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Making the most of immigration in Canada

David Carey

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ECONOMICS DEPARTMENT

MAKING THE MOST OF IMMIGRATION IN CANADA

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By David Carey

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ABSTRACT/RÉSUMÉ**Making the most of immigration in Canada**

Canada's immigration policy aims to promote economic development by selecting immigrants with high levels of human capital, to reunite families and to respond to foreign crises and offer protection to endangered people. Economic-class immigrants, who are selected for their skills, are by far the largest group. The immigration system has been highly successful and is well run. Outcomes are monitored and policies adjusted to ensure that the system's objectives are met. A problematic development, both from the point of view of immigrants' well-being and increasing productivity, is that their initial earnings in Canada relative to the native-born fell sharply in recent decades to levels that are too low to catch up with those of the comparable native-born within immigrants' working lives. Important causes of the fall include weaker official language skills and a decline in returns to pre-immigration labour market experience. Canada has responded by modifying its immigration policy over the years to select immigrants with better earnings prospects, most recently with the introduction in 2015 of the Express Entry system. It has also developed a range of settlement programmes and initiatives to facilitate integration. This chapter looks at options for further adjusting the system to enhance the benefits it generates.

This Working Paper relates to the 2018 *OECD Economic Survey of Canada* (www.oecd.org/eco/surveys/economic-survey-canada.htm).

JEL Classification: F22, J15, J24, J61, J71

Key words: immigration, skills, points system, refugees, productivity, government budgets, debt, integration, discrimination

Tirer le meilleur parti de l'immigration au Canada

La politique d'immigration du Canada ambitionne de favoriser le développement économique par la sélection d'immigrants à fort capital humain, de regrouper les familles, mais aussi de réagir aux crises qui éclatent à l'étranger et de protéger les populations en danger. Les immigrants de la catégorie économique, sélectionnés pour leurs compétences, constituent de loin le groupe le plus nombreux. Le système d'immigration a fait ses preuves et fonctionne bien. Les résultats sont suivis et les politiques sont ajustées de manière à satisfaire les objectifs du système. Un problème se pose cependant, tant du point de vue du bien-être des immigrés que de la hausse de la productivité : leurs gains initiaux ayant fortement diminué depuis quelques décennies, les immigrés ne parviennent plus à rattraper leurs homologues natifs durant leur vie active. Cette baisse s'explique en grande partie par la baisse des niveaux de maîtrise des langues officielles et par un recul du rendement de l'expérience professionnelle acquise avant l'immigration. Le Canada a réagi en modifiant sa politique d'immigration au fil des ans, de manière à sélectionner les immigrants en fonction de leurs perspectives de gains. La mise en place du système d'Entrée Express en 2015 en est le plus récent exemple. Plusieurs programmes et initiatives en matière d'établissement ont également été créés pour faciliter l'intégration. Ce chapitre s'interroge sur les modifications qu'il serait encore possible d'apporter au système pour en renforcer les avantages.

Ce Document de travail a trait à l'*Étude économique de l'OCDE du Canada 2018* (<http://www.oecd.org/fr/eco/etudes/etude-economique-canada.htm>).

Classification JEL: F22, J15, J24, J61, J71

Mots clefs: immigration, compétences, système de points, réfugiés, productivité, budget gouvernemental, endettement, intégration, discrimination.

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Making the most of immigration in Canada

By David Carey¹

The main objectives of Canada's immigration policy are to promote economic development by selecting immigrants with high levels of human capital, to reunite families and to respond to foreign crises and offer protection to endangered people (IRCC, 2017[1]). The federal government sets annual admission targets for permanent resident visas to achieve a pace and mix of immigration that is judged best to contribute to meeting these objectives. Economic-class principal applicants, who are selected for their skills, and their spouses and dependent children comprise by far the largest immigrant category, followed by the family and refugee and humanitarian categories. The focus on economic immigration reflects the view that it improves the quality and productivity of the Canadian labour pool over the long term, leading to higher potential growth (ibid). In addition to the economic and social benefits of furthering the above objectives, immigration policy also enhances well-being by increasing cultural diversity and the variety of goods and services available and by strengthening understanding of diverse cultures, potentially improving international relations.

Canada's immigration system has been highly successful in many respects. Immigrants and their children are better integrated into society in Canada on a variety of indicators than in most other countries (OECD and European Union, 2015[2]). The system is well run. Outcomes are constantly monitored and policies adjusted accordingly to ensure that the system's objectives are met. Immigration has become the main source of population growth, increasing the immigrant share of the population to one of the OECD's highest. It has contributed to an increase in educational attainment of the working-age population, made the country more culturally diverse and helped to grow the main cities, facilitating agglomeration economies. Immigrants' children succeed well in education and enjoy strong labour-market outcomes. Immigrants selected for their skills earn substantially more than other immigrants, indicating that selection is succeeding in identifying immigrants with the greatest potential for labour market integration.

A problematic development, both from the point of view of increasing immigrants' well-being and productivity, is that initial earnings for immigrants relative to the native-born fell sharply in recent decades, despite immigrants being more highly educated on average than the native-born. Immigrants' relatively low productivity and earnings are the reason why studies of the impact of immigration on GDP per capita have typically failed to find a positive effect. Canada has responded by modifying its immigration policy over the years to select immigrants with better earnings prospects. It has also developed a range of settlement programmes and initiatives to facilitate integration but could get better results by reallocating resources from the least effective programmes and initiatives to those that are more beneficial.

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Immigration also raises hopes and fears about a variety of economic effects other than productivity and about social effects, all of which are typically found to be small. Some see immigration as a solution to Canada's population ageing, but even a doubling of the immigration rate would only have minor effects on the working-age and elderly population shares. Concomitantly, the effects on government budgets are modest in the long term and small over shorter horizons. A vast literature has developed on the effects of immigration on the wages of the native-born. While not conclusive, this literature generally also finds that such effects are only minor. And immigration does not appear to have weakened social cohesion in Canada, in contrast to the situation in many other countries (Picot, 2013[3]).

After discussing the main features of immigration policy in Canada and its demographic effects, this chapter reviews the effects of immigration on GDP per capita, the wages of the native-born and government budgets. The causes of the long-term drop in immigrant earnings relative to those of the native-born are tackled in the next section followed by a discussion of measures to improve immigrants' labour-market integration. These broadly fall into the categories of selecting immigrants with better labour-market prospects and improving integration of those already settled in Canada.

Canada takes a managed approach to immigration

Canada has a managed immigration model with defined legal pathways for people wishing to come and live in the country. It sets annual targets for permanent resident admissions to achieve a pace and mix of immigration that is judged best to contribute to economic and social well-being. The minister responsible for immigration must table a plan in Parliament by 1 November each year setting out the intended ranges for permanent-resident admissions in total and within each of the classes – economic, family and protected persons and refugees – in the following year. The 2018 plan has an admissions target of 310 000 (0.84% of the population) with a range of +/- 20 000, which is slightly higher than in 2016 (296 352) and 2017 (300 000) and 19% higher than the average intake over 2006-2015 (257 000) (Table 1). This target will rise to 340 000 in 2020. Economic immigrants account for 57% of planned admissions in 2018 (of which two thirds are spouses and dependent children of principal applicants), family immigrants 28% (mostly spouses, partners and children of residents, making this target more an exercise in projecting demand as these persons are normally entitled to immigrate) and refugee and humanitarian immigrants 15% (Table 1). The share of economic-class immigrants in the total has increased markedly since the early 1990s to one of the highest levels among OECD countries (Figure 1 and Figure 2).

Table 1. Immigration levels

	2015	2016	2017	2018	2019	2020
	Admissions				Targets	
Economic						
Federal High Skilled ¹	68 795	59 999	73 700	74 900	81 400	88 000
Caregivers ²	27 214	18 481	18 000	17 000	14 000	5 000
Provincial Nominee Program	44 535	46 169	51 000	55 000	61 000	67 800
Quebec Skilled Workers and Business ³	28 787	30 492	29 300	28 900	32 500	32 500
Other economic ⁴	1 036	867	500	1 700	2 700	2 500
Total Economic	170 367	156 008	172 500	177 500	191 600	195 800
% of total	62.7	52.6	57.5	57.3	58.1	57.6
Family						
Spouses partners children	49 996	60 944	64 000	66 000	68 000	70 000
Parents, grandparents	15 489	17 039	20 000	20 000	20 500	21 000
Total Family	65 485	77 983	84 000	86 000	88 500	91 000
% of total	24.1	26.3	28.0	27.7	26.8	26.8
Refugees and Protected Persons, Humanitarian and Other	35 969	62 361	43 500	46 500	49 900	53 200
% of total	13.2	21.0	14.5	15.0	15.1	15.6
Total	271 821	296 352	300 000	310 000	330 000	340 000

1. Includes Federal Skilled Worker Program, Federal Skilled Trades Program and Canadian Experience Class.

2. Includes admissions in the Caring for Children Class and the Caring for People with High Medical Needs Class, pilot programmes that replaced the Live-in Caregiver Program in late 2014.

3. Under the 1991 Canada-Quebec Accord, Quebec has full responsibility for the selection of immigrants destined for Quebec except for Family Class and in-Canada refugee claimants.

4. Includes the Atlantic Immigration Pilot Program and Federal Business programmes.

Source: Immigration, Refugees and Citizenship Canada (2017), "Notice – Supplementary Information 2018-2020 Immigration Levels Plan" and "Canada's Immigration System and the Points-based Approach for Human Capital".

Figure 1. Permanent resident admissions and planned levels by main class

1. Refugees and protected persons, humanitarian and other.

Source: Immigration, Refugees and Citizenship Canada, IRCC Facts and Figures, various years; IRCC (2017), "Notice - Supplementary Information 2018-2020 Immigration Levels Plan".

StatLink 2 <http://dx.doi.org/10.1787/888933779884>

Figure 2. Permanent migration flows by category

1. Work immigrants and accompanying family of workers.

Source: OECD (2017), International Migration Outlook 2017, Table 1.A.2.

Economic-class principal applicants, who are selected for their relatively high skill levels, tend to have higher productivity and labour market earnings than family-class (i.e., family reunification and formation) immigrants and landed refugees, and hence contribute more to economic development, as intended (Figure 3). The other priority of economic-class immigration is to supply workers sought by employers and/or to alleviate local/regional labour-market shortages. The main pathway for such immigration is through the Provincial Nominee Program (PNP); the main permanent economic immigration programmes are summarised in Box 1. These immigrants typically receive a job offer before landing in Canada. In 2014, they had more favourable economic outcomes than other economic-class principal applicants for cohorts landed up to ten years except for those entering through the Canadian Experience Class programme; the fall-off in PNP principal applicant earnings for cohorts landed more than ten years reflects the lower levels of skills and education of provincial nominees in the early years of the programme.

Figure 3. Average employment earnings by years since landing

1. Principal applicants (economic class).

Source: H. Zhang (2017), “2014 Longitudinal Immigration Database (IMDB): Current Measures of Immigrant Economic Outcomes and Strategic Enhancements”, IRCC, Research and Evaluation Branch, April, calculations based on data from Longitudinal Immigration database 2014, and Canadian Income Survey 2014.

Box 1. Main permanent economic migration programmes¹

Federal

- **Federal Skilled Workers (FSW).** Applicants are selected for having skilled work experience and high human capital. Points are awarded to applicants based on criteria that have been shown to help individuals adapt to the Canadian labour market and society, notably age, language and education.
- **Federal Skilled Tradespersons (FST).** People with a job offer or Canadian qualifications in certain skilled trades may be eligible for permanent residence if they have sufficient language proficiency, training and work experience in a trade.
- **Canadian Experience Class (CEC).** This programme is for applicants who have at least one year’s work experience in a skilled occupation in Canada and who have sufficient official language proficiency to remain in Canada permanently. It is attractive for international graduates of Canadian educational institutions, who can satisfy the work experience requirement while on a post-graduate work permit.
- **Federal Business Immigration (FBI).** There are currently two programmes accepting new applications – the Start-Up Visa Program for Immigrant Entrepreneurs and the Self-Employed Program, which targets persons with the experience and ability to contribute significantly to Canada.

