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### Why are the Relative Wages of Immigrants Declining? A Distributional Approach

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## ABSTRACT

In this paper, we show that the decline in the relative wages of immigrants in Canada is far from homogenous over different points of the wage distribution. The well-documented decline in the immigrant-Canadian born mean wage gap hides a much larger decline at the low end of the wage distribution, while the gap hardly changed at the top end of the distribution. Using standard OLS regressions and new unconditional quantile regressions, we show that both the changes in the mean wage gap and in the gap at different quantiles are well explained by standard factors such as experience, education, and country of origin of immigrants. Interestingly, the most important source of change in the wages of immigrants relative to the Canadian born is the aging of the baby boom generation that has resulted in a relative increase in the labour market experience, and thus, in the wages, of Canadian born workers relative to immigrants.

*JEL:* J31, J61, C21

*Keywords:* Canada; Immigration; Wages distribution; Unconditional quantile regression

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## Executive Summary

A large body of literature has documented a steep deterioration in the relative earnings of immigrants in Canada over the last two or three decades (see for instance, Green and Worswick, 2004, and Aydemir and Skuterud, 2005). Several factors explain this negative trend in the economic performance of immigrants. In particular, secular changes in the country of origin of immigrants and the related decline in the returns to foreign work experience and language ability account for a substantial part of the decline. Entry labour market conditions are also highlighted.

With very few exceptions, however, existing studies only attempt to explain the decline in the *mean* wage of immigrants relative to natives. This decline may be hiding different trends across the wage distribution. Accordingly, the goal of this paper is to examine the changes in the immigrant-Canadian born wage gap at different points of the wage distribution and then explain these distributional changes using the standard explanatory factors used in the literature.

We use the unconditional quantile regression method of Firpo, Fortin, and Lemieux (2009) to perform our analysis for the period 1980-2000. Data is from the census master files for the years 1981 and 2001. We focus on individuals aged 16 to 65 and use weekly earnings of full-time workers as our main measure of wages. In computing weekly earnings, we only use wage and salary earnings.

Our descriptive statistics show that while male immigrants used to earn six percent more than Canadian-born workers in 1980 (difference of 0.06 log points), they now earn one percent less than Canadian-born workers in 2000. For women, the immigrant-Canadian born mean wage gap barely changed over time. These trends hide different changes across wage percentiles. Indeed, inequality expanded more dramatically among immigrants than the Canadian born, and immigrants at the low-end of the distribution lost considerable ground relative to the Canadian born. Accordingly, most of the growth in the immigrant-Canadian born wage gap happens at the lower end of the wage distribution.

### Results for the mean wage gap

The decomposition of the mean wage gap for males shows that 5.3 points the change in the mean wage gap can be explained by the effect of changes in Canadian labour market experience. The factor driving this change is the aging of the baby boom generation. Because of this large demographic shift, the average experience of Canadian-born workers has increased substantially more than immigrants. The contribution of foreign experience is also large because of the steep decline in the return to foreign experience over time. Indeed, our results indicate a dramatic decline in the return to foreign experience, which goes from half of the return to Canadian experience in 1980 to essentially zero in 2000. Most of the effect of the foreign experience is offset, however, by the countervailing effect of the interaction term between Canadian and foreign

experience. Taken together, these two effects nonetheless explain another 2.2 percentage point change in the gap. Broadly speaking, experience effects alone go a long way towards explaining why the immigrant-Canadian born gap changed so much over time. Among the other explanatory factors, country of origin effects (place of birth plus mother tongue) account for a 0.063 decline while the educational upgrading of immigrants and the fact that immigrants tend to be located in places where wages are higher (CMA, Ontario and BC) has a reverse impact.

The mean wage gap changed much less for women than for men. Nevertheless, changes in Canadian experience and in country of origin each account for about a 4.8 percentage point decline in the mean wage gap, while location (province and CMA) goes the other way around. Other factors, including education and the return to foreign experience, play only a modest role.

#### Results for the quantile gaps

The decomposition results for the 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> quantiles are qualitatively similar to those for the mean. Canadian experience explains well the changes at these three quantiles, but its effect is largest at the bottom end. The reason is that there was a large concentration of young Canadian born workers with very low values of experience in 1980, which is precisely the place where returns to experience are the largest. The place of birth alone does not explain the observed changes very well, as it has a larger impact on changes at the top end than at the lower end of the wage distribution. So while country of origin explains well the mean decline in immigrant wages, it cannot account for the observed distributional changes. One factor that works better in this regard is education which has a larger positive impact at the top end, because returns to university education increased a lot over this period, and immigrants are relatively more likely to hold university degrees.

Overall, one of the most important source of change in the wages of immigrants relative to the Canadian born is the aging of the baby boom generation, which has resulted in a relative increase in the labour market experience, and thus in the wages, of Canadian-born workers relative to immigrants.