



Annual Levels of Immigration and Immigrant Entry Earnings in Canada

About the Brief

This research brief is based on Feng Hou and Garnett Picot, "[Annual Levels of Immigration and Immigrant Entry Earnings in Canada](#), *Canadian Public Policy* 40, no. 2(2014): 166-181. It was written by Carmina Ravanera.

For more information, contact [Feng Hou](#), Statistics Canada.



Target Audience

- ◆ Researchers
- ◆ Policy Makers
- ◆ Graduate Students

Summary

The annual level of immigration is a critical component of a country's immigration policy. This study considers the influence of immigration levels on immigrant entry earnings in Canada. We find that from 1982-2010, a 10% increase in the size of a cohort of entering immigrants is associated with a 0.8% decline in entry earnings among immigrant men from that cohort, and a 0.3% earnings decline among immigrant women.

Key Findings

- ◆ There is a significant association between the size of an immigrant cohort and the entry earnings of prime working-age immigrants in that cohort.
 - A 10% increase in the immigration level is associated with an average 0.8% decline in entry earnings among immigrant men and an average decline of 0.3% among immigrant women.
 - These effects are consistent across the immigrant entry earnings distribution, although they are somewhat weaker for those with the highest earnings.
- ◆ The effect of immigrant cohort size on entry earnings does not vary with general macroeconomic conditions. Increasing immigration levels tends to put similar downward pressure on entry earnings in both recessions and economic expansions.
- ◆ For both immigrant men and women, unemployment rates in Canada are negatively associated with entry earnings. For instance, a 1% increase in the unemployment rate in the year of landing is associated with a 2.9% decline in the earnings of immigrant men entering in that year.

Background

Between the 1920s and the late 1980s, the annual intake of immigrants was related to the state of the Canadian labour market: immigration was increased during periods of economic expansion and reduced during periods of significant economic downturn (Green 2004). However, since the early 1990s, Canada has maintained a historically high level of immigration. Some argue that the current level is beyond the "absorptive capacity" of the economy, undermining labour market performance of successive groups of new immigrants (Grady 2009). Others call for a sustained increase in immigration to counteract the effects of an aging population and the intensification of international competition for skilled labour (Conference Board of Canada 2010).



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It is difficult to settle these debates because immigration serves multiple goals, including reuniting families and responding to humanitarian needs.

This study restricts its analysis to the impact of immigration levels on immigrants' economic outcomes in the initial years after immigration. We ask two questions:

1. Is immigration level associated with immigrant entry earnings?
2. Does the association vary with the economic conditions in Canada at the time of landing?

Prior studies on youths in Western countries have found that larger cohorts are associated with lower earnings and increased unemployment, because inexperienced workers compete for entry-level jobs (Bertola, Blau and Kahn 2007). Similarly, new immigrants often bring little or no Canadian work experience, and may have language and cultural issues on the job search. They are therefore imperfect substitutes for domestic workers and primarily compete with each other for work. An increase in the size of their cohort is likely to increase this competition, and therefore would place downward pressure on their wages.

Notably, however, substitutability varies across the income distribution: highly paid immigrants are more likely to have the language and other skills needed to compete with domestic workers. We therefore expect the effect of cohort size on immigrant wages to be weaker among highly paid immigrants.

Data and Method

This investigation uses the Longitudinal Immigration Database (IMDB) over the 1982-2010 period. The IMDB combines landing records and annual tax records for immigrants who have arrived in Canada since 1980. Our study includes immigrants who were aged 25-54 at time of entry, obtained their permanent resident status between 1980 and 2009, and had at least \$1000 in paid employment earnings.

We examine these immigrants' annual paid employment earnings in their first two full years in Canada. Our explanatory variable is annual level of immigration, with cohort size defined by year and education level¹.

¹ It is reasonable to assume that immigrants with different levels of education engage in different sections of the labour market. Further, trends in the annual level of immigration differ by education level. The number of landing immigrants with a university degree rose continuously between the early 1980s and 2000, while the number of entering lesser-educated immigrants has remained low since 2000.

The study also uses the following variables to control for macroeconomic factors that could influence immigrant earnings:

- Unemployment rate of prime working-age Canadian males at the year of landing
- Current-year unemployment rates for prime working-age males
- The weekly paid employment earnings of Canadian-born full-time male workers aged 20-34

Further, we control for the following individual-level demographic variables: years of potential foreign labour market experience, ability to speak an official language, marital status, education at landing, immigrant class, immigrant source region, and geographical location of residence in Canada.

The study involves three models. The **first model** tests the association between earnings and immigration level when controlling for the above individual characteristics. The **second model** tests whether any effect remains after controlling for the aforementioned macroeconomic conditions. The **third** tests the interaction between the effect of cohort size and economic conditions at entry, e.g., whether the effect is stronger during periods of economic downturn.

Results

Entry Earnings Among Immigrant Men

We find a negative correlation between cohort size and entry earnings for immigrant men as a whole and within each education level. In Model 1, a 10% increase in cohort size is associated with a decline of 0.86% in the entry earnings of immigrant men in that cohort (see Figure 1). When we use Model 2, controlling for aggregate economic conditions, the decline becomes 0.78%. This implies that the effect of cohort size is mostly unaffected by our macroeconomic variables.

While this effect does not seem large, one should interpret it in the context of large changes in immigration levels over the study period. The average size of entry cohorts of working-age immigrants rose from 47 800 in the 1980-84 cohort to 145 000 in the 2005-09 cohort. As a result, there would have been large impacts on the trends of entry earnings. In fact, the model estimates suggest that a 9.3% decline in entry earnings from the former to latter cohort is attributa-



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ble to the increase in the immigration level.