- **Caregivers.** The Caring for Children Class and the Caring for People with High Medical Needs Class are pilot programmes that replaced the Live-in Caregiver Program in late 2014. They provide eligible caregivers with pathways to permanent residence.

Provincial/Territorial

- **Québec Skilled Workers (QSW) and Québec Business Immigration (QBI).** Under the Canada-Québec accord, Québec has full responsibility for the selection of immigrants (except Family Class and in-Canada refugee claimants), as well as for delivering integration services in the province, supported by an annual grant from the federal government.
- **Provincial Nominee Program.** Nine provinces and two of the territories manage programmes which allow them to nominate individuals for permanent residence based on regional needs, including those of employers, and on an individual's potential to integrate economically.

1. Based on descriptions in IRCC (2017[1]).

The government also issues temporary visas for foreign nationals to come to Canada for a limited time to study or work. The number of student visas issued has soared in recent years (Figure 4, Panel A). STEM studies (science, technology, engineering and

Figure 4. International students by level and field of education

1. The year shown corresponds to the beginning of the schoolyear.
Source: Statistics Canada, Table 477-0019.

mathematics), which can support innovation if international students in these fields subsequently work in Canada in STEM jobs, comprise 31% of international student enrolments. Temporary foreign workers may enter Canada under either the Temporary Foreign Worker Program (TFWP) or the International Mobility Program (IMP) for higher-skilled workers. Employers can hire foreign workers through the TFWP when qualified Canadians are not available. The lack of local qualified workers must be verified through a Labour Market Impact Assessment (LMIA). Workers entering under the TFWP are tied

to a specific employer, while those entering through the IMP do not require a LMIA and are not necessarily tied to a specific employer. There has also been a large increase in visas issued for temporary foreign workers, reflecting growth in the IMP, notably for post-graduate employment, International Experience Canada, which facilitates mobility of young adults aged 18 to 35 years, and spouses of skilled workers and students (Figure 5).

Figure 5. Recent trends in temporary residents

Work permit holders by type and programme, sign year¹

1. Sign year is the year the permit was signed by an authorised signing agent/officer of Immigration, Refugees and Citizenship Canada. It is the date that an issued permit becomes effective.

2. Spouses of skilled workers.

3. Other low-skilled and other occupation.

Source: Immigration, Refugees and Citizenship Canada, IRCC Facts and Figures 2015; IRCC (2017), "Canada's Immigration System and the Points-based Approach for Human Capital", August.

Immigration has demographic effects but is not a solution to population ageing

Immigration has become the main source of population growth

Net migration has become the primary source of population growth in Canada in recent decades (Figure 6). The share of immigrants, defined as people born abroad, in the total population has increased by one third since the 1970s, to 21.9% in 2016. This is one of the highest shares in the OECD (Figure 7). In Statistics Canada's reference scenario, which assumes an annual immigration rate per thousand of population that is close to recent rates

at 8.3, immigration becomes almost the entire source of population growth by the early 2030s, and the share of immigrants in the total population increases to 28.2% in 2036.

Figure 6. Immigration underpins high population growth in Canada

Source: Statistics Canada, Tables 051-0001 and 051-0004.

Immigration mitigates population ageing, but the effects are small

Canada's population is ageing rapidly. The population aged 65 or over is projected to more than double between 2011 and 2036 in Statistics Canada's reference scenario, while the working-age population is set to grow only marginally (Table 2). In this scenario, the old-age dependency ratio almost doubles, and the overall dependency ratio rises by 30%. If the labour-force participation rate and productivity growth were to remain unchanged, the increase in the overall dependency ratio would reduce annual average growth in GDP per capita over the 25 years to 2036 by 0.5 percentage point.

Immigration is essential to working-age population growth over coming decades. Without it, Canada's working-age population would decline by 4.6% over 2011-36 according to Statistics Canada's reference scenario (Figure 8). With immigration, the working-age population rises by 13% in the reference scenario over this period, an annual average rate of 0.5%, which is low by historical standards. Doubling the immigration rate from the low scenario (five immigrants per thousand of population) would increase growth in the working-age population from 4% to 17% over this period.

Figure 7. Immigrant share of the populationShare of the foreign-born in the total population, 2015¹ or latest year available

1. 2016 for Canada according to the Canadian 2016 Census Program.

Source: OECD, International Migration and Economic Outlook databases.

Table 2. Age structure of the population2011 and Statistics Canada's 2036 reference scenario¹

Age group	Millions		% growth 2011-36	
	2011	2036	Total	Annual average
0-14	5.6	6.9	23.2	0.8
15-24	4.6	4.9	6.9	0.3
25-64	19.1	21.6	12.7	0.5
65+	4.9	10.4	111.3	3.0
Total	34.3	43.8	27.8	1.0
Old-age dependency ratio ²	0.26	0.48		
Overall dependency ratio ³	0.79	1.03		

1. The reference scenario combines the following: a medium immigration level of 8.3 immigrants per thousand of population, medium emigration, a progressive decrease in the net change in the number of non-permanent residents to zero by 2021, a medium fertility rate of 1.67 children per woman and medium growth in life expectancy.

2. The population aged 65 years or over divided by the population aged 25-64 years.

3. The sum of the populations aged 0-24 years and 65 years or over divided by the population aged 25-64 years.

Source: J.-D. Morency, É. Malenfant and S. MacIsaac (2017), "Immigration and Diversity: Population Projections for Canada and its Regions, 2011 to 2036", Statistics Canada Catalogue, No. 91-551-X.

Figure 8. Immigration will be essential to working-age population growth

1. The reference scenario assumes an annual immigration rate of 0.83% (8.3 immigrants per 1000 population); the low scenario corresponds to an immigration rate of 0.5% and the high scenario to 1%.

Source: J.-D. Morency, E. Caron Malenfant and S. MacIsaac (2017), "Immigration and Diversity: Population Projections for Canada and its Regions, 2011 to 2036", Appendix 1 and Appendix 4, Statistics Canada, Cat. No. 91-551-X.

However, while immigration helps to mitigate population ageing, the impact is small as immigration does not have much effect on the age structure of the population in the long run because immigrants age too. Even a doubling of the immigration rate (from the low scenario to the high) would have little effect on the working-age and elderly-population shares, and hence on the old-age dependency ratio over the next two decades (0.54 and 0.47, respectively, in the low- and high scenarios) (Figure 9), and an even smaller effect in the long run, when the increase has impacted all age groups. Along the same lines, Banerjee and Robson (2009[4]) find that even huge increases in immigration and extreme age filters to select young immigrants could only slow the coming increase in Canada's old-age dependency ratio. In projections where immigration is used to control this ratio, Canada's resulting population projections in 2058 range from 60 million to over 200 million.

Immigration is increasing university attainment numbers, but immigrants' share of university graduates will not rise much

Immigration is increasing the average educational attainment of the Canadian population. The share of those aged 25-54 with university attainment is much higher for immigrants (47% in 2016) than for the native-born population (28%), and the gap has grown over time (Figure 10, Panel A). The rapid increase in university attainment of immigrants does not reflect rising levels of attainment among recent immigrants – these levels have been over 50% for many years – but rather the replacement of earlier, lower-attainment waves of immigrants by more highly educated waves since the 1990s (Panel B).

Figure 9. Immigration has modest effects on the population age structure in the long run

1. The reference scenario assumes an annual immigration rate of 0.83% (8.3 immigrants per 1000 population) from 2011 to 2036; the low scenario corresponds to an immigration rate of 0.5% and the high scenario to 1%. Source: J.-D. Morency, E. Caron Malenfant and S. MacIsaac (2017), "Immigration and Diversity: Population Projections for Canada and its Regions, 2011 to 2036", Appendix 1 and Appendix 4, Statistics Canada, Cat. No. 91-551-X.

Figure 10. University-level educational attainment of immigrants and the Canadian born

Source: Statistics Canada, Table 282-0106.

Over the next two decades immigrants will contribute to the increase in the share of the labour force (aged 25-64 years) with university attainment, but their share of the highly educated labour force is not projected to rise by much because of the projected increase in university attainment of the native-born (Figure 11, Panel A). At the same time, immigrants are projected to account for a much larger share of the labour force without university attainment owing to a shrinking of the Canadian-born population in this category (Panel B). Changing immigration rates has only minor effects on both sets of projections. Given that

under-employment (notably work in part-time jobs) and over-qualification (i.e., highly educated people in low-skilled jobs) are more prevalent among immigrants, especially recent immigrants, than the Canadian-born, immigrants are set to occupy a large proportion of the relatively low-skilled labour market.

Figure 11. Immigration and educational attainment of the labour force

Labour force participants aged 25-64, 2011-36

1. The reference scenario assumes an annual immigration rate of 0.83% (8.3 immigrants per 1 000 population); the high scenario corresponds to an immigration rate of 1% and the low scenario assumes 500 000 new immigrants per year.

Source: H. Zhang (2017), "The Economic and Fiscal Impacts of Immigration: the Canadian Evidence", IRCC, Research and Evaluation Branch, October.

Immigrants' children succeed well in education. Their PISA results are on a par with those of non-immigrant children controlling for social-economic background, whereas in most other countries their scores are lower (Figure 12). And second-generation Canadians have higher levels of education attainment on average than other Canadian-born people, although there are large differences by origin of the immigrant parent or parents; university

degree completion rates are especially high among children of Asian immigrants and low for children of immigrants from Central America, the Caribbean and Southern Europe and for the Black visible minority category. Moreover, there has been persistent, significant upward education mobility among children of immigrants from less educated families. Including second-generation Canadians in the immigrant population would increase the projected increase in the contribution of immigration to university attainment in Canada.

Figure 12. Differences in PISA science performance between non-immigrant and immigrant students

1. A positive score indicates better performance for non-immigrants than (first- and second-generation) immigrants.

Source: OECD (2016), PISA 2015 Results (Vol I): Excellence and Equity in Education, Table I.7.4a.

Immigration is making Canada more culturally diverse

Immigrants' origins have changed sharply in recent decades, making Canada more culturally diverse. Most immigrants who landed before 1980 came from Europe, but most who landed in 2011-16 came from Asia (including the Middle East) (Figure 13). Assuming that shares in recent years are sustained, a further increase in the proportion of the population born in Asia and decline in the share from Europe is in prospect (Figure 14Table 3). These trends will be even more marked in Toronto and Vancouver, where the share of the population born in Asia in Statistics Canada's reference scenario is projected to increase by around one third to 33% and 36%, respectively, by 2036.

Figure 13. Immigrant place of birth

Share of immigrants from each region in total immigrants

Source: Statistics Canada, 2016 Census Program, <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/dv-vd/imm/index-eng.cfm>.

Figure 14. Distribution of foreign-born population, by region of birth

1. Excluding the British Isles.

2. Caribbean, Bermuda, Central and South America.

3. Including the Middle East.

4. // denotes a break in the time series.

Source: Statistics Canada, <https://www.statcan.gc.ca/eng/dai/btd/othervisuals/other009>.

