OBSERVATION

TD Economics

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INCOME INEQUALITY UNDER VARIOUS INCOME METRICS

In a recent report (Income and Income Inequality – A Tale of Two Countries), TD Economics reported that the traditional economic benchmark for income inequality, the Gini coefficient, has remained largely unchanged since 1998 in Canada. In light of that finding, we received numerous responses from experts and policymakers asking why we had used pre-tax total household income (which includes government transfers) as opposed to other measures that are available. Given the interest, we thought it would be useful to illustrate that the story does not change if one uses after tax or market income or numbers adjusted for family size.

The data

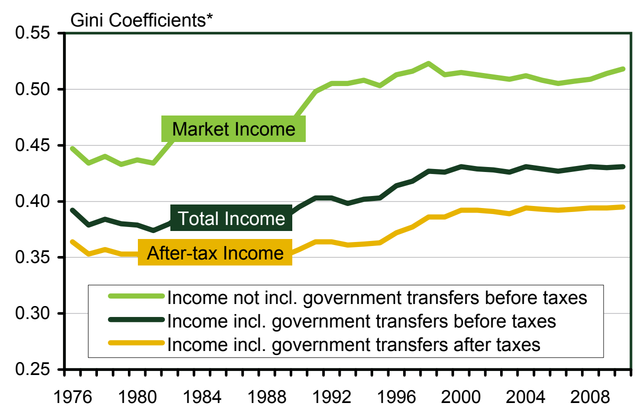
There are a variety of income metrics calculated by Statistics Canada that can be used for analyzing income inequality trends. First, there is market income that only includes income from private sources such as employment earnings, investment income, or private retirement income. Second, there is total income, which takes the definition of market income and adds government transfers such as old age security and social assistance. Both of these income definitions are pre-tax measures. One could also look at either income definition on an after-tax basis that takes total income and subtracts federal and provincial taxes paid. All of these income measures are adjusted for inflation.

These data can also be adjusted so that differences in family size are taken into account. For example, a family of five working-age individuals living in a single dwelling could potentially have a very high family income, but they may not be high earners individually. Statistics Canada provides income data on both a family unit and "per adult equivalent" basis. The latter can be used to better assess relative incomes on an individual-by-individual basis.

What we used

The initial goal of our report was to highlight the differences in income trends between Canada and the United States. We wanted to highlight that Canadian median household income was now higher than in the United States and that income inequality in Canada has not been rising the way it has in America. Therefore, we needed to use a measure of income that was comparable between the two countries. Ideally, we would have used after-tax income adjusted for family size, as this is our preferred metric. Unfortunately, the U.S. only publishes pre-tax total income (i.e.

CHART 1: CANADIAN INCOME INEQUALITY MEASURES



*Higher = less equality; Source: Statistics Canada

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including government transfers but before taxes) unadjusted for family size.

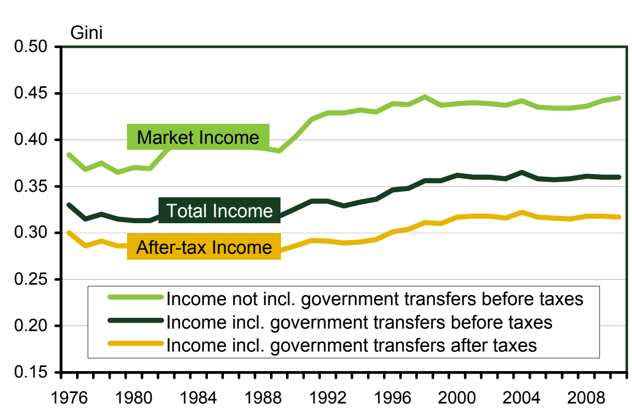
Do the other measures of income tell a different story?

However, many readers were only interested in income trends in Canada exclusively. So, this leads to the question of whether the other metrics of income tell a different story. As was noted in our original report, "Interestingly, the story changes very little even by using after-tax income data and adjusting for the secular decline in the average family size over the last few decades. The Gini coefficient calculated using this definition of income has been flat since 2000." Regardless of the income metric used, the Gini coefficient has generally remained flat over the last decade (Chart 1). After adjusting for family size, the trends look identical to the non-adjusted series, save for the fact that they are significantly lower than their non-adjusted counterparts (Chart 2). The only series that has perhaps seen a slight uptick is that of market income (not including government transfers before taxes). However, it is still not materially higher than in the last decade. Most importantly, when one looks at the after-tax metrics, which is what truly matters to people since it is the funds that they must live on, it is evident that Canada's progressive tax and transfer system has helped to ensure that inequality has remained relatively stable over the past decade.

