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## **A Critique of “Macroeconomic Impacts of Canadian Immigration... Using the Focus Model” (Dungan, Fang and Gunderson, 2010)**

### **General Comments**

This paper by Peter Dungan, Tony Fang and Morley Gunderson, which was supported by grants from Metropolis and the Social Sciences and Humanities Research Council, uses the FOCUS macroeconomic model of the University of Toronto to estimate the impact of a 100,000 per year increase in immigration over a ten-year period starting in 2012. The methodology relies on microeconomic information, much of which is dated, from earlier studies of the impact of immigration in Canada and other countries to gauge the microeconomic impact that is used to shock the various exogenous variables and equations of the model.

As is often the case in such studies, the model overrides are the most important determinants of the simulation results as most, if not all, the important impacts of immigration are not built into the structure of the model. And this key fact will, of course, be ignored by those who will use the results to make the case for higher immigration.

In this case in particular, it is assumed that all the new immigrants will find employment to the same degree as other Canadians, but at a wage reflecting the substantial discount reported in the 2006 Census. This is based in part on the assumption that the Canadian economy will be operating at a high level of employment over the 2012 to 2022 period of the simulations which can be characterized as full employment. This, of course, is an optimistic assumption. Indeed, it is likely that the unemployment rate of new immigrants will be much higher than other Canadians as has been reported by the Census and Labour Force Survey (approaching twice as high for recent immigrants). And it is also a risk that other Canadians could face higher than full employment levels of unemployment if some of the risks facing Canada and the international economy as a result of international fiscal and trade imbalances materialize. But this is another story.

In addition, many possible model overrides, such as allowing for lower propensities to consume, purchase new housing, and import, which might dampen the magnitude of the demand impacts of the simulations, are not taken into consideration. There is also the possibility that lower wages resulting from increased immigration would cause the substitution of labour for capital and mitigate the increase in investment spending in the simulation resulting from the accelerator effect of increased aggregate demand.

Nevertheless, the overall simulation results still show the increase in real GDP (2.29 per cent) being less than the increase in population resulting from immigration (2.59 per cent) or the increase in employment (2.82 per cent). This means that the additional immigration actually causes a small reduction in labour productivity. And it certainly doesn't suggest

that there will be much additional output resulting from the immigration left over for other Canadians.

The key fiscal result of the simulation that Canada would have \$14 billion in additional net government revenues from the impact of the assumed increase in immigration is highly questionable. It depends on the combined effect of the assumptions explained below, namely that recent immigrants in the labour force will have the same unemployment rate, that their taxes will be the same with respect to income and spending and that the government will spend less on real current and capital spending on them than on other Canadians. It also depends on the overall macro impacts on GDP. None of these assumptions are very plausible.

The more likely scenario is that the new immigrants do not experience anything approaching full employment and that governments end up spending more than assumed to provide them with the same level of services as other Canadians and to meet their special needs resulting from their likely high levels of poverty. And it is also likely that the positive impact on GDP and tax bases will not be as large as estimated for the reasons explained below.

The best way to estimate the net fiscal impact of additional immigration is to focus on its direct effect as Herb Grubel and I do in our joint paper (Grubel and Grady, 2011). Adding in alleged macroeconomic fiscal benefits based on dubious assumptions as is done in the FOCUS paper just muddies the waters.

The most unlikely scenario of all is the alternative scenario presented in the paper where the new immigrants also earn the same amount as other Canadians. It is this scenario that generates the \$22 billion increase in net fiscal revenues noted in the paper.

A problem with such simulation results as those produced with the FOCUS model that support the case for more immigration is that they will be used by pro-immigration groups to prove that Canada needs more immigrants. The mystique attached to prestigious academic institutions and complicated econometric models that are beyond the understanding of even most educated people will enhance the credibility of arguments that fly in the face of simple Census data on the performance of recent immigrants and indeed on a common sense understanding of the economic forces at play when more underperforming immigrants are admitted to a modern welfare state like Canada.

### **Some Specific Observations**

The section surveying the literature is interesting, particularly the part that discusses the theoretically expected impact. It starts out with a good presentation of the possible negative impact of immigration on the wages and employment prospects of non-immigrants relying on the economic theory of supply and demand as applied to labour markets (p.3). But its discussion of the possible positive impacts such as on consumer

spending and housing, industrial structure, trade, is weaker and less soundly based on microeconomic theory (p.4).

The survey of the literature leads the authors to conclude that the overall result on the labour market for other Canadians is small (p.6). While they mention the study by Aydemir and Borjas (2006) which finds a negative effect over the period 1971-2001, they tend to dismiss it in favour of earlier studies which found no effects. This ignores the fact that the increase in immigration particularly from the Third World is a relatively recent phenomena that was not fully captured in the earlier studies.

