



Macroeconomic Impacts of Canadian Immigration: An Empirical Analysis Using the FOCUS Model

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Motivation

- Of interest in its own right given that Canada is one of the highest immigrant intake countries in the world.
- Also if immigration has a negative impact on the Canadian economy this could foster a backlash against immigration that would fuel the concerns that already exist on the part of immigrants because of
 - *their increasingly slow rate of economic assimilation into the Canadian economy*
 - *and their associated increase in poverty.*
- This paper reviews the literature on the economic impact of immigration and uses the FOCUS model for the Canadian economy to simulate the impact of additional immigration.

Impact on Domestic Labour Market

(Wages, Employment, Participation, Unemployment)

- International evidence tends to be mixed, although most studies find little or no impact, a few find a positive impact and a few a negative impact. Certainly, the evidence tends not to show any substantial negative impact.
- Canadian evidence similar although not uniformly in agreement.

Impact on Use of Transfer Payments (1)

(Unemployment Insurance, Social Assistance, Housing Subsidies)

- Canadian evidence suggests that new immigrants tend to access such transfer programs less than do domestic-born persons.
- Evidence is mixed as to whether they assimilate into using them more the longer they remain in Canada and whether more recent cohorts of immigrants tend to access such programs more often
- Accessing of transfer programs by immigrants is higher for the less skilled and it varies by immigrant class in descending order from high to low usage being refugees, family class, assisted relatives, skilled workers and business class.

Impact on Use of Transfer Payments (2)

(Unemployment Insurance, Social Assistance, Housing Subsidies)

- U.S. evidence on accessing transfer programs is more mixed although it tends to suggest they assimilate into accessing transfers more often the longer they remain in the country and that more recent cohorts accessed them more often.
- The contrast between Canada and the US could be due to the fact that the Canadian immigration system emphasizes skills while the US one is built more on family reunification.
- Limited Canadian evidence suggests that immigrants and non-immigrants are fairly similar in health status (if anything immigrants may be slightly more healthy) and in their use of the *health care* system.

Impact on Net Fiscal Balance

(Public Expenditures Including Transfers Minus Taxes)

- Canadian evidence suggests that immigration is likely to have a small positive effect on *government fiscal balances* (expenditures including transfers less taxes)
- That impact is not likely to be sufficient to be a panacea for the looming pension and especially health care expenditures associated with an ageing population.

Knowledge Gap and Purpose of Study (1)

- Existing literature identified a gap in our knowledge because the micro-analysis studies often do not account of such factors as responses from employers, housing and other markets, public expenditure, taxes, prices and longer run dynamic adjustments not only in the labour market but in other markets.
- This paper follows the spirit of those suggestions by providing illustrative evidence of the impact of immigration on the Canadian economy through simulations based on the FOCUS model for the Canadian economy, developed by the Policy and Economic Analysis Program at the University of Toronto.

Knowledge Gap and Purpose of Study (2)

The main outcomes of interest include:

- real GDP and GDP per capita;
- unemployment;
- aggregate demand and especially for housing;
- investment and productivity; and
- government expenditures, taxes and net government balances.

Model Assumptions and Modifications (1)

- Illustrative projections are based on an assumed increase of 100,000 *additional* immigrants per year above base-case levels, with the increase being the same in each of the years 2012 through 2021 (i.e., 100,000 in 2012, 100,000 in 2013) so that it amounts to one million new immigrants over the 10 year period.
- Alternative assumptions would yield roughly proportionate projections (e.g., 50,000 additional immigrants each year would have the effect of approximately half of that of the 100,000 simulation).

Model Assumptions and Modifications (2)

- The expected impact of additional immigration into Canada are simulated over the period 2012-2021.
- The model is modified to incorporate additional information related to the immigrants in such areas as:
 - their labour force participation;
 - the full-employment unemployment rate;
 - associated expenditures on government services and infrastructure;
 - government transfer expenditures at the federal, provincial and local levels;
 - remittances and funds brought by immigrants; and
 - wages of immigrants relative to Canadian-born workers.