We also find that current-year and entry-year unemployment rates in Canada are negatively associated with immigrant earnings. For instance, a 1% increase in the unemployment rate in the year of landing is associated with a 2.9% decline in the earnings of immigrant men entering in that year.

Finally, our results show that the interaction between the effect of cohort size and entry year unemployment rates is not statistically significant. Therefore, the effect of cohort size on entry earnings does not vary whether there is an economic recession or expansion.

Entry Earnings among Immigrant Women

Using our first model, we find that cohort size is also negatively associated with the entry earnings of immigrant women, but the association is not statistically significant. One reason could be that immigrant women have lower labour force participation rates than men, and thus may not face the same degree of competition with other arriving immigrants. They may also have more flexibility than men to postpone entry into the Canadian labour market. Overall, then, their wages may be less affected than men's. However, when we use our second model to include our three macroeconomic variables, the association becomes statistically significant. Data now show that a 10% increase in cohort size is in fact associated with a 0.27% decline in entry earnings for immigrant women.

Similar to immigrant men, entry-year and current-year unemployment rates are also negatively associated

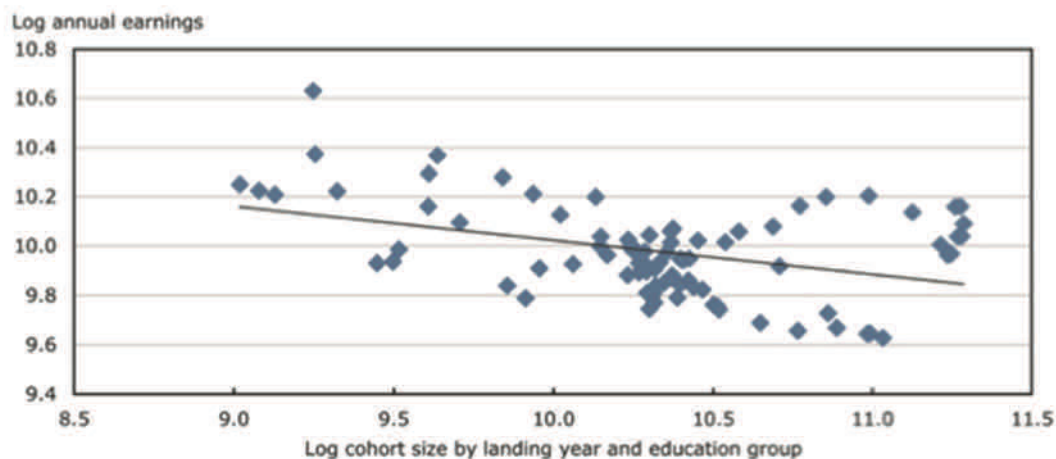


Figure 1: Cohort Size and Observed Log Earnings in the First Two Full Years in Canada, Male Immigrants Aged 25 to 54
Source: Statistics Canada, Longitudinal Immigrant Database.

with entry earnings among immigrant women. Further, immigrant women's earnings are strongly associated with the weekly earnings of Canadian-born young men. This suggests that the events that generally affect the wages of new labour market entrants also affect the wages of entering female immigrants.

Effects Across the Earnings Distribution

When applying Model 2 to various points of the entry earnings distribution, we find that the effect of cohort size is consistent except at the very top, where it becomes weaker. For immigrant men at the 90th earnings percentile, a 10% increase in cohort size is associated with only a 0.49% decline in entry earnings. The decline becomes 0.82% at the 75th percentile, 0.89% at the 25th percentile, and 0.79% at the 10th percentile. Similar patterns are observed among immigrant women.

The smaller effect for those with higher earnings reflects the possibility that highly paid immigrants have the skills, such as language ability, necessary to work in the same labour market segments as Canadian-born workers. Compared to lower-paid immigrants, these immigrants are less likely to compete with immigrants arriving in the same cohort.



Conclusion

Overall, we find that there is a statistically significant association between the size of an entry cohort and entry earnings among prime working-age immigrants in that cohort. A 10% increase in immigration level is associated with an average 0.8% decline in entry earnings among immigrant men and an average 0.3% decline among immigrant women. These effects are consistent across the immigrant entry earnings distribution, although they are somewhat weaker for those with the highest earnings. Our analysis suggests that the very large increase in immigration levels in Canada between the 1980-1984 cohort and the 2005-2009 cohort would have resulted in a 9% decrease in average entry earnings of immigrant men, and a 3% decline for women. These results align with those of prior studies, which have concluded that immigrants and domestic workers are imperfect substitutes. Therefore, immigration levels affect other immigrants' wages, but not those of the domestic-born (Card 2009).

Further, our results show that the effect of cohort size on entry earnings does not vary with macroeconomic conditions. Increasing immigrant levels puts similar downward

pressure on entry earnings during both recessions and economic expansions. However, it is important to note that there are many other factors that also affect earnings. Hence, an increase in immigration levels during an economic expansion does not necessarily mean that immigrant entry earnings will fall. The downward wage pressure of increasing immigration levels may be more than offset by increased earnings associated with improving economic conditions.

Since the 1980s there has been long-term decline in the entry earnings of immigrants to Canada, and reversing this decline has been a primary goal of Canada's immigration policy over the past two decades. The government has focused on altering the characteristics of immigrants, including changing distribution by class, education, language skills, and occupation. This paper suggests that immigration level is another factor that can influence entry earnings, providing policy analysts with an estimate of the magnitude of that effect.

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