On p.7, they note that “Overall, the Canadian evidence suggests that new immigrants tend to access transfer programs like unemployment insurance, social assistance and housing subsidies less than do domestic-born persons.” But it should be emphasised that the evidence presented mostly concerns pre-1990 immigrants and excludes the recent cohorts of immigrants who have fared much more poorly in the labour market.

Also the literature survey does not cover immigrants’ consumer behaviour or demand for housing. This is an important gap as their FOCUS model estimates of the impact of increases in immigration very much depend on the assumption that new immigrants will for any given income level spend the same amount as other Canadians on these categories. Equations for consumer expenditure (and also housing demand) are usually in real per capita terms and have some form of real per capita permanent income as important driving variables (I can only speculate here as the exact equations are not presented in the paper and my documentation on FOCUS is out of date). So increases in population from whatever source tend to increase demand. While it’s true that this is dampened by the assumption that the new immigrants will earn less than other Canadians, the permanent income variable may be overstated because it assumes that past per capita income was the same for the immigrants as for other Canadians. And it doesn’t consider the possibility that new immigrants will need to save a larger share of their income than other Canadians in order to get themselves financially established in Canada. Also it doesn’t allow for the possibility that new immigrants may double up on housing with others and thus not generate the same demand for housing as other Canadians all other things being equal (this assumption could be easily checked in the Census as it has data on housing conditions). Another issue is the impact of immigration on exports and imports. It is possible that the marginal propensity to import could be higher for new immigrants who may prefer the goods they are familiar with from their home countries. This would have a mitigating impact on any increase in aggregate demand resulting from additional immigration. On the other hand, exports to their home countries could be increased if the new immigrants were to get involved in export-oriented businesses.

On p.10 they conclude that “Overall, the evidence for Canada suggests that immigration is likely to have a positive effect on government fiscal balances although 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. As a more conservative statement it is the case that immigrants are very unlikely to be a net drain on fiscal balances.” Yet the only Canadian evidence they cite is Akbari (1989a, 1989b 1991, 1995)

which again use data from the late 1980 or 1990 before the recent increase in immigration particularly from the Third World. Herbert Grubel's study (Grubel, 2005) of the net fiscal impact of recent immigration is not mentioned in the paper.

As they say on p.12 "The purpose of the remainder of this paper is to follow the spirit of those suggestions [from their microeconomic literature survey] by providing illustrative evidence of the impact of immigration on the Canadian economy through simulations based on the FOCUS model." In other words, the FOCUS simulations do not actually provide any independent estimates of the microeconomic effects of immigration, but merely illustrate the macroeconomic consequences given the assumption that the impact of immigration induced population increases is the same as any other source and their interpretation of the microeconomic literature, which in so far as it provides any evidence on Canada at all largely predates the post 1990 large increase in immigration.

Note that the base case assumes that the Canadian economy will close most of the gap opened up in the 2008-09 recession by 2012 and will be operating at "full employment" by 2015. This means that the impact of immigration is being estimated assuming that the immigrants will be arriving in an economy operating with relatively tight labour markets. It is far from obvious that this will be the case given the severity of the past recession and the risks overhanging the domestic and international economic outlooks.

The shock considered is a ten-year increase of 100,000 net immigrants per year adding up to a total of 1 million immigrants assuming no return immigration. This shock was chosen because it increases immigration levels to roughly 1 per cent of population, which is the level advocated by Liberal then Citizenship and Immigration Minister Elinor Kaplan and more recently re-iterated by the former Liberal Official Opposition Critic for Youth, Citizenship and Immigration, Justin Trudeau.

A question that needs to be asked given the recent deterioration in the performance of immigrants is whether it would be possible to find this many new prospective immigrants without a further deterioration in their "quality." This problem would be exacerbated by the Government's perceived requirement that it must clear the backlog in taking new immigrants. This would mean that at least initially many of the additional immigrants would come from the backlog. And, of course, it is a fact of life that the new immigrants would not necessarily be all selected as skilled workers as currently only 17.5 per cent are. Many of the new immigrants would be immediate family of skilled workers, family class including some parents and grandparents, and maybe even refugees as the immigration of all categories of immigrants seems to expand when the totals do.

Interestingly on p.13 they say "While the results could be considered 'linear' for an increase of perhaps up to 100,000, or even a decrease of say 30,000, any larger changes in immigration in either direction would likely require further research into important additional effects – for example, the absorptive capacity of the economy for a large increase, or the impact of key labour-shortage bottlenecks for significant decreases in immigration from current levels." As they acknowledge that their base level is only set at approximately 0.75% of population, rising from 260,700 in 2012 to 291,800 in 2021 and

that they have not considered the any impact from the Temporary Foreign Worker Program, they have not allowed much room for increases from current levels except that which would result from return migration.

