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*update on FAMILY AND LABOUR STUDIES* is the newsletter of the Family and Labour Studies Division, a research arm of Statistics Canada devoted to analysis of the well-being of children and families and to how they interact with the labour market and social programs, particularly the education and income support systems. You can subscribe to the electronic version and enquire about our research by sending a message to [fls-info@statcan.ca](mailto:fls-info@statcan.ca). This newsletter is also available at [www.statcan.ca](http://www.statcan.ca) by searching on the keywords "update on family and labour studies".

## The Impact of Immigration on Labour Markets in Canada, Mexico, and the United States

Abdurrahman Aydemir, a Statistics Canada researcher, and George Borjas, Professor of Economics and Social Policy at the Kennedy School of Government of Harvard University, have found that a migration-induced shift of 10% in the supply of labour is associated with a 3% to 4% movement of wages in the opposite direction. International migration, in other words, raises a country's wages whenever it decreases the size of its workforce; it lowers wages whenever the opposite is true.

The core conclusion of their study, *A Comparative Analysis of the Labour Market Impact of International Migration: Canada, Mexico, and the United States*, confirms the prediction of the simplest textbook model of a competitive labour market, with the estimates being similar for Canada, Mexico and the United States. The study imposes a consistent theoretical structure on the three economies, and utilizes information drawn from microdata samples of each country's national census.

The authors also find that the skill mix of immigrants matters in determining their impact on the wages of domestic workers. Since a significantly higher proportion of immigrants to Canada are highly skilled this has had the effect of curtailing the growth of earnings of the most affluent Canadians and dampening a labour market trend to higher earnings inequality.

In the United States the opposite has happened, with a much higher proportion of lower skilled immigrants depressing the earnings of low paid Americans and exacerbating earnings inequality.

### *Theory and methods*

The debate over the social and economic consequences of international migration has been rekindled by a broad resurgence in international labour migration. Economists have been motivated to develop and estimate new models designed to measure the impact of international migration on the labour markets of both the countries to which immigrants go, and those from which they came.

Economic theory suggests that, at least in the short term, immigrants will boost the supply of labour in matched skill groups in the host country, increasing competition for jobs and thereby depressing the wages of the similarly-skilled in the market. Likewise, emigrants of a particular skill type will raise the wages of comparable workers left behind by decreasing the local supply of that skill type.

Whether this inverse relationship between migrant flows and wages materializes in practice, and whether the magnitudes of the wage shifts are economically significant are much debated. Good empirical estimates of the responses of wages are essential in assessing the impacts of international migration on economic efficiency—the swift matching of resources and opportunities—and on the distribution of income, both in local and global terms.

Borjas argued in 2003 that the potential for responses by capital and labour to immigration means that the appropriate geographic scope of a study of the impacts of immigrant labour supply shocks on particular skill

groups—defined in terms of both education and years of work experience—is national. Borjas’s proposed national-level model has been implemented in multiple studies since that time, and has led to estimates showing a strong, inverse relationship between wage changes and migration-induced labour supply shifts consistent with economic theory.

Such a national-level model is utilized in this study. The data are drawn from the Canadian, Mexican and American censuses, and the analysis is restricted to civilian labour market participants aged 18 to 64. All the microdata files of the Canadian Censuses from 1971 to 2001 are utilized. Each of these files represents a 20% sample of the Canadian population, except the 1971 file which represents a 33.3% sample.

Data used to study the American labour market are the U.S. decennial Census files from 1960 through 2000, with 1960 representing a 1% sample of the population, 1970 a 3% sample, and 1980 through 2000 each 5% samples.

Finally, the analysis of the Mexican labour market uses the 1960, 1970, 1990 and 2000 Integrated Public Use Microdata Samples (IPUMS) of the Mexican decennial Census; no microdata sample is available for 1980 as the primary records were destroyed in an earthquake. The 1960 file represents a 1.5% sample of the Mexican population; the 1970 file represents a 1% sample; the 1990 file represents a 10% sample; and the 2000 file represents a 10.6% sample.

### *The skill mix of immigration matters*

Aydemir and Borjas go beyond the finding that migration-induced shifts in labour supply inversely influence wages; they also explore the distributional impacts of migration that differs in its skill mix.

Differences in immigration policies between Canada and the United States over the last four decades provide the backdrop for this investigation. Canadian immigration policies since the 1960s have encouraged high-skilled workers to come to the country; American immigration policy over the same period has emphasized family reunification and resulted in a disproportionate number of low-skilled immigrants.

Significant illegal immigration to the United States since 1965, more than half of which is estimated to have been from Mexico, has also contributed to the tendency for U.S. immigrant workers to be low-skill relative to those having entered Canada. Immigration to the United States, moreover, has tended to increase the supply of young workers; the opposite has been true in Canada.

The Mexican experience is roughly a mirror-image of the American and Canadian experiences. Between 1980 and 2000, while immigration increased the number of working men by 13.2% in Canada and 11.1% in the United States, Mexico experienced a 14.6% reduction in the size of its potential male workforce.