Aggregate immigration has modest economic effects

Effects on real GDP per capita

In response to the Advisory Council on Economic Growth's recommendation (Advisory Council on Economic Growth, 2016[5]) to boost immigration sharply to 450 000 by 2021 and then hold it constant as a share of the population, El-Assal and Fields (2017[6]) of the Conference Board of Canada modelled the economic effects of implementing such an

increase. In this high-immigration scenario, immigration reaches 450 000 by 2025 (any sooner was judged to be logistically impossible) and is held at 1.1% of the population thereafter. They also modelled a status quo scenario in which immigration remained constant at its 2016 rate of 0.82% of the population for 2017-40 and a medium-immigration scenario in which immigration rises slowly to 350 000 by 2020, 400 000 by 2030 and 450 000 by 2040 (0.99% of the population). The authors assumed that 60% of immigrants were economic class, 28% family class and 12% refugee class, the average composition over 2006-15, and that immigrants' wages and employment rates evolve as they did over 1991-2014; typical immigrants' wage rates rose from just over 40% of the Canadian average upon landing to 83% after 23 years, with economic-class immigrants earning the highest wages and refugees the lowest. Moreover, they assumed that wage rates reflect productivity.

Despite slightly attenuating the decline in the number of workers per retiree, the higher-immigration scenarios result in slightly lower GDP per capita in 2040 than the status quo scenario (Table 3). This is mainly because immigrants earn less than the rest of the Canadian population. However, immigrants could be better off still if labour market integration were improved. El-Assal and Fields concluded that this was the policy priority, not increasing the level of immigration.

Table 3. The impacts in 2040 of the Conference Board's three immigration scenarios

	Canada (end of 2017)	Status Quo Scenario	Medium-Immigration Scenario	High-Immigration Scenario
Immigration (number)	300 000	361 824	450 000	528 468
Population (number)	37 079 264	44 290 842	45 624 736	47 929 010
Real GDP (2007 CAD millions)	1 836 811	2 785 941	2 844 593	2 924 989
Real GDP per capita (CAD 2007)	50 087	62 901	62 348	61 628
Real GDP per capita difference with status quo (CAD 2007)	NA	NA	-553	-1 273

Source: K. El-Assal and D. Fields (2017), 450 000 Immigrants Annually? Integration is Imperative to Growth, The Conference Board of Canada.

Another, albeit less important, factor explaining lower growth in GDP per capita in the higher-immigration scenarios is that the capital stock does not fully adjust to higher population growth, resulting in slightly lower capital intensity and labour productivity. This is an empirical feature of the Canadian economy as estimated by the Conference Board, but it has also been observed in cross-country correlations (Estevão, 2011[7]) and is present in other Canadian studies (Fougère, Harvey and Rainville, 2011[8]).

The Conference Board's model, in line with economic literature more generally, assumes that the economy is subject to constant returns to scale (CRTS: doubling inputs doubles output). This is in contrast to the widespread assumption of the general public and some politicians of increasing returns to scale (IRTS: doubling inputs more than doubles output). In the last wide-ranging study looking at the impact of immigration on the Canadian economy (Swan, 1991[9]) the Economic Council of Canada argued that while there may have been a time in the early stages of Canada's development when the economy was characterised by IRTS, CRTS was likely to be a more appropriate characterisation now. This, in the report's view, eliminated a key economic motivation for immigration.

Using a macroeconomic forecasting model, Dungan et al. (2013[10]) also find that an increase in immigration would slightly reduce GDP per capita owing to immigrants having

lower productivity than the native-born. Fougère et al. (2011[8]) also found a small negative effect on Canada's GDP per capita even for high-skilled immigration.

These studies are subject to methodological limitations, the most important of which is that second-generation effects are not taken into account. Yet, second-generation Canadians have higher levels of education attainment and are more likely to live in major urban centres whose residents have appreciable earnings premia over the rest of the native-born population, and they consequently are paid higher average wages, albeit not as high on average as for other native-born persons with the same characteristics (Aydemir and Sweetman, 2008[11]). Another weakness is that it is assumed that immigrant labour-market outcomes have not changed in the recent past despite policy reforms aimed at improving them. Moreover, it is assumed that immigrant composition does not change, even though Canada's policy priorities could evolve. In addition, the costs of higher immigration levels are not taken into account. Allowing for these limitations, the effect of immigration levels on GDP per capita is likely to be positive, albeit remaining modest. This effect would be greater, and immigrants' incomes and well-being higher, if immigrants' labour market integration were enhanced.

Increasing diversity of Canadian immigrants' origins may have made the impact of immigration on GDP per capita more positive than it would otherwise have been. Alesina et al. (2016[12]) find that diversity (measured by the Herfindahl-Hirschmann concentration index for country of birth) of (and arising from) skilled (i.e., university-educated) immigration is significantly positively related to GDP per capita in advanced countries; there is no such effect in low-income countries nor is there for diversity of low-skilled immigrants in high-income countries. Increasing the birthplace diversity of skilled immigrants by one percentage point is associated with an increase in long-run GDP per capita of about 2%. The authors find that their results are robust to their attempts to account for potential reverse causality and unobserved heterogeneity among skilled immigrants.

Effects on innovation

Numerous US and European studies have found that increasing skilled immigration, especially of immigrants educated in STEM fields, has a significant positive effect on patenting. For example, Hunt and Gauthier-Loiselle (2010[13]) find that a one percentage point increase in the share of a US state's population composed of college-educated immigrants can be expected to increase state-level patents per capita by 9-18%. This effect is considerably greater than the 8-9% effect implied by the differential patenting rate of immigrants observed in individual-level data (a college-graduate immigrant contributes at least twice as much to patenting as his/her native-born counterpart), pointing to substantial spill-over effects on the patenting rates of native-born Americans. The higher contribution of college-graduate immigrants to patenting than their native counterparts is fully explained by the greater share of immigrants with science and engineering degrees.

Blit et al. (2017[14]) replicate this study to see whether similar conclusions hold for Canada. They find that increasing the share of university-educated immigrants in a city's population does not have a significant effect on patenting per capita. This is true even for university-educated immigrants in STEM fields. On the other hand the estimated effect of Canadian-born university graduates on patenting rates is virtually the same as in the Hunt and Gauthier-Loiselle study, suggesting that the smaller immigrant effects in Canada do not reflect measurement error or some intrinsic feature of the Canadian economy or innovative sectors. When Blit et al. isolate the effects of immigrants who were university

educated in a STEM field and are currently employed in a STEM occupation, the estimated effects become much greater and are statistically significant. Thus, the small impact largely appears to reflect the relatively low shares of Canadian immigrants in STEM jobs, including among those educated in STEM fields.

A key policy issue is whether the employment barriers that Canadian STEM-educated immigrants encounter in getting STEM-type jobs reflect differences in their skills and abilities or labour market inefficiencies arising from information frictions in job search, foreign-credentials recognition or racial discrimination. Blit et al. note that a key difference between skilled immigration policies in the two countries is that the vast majority of skilled immigrants in the United States are admitted via temporary work permits from sponsoring employers (especially H-1B visas) whereas skilled-stream immigrants arriving in Canada as new permanent residents typically do not have pre-arranged employment. The advantage of the US system is not only that immigrants have a job immediately but also that more able immigrants are selected as employers are likely to have considerable information about the productivity of the foreign workers they are sponsoring, including skills unobservable to the “points system”. Blit et al. conclude that a greater emphasis on pre-arranged employment in immigrant selection would help to increase the proportion of university-educated immigrants in STEM fields who find STEM jobs, thereby increasing their contribution to innovation.

In a more recent study, Blit et al. (2018[15]) find that immigrants in Canada with a PhD in a STEM field working in a STEM job contribute disproportionately to innovation. The educational and employment characteristics of some ethnic minorities (notably, Korean, Japanese and Chinese), in particular the share with a PhD, a STEM education and a STEM job, account in large part for their higher patenting rates. The effect of PhDs on patenting rates is almost entirely driven by PhDs employed in a STEM occupation.

Agglomeration economies

Concentration of population in cities and industrial clusters may generate agglomeration economies, increasing productivity (Glaeser, 2010[16]); the downside can be large increases in house prices and congestion, as has occurred in Toronto and Vancouver. Such economies may result because population density in large urban areas reduces transport costs, makes for deeper labour markets in which specialised skills can be better matched to jobs, increases knowledge spill-overs from high-skilled workers and reduces labour-market information asymmetries (Ciccone et al., 1996[17]); (Greenstone, Hornbeck and Moretti, 2010[18]). The distribution of Canada’s immigrants has been such as to expand the size of major urban areas, where population density is highest, more than in the rest of the country, with this effect having been especially marked in Toronto and Vancouver (Figure 15, Panels A and B).

The continued flow of high-skilled immigrants to the largest metropolitan areas (Figure 15, Panels C and D), which is even more pronounced than for immigrants in general, is consistent with there being agglomeration economies – these inflows do not seem to dampen further inflows to these destinations, as would occur if high-skilled workers were complementing unskilled workers or other fixed factors of production, and may even reinforce them. In many high-skilled occupations and sectors, each individual’s productivity is enhanced by interactions with other high-skilled workers employed in similar or related occupations and sectors, a mechanism that can be reinforcing (Jones, 1995[19]). Kerr et al. (2017[20]) report that in many US studies high-skilled immigrants boost productivity in cities and regions where they are concentrated and rarely find adverse

wage and employment consequences for high-skilled workers already in place. They note that agglomeration effects make the rewards for skills much higher in some countries than others and create differences across locations within the same country.

Figure 15. Concentration of immigrants by population density¹

1. The population density is determined by data in 2016.

2. Census Metropolitan Areas (CMAs) are grouped by population density. The top 3 CMAs by density are Toronto, Montréal and Vancouver. The top 10 CMAs also include Kitchener-Cambridge-Waterloo, Hamilton, Victoria, Oshawa, Windsor, Ottawa-Gatineau and Abbotsford-Mission.

Source: Statistics Canada, Table 051-0056 and 2016 Census Program, <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/dv-vd/imm/index-eng.cfm>.

Kerr et al. go on to point out that trade in services provided by high-skilled workers is at the heart of the agglomeration process. As the market for these services is global, not local, they can be massively scaled up, increasing productivity. Such workers share technical knowledge and business information through social and professional networks, made more efficient by physical proximity. Moreover, deeper labour markets facilitate greater specialisation, boosting productivity. Agglomeration also enhances the presence of complementary specialised inputs and services, such as legal advice.

Effects on trade

Immigration does not appear to have a large effect on trade intensity, another potential mechanism by which it could increase productivity. Head and Ries (1998[21]) find that a 10% increase in immigration is associated with a 1% increase in Canadian exports to the immigrant's home country and a 3% increase in imports from it. They also find that self-employed immigrants have the greatest impact on trade, while entrepreneur-class immigrants have the least (bar refugees). Similar results were found at the provincial level (Wagner, Head and Ries, 2002[22]). Partridge and Furtan (2008[23]) got similar results but also found that new immigrants affect imports almost immediately, whereas for exports the immigration effect is not significant for at least five years and may take as long as 20 years to reach full impact. Similar results have been found for other developed countries (Peri and Requena-Silvente, 2010[24]). It should be noted that these results concern trade in goods. Trade in services and capital market flows could behave differently.

Labour-market effects

Canadian studies generally find that overall immigration has no or only a small negative impact on the wage rates of Canadian workers but a relatively larger effect on those of other immigrants (Table 4). However, in line with most of the literature in this field, these studies contain estimates of parameters that are often different from each other, non-comparable and sometimes difficult to interpret (Box 2). Moreover, unrealistic assumptions about labour-supply elasticities and whom immigrants compete with are often made (in particular, no allowance is made for immigrants downgrading to lower-skilled jobs upon arrival than those that correspond to their education levels). For example, Aydemir and Borjas (2007[25]) produce estimates that overstate the negative effect of immigration on native high-skilled wages by abstracting from downgrading. Yet, downgrading is widespread across countries, including in Canada: for example, Dustmann, Frattini and Preston (2013[26]) demonstrate downgrading of immigrants in the United States, the United Kingdom and Germany.