Central Case: Census 2006 Immigrant Wage Ratio

	2012	2013	2014	...	2017	...	2021
Real GDP (%)	.43	.87	.89		1.21		2.29
Real GDP per capita (%)	.15	.30	.05		-.41		-.29
Total Population ('000)	100	200	300		600		1000
Source Population ('000)	79	159	241		495		852
Employment ('000)	59	144	196		288		539
Unemploy't Rate (pc pts)	-.06	-.19	-.18		0.0		-.09
Labour Productivity (%)	.09	.06	-.19		-.33		-.53
Federal Balance (\$Bill)	1.3	2.6	2.7		3.7		8.8
Provincial Balance (\$Bill)	0.8	1.7	2.0		1.9		3.8

Results (1): GDP and Unemployment

- Real GDP increases by 2.3% by 2021, the end of the 10-year simulation period
- Population increases by 2.6% because of the additional 1 million immigrants over the period, so that real GDP *per capita* falls slightly. This occurs largely because of assumptions we have incorporated (that are relaxed in a variant simulation) reflecting the fact that immigrants are initially paid below their marginal productivity and recent cohorts only slowly assimilate into the labour market (based on evidence from the literature).
- Unemployment is not affected, reflecting the fact that immigrants increase aggregated demand for goods and services (especially housing) and this roughly offsets any increase in unemployment as they enter the labour market and search for employment.

Results (2): Aggregate Demand, Investment and Productivity

- The increase in aggregate demand comes mainly from housing. To a lesser extent it also comes from an increase in non-residential and machinery-and-equipment investment, stimulated by various factors:
 - *the overall growth in the economy*
 - *the generation of new capital to work with the new immigrants*
 - *the positive impact on corporate profits, which tend to expand in advance of the overall economy.*
- Productivity is increased because of the increase in investment relative to consumption and the fact that the average workers in the investment sector (residential and nonresidential) are somewhat more productive than those in the consumer sector.

Results (3): Government Expenditures and Tax Receipts

- Govt. expenditures increase in response to new immigration (although OAS and CPP only by a small amount and come later). Taxes and CPP contributions increase sooner as the new immigrants begin work. The increase in expenditures is less than the increase in taxes paid by immigrants since:
 - 1) *The taxes are more immediate while many of the expenditures come later*
 - 2) *There are economies of scale in the provision of government services*
 - 3) *Immigrants tend to enter in the tax paying yrs of lifecycle*
- Because taxes paid by immigrants exceed expenditures, immigration adds to overall govt. balances (i.e., \$14 billion in total and \$8 billion at the federal level by the 10th year of the simulation). This represents a significant reserve against future needs or could perhaps be redeployed into additional social programs or tax cuts.

Variant 1 Case: Immigrant Wage = Domestic

	2012	2013	2014	...	2017	...	2021
Real GDP (%)	.45	1.03	1.34		2.03		3.44
Real GDP per capita (%)	.17	.46	.49		.40		.83
Total Population ('000)	100	200	300		600		1000
Source Population ('000)	79	159	241		495		852
Employment ('000)	40	116	182		305		537
Unemploy't Rate (pc pts)	.02	-.10	-.15		-.05		-.08
Labour Productivity (%)	.22	.37	.32		.38		.60
Federal Balance (\$Bill)	1.2	2.9	3.9		6.3		12.4
Provincial Balance (\$Bill)	0.8	1.9	2.8		4.2		7.2

Results (4): Alternative Simulation Assuming No Immigrant Wage Gap

- Alternative simulation assumes that new immigrants are paid their marginal product same as that of domestic workers. The purpose is to indicate what gains could be had from integrating immigrants more quickly or finding immigrants who can be more quickly integrated.
- In this case, after 10 years:
 - Real GDP growth is greater than population growth so that real GDP per capita increases
 - There is a greater net gain in productivity from accumulation of new capital and the reorientation of output in the economy to investment goods and to net exports
 - Government balances are \$22 billion higher than in base case
- Again, there is no negative impact on the unemployment rate as the demand directly or indirectly associated with new immigrants meets their addition to the potential supply capacity of the economy.

Policy Implications (1)

- Additional immigration is likely to have a positive impact on the Canadian labour market and economy in general, including net fiscal balances.
- This is generally buttressed by conclusions reached in the existing literature; however, that literature is by no means in agreement.
- The real concern, however, is with respect to immigrants themselves in that they appear to be having an increasingly difficult time economically assimilating into the Canadian labour market, and new immigrants are increasingly falling into poverty.

Policy Implications (2)

- Furthermore, existing immigrants are likely to be adversely affected by expanding immigration since new and existing immigrants are likely substitutes.
- Improving the economic integration of immigrants into the Canadian labour market is likely to be beneficial not only for the immigrants themselves but also because such integration is also likely to enhance the generally positive impact that immigrants have on the Canadian economy.