280***	1.215 - 1.348
Separated/Divorced	0.987	0.871 - 1.118
Not Stated	1.064	0.816 - 1.388
Age at landing	1.025***	1.021 - 1.029
Age at landing (square)	1.000***	1.000 - 1.000
Comparison Category: Year Landing = 2018 - 2021		
2005-2009	1.163***	1.102 - 1.228
2010-2013	1.129***	1.072 - 1.190
2014-2017	1.066**	1.015 - 1.119
Comparison Category: PR Path = Direct PR		
Temporary Foreign Worker	0.860***	0.816 - 0.907
International Graduate	0.829***	0.771 - 0.892
Comparison Category: Immigration Stream = Provincial Nominee		
Sponsored Family	0.566***	0.531 - 0.603
AIP	1.390***	1.300 - 1.486
Skilled Worker	0.944*	0.882 - 1.011
Other	0.805***	0.709 - 0.913
Canadian Experience	1.024	0.931 - 1.127
TR to PR Pathway	2.448***	1.961 - 3.055
Comparison Category: Source Country = China		
Philippines	0.238***	0.218 - 0.259
India	0.975	0.908 - 1.047
Ukraine	0.905**	0.819 - 0.999
USA	0.398***	0.355 - 0.446
Mexico	0.430***	0.333 - 0.556
Jamaica	0.446***	0.348 - 0.573
UK	0.330***	0.294 - 0.369
France	0.564***	0.508 - 0.626
Brazil	0.481***	0.379 - 0.610
Romania	0.769***	0.689 - 0.858

South Korea	0.650***	0.612 - 0.690
Germany	0.328***	0.278 - 0.387
Other	0.757***	0.723 - 0.793

****p<0.01, **p<0.05, p<0.1*

Appendix 2 – Statistical Analysis Methodology

Factors Associated With International Graduates Becoming PRs

The logistic regression model we used to estimate factors associated with international graduates of public NB PSE institutions becoming permanent residents is as follows:

$$\log\left(\frac{p(\text{Becoming a PR})}{1-p(\text{Becoming a PR})}\right) = \beta_1 \text{Gender} + +\beta_2 \text{PGW} +\beta_3 \text{EduLev} +\beta_4 \text{Age} +\beta_5 Age^2 + \beta_6 \text{Instit} + \beta_7 \text{GradYr} + \varepsilon$$

where

- *Gender* is a binary variable with *male* as the reference category.
- *PGW* refers to whether an international student obtained post-graduation employment, with no post-graduation work permit as the reference.
- *EduLev* is the education level of the international graduate with undergraduate as the reference category.
- *Age* is a continuous variable at graduation.
- *Instit* represents the post-secondary institute from which the individual graduated.
- GradYr represents the graduation years (pooled across three categories) of international students from NB PSE institutions.

Binary logistic regression was used to estimate covariates affecting the probability of an international graduate becoming a permanent resident after graduating from an NB post-education institution.

In the equation above, $\log\left(\frac{p(\text{Becoming a PR})}{1-p(\text{Becoming a PR})}\right)$ is the probability of an international graduate becoming a PR in the province.

The regression accounts for covariates, including gender, post-graduation employment status of a graduate, age at graduation (and its square), education level (certificate/diploma, undergraduate, post-graduate), graduating institution, and graduation year.

Factors Associated With Temporary Foreign Workers Becoming PRs

Similar to international graduates, a logistic regression was used to estimate factors associated with TFWs becoming PRs in NB, as follows:

$$\log\left(\frac{p(\text{Becoming a PR})}{1-p(\text{Becoming a PR})}\right) = \beta_1 \text{Gender} + +\beta_2 \text{MarStat} + \beta_3 \text{Stream} + \beta_4 \text{Age} + \beta_5 Age^2 + \beta_6 \text{Dur} + \beta_7 \text{Country} + \varepsilon$$

where

- *Gender* is a binary variable with male as the reference category.
- *MarStat* refers to the most recent marital status of the TFW with married as the reference category.
- *Stream* represents the most recent work permit stream of the TFW – i.e., the IMP or the TFWP. The reference group in the model is the IMP.
- *Age* is a continuous variable (most recent).
- *Dur* is a categorical variable which represents duration (years) since the first work permit.
- *Country* is the country of citizenship of the TFW, with the Philippines as the reference category.

The regression accounts for several characteristics of TFWs, including gender, marital status, age of TFW (most recent), work permit stream (IMP or TFWP), duration (years since issuance of the first work permit), and country of citizenship.

Factors Associated With Duration of Retention of Permanent Residents in NB

We first ran a Kaplan-Meier survival analysis, which estimates the probability of retaining a PR (i.e., immigrant) from time of arrival to some future time. This form of analysis enables us to compare various immigrant groups, such as permanent residency path, to illustrate which categories are more or less likely to be retained in NB over time.

To estimate factors associated with duration of PRs in NB, the Cox proportional hazard model was used in the following form:

$$h(t) = h_0(t) \times \exp(b_1 x_1 + \cdots + b_p x_p),$$

where

- t represents the time until an event occurs (leaving NB).

- $h(t)$ is the hazard function determined by a set of covariates $(x_1, \cdots, x_p)$. It represents the risk of the event occurring at time t, given that the individual has survived up (retained) to time t.

- The coefficients $(b_1, \cdots, b_p)$ measure the impact of covariates. A positive coefficient indicates an increased hazard (and thus a decreased survival time), while a negative coefficient indicates a decreased hazard (and thus an increased survival time).

- h_0 is the baseline hazard if all x_i are zero, representing the risk of the event at time t when all covariates are zero.

- $\exp(b_i)$ are hazard ratios. They represent the multiplicative effect on the hazard for a one-unit increase in the corresponding covariate.

We used the Cox Proportional Hazard model to examine the duration of PRs in NB and its predictors. This model lets us include observable factors (called covariates) that may influence the probability of leaving the province.

PRs who are still residing in NB at the end of the study period (2022) are censored in the analysis. The hazard rate is the chance of a PR leaving NB, given that they have not left until that point. A hazard ratio above 1 means a higher chance of leaving, while a hazard ratio below 1 means a lower chance than the base category.

For our analysis, the observable factors or covariates (base categories in parentheses) include gender (male), marital status (married), age at landing as a continuous variable, year of landing pooled into ranges (2018-2021), permanent residency path (direct PR), immigration stream (Provincial Nominee – PNP), and country of citizenship (China).