In a study of the effects of immigration on wages in the United Kingdom that avoids these pitfalls Dustmann et al. (2013[26]) allocate immigrants to their position in the wage distribution -- not the education distribution -- and estimate total effects (allowing for different labour-supply responses). Despite UK immigrants having a far higher level of educational attainment than the native-born population, the authors find that immigration depresses wages below the 20th percentile and contributes to wage growth above the 40th percentile. They also find that the average effects of immigration on measured average wages are slightly positive. The possibility that immigrants receive wages that are less than their marginal product, either because of initial mismatch or downgrading, could explain a substantial part of the average wage gain for the native-born. Given that the distribution of immigrants by education attainment is similar in the United Kingdom and Canada and that downgrading occurs in both countries, there is a reasonable chance that comparable conclusions would be obtained -- i.e., that immigration has negative effects on the lower part of the wage distribution but positive effects on the upper part -- if this methodology were applied to Canadian data.

Table 4. Studies on the impact of immigration on the wage rates of Canadian workers

Canadian studies	Findings
Aydemir and Borjas (2007[25])	<ul style="list-style-type: none"> • A 1% labour supply increase due to immigration is associated with a 0.3%-0.4% decrease in wages. • Immigration narrowed wage inequality because immigrants in Canada tend to be disproportionately highly skilled.
Tu (2010[27])	At the national level the substantial immigrant inflows after the policy change in the late-1980s did not adversely affect native-born wage growth rates in the following decade.
Fougère, Harvey and Rainville (2011[8])	Wage rates for all workers could decrease by 0.1% in 2026 and 0.2% in 2034 if there is an increase of immigrants from 0.75% to 1% of the population because of an extra inflow of highly skilled immigrants.
Hou and Picot (2014[28])	A 10% increase in the immigration level is associated with an average 0.8% decline in entry earnings among immigrant men and 0.3% among immigrant women.

Source: H. Zhang (2017), “Economic and Fiscal Impacts of Immigration: the Canadian Evidence”, IRCC, Research and Evaluation Branch, October.

Box 2. Why do studies of immigration’s effect on wages reach disparate results?

Dustmann, Schönberg and Stuhler (2016[29]) examine why studies on the impact of immigration on wages starting from the same canonical model yield contradictory results and draw lessons on how such studies should be configured to give unbiased policy-relevant parameter estimates. The starting point of these studies is a partial equilibrium model that combines one or more types of labour with capital in a constant-returns-to-scale production function. In this model an expansion in the supply of a certain type of labour will lead to a decrease in the wage rates for native labour of the same kind in both absolute terms and relative to other types of labour as well as an increase in the marginal product of capital. This model underlies the common view that immigration is harmful for people with skills most similar to those of immigrants, but beneficial for those with different skills and for owners of capital. Using variants of this model for the United States, Borjas (2003[30]) finds that wages of the native born have been adversely affected by immigration, while Card (2009[31]) finds only minor effects and Ottaviani and Peri (2012[32]) find positive effects; for Canada, Aydemir and Borjas (2007[25]) find that immigration reduces average wages over the short term and that, while there is no impact on average wages in the long run if the capital stock adjusts fully to the increase in the labour supply, high-skilled immigration reduces the wages of the high-skilled native-born relative to other native-born.

The different empirical strategies employed in this literature result in structural parameter estimates that are not comparable. Borjas (2003[30]) and Aydemir and Borjas (2007[25]) exploit variation in immigrant flows across education-experience cells on a national level (“national skill-cell approach”), yielding estimates of the relative wage effect of immigration on one experience group versus another within an education group. Card (2001[33]) uses variation in immigrant inflows both across education groups and regions (a “mixture approach”), yielding estimates of the relative wage effect of immigration on one education group compared with another. In the other main specification Altonji

and Card (1991[34]) use the variation in the total immigrant flow across regions (a “pure spatial approach”).

Research in this area typically makes two assumptions that are unrealistic and bias estimates made using the “national skill-cell approach” and the “mixture approach”. First, it is assumed that the elasticity of labour supply is the same (often inelastic) across different native-born groups. This enables the studies to abstract from labour-supply responses. However, labour supply is likely to be elastic and to have an elasticity that differs across groups. Dustmann et al. demonstrate that with group-specific labour-supply elasticities, the “national skill-cell approach” produces estimates that are hard to interpret, while the other two approaches still have a clear interpretation. Second, the national skill-cell and the mixture approaches assume that an immigrant and a native with the same measured education and experience compete against each other. However, there is strong empirical evidence that immigrants downgrade upon arrival to occupations filled by less educated native-born workers, earning less than a native-born worker with the same education and age characteristics. Dustmann et al. provide evidence for the United States that downgrading may overstate the negative effect of immigration in both the national skill-cell and mixed approaches. In contrast, approaches that estimate the total effects of immigration, such as the pure spatial approach, are robust to downgrading because they do not entail allocating immigrants to skill groups. They also point out that, as a result of downgrading, studies such as Ottaviano and Peri (2012[32]) that estimate the underlying parameters of the canonical model underestimate the elasticity of substitution between immigrants and the native born, which may help to explain why these studies tend to find positive wage effects.

In light of the above, Dustmann et al. recommend investigating the effects of the overall (as opposed to group-specific) immigration shock on wages and employment of the various native-born groups. This approach avoids misclassification of immigrants resulting from downgrading and yields parameters that are of direct policy relevance and more easily interpretable.

Relieving skills shortages through immigration

Skills shortages occur when demand for workers in an occupation, industry or geographical area exceeds the supply of qualified workers at the going wage. In a market economy such shortages elicit various adjustments to reduce them, such as higher wages to encourage more workers to move to areas where the shortages are most acute, more people to obtain the qualification necessary to enter the occupation, some people in these occupations to delay retirement and firms to adjust production technologies to economise on such workers. Another could be more immigration of suitably qualified people.

Picot (2013[3]) reports that none of the main approaches for identifying skills shortages caused by labour-market mismatches is very reliable. Many such shortages are short term, such as those observed at the peak of the business cycle or because the adjustments discussed above eliminate them. Using immigration policy to alleviate such shortages sometimes goes wrong. Canada selected large numbers of IT professionals and engineers to address shortages in these fields in the late 1990s, but, following the dot.com bust, these immigrants experienced large falls in earnings. Many subsequently emigrated. More generally, Picot argues that immigration is more suited to addressing long-run issues, not

short-run needs. As immigrants normally come to Canada to reside indefinitely, it is more important that they have the skills needed to adjust to long-run economic changes than to alleviate short-term shortages. Even so, expected labour-market conditions need to be (and are) taken into account when planning the levels and mix of immigration to limit the risk of immigrants landing during economic downturns experiencing a “scarring effect” on their earnings potential from poor initial outcomes.

Immigration policy may also not be well suited to reducing predicted occupational shortages owing to the difficulty of forecasting them. The few available models perform best “for occupations that are not susceptible to rapid technological change or shifts in consumer preferences that influence labour demand by industry. However, it is often the occupations that do in fact undergo such structural changes that develop a shortage” (Picot, 2013, p. 10[3]). Long-term forecasting models, such as the federal government’s Canadian Occupational Projections System (COPS) analysis, work best at a broad skill level (i.e., by level of education attainment). The COPS model suggests that there is no looming broad skills shortage in Canada, at least until 2020, but that there may be a surplus of low-skilled workers. It suggests that future jobs will increasingly require post-secondary education. This would suggest that the bias in immigration policy in favour of high-skilled immigrants is appropriate.

Net fiscal impact

Most studies suggest that immigration’s overall net fiscal impact, taking into account taxes net of transfers, the costs of health care, education and some other government expenditures, is small in Canada, as in most other countries [(OECD, 2013[35]); (Picot, 2013[3]); (Kerr and Kerr, 2011[36])]. OECD (2013[35]) estimates a small overall negative effect in Canada (Table 5). In contrast to Canada, pension systems make a negative contribution to the net fiscal impact in most countries because they are largely tax financed. These estimates exclude an allocation for collective public expenditures, which worsen immigration’s net fiscal impact by 0.6% of GDP on average in OECD countries with available data.

Immigrants as a group make net direct fiscal contributions (defined here as income tax paid less government transfers received), albeit smaller than the Canadian average for cohorts up to 24 years since landing (Figure 16). Economic-class principal-applicant immigrants make far greater net direct fiscal contributions than both other immigrants and the Canadian average. As more time is spent in Canada, immigrants’ net direct fiscal contributions converge to the Canadian average, although the downward convergence for high-skilled immigrants in recent years is exaggerated by the IT-sector collapse in the early 2000s, where many of them worked. Immigrants overall have higher per capita public health-care costs, mainly because their elderly share is higher than that of the rest of the Canadian population, but the difference is marginal when immigrants and their children are grouped together (Figure 17).

In light of the small effects of immigration on the overall dependency ratio and the modest differences in net direct fiscal contributions between immigrants and the native-born, increasing immigration levels is unlikely to be an effective means of attenuating the coming deterioration in government finances caused by population ageing. Other policy levers, notably encouraging people to work longer before retiring, would be far more effective. However, increasing the share of well-educated and young immigrants would make immigration’s fiscal impact more favourable.

Table 5. Estimated net fiscal impact of immigrants, 2007-09 average

	Percentage of GDP			
	Baseline	Baseline excluding pensions	Baseline plus per-capita allocation of collective revenue and expenditure items (excluding defence and debt services)	Baseline plus per-capita allocation of collective revenue and expenditure items (excluding defence)
Australia	0.00	0.82	..	..
Austria	0.12	0.89	-0.37	-0.80
Belgium	0.76	0.96	0.06	-0.43
Canada	-0.06	-0.06	..	..
Czech Republic	-0.01	0.07	-0.28	-0.31
Denmark	0.11	0.23	-0.31	-0.39
Estonia	0.49	1.15	..	..
Finland	0.16	0.02	-0.08	-0.13
France	-0.52	0.30	-0.52	-0.84
Germany	-1.13	0.21	-1.93	-2.32
Greece	0.98	0.86	..	..
Hungary	0.08	0.12	-0.11	-0.18
Iceland	0.90	0.96	..	..
Ireland	-0.23	-0.39	-1.23	-1.41
Italy	0.98	0.91	0.97	0.61
Luxembourg	2.02	2.20	0.37	0.24
Netherlands	0.40	0.74	-0.01	-0.14
Norway	0.42	0.50	0.60	0.49
Poland	-0.32	0.01	-0.42	-0.45
Portugal	0.52	0.56	0.27	0.13
Slovak Republic	-0.06	0.04	-0.16	-0.18
Slovenia	0.76	1.00	..	..
Spain	0.54	0.21	0.07	-0.05
Sweden	0.20	0.62	-0.37	-0.57
Switzerland	1.95	2.00	1.42	1.16
United Kingdom	0.46	1.02	-0.01	-0.26
United States	0.03	-0.51	-0.64	-1.00
Average	0.35	0.57		
Average (2)	0.30	0.49	-0.12	-0.31

Note: Average (2) includes only countries for which the per capita allocation of collectively accrued items was available.

Source: OECD (2013), International Migration Outlook 2013, OECD Publishing, Paris.

An issue identified by the Productivity Commission (2016[37]) for Australia that undoubtedly also applies to Canada is the high net fiscal cost of allowing parents of residents to immigrate (as opposed to entering on Super visas, which allow them to live in Canada without access to public health insurance and social transfers). These immigrants tend to have low integration in the labour market owing to their age and in many cases poor English- or French-language proficiency. They are also at a stage in their lives when they make considerable claims on aged care, health-care and social security systems, the costs of which fall on the taxpayer. Unfortunately, no information is publicly available on these costs. The Productivity Commission estimated the cumulated lifetime fiscal costs (in net present value terms) of a parent visa holder in 2015-16 to be AUD 335 000-410 000 per adult, which corresponds to AUD 2.6-3.2 billion for the 8 700 immigrant parents in Australia. Similar costings should be undertaken in Canada.