What is different with these other measures?

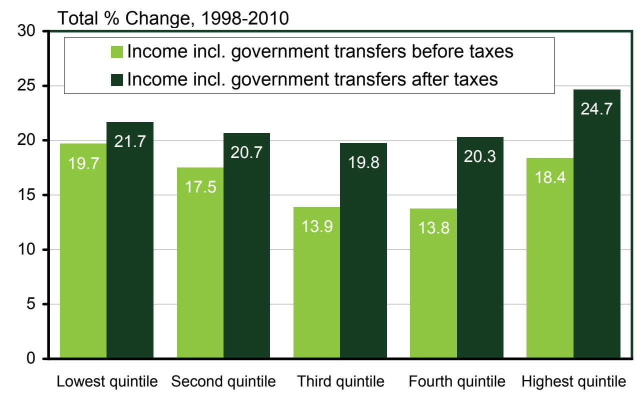
So, the story does not change, but there are a couple of nuances to flag. As mentioned above, there is an uptick in market income inequality over the past couple of years, but the tax system appears to have largely eliminated the differential. Where we find a more significant change in the story is the distribution of income growth across income quintiles. In our original analysis, we reported that since 1998 total income growth was strongest for low-income and high-income families and weakest for middle-income families (Chart 3). This was largely responsible for the flat profile of the Gini coefficient. Looking at both the adjusted for family size and unadjusted for family size after-tax income statistics, the same story holds true, but the gap between the high, low and middle income growth rates is much narrower. In other words, there is less of a U-shaped profile across the income brackets (Charts 3 & 4). In particular, the income statistics adjusted for family size show that income growth has been roughly similar for all five income brackets over the 1998-2010 timeframe, with only a slight underperformance for middle-income families.

CHART 2: CANADIAN INCOME INEQUALITY MEASURES ADJUSTED FOR HOUSEHOLD SIZE



*Higher = less equality; Source: Statistics Canada

CHART 3: HOUSEHOLD INCOME GROWTH IN CANADA, 1998-2010

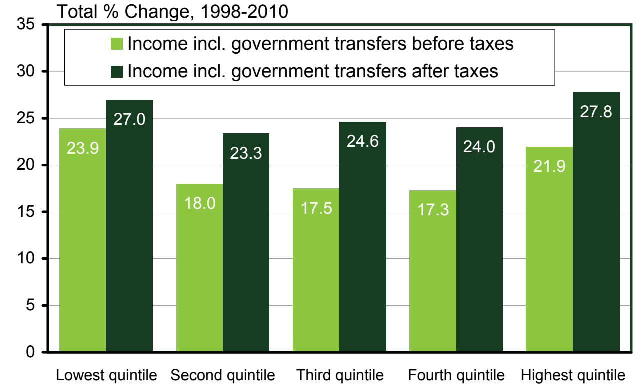


Source: Statistics Canada

Final thoughts

The purpose of our research was simply to outline the factual trends in income and income equality. A review of the trends of the Gini coefficient for total income versus market income, on a pre-tax and after-tax basis, and adjusted or non-adjusted for family size, all tell the same story that income inequality across Canadian households in aggregate has been flat over the last decade. Make no mistake, income inequality does exist. However, it has neither increased or declined in a meaningful way. As we stressed in the first report, it is the level of income that is a greater challenge. The bottom 20% of earners are living on an average pre-tax income of $15,200. To illustrate the income inequality gap, the top 20% have an average income of over $170,000. And, it is the case that the top 1% of earners have increased their share of income versus other 99%. Moreover, the public perception of income inequality is likely shaped by the considerable inequality of wealth that exists. In our opinion, the focus should be on removing the barriers to increasing income for those at the bottom end of the income scale and improving productivity in the Canadian economy to provide stronger income gains for middle-income Canadians.

CHART 4: HOUSEHOLD INCOME GROWTH ADJUSTED FOR HOUSEHOLD SIZE, 1998-2010



Source: Statistics Canada