A key assumption of the simulation is that the immigration would not change the full-employment or 'natural' unemployment rate or 'Non-Accelerating Inflation Rate of Unemployment' (NAIRU), which is a key exogenous variable in the FOCUS model. This is, of course, not very plausible as recent cohorts of immigrants have had unemployment rates up to twice as high as non-immigrants. It also has an important impact on the results as employment in macroeconomic models like FOCUS have a tendency to gravitate towards the levels consistent with the assumed natural rate. In effect, they have assumed that all the new immigrants will experience the same levels of unemployment as everyone else, which has obviously not been the case as shown in the Census and Labour Force Survey data.

They also "turn off" a cyclical variable measured as the difference between the actual unemployment rate and the NAIRU which function in the consumption and housing demand equations of FOCUS proxy for the perceived cyclical state of the economy (pp.14-15). This means that they don't take into account any negative impact of initial unemployment of immigrants on their spending on consumer goods or housing. Again this biases their impact estimates in a positive direction.

On p.19, the authors note the increase in non-residential investment and investment in machinery and equipment resulting from the shock. They attribute this to "the overall growth in the economy and by a positive impact on corporate profits, which tend to expand in advance of the overall economy." On the other hand, they never acknowledge that it is possible that lower wages resulting from increased immigration could result in a substitution of labour for capital and reduce investment.

As to the fiscal impact of immigration, they assume that the increases in income or spending resulting from immigration will result in increases in government revenue in the same way as any increase in income or spending and do not take into account the progressivity of the personal income tax which levies tax at lower rates on lower income taxpayers like most immigrants. This is the main reason that the Census data in Herb's and my study show that recent immigrants only pay 57 per cent of the income taxes paid by all Canadians.

And on the spending side, they assume that "real current and capital spending by level of government will change in proportion to the increase in overall population due to increased immigration with the proportions being 0.5 for federal, and 0.75 for provincial and local governments." (p.15) This means that they assume government spending goes up significantly less percentage-wise than the increase in the population or that there are economies of scale in the production of government goods and services. It is hard to square this assumption with the fact that larger countries don't necessarily have lower relative levels of government spending and that government spending doesn't decrease as countries grow larger.

The study examined all the main transfer payments. The most important assumptions were that the new immigrants would get no OAS and GIS and C/QPP because none of them would have been in the country for over ten years. No special adjustments were made to increase Social Assistance Payments that might go to new immigrants who find themselves with low income and no jobs. But there was no need for this as it was assumed that they would find jobs.

Concerning OAS and GIS, there are future liabilities accruing with respect to the new immigrants that will need to eventually be paid. And the C/QPP program is a contributory pension scheme. Under a life cycle approach to fiscal incidence, it is not appropriate to count the benefits paid to non-immigrants just because they are older and exclude the future benefits to new immigrants as both groups are paying for the same pensions but are just at a different stage of their life cycles.

The approach used in this paper to estimate the net fiscal impact of immigration are not appropriate. As Herb points out in his e-mail, this paper relies on assumptions about the taxes immigrants pay (ie the same as other Canadians), while ours uses census data on the immigrants' incomes and taxes paid. Our data clearly shows that the assumption about equality is not valid.

The assumptions made in the paper ensure that there will be a positive impact on the government fiscal balance when the FOCUS model is shocked. This results from the combined effect of the assumptions, namely that recent immigrants in the labour force will have the same unemployment rate, that their taxes will be the same with respect to income and spending and that the government will spend less on real current and capital spending on them than on other Canadians.

The discussion of immigrants' funds and remittances on pp.15-16 is interesting. They estimate that \$1.1 billion (2009\$) is brought in for each 100,000 immigrants. It is worth noting that this is a relatively small amount or only \$11,000 per immigrants. They certainly don't bring that much with them in the way of assets. Also the estimated remittances of \$190 million in 2022 for the total of 1 million additional immigrants coming in over the period is small. It amounts to only \$190 per immigrant.

It is appropriately assumed based on the 2006 census that new immigrants will earn less (34 per cent for men and 27 per cent for women) than non-immigrants initially and that this discount will decline by approximately 1 percentage point per year for men over the ten year period. (p.17)

Also, interestingly, it is assumed that the wage differential indicates "an equivalent productivity differential reflecting such factors as the underutilization of immigrant skills that would otherwise make them more productive (and earn a higher wage) or the inability to apply these greater skills, especially when they first enter, because of language, cultural or other barriers." This is exactly the same assumption I made in my paper that estimated the negative impact of recent immigration on productivity.

It is interesting that the increased immigration is estimated to cause a 2.02 per cent depreciation of the Canadian dollar in terms of the U.S. by 2021. This means that the price of most imported goods would be increased by this percentage. The overall GDP deflator is estimated to only go up by .33 per cent because the Bank of Canada is assumed to respond any increases in inflation resulting from the immigration shock by to by raising interest rates in order to meet its 2% inflation target.

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