Figure 16. Average income tax paid in 2014 net of transfers received by years since landing

Source: H. Zhang (2017), “Economic and Fiscal Impacts of Immigration: the Canadian Evidence”, IRCC, Research and Evaluation Branch, October, calculations based on data from Longitudinal Immigration database 2014, and Statistics Canada’s T1 Family File (2014).

Figure 17. Estimated 2011 public health cost per capita¹

1. The estimate assumes that health cost per capita depends on three factors: age structure, gender and location of health care services.

Source: H. Zhang (2017), “Economic and Fiscal Impacts of Immigration: the Canadian Evidence”, IRCC, Research and Evaluation Branch, October, estimates based on data from Canadian Institute for Health Information (2016) and National Household Survey (2011).

Labour-market integration of immigrants has deteriorated

Their labour market outcomes have worsened relative to the native-born

Employment and unemployment outcomes for immigrants deteriorated between the 1970s and the early 2000s. Relative to employment and unemployment rates for the native-born, rates for immigrants worsened until the early 1990s and then rebounded to some extent by 2001-05 (Table 6). These outcomes for individual immigrants improve the longer they have been in Canada, with greater gains for males than for females. Overall relative employment and unemployment rates deteriorated during the global financial crisis, as typically occurs

during economic downturns, but subsequently recovered to around the same level in 2016 as a decade earlier (Figure 18, Panels A and C). Employment rates remain lower and unemployment rates higher for recent immigrants (Panels B and D) than for long established immigrants, but the gap has narrowed. These patterns are broadly similar across all levels of education. This evolution suggests that changes in immigration policies to give greater weight to factors that determine successful labour-market integration have borne fruit (see below).

Table 6. Immigrant labour market outcomes relative to those of the native born, by landing cohort and years since landing

	Years in Canada				
	≤ 5	6-10	11-15	16-20	≥ 20
a) Employment rate relative to that of the Canadian-born					
Women					
1976-80	1.09	1.11	1.08	1.05	0.94
1981-85	0.96	0.99	0.98	1.03	0.93
1986-90	0.88	0.90	0.99	1.01	
1991-95	0.73	0.90	0.95		
1996-2000	0.77	0.91			
2001-05	0.79				
Men					
1976-80	1.03	1.06	1.06	1.05	0.99
1981-85	0.97	1.02	1.03	1.05	0.99
1986-90	0.91	0.98	1.04	1.05	
1991-95	0.87	1.00	1.03		
1996-2000	0.93	1.03			
2001-05	0.97				
b) Unemployment rate relative to that of the Canadian-born					
Women					
1976-80	1.15	1.05	1.10	1.08	0.82
1981-85	1.40	1.40	1.30	1.08	0.90
1986-90	1.87	1.68	1.24	1.17	
1991-95	2.37	1.54	1.45		
1996-2000	2.42	1.66			
2001-05	2.62				
Men					
1976-80	0.84	0.85	0.92	0.82	0.67
1981-85	1.27	1.14	0.96	0.77	0.75
1986-90	1.73	1.20	0.89	0.88	
1991-95	1.68	1.06	0.95		
1996-2000	1.55	1.05			
2001-05	1.60				

Source: G. Picot and A. Sweetman (2011), "Skillnaden i sysselsättningsgapet mellan Kanada och Sverige", in P.Hojem and M. Ådahl (eds.), *Kanadamodellen: Hur invandring leder till job*, FORES, Stockholm.

Immigrant earnings have fallen relative to native-born earnings

Immigrant entry earnings (i.e., the average of the first full two years in Canada) fell for males in recent decades but increased slightly for females (Figure 19). Such earnings are highly cyclical. They dropped sharply in the recessions of the early 1980s, 1990s and 2000s, although the fall in the latter period was more related to the IT bust than to the recession, which was mild (Picot and Hou, 2009[38]). Focusing on periods at a similar stage of the business cycle, entry earnings fell by 9-10% between the 1981 and 1988 cohorts

of male immigrants but rose by 14-19% for female immigrants and have since been stable for both (Table 7). As earnings for the comparator group comprising the Canadian-born and immigrants landed for 10 years or more (9 years or more for the 1988 cohort and 2 years or more for the 1981 cohort) rose throughout, entry earnings relative to those of the comparator group declined sharply between the 1981 and 2010 cohorts for both male (23-25%) and female (22-24%) immigrants.

Figure 18. Immigrant relative labour market outcomes, by educational attainment¹

1. Employment/unemployment rates of immigrants aged 25-54 relative to those of the native born with the same educational level.

2. Highest level obtained is some high school.

Source: Statistics Canada, Table 282-0106.

Figure 19. New immigrant annual entry earnings

Source: F. Hou and G. Picot (2016), “Changing Immigrant Characteristics and Entry Earnings”, Analytical Studies Branch Research Paper Series, Statistics Canada, Cat. No. 11F0019M - No. 374, based on Statistics Canada, Longitudinal Immigration database.

The decline in immigrant entry earnings relative to the native born is greater and the relative level of earnings lower when controlling for relevant characteristics such as education, age and place of residence. Controlling for these factors, Picot and Sweetman (2012[39]) find that male entry earnings (average earnings during the first five years in Canada) fell from 85% of those of the Canadian-born in the late 1970s to around 60% in the early 2000s (Figure 20); similar trends are observed for female immigrants. By comparison, male unadjusted earnings fell from 90% of those of the Canadian born to 72% over the same period. Whereas adjusted immigrant earnings approached those of the native born with similar characteristics after 20 years for the cohort entering Canada in the late 1970s, the starting point for cohorts since the early 1990s has been so low that their earnings are unlikely to catch up to those of the native born with similar characteristics during their working lives.

Table 7. Annual absolute and relative new immigrant entry earnings

	Landing cohort				
	1981	1988	1999	2006	2010
2011 constant dollars					
Entry earnings					
All new immigrants					
Male	38 200	34 600	34 300	33 400	34 300
Female	18 900	21 500	20 100	20 700	21 800
Principal applicants in the economic class					
Male	47 800	43 100	41 400	41 100	42 100
Female	25 200	30 000	29 000	29 200	27 900
	Ratio				
	1981	1988	1999	2006	2010
Entry earnings relative to those of the comparison group					
All new immigrants					
Male	0.74	0.64	0.60	0.55	0.57
Female	0.68	0.70	0.60	0.52	0.53
Principal applicants in the economic class					
Male	0.93	0.80	0.73	0.68	0.70
Female	0.90	0.98	0.81	0.73	0.68

Note: New immigrants include those aged 20 to 54 at landing and who had positive earnings in at least one of the first two full years in Canada. Entry earnings are defined as the average annual earnings during the first two full years in Canada, rounded to the nearest CAD 100. For cohort years 1988, 1999, 2006 and 2010, the comparison group includes the Canadian-born plus immigrants who have been in Canada for 10 years or more (9 years or more for the 1988 cohort). For the 1981 cohort, the comparison group includes the Canadian-born plus immigrants in Canada for two years or more. Hence, entry earnings as a percentage of the earnings of the comparison group are somewhat overestimated in 1981 compared with other years.

Source: F. Hou and G. Picot (2016), “Changing Immigrant Characteristics and Entry Earnings”, Statistics Canada Catalogue No. 11F0019M – No. 374, using the Statistics Canada Longitudinal Immigration Database.

Figure 20. Predicted male immigrant earnings¹ relative to those of comparable Canadian-born

1. Predicted values based on a model.

2. Aged 16 to 64.

Source: G. Picot and A. Sweetman (2012), “Making It in Canada - Immigration Outcomes and Policies”, IRPP Study, No. 29, April, Figure B1.

For university educated immigrants, earnings fell to a similar extent relative to those of the comparable native-born over the past quarter century whether or not qualifications were in STEM fields (Picot and Hou, 2018[40]). Controlling for official language background and visible minority status, the earnings shortfall between immigrants and the native-born for the STEM educated increased from 10% in 1985 to 23% in 2010 while for the non-STEM educated the shortfall rose from 15% to 27%. However, STEM educated immigrants working in a STEM job did much better: the adjusted earnings shortfall only increased from 4% in 1985 to 10% in 2010; and their adjusted earnings relative to those of STEM educated immigrants working in non-STEM jobs rose from 8% higher in 1985 to 18% higher in 2010. For STEM-educated immigrants, the choice seems to be between working in a STEM job or in a very poor quality job. The earnings penalty for STEM educated immigrants who do not work in a STEM job contrasts with the experience of the native-born in similar circumstances, who are not subject to such downgrading – their skills appear to be more transferable.

The main causes of the decline in immigrant earnings are a change in source countries and declining English and French language skills

To be able to implement policies to increase immigrant earnings, and thereby their economic contribution to economic well-being, it is necessary to understand why their earnings deteriorated in the first place. The major factor explaining the decline in entry earnings for male immigrants during the 1970s and 1980s is the decline in the share of immigrants coming from the traditional source countries in Western Europe and the United States and the increase in the share coming from Asia, Africa and the Caribbean (Hou and Picot, 2016[41]). The next most important factor is deterioration in English or French language skills, which contributed 37-43% of the decline. The other major factor contributing to the decline is changes in immigrant-class composition, with a decline in the share of principal applicants in the economic class and an increase in the refugee share also contributed. The other factors controlled for by Hou and Picot - age at landing, education attainment at landing, geographic distribution and regional unemployment rate – are found to have boosted entry earnings.

English and French language skills appear to have a direct effect on labour market outcomes as well as influencing the rate of return to formal education (Picot and Sweetman, 2012). Immigrants with strong official language skills get a higher return on their education credentials than immigrants with weak language skills, who get no return at all [(Bonikowska, Green and Riddell, 2008[42]); (Ferrer, Green and Riddell, 2006[43]); (Warman, Sweetman and Goldmann, 2015[44])]. Returns are particularly high for those with higher levels of education (Goldmann, Sweetman and Warman, 2011[45]). When English or French literacy skills are accounted for, there is no statistical difference between rates of return to education for immigrants and the Canadian-born (Ferrer, Green and Riddell, 2006[46]).

A related factor explaining the decline is the fall in the returns to pre-immigration labour-market experience, mainly in the 1980s and 1990s (Picot and Sweetman, 2012[39]). Up until the 1970s such experience was rewarded, as it is for the Canadian-born. However, the return on foreign work experience had fallen to zero by the time of the 1990-94 cohort for all immigrants except males from traditional source countries (Aydemir and Skuterud, 2005[47]). Aydemir and Skuterud conclude that, among recent immigrants, the decline in the return to foreign experience accounts for roughly one-third of the decline in entry-level earnings.

For the time being there is little evidence as to the reasons for this decline in the value of foreign work experience in Canada. It does not appear to be attributable to foreign work experience generating lower cognitive skills, because, even when they are controlled for, returns are lower to both foreign-acquired education and experience for immigrants than to education and experience obtained in Canada by either immigrants or Canadian-born workers (Bonikowska, Green and Riddell, 2008[42]). Another possibility is that employers have difficulty judging the value of work experience (and credentials) acquired in a very different labour market (educational) context (Liebig and Huddleston, 2014[48]). Yet another possibility is that employers have less incentive to evaluate foreign experience (and years of schooling) owing to rising supply of highly educated workers in Canada, but there is little evidence concerning this hypothesis.

Another factor explaining the decline in immigrant entry earnings may be the decline experienced by all new cohorts of labour-market entrants, with the effect having been most pronounced in the early 1980s and for men (Picot and Sweetman, 2012[39]). This decline coincided with an increase in labour supply associated with baby-boom generation demographics and the recession. If this was the cause, it was temporary.