At the same time, the observed skill distribution of this emigration provides a useful lens through which to view the results generated by the authors’ model. The proportion of workers in the middle of the education distribution (those with either a high school diploma or some college education) leaving Mexico has been the highest among all skill groups.

This group, however, represents a relatively small proportion of the entire male workforce in Mexico; although leaving Mexico at a lower rate, the preponderance of workers who are high school dropouts means that the flow of low-skilled workers from Mexico has been numerically high. This was particularly true in the 1990s, as the emigration rate of Mexican high school dropouts roughly doubled.

Aydemir and Borjas suggest that immigration played a role in the 7% drop in real weekly wages experienced by workers with post-graduate degrees in Canada between 1980 and 2000. Over this period the immigrant share of all workers with post-graduate degrees in Canada increased; between the 1986 and 2001 censuses they report that this share rose from 32.5% to 38.2%.

Their simulations also suggest that in the long run low-skilled workers in Canada have gained relative to high-skilled workers, not simply because immigration has dampened pressure for the wages of high-skilled workers to rise, but because of complementarities between workers of different skill classes. The net result is that migration-induced shocks to Canadian labour supply have served to reduce measured wage inequality between low-skilled and high-skilled workers. In their long run results Aydemir and Borjas conclude that immigration increased the earnings of high school dropouts relative to the earnings of workers with at least a college diploma by at least 12%.

The story as it pertains to the labour market of the United States is quite different. The tendency for the supply shocks of immigrant labour to the United States to be greater for low-skilled workers served to depress the wages of workers in the lowest skill groups. Coupled with only a small dampening effect of immigration on the wages of highly-skilled workers—who saw their real weekly wages increase in the United States between 1980 and 2000 (8% for college graduates and 20% for those with post-graduate degrees)—immigration served to magnify

growth in U.S. wage inequality between low-skilled and high-skilled workers over the same period.

Most of these effects, however, are small relative to actual wage changes and not the main explanation of developments in earnings inequality in the two countries.

Analysis of the Mexican labour market offers yet another case in point, and a paradoxical conclusion. Aydemir and Borjas suggest that although the 1980 to 2000 emigrant flow from Mexico dramatically reduced its male workforce and was numerically largely an emigrant flow of high school dropouts, the low-skilled workers in Mexico did not gain—and perhaps saw their relative wages fall—as a result of the migration.

This paradoxical prediction follows from the fact that the high rates of emigration of those with slightly higher levels of education from Mexico made the skills of the high school dropouts remaining in Mexico relatively more abundant. The authors further note that the largest real wage increases in Mexico between 1990 and 2000 occurred for workers with the highest education levels, particularly for workers with some college, in spite of the accelerated emigration of high school dropouts over the decade.

### *In summary*

Although the evidence suggests a roughly similar numerical wage reaction to migration-induced labour supply shocks in each of the countries—a 10% labour supply shift is associated with a 3% to 4% change in wages—the impacts of international migration on national wage structures differ across the three countries.

In Canada, immigration has had a mitigating effect on wage inequality because immigrants to Canada tend to be disproportionately high-skill. Immigration to the United States on the other hand, has reinforced growing wage inequality in that country as immigrants are disproportionately low in skill.

In Mexico emigration has been highest in recent decades in the mid-level of the skill distribution and this has served to raise relative wages for this group. Paradoxically, in spite of substantial emigration of low-skilled workers from Mexico, their continued abundance relative to those with slightly higher skill levels—who have left Mexico at higher rates—may have slightly reduced the relative wages of those low-skilled workers left behind.

*A full-length version of the original research paper is located at <http://papers.nber.org/papers/w12327>. □*

## Further reading

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These publications are available at [www.statcan.ca](http://www.statcan.ca) by searching on the author's name or by forwarding a request to [fls-info@statcan.ca](mailto:fls-info@statcan.ca).

Abdurrahman Aydemir and Chris Robinson (2006). "[Return and Onward Migration Among Working Age Men](#)." Statistics Canada, Analytical Studies Research Paper No. 273.

Abdurrahman Aydemir, Wen-Hao Chen, and Miles Corak (2005). "[Intergenerational Earnings Mobility Among the Children of Canadian Immigrants](#)." Statistics Canada, Analytical Studies Research Paper No. 267.

Abdurrahman Aydemir (2003). "[Effects of Business Cycles on the Labour Market Assimilation of Immigrants](#)." Statistics Canada, Analytical Studies Research Paper No. 203. □

## What's new

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### PhD Stipend Program invites applications

The Statistics Canada PhD Stipend Program is accepting applications for the 2007/2008 academic year. This program, now in its tenth year, offers support to PhD candidates working on their theses who are interested in using one of a variety of newly available microdata, including both longitudinal surveys and administrative data. Through this program, students have the opportunity to work at the Ottawa headquarters of Statistics Canada and are offered limited financial support. The program seeks not only to offer PhD students access to survey and administrative data to complete work associated with their theses, but also to promote awareness of the these data and the workings of Statistics Canada to a group of future Canadian researchers as well as to the general research community. The application deadline is April 15<sup>th</sup>. For details see <http://dissemination.statcan.ca/english/edu/symons.htm>. ■

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