Job heterogeneity also appears to contribute to the shortfall in earnings for immigrants relative to the native-born controlling for age and education attainment. Skuterud and Su (2012[49]) find that up to one half of this shortfall can be accounted for by the under-representation of immigrants in high-quality jobs. This gap appears to reflect relatively low transitions into high-quality jobs and high transitions out of them. Immigrants have difficulty obtaining high-quality jobs directly out of unemployment and in being able to use low-quality jobs as stepping stones to high-quality jobs. Moreover, the immigrant gap in job quality does not close with time since landing.

A factor that is frequently cited as a cause of the decline in entry earnings is increasing difficulty having foreign credentials recognised or in upgrading them to equivalent Canadian credentials. However, there have been only modest changes in the returns to foreign credentials (Ferrer and Riddell, 2008[50]), abstracting from the IT collapse in the early 2000s, which caused the returns to higher education to fall for many immigrants (Picot and Hou, 2009[38]). Immigrants receive a lower rate of return on pre-immigration education, but this has always been so (Picot and Sweetman, 2012[39]). There are indeed credentials-recognition difficulties in regulated professions, which are the pre-immigration occupations of 15% of economic-class immigrants.

Earnings for university educated new immigrants relative to earnings of the university educated native-born declined much more in Canada than in the United States over 1980-2005 (Bonikowska, Hou and Picot, 2011[51]). Whereas the university education wage premium for new immigrants was similar in both countries in 1980, it was considerably higher in the United States by 2000. Plausible explanations, which need to be further researched, into the weaker performance in Canada include:

- Worse job matching in Canada than in the United States – 42% of recent immigrants are in jobs that require lower qualifications than they have in Canada, a gap of 19 percentage points over the native-born, compared with 29% and a gap of four percentage points in the United States.
- The more rapid increase in the supply of highly educated immigrants in Canada – over the 1990s the share of new adult immigrants who held a university degree rose from 25% to 47% in Canada, but only from 30% to 34% in the United States.

- The more pronounced decline in language ability in Canada than in the United States associated with the greater shift towards immigration from non-traditional source regions in Canada.
- Selection effects, with more able immigrants selecting the United States over Canada owing to higher US returns to skills (Clarke, Ferrer, Skuterud, 2018) and higher participation of employers in skilled immigrant selection in the United States.
- Possible declines in the quality of degrees held by entering immigrants which may have been more pronounced in Canada than the United States given the greater shift to non-traditional source regions in Canada.
- Differences in the occupational mix among highly educated immigrants in the two countries.

The gap in low-income rates between immigrants and the native born has grown

The deterioration in labour-market outcomes for immigrants in recent decades has resulted in a growing share of them falling into relative poverty at a time when the opposite was happening for the Canadian born. Low-income rates (i.e., the share of the population with disposable incomes below Statistics Canada's low-income cut-off) for immigrants increased from 17% in 1980 to 22% by 2005, while rates for the native born declined from 17% to 13% (Picot and Sweetman, 2012[39]). In line with developments in immigrant earnings, the increase in the low-income rate was particularly pronounced for recent arrivals and was concentrated among immigrants from the newer source regions; there was little increase in the low-income rate among immigrants from the traditional source countries (Picot, Lu and Hou, 2009[52]).

Picot and Lu (2017[53]) find that chronic (i.e., lasting for at least five consecutive years) low-income rates among immigrants declined over 2000-12, but less so than for the native born and immigrants landed 21 years or more before, resulting in an increase in relative chronic low-income rates. The highest chronic low-income rates were for immigrants aged 65 or over, especially in relative terms. Immigrants from Asia (excluding the Philippines) have much higher chronic low-income rates than do those from North-West Europe, the Philippines, Australia, New Zealand and the United States. There is now little difference in chronic low-income rates between recent and earlier immigrants, reflecting improvements in selection. Chronic low-income rates for immigrants, but not the Canadian-born, are most concentrated in Canada's three main cities (Vancouver, Toronto and Montreal).

Immigrants' children have less favourable labour-market outcomes as adults than the comparably educated native-born

While 1.5- and second-generation Canadians (i.e., landed at less than 10 years of age or Canadian-born with at least one foreign-born parent, respectively) on average earn more than their counterparts with Canadian-born parents, that is more than entirely explained by their higher educational attainment and greater tendency to live in large urban areas with high wage premia (Aydemir and Sweetman, 2008[11]). This result reflects outcomes for all main visible-minority/source-region categories – non-visible minorities do not suffer an earnings disadvantage controlling for educational attainment. The adjusted earnings gaps are especially large for children of immigrants of African, Southeast Asian, West Asian/Arab or Latin American origin. These gaps are growing.

In 2011 employment rates for 1.5- and second-generation Canadians were lower than for their counterparts with Canadian-born parents, despite these immigrants having higher educational attainment. This is a reversal of the situation in 2001 when this group had higher employment rates. Increases in employment rates with rising educational attainment are smaller for this group than for their counterparts with Canadian-born parents. Controlling for relevant characteristics, employment rates for second-generation immigrants of West Asian/Arab and Latin American origin with university attainment are, respectively, 26 and 18 percentage points lower than rates for their counterparts with native-born parents. The extent of under-employment (i.e., working fewer hours than desired) and over-qualification (i.e., highly educated people in low-skilled jobs) is also more prominent among 1.5- and second-generation Canadians than their counterparts with Canadian-born parents.

Unemployment rates remained lower for 1.5- and second-generation male Canadians in 2011 than for their counterparts with Canadian-born parents, reflecting higher education attainment, but the gap was smaller than in 2001. For females such unemployment rates were higher in 2011 than for their counterparts with Canadian-born parents, the opposite of the 2001 situation.

More research is needed to determine the causes of the labour-market underperformance of 1.5- and second-generation Canadians relative to their peers with native-born parents controlling for education attainment and place of residence.

Improving immigrants' labour-market integration

Selecting immigrants with better integration prospects

An early policy response to counter the deterioration in immigrants' labour-market performance was to increase the share of economic-class immigrants from 40% in 1993 to more than 60% by the late 2000s (see Figure 2.1 above). There have also been changes in selection policy for economic-class immigrants to favour those with characteristics associated with stronger earnings outcomes, notably educational attainment, age, language ability and occupation. A major change occurred in 2002, when the points-based system was overhauled. Prior to the Immigration and Refugee Protection Act (2002) (IRPA), this system was aimed at selecting immigrants in occupations experiencing shortages. As discussed above, such shortages are difficult to anticipate and may not last long enough for immigrants to remain employed in jobs well matched to their skills. The result was that too much weight was given to short-term as opposed to longer-term labour-market outcomes. IRPA modified the points system for the Federal Skilled Worker programme to be almost entirely based on human capital factors, and the occupation list for immigration was suppressed. Following employer opposition, the federal government adopted a hybrid approach in 2008 that entailed pairing the points-based system to assess human capital with occupations lists, and prioritised arranged employment. The aim of these changes was to support long-term economic needs by attracting immigrants in high-skilled occupations while also addressing short-term labour-market demands.

The points system was markedly tightened in 2013. Greater emphasis was placed on standardised language testing and pre-migration credentials recognition (based on the Australian system). Other factors given greater weight were work experience in an eligible occupation and arranged employment or enrolment in a PhD programme in Canada. One of the consequences of these changes was a sharp increase in the share of Canadian

Experience Class (CEC) immigrants, who have higher earnings than other immigrants (see Figure 3 above).

A major enhancement to the selection of economic-class immigrants occurred in 2015, when Express Entry became operational. This system, which is based on similar systems in New Zealand (since 2003) and Australia (since 2012), facilitates the selection of applicants for permanent residence with the greatest chance of economic success. Express Entry is an electronic application-management system for three federal economic immigration programmes: the Federal Skilled Worker (FSW) Program, the Federal Skilled Trades (FST) Program and the Canadian Experience Class (CEC). Québec has a comparable Express Entry system. To be eligible for Express Entry, candidates must meet the requirements of at least one of these programmes. Once in the Express Entry pool, candidates are assigned a Comprehensive Ranking System (CRS) score based on the information in their profile. Points are assigned for their human capital and additional policy factors. Only those candidates with the highest scores are invited to apply for permanent residence. This feature should result in applicants for permanent residence with higher levels of human capital, as previously all applications were processed on a first-in, first-out basis.

The reconfiguration of the points system through the CRS should also yield applicants with more favourable long-term labour market prospects. It was jointly developed with Statistics Canada based on immigrants' economic outcomes. Each human capital factor in the CRS is assigned a points scale weighted to reflect evidence on outcomes. For applicants without a provincial/territorial nomination, 70% of the maximum 875 maximum points awarded are for human capital factors (Table 8).

Table 8. Points available in the Comprehensive Ranking System

Source: Immigration, Refugees and Citizenship Canada (2017), "Canada's Immigration System and the Points-based Approach for Human Capital", August.

Educational attainment, first official language ability and age (younger immigrants have higher potential Canadian work experience, which is more highly rewarded than foreign work experience) are the most important factors. Skills transferability is based on interactions between first official language proficiency and educational attainment, Canadian work experience and educational attainment, and foreign work experience and first official language proficiency. For principal applicants with a spouse or common-law partner, up to 40 of the potential 500 points for the human-capital factors other than skills transferability are based on the spouse's or common-law partner's educational attainment, first official language ability and Canadian work experience. The rest of potential points are for additional policy considerations, including a provincial/territorial nomination, for which the full 600 points are awarded, and for candidates without such a nomination, a job offer, Canadian post-secondary education credentials, French language proficiency and having a sibling in Canada.

Current CRS scoring arrangements include significant changes made in November 2016 to enhance long-term economic outcomes. The most important was to reduce the number of points for a job offer from 600 to 200 for senior executive positions and 50 for all other skilled occupations. This change was made to strike a better balance between labour-market responsiveness and immigrant outcomes and better reflect the empirical value of employment. Since this change, there have been more applicants with higher levels of skills and education being invited to apply for permanent residence and a better mix of occupations, with the top five occupations of invited applicants in the highest skill category (National Occupational Classification A) and more invitations to candidates in STEM occupations. After having reached a peak of 78% of candidates invited to apply for permanent residence following the introduction of Express Entry, candidates with Canada as their country of residence fell to 50% in the first half of 2017. It is anticipated that the decline in the proportion of applicants already resident in Canada will continue in the near term, as more candidates qualifying for the Federal Skilled Worker Program from outside Canada are invited to apply. Despite the impacts of Express Entry on the skill levels and composition of economic immigrants to Canada, this trend may be unfavourable for immigrants' earnings as immigrants with prior skilled Canadian work experience have traditionally had higher earnings than other immigrants (see below).

The increased weight given to advanced official language proficiency, both directly and through interactions with educational attainment and foreign work experience, is very important for enhancing immigrant economic outcomes. Many studies attest to the importance of strong official language skills to be able to translate educational credentials and foreign work experience into earnings. For example, Warman, Sweetman and Goldmann (2015[44]) find that increased English language skills are associated with higher earnings. Moreover, the returns to foreign post-secondary educational credentials are statistically significant only for those who have high levels of English language ability and/or work in their pre-immigration occupation. Looking at foreign qualifications in the form of labour-market experience, Warman et al. also find that only immigrants who work in their pre-immigration occupation and have high English language proficiency receive a positive rate of return on their pre-immigration potential labour-market experience (which is inversely related to age at landing).

These changes should also help to increase immigrants' information-processing skills as they are mediated in the labour market (and the OECD's PIAAC assessment) by official language competence. Increasing these skills is important because they are rewarded in the labour market with a return that is no lower for immigrants than for the native born (Bonikowska, Green and Riddell, 2008[42]). Such skills are lower in Canada than in

Australia and New Zealand, which run similar, selective immigration policies (Table 9). The difference in performance between Canada, on the one hand, and Australia and New Zealand on the other, mainly reflects lower scores for immigrants who learned the language of the PIAAC assessment as a first or second language as a child. Canada has a much higher proportion of immigrants from India and the Philippines, countries from which many immigrants who would be classified in PIAAC as native English speakers, than Australia and New Zealand, which have much higher shares of immigrants from the United Kingdom and South Africa (and each other), where English is more likely to be the “mother tongue”, a more demanding definition than that used in PIAAC. Canada’s foreign-language immigrants also had lower literacy skills than Australia’s and New Zealand’s, although the gap was smaller. A more favourable aspect of the PIAAC results for immigrants in Canada is that second-generation Canadians from a foreign-language background have essentially the same scores as native-born native-language speakers, a far better result than in Australia, New Zealand and most other OECD countries. This performance reflects well on Canada’s education system, in which socio-economic background has a relatively small effect on PISA outcomes.

Table 9. Mean PIAAC literacy proficiency by immigrant and language background and selected score differences

	Native born	Foreign born			Difference between native and foreign born	Native born		Foreign born		Difference between native born/native language and foreign born/foreign language
		Total	Recent immigrants (in host country 5 or fewer years)	Established immigrants (in host country more than 5 years)		Native born and native language	Native born and foreign language	Foreign born and native language	Foreign born and foreign language	
Canada	279.5	255.9	248.8	257.9	23.6	279.7	278.1	268.8	249.8	29.8
Australia	284.0	271.3	m	m	12.7	284.4	274.6	287.7	255.0	29.4
New Zealand	282.9	275.1	269.5	277.4	7.8	284.0	258.4	289.6	261.6	22.4
OECD average	270.6	247.0	233.7	248.4	23.6	270.9	257.9	264.2	240.4	30.5
Canada-Australia		-15.3				-4.7	3.4	-18.9	-5.2	
Canada-New Zealand		-19.2	-20.7	-19.5		-4.3	19.7	-20.8	-11.8	
Share of native-language immigrants										
Canada								25.9		
Australia								41.8		
New Zealand								41.3		
Canada with AUS share		257.8								
Canada with NZL share		257.7								

Note: m for missing - information about years since immigration is not available for Australia. Native language refers to whether the first or second language learned as a child is the same as the language of assessment, and not whether the language has official status. Foreign language refers to whether the first or second language learned as a child is not the same as the language of assessment. Thus, in some cases, foreign language might refer to minority languages in which the assessment was not administered.

Source: OECD, Survey of Adult Skills (PIAAC) database (2012, 2015).

While prior Canadian skilled work experience (National Occupations Classifications O (managerial), A (professional) and B (technical occupations and skilled trades)) has been given greater weight in selection in light of evidence that immigrants with it earn much more than immigrants without it (Sweetman and Warman, 2014[54]), the share of economic immigrants with such experience has traditionally been modest - 16.9% of male and 15.0% of female economic immigrants had prior skilled Canadian work experience in

2005-06 (Hou and Bonikowska, 2016[55]). Yet prior Canadian skilled work experience contributes to much higher immigrant earnings. Indeed, this is the main source of Canadian Experience Class (CEC) principal applicants' earnings advantage over other immigrants: former International Students earn no more than other immigrants on a weekly basis and only slightly more on an hourly basis. The skilled TFW route to permanent immigration is particularly beneficial for immigrants from non-Western backgrounds and to those in the upper earnings quintiles. Sweetman and Warman (2014[54]) also find that former TFWs receive a positive return for years of potential foreign work experience, in contrast to other recently landed immigrants whose return is either zero or negative. For females the results are more mixed and more modest, but still positive for the two main CEC categories. As noted above, the proportion of applicants residing in Canada invited through Express Entry was 50% in 2017.

Hou and Bonikowska (2016[55]) also find that immigrants with prior Canadian skilled work experience have a very large initial earnings advantage over those directly selected from abroad, regardless of whether the comparison is made starting from the year of immigration or the year of arrival (i.e., this advantage is not simply due to former TFWs having worked longer in Canada). As less than one-quarter of these immigrants' earnings advantage is attributable to their higher education level, stronger English skills and higher share coming from traditional source countries, these authors conclude that most of the earnings advantage is probably related to institutional labour market selection in terms of employers' role in selecting foreign workers and subsequent on-the-job screening, and self-selection among skilled immigrants (those with unsatisfactory experiences as TFWs are more likely to have left the country). By contrast, former international students without prior Canadian high-skilled work experience have only a small earnings advantage over immigrants selected directly from abroad, with this advantage being entirely attributable to having spent longer in Canada. Consistent with previous US, Australian and Canadian studies, receiving-country education does not generate a clear earnings advantage unless validated in the labour market by securing a high-skilled job after graduation. Immigrants with only prior Canadian low-skilled work experience had the worst outcomes, indicating that the types of jobs that potential immigrants are selected into shape their long-term labour market outcomes.

In view of these results, giving even greater weight in selection to prior skilled Canadian work experience could yield economic immigrants with more favourable earnings prospects. At the same time, points awarded for a skilled job offer should be subject also to having skilled Canadian work experience, which is not currently the case, as a job offer without it doesn't make much difference to entry earnings. Similarly, points awarded for Canadian post-secondary education credentials, which was introduced in November 2016, should be conditioned on having skilled Canadian work experience because without it such education does not offer a clear earnings advantage (*ibid*). Canadian work experience, not Canadian credentials alone, also helps with finding a job. Oreopoulos (2011[56]) finds that having a Canadian bachelor's degree makes no difference to the likelihood of obtaining a job interview if the candidate also has four to six years of Canadian work experience.

In light of the findings discussed above that immigrants with a PhD in a STEM field working in a STEM job contribute disproportionately to innovation (Blit et al., 2018), there is a case from an economic point of view for increasing the weight given in CRS scoring to a relevant job offer for applicants with a PhD in a STEM field. The main advantage of giving weight to a relevant job offer is that better firm-worker matches are obtained, as employers are likely to be well informed about the productivity of the foreign workers they would like to hire, many of whom will have worked for the employer as a TFW.

Subject to enhancing norms for provinces' foreign qualifications recognition, another change in selection policies that would enhance outcomes of those concerned is to take into account the gap between these foreign credentials and what is required for local registration, as already occurs in certain regulated trades through credentials assessment, as immigrants whose pre-immigration occupation is regulated in Canada receive a substantial earnings benefit if they get a job in their pre-immigration occupation (Warman, Sweetman and Goldmann, 2015[44]; OECD, 2016[57]).

While Express Entry is intended to be a hybrid system that is both migrant supply and employer demand driven, employers have made less use of it to date for recruitment than may have been expected. Processing delays, administrative complexity and the reduced number of points awarded for a job offer since November 2016 (except for the 20% of PNP principal applicants channelled through Express Entry) may have discouraged employer use. Some of these barriers have been reduced. Application processing time has been at or below six months in most cases since the introduction of Express Entry, and job-offer requirements have been eased by introducing a Labour Market Impact Assessment exemption in certain cases and reducing the job-offer duration requirement from indeterminate to a minimum of one year. While current job-offer points continue to significantly improve the likelihood of receiving an invitation to apply, further increasing the weight given to candidates with Canadian skilled work experience and a relevant job offer, as recommended above, could also increase employers' interest. Another change that would make the system more attractive to employers is to prioritise the processing of applications with a relevant job offer, as in Australia, and skilled Canadian work experience. Such an arrangement has sharply increased the share of economic immigrants with a relevant job offer in Australia, and has contributed to improved labour market outcomes for immigrants (van de Ven and Voitchovsky, 2015[58]). Further consultations with employers should be held to identify remaining barriers to use of Express Entry by employers that could be lowered.

The PNPs, on the other hand, continue to be labour market demand driven. However, they tend not to place great weight on the factors associated with long-term labour market success. This focus can lead to problems for the rest of Canada when demand for the specific skills recruited through a PNP dries up, as occurred in Alberta following the fall in oil prices in 2014, and the immigrants concerned move elsewhere in search of work but may lack the skills needed to find good jobs. Channelling more PNP candidates through Express Entry would help to ease this problem by assuring that more of them also have the high levels of human capital needed to adapt easily to future labour market shocks. With the recent addition of an Express Entry Stream to the Alberta International Nominee Program, all provinces and territories with a provincial nominee programme now participate in Express Entry; this is a welcome move.

Enhancing the impact of settlement programmes

Canadian governments fund a full array of settlement programmes to help immigrants to build their human and social capital so they can integrate smoothly into Canadian society. The federal government is the largest provider of programme funding (CAD 945 million in FY2015-16). Settlement services supported by this funding include pre-arrival services, which aim to provide selected permanent residents with accurate, relevant information and supports so that they can make informed decisions about their new life in Canada and begin the (re) settlement process while overseas, including planning and preparing to work in Canada. Such services include Needs Assessment and Referrals, Information and Orientation, Community Connections and Employment Related Services. These services

are also available to eligible newcomers and immigrants in Canada (Figure 21, Panel A). Other key settlement services are Language Assessment and Language Training. Immigration, Refugees and Citizenship Canada (IRCC) also funds a variety of indirect and support services (Panel B), which facilitate programme participation and foster community planning and partnership.

Figure 21. Use of IRCC settlement services¹

1. The estimates use IRCC administrative data as of April 2017 for immigrants landed from 2014/15 to 2016/17 and thus exclude pre-arrival use of settlement services.

Source: H. Zhang, J. Zhong and R. Lee (2017), “Research Insights in Settlement Services: Uptake, Mobility of Clients and Service Outcomes”, IRCC, Research and Evaluation Branch, October.

More than 35% of immigrants who landed in the last three years have used at least one IRCC-funded settlement service within one year of landing (Figure 21, Panel A), and, of these users, more than one third accessed support services (Panel B). Some services are used much more than others. It is not clear whether these utilisation patterns reflect differences in needs, availability or other barriers to take-up. One issue that IRCC has identified is that services may not be offered near to where immigrants live. It plans to reorganise service delivery in Vancouver so that it is closer to where immigrants live. Familial and financial constraints, which may oblige immigrants to take on “survival jobs”, also may be contributing to low use of language training and employment-related services relative to orientation and needs assessments, which can be completed more quickly. IRCC

should assess more broadly the extent to which utilisation patterns reflect needs and, insofar as they do not, redirect resources. It would also be useful to ensure that all new immigrants are well informed about the availability of settlement services and receive advice on what services would be most beneficial to them. Sponsoring the development of an Application to use as a platform to streamline integration services information, as in Finland, could help in this regard.

The largest funding source for language training is the federal government's Language Instruction for Newcomers to Canada (LINC) programme. It is free of charge to users and open to permanent residents within their province or territory who are not citizens and older than the minimum school-leaving age. Training is delivered by a range of organisations across Canada (outside Québec), primarily non-profit and educational institutions. Clients can choose to take full- or part-time courses, in a classroom or online, during the day, the evening or the weekend. Classes are available from basic to advanced levels and cover aspects of living in Canada, Canadian culture, civics, job-search skills and cross-cultural communication. Language training is also available through provincially funded programmes and adult skills training programmes geared to labour-market inclusion.

Under Canada's Settlement Program, childminding services are offered to facilitate access to direct services, including the enrolment of newcomer women in language training. IRCC has made significant investments in childcare support for newcomers and continues to monitor and adjust these supports as the average newcomer profile changes. Nevertheless, it has been a challenge for immigrant mothers to get to the front of the queues for language training and childcare services at the same time. Recognising that childcare spaces are a prerequisite for accessing language training and other settlement services, in 2016-17 IRCC reinforced flexibility in this area to facilitate access to settlement services by Syrian refugees. Temporary adjustments enabled more spaces to be created to accommodate adults with many young children. As a complement, provinces and territories are implementing the 2017 Multilateral Early Learning and Child Care Framework, with some of them highlighting in their three-year investment plans measures to address the childcare needs of immigrant families.

Resources for language training did not expand by enough to cope with the surge in Syrian refugees in 2015-16. Language-training funding was redirected from other immigrants, who were supported only up to a lower level than in the past. The levels on the Canadian Language Benchmark (CLB) up to which support was offered – five for non-federal programmes, three for LINC on a 12-level scale – are not adequate to support strong labour-market integration. In the future any increase in the share of immigrants with weak official language skills should be accompanied by enough extra funding to avoid additional rationing of language training for other immigrants.

Of the IRCC-funded language-training clients who landed between January 2014 and March 2016, 57% gained at least one CLB in one or more of the four language components, with 18% achieving an increase in all four components (listening, speaking, reading and writing). Economic-class immigrants required the least number of training hours on average to improve by one CLB, while parents/grandparents (family class) and refugees required the most (Figure 22). For older persons, the classroom context may not be the most suitable for teaching. Where other cheaper services are available to fulfil some clients' objectives, such as community connection services for parent/grandparent immigrants instead of expensive language training services, consideration should be given to expanding these services and redirecting the resources saved to other clients.

Figure 22. Average time needed to improve one Canadian Language Benchmark¹

1. Calculation based on IRCC's administrative data language service users who landed between January 1, 2014 and March 31, 2016 and data as of April 2016.

2. Principal applicants.

3. Spouses/Domestic common law partners.

Source: H. Zhang, J. Zhong and R. Lee (2017), "Research Insights in Settlement Services: Uptake, Mobility of Clients and Service Outcomes", IRCC, Research and Evaluation Branch, October.

Clients who utilised occupation-specific language training are the most likely to improve by at least one CLB and need the least number of training hours on average to do so, followed by those who use academic-preparation language training (Figure 23). The daily life/basic needs and general/all others categories of language training had the smallest proportion of clients advancing by at least one CLB and needed the most training hours to do so. While selection clearly influences these results, IRCC should nevertheless consider increasing resources for the more efficient courses to reduce waiting times. Consideration should also be given to how the less efficient courses can be restructured to improve outcomes, for example by making them more relevant to clients' needs. Greater use of online courses could be helpful in this regard as they are easier than traditional courses to tailor to individual needs. More generally, language training needs to be more client specific, including the way it is delivered (e.g., classroom, evening classes, by Internet), and more coordinated across all levels of government.

The case for focusing more resources on occupation-specific language training is particularly strong, considering the large potential earnings gains. Warman et al. (2015) observe higher earnings for immigrants who report educational training preparatory to an occupation licensed in Canada, especially for those with advanced English-language skills. The earnings gain is large if their pre- and post-immigration occupations are matched. Expanding access to occupation-specific classes, which are often held in the evening, may be particularly beneficial for refugees, who cannot afford to delay working for years while they learn English for daily needs.

Bridge programmes, which combine advanced language training specific to an immigrant's field and courses needed to bring their credentials up to Canadian standards, have been highly successful in facilitating post-secondary credentials recognition. The programmes have been jointly developed with the regulated professions and trades. They are very important in the health-care sector, which has many immigrant physicians but a high failure rate (60%) in the licencing test. Further expansion of bridge programmes would help more

immigrants to work in their fields of expertise, enabling them to be more productive. Such an expansion could profitably be complemented by the enhancement of norms for qualifications recognition and harmonisation at the provincial level to reduce barriers to inter-provincial mobility of immigrants in licenced occupations.

Figure 23. Cost-effectiveness of language training by type¹

1. Calculation based on IRCC's administrative data of language service users who landed between January 1, 2014 and March 31, 2016 and data as of April 2016. The calculation excludes language service clients who do not have any Canadian Language Benchmark (CLB) recorded in the four language components.

Source: H. Zhang, J. Zhong and R. Lee (2017), "Research Insights in Settlement Services: Uptake, Mobility of Clients and Service Outcomes", IRCC, Research and Evaluation Branch, October.

Mentoring programmes are a promising way of helping immigrants overcome their under-representation in high-wage jobs discussed above (Skuterud and Su, 2012[49]). Such programmes, which help currently employed skilled immigrant workers meet people in their profession, potentially integrating them in job-search networks, provide profession-specific language skills as well as literacy and soft skills (including teamwork and oral communication) specific to Canadian workplaces, plus information on workplace culture and employer expectations. The programmes operated by the Toronto Region Immigrant Employment Council (TRIEC) have been particularly successful: three-quarters of immigrant professionals using their programmes find a job in their field within a year; this success has been such that this model has been exported to other Canadian cities and Australia. Mentoring programmes also make bridge programmes more effective. A reflection is needed on how the main constraint to expanding these programmes - finding people who can take the time to mentor - can be attenuated.

The Targeted Employment Strategy for Newcomers announced in the 2017 budget is aimed at facilitating foreign-credentials recognition and helping immigrants to gain Canadian work experience in their profession. The Strategy includes: improved pre-arrival supports to begin recognition; a loan programme to assist with costs; and targeted employment-assistance measures to test innovative approaches to help newcomers acquire Canadian professional experience. Several pilots are underway to gather evidence on the most effective and efficient means to work with employers to support immigrants in obtaining their first Canadian work experience commensurate with their professional training and background.

A useful innovation to reduce unwarranted barriers to immigrants registering in licenced professions has been the creation of several Offices of the Fairness Commissioner (OFCs) in various provinces, starting with Ontario in 2006. There, the OFC ensures that registration practices in 40 regulated professions are transparent, objective, impartial and fair for anyone applying to practice their profession there. The Ontario OFC requires the bodies that regulate the professions to review their own registration processes, submit reports about them and undergo compliance audits. With these audits, the office ensures that the regulatory bodies are meeting their legislated obligations. The Ontario OFC has guided changes that removed unnecessary hurdles for applicants through streamlined processes, better communication and/or improved support. For example, internationally trained lawyers do not have to do compulsory articling anymore. The Ontario OFC has also encouraged programmes that help internationally trained professionals bridge the gap between the education and experience they already have and what is needed to be licenced in Ontario. The Office also published a guide so that regulatory bodies can reconsider the substance of the requirements to get into their professions. Similar bodies have been created in Manitoba, Québec and Nova Scotia. Denmark, Australia and New York State are currently liaising with Ontario's OFC to establish similar offices in the future.

Reduce discrimination

Discrimination may be a cause of lower earnings for immigrants. Even after controlling for all non-ethnic factors that explain earnings, immigrants, especially the university educated, earn less than the native-born. For example, Bonikowska et al. (2008) find that while university-educated immigrants' lower literacy skills help to explain their earnings shortfall in Canada, there would still be a 50% male earnings gap if skill levels were increased to the levels of the native born. Some studies find evidence of discrimination against non-Caucasian job-seekers in Canada. For example, Oreopoulos and Dechief (2012[59]) find evidence of discrimination against job applicants with "foreign" names in the probability of being called back for a job interview even if the applicants have similar education and skill profiles as those with English names. More studies, perhaps based on data with larger sample sizes and more variables, are needed to determine the extent and nature of discrimination and how best to combat it.

Potential victims of discrimination can seek justice under elaborate anti-discrimination laws. The many types of discrimination are clearly defined, and people are protected in all areas of public life. However, one aspect where improvements need to be made according to the Migrant Integration Policy Index is in the mechanisms to enforce the law, which do not strongly support victims' access to justice. Canada also makes a strong commitment to equality through its human rights bodies and equity programmes. The authorities regularly conduct public campaigns and social dialogue on discrimination and racism. Federal employment equity programmes have been in place and monitored since 1986. The Federal Internship for Newcomers Program in federal departments, agencies and private organisations aims to facilitate immigrants' labour-market integration; even so, first- and second-generation Canadians are under-represented in the public service. To be a federal contractor a firm's visible minority share of its workforce must be at least as high as its share in the population. There remains scope to broaden such obligations to areas covered in a number of other countries, including Australia, France, the United Kingdom and the United States. For example, a measure along the lines of Australia's 2013 Multicultural Access and Equity Policy, which requires all government departments to deliver equitable access to services regardless of clients' cultural or linguistic background, could enhance outcomes.

Facilitating labour-market integration of refugees

The resettlement, settlement and integration of refugees poses challenges as they often experience multiple barriers to integration, such as a lack of social networks, interrupted education, limited literacy in either of Canada's official languages, or health issues. Being able to speak English or French is necessary for refugees to fully participate in the nation's economic, social and cultural life. IRCC plans to intensify regular collaboration with provincial and territorial partners and service providers to monitor needs and make adjustments to language programming as required.

The significant intake of refugees from Syria in recent years has posed a financial burden on provinces and territories, which are responsible for providing claimants with access to social assistance, education, temporary health services, emergency housing and legal aid while their claim is pending. The federal government directly helps with temporary coverage for health-care services (through the Interim Federal Health Program). In exceptional circumstances the federal government may provide additional support upon request from a province or territory.

Government-assisted refugees (referred to Canada for resettlement by the United Nations Refugee Agency or another referral organisation, with resettlement supported by the government) have lower earnings than privately sponsored refugees (for whom a group of individuals supports their material, social and emotional needs for one year after arrival), both of which have lower earnings than other immigrants and Canadians on average (Figure 24). It is not clear whether these contrasting results reflect selection or treatment effects. After adjusting economic outcomes of refugees for differences in source country, age at immigration, official language knowledge, regional economic conditions and years since landing, Picot, Zhang and Hou (2018[60]) find that employed privately sponsored refugees earned 15-20% more than their government-sponsored counterparts during the first year, falling to 4-5% more by the fifth year and no more by the 10th year. These results point to the advantage reflecting treatment effects. A blended model with government selection and private management is being trialled to see if it yields better results. If so, it should be expanded.

Figure 24. Average employment earnings for refugees and immigrants by years since landing

Source: IRCC (2017), "Government-Assisted Refugees - Findings from the Longitudinal Immigration Database (IMDB)", IMDB 2013 Research Series.

Recommendations to make the most of immigration

(Key recommendations are in bolded text)

Immigrant selection

- Increase the weight given to skilled Canadian work experience in selection. Condition points for post-secondary Canadian education and a relevant job offer on such experience.
- Process applications for immigrant candidates with skilled Canadian experience and a relevant job offer before others, and reduce administrative complexity.
- Channel more Provincial Nominee Program candidates through the federal government's Express Entry System, which selects candidates with high levels of human capital.
- Enhance norms for provinces' foreign qualifications recognition, and take into account the gap between applicants' credentials and requirements in regulated professions when awarding points.
- Give more weight to a relevant job offer for applicants with a PhD in a STEM field to enhance the quality of firm-worker matches, and therefore STEM employment and patenting rates.

Settlement facilitation

- Assess the extent to which utilisation patterns of settlement services provided by Immigration, Refugees and Citizenship Canada (IRCC) reflect needs and, insofar as they do not, redirect resources.
- Ensure that funding for official language training keeps pace with needs.
- Increase resources for the more effective language training programmes, such as occupation-specific training, to reduce queuing, and examine how to improve outcomes for the less effective programmes.
- Where cheaper alternative services other than formal language training are available for some clients who make slow progress, expand them and redirect resources saved to other clients.
- Expand bridge programmes, which combine advanced language training specific to an immigrant's field and courses needed to help bring their credentials up to the required level in regulated occupations.
- Expand mentoring programmes, which help employed immigrants to develop their professional networks and improve their profession-specific language skills, to help immigrants into high-quality jobs.
- Expand the blended model of government selection and private management of refugees if trials underway show that it improves labour-market outcomes.

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