

WORKING DRAFT

Toward a “New Canada Poverty Line” (NCPL): Input to the Canadian Poverty Reduction Strategy

Experts Panel on Income Security of the Council on Aging of Ottawa

Introduction

This brief note proposes the adoption of a New Canada Poverty Line (NCPL) for use in setting national targets. It responds to one of the main issues for the Canadian Poverty Reduction Strategy: which measure or “headline indicator” should be the main focus for a national poverty reduction target.

- The word ‘new’ is intended to signal that, in order to harness renewed commitment to policy action to reduce poverty, we are moving beyond a long and confusing history of the best way of measuring poverty, but in a way that provides continuity by building on the best features of the two existing measures that have received most widespread support, MBM and LIM. The NCPL would also be Canada’s first official poverty line
- The word ‘Canada’ is intended to signal that this is a high-level indicator, though not the only one that can be used in poverty target-setting. Other actors can set targets that, for example, relate to particular provinces or territories, to particular urban areas, or to poverty in particular population groups such as children or retirees or those facing particular disabilities.
- The phrase ‘poverty line’ is used (in contrast to phrases such as low-income cut-offs or measures) in order to signal that indicators and targets based on it are meant to be readily understood by the public and to mobilize action. ‘Poverty’ clearly implies that there is a problem to be solved. ‘Line’ signals that, at the end of the day, a considered political judgment has been made. While poverty is a complex phenomenon with many shades and dimensions, policy discourse can be more effective if key poverty reduction targets are based on a simple ‘line’ that delineates poverty in a way that has broad support.

A single line used as the basis for indicating whether things are getting better or worse regarding poverty in Canada has the advantages of clarity and simplicity. Its use may help mobilize public opinion and build political consensus around needed policy action. Still, it should be complemented by a coherent dashboard of related poverty indicators. Ideas regarding a poverty indicator *dashboard* are advanced in a companion note. That note clarifies that a poverty line can and should be used as the basis for several indicators, for example both counts of the proportion of Canadians falling below the line (the “headcount ratio”), and by how far they are falling below it (the “depth” of poverty).

Current MBM and LIM

At present in Canada, three “lines” dominate: LICO (low income cut-off), MBM (market-based measure) and LIM (low income measure). (Additionally, the LICO and LIM are also each estimated and applied two ways – using both before- and after-tax incomes.) As Statistics Canada has repeatedly insisted, none of these is a “poverty line”, since there is no purely statistical basis for defining poverty generally, or the level of income below which one should be considered “poor”.

However, it is entirely reasonable for an appropriate authority like a government department and its minister to make the value judgments needed to specify an official poverty line. Judgments are required because any poverty line necessarily embodies arbitrary decisions.

In support of the objective of defining an official poverty line conceived in this sense, our view is that the best approach is a “New Canada Poverty Line”, taking the best features of the LIM and MBM, since it appears that there is now near unanimity that the LICO should be abandoned. (Recall that none of these lines are in any sense “official”.)

There are several *apparent* advantages of the MBM in comparison to the LIM:

1. The MBM has the appearance of better “face validity” than the LIM, since it is based on an explicit listed set of items whose purchase is considered a reasonable minimum basket of goods and services needed to stay out of (income) poverty.
2. The MBM varies across the country in a way that reflects differences in living costs, such as housing, while a single national LIM does not.
3. The MBM is updated from year to year using the inflation rate (i.e. the CPI), and then periodically (e.g. once a decade?), though it is unclear how and how frequently the basket of goods and services underlying the MBM is to be updated, presumably by some committee to reflect contemporary ideas about what the necessities should be. Between such “relative” updates, the MBM is essentially an absolute measure of poverty. In contrast, the LIM is inherently a relative measure, since it is based on median (adjusted) family income and so updated annually. In this way, it tends to increase faster than inflation – to the extent that the economy produces positive real per capita economic growth and thus growing real median incomes. (As a result, the LIM offers a more challenging metric for public policy to show a reduction in the prevalence of poverty.)
4. Some have expressed a concern that when there is a recession or downturn in the economy, median family incomes might fall, leading to the apparently perverse result that the LIM could show a decline in the prevalence of poverty.

One point common to both the LIM and the MBM is that a switch to either from the LICO could result in a noticeable change in the number of people living in “poverty”, i.e. below the line. This change could well generate political issues and concerns which would require a careful communications strategy.

An obvious strand of any such communication would simply be “back-casting”, presenting the data on what the poverty rates were in previous years using the new measure. While there could still be a noticeable change in the *number* of individuals and families counted as poor, and the composition of those counted as poor (e.g. by age, family type), there need not be a sharp discontinuity in the *trend* percentage poor at the time of adoption of the new measure. Such back-casting could also be

accompanied by analysis showing how much the prevalence of poverty had changed, for example to show the improvements associated with the introduction of the new Canada Child Benefit.

Returning to the pro's and con's of the LIM and MBM, there are very good responses to the *apparent* advantages of the MBM, as follows (with corresponding numbering):

1. The choice of a basket of goods and services is inherently arbitrary. Reasonable groups of thoughtful and well-meaning individuals can come up with baskets where one costs twice as much as another (e.g. in the 1990s, the Montreal Diet Dispensary and the Metro Toronto Social Planning Council each defined a basket of goods where the Toronto basket cost twice as much as the Montreal basket.) A simple glance at the specific items of considered necessities in the 2010 re-basing of the MBM clearly illustrates such arbitrariness (e.g. Table A.5 for clothing). As a result, the face validity and appearance of precision in the MBM thresholds (4 or 5 significant digits) is essentially spurious.
2. It is a reasonable concern that the LIM is the same in high cost areas like Toronto and Vancouver as in lower cost areas of the country. This concern can be addressed by modifying the LIM based on a formula using the CPI data on variations in housing costs across the country (see below).
3. Ever since Adam Smith's famous quote that poverty is the inability to afford, "not only the commodities which are indispensably necessary for the support of life but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without", there is a broad consensus across OECD countries that a relative poverty line should be standard. Further, and more broadly, the stagnation of incomes of those in the lower portion of the income spectrum (e.g. at and below median income) in many higher income countries, while incomes of the well off have increased over recent decades, is increasingly identified as one of the fundamental risks to democracy. In other words, it is not sufficient for social order for one's income to keep pace with inflation if it is falling behind relative to the overall economy and to the incomes of the better off.
4. The apparent concern about the behaviour of the LIM when the economy enters a downturn, if this is considered a real issue, can be easily fixed – base the LIM on a multi-year moving average of family size-adjusted median incomes.

A further consideration is that with the LIM, it is possible to compare (annual income) poverty rates internationally, since this indicator is used in many OECD member countries. In contrast, no country has data comparable to the MBM. Of course, many OECD countries use indicators of multiple deprivation; but these are distinct kinds of measures, not at all comparable to the MBM, and are better considered in connection with the "Poverty Dashboard" described in a companion note.

Recommended: A Hybrid Approach

On balance, therefore, we propose that the "headline" measure of poverty be based on a hybrid of the LIM and MBM lines, taking the best features of each. This hybrid can be derived starting either from the current MBM, or from the current LIM.

Starting with the MBM, the "market basket" would be simplified to focus only on shelter costs, as these are the most important source of geographic variations in the costs of living (as illustrated in the Appendix). The current geographic breakdown by province and urban size can be retained. This revised

poverty line would be routinely and automatically updated from year to year using a moving average of median adjusted family incomes.

Alternatively, starting with the LIM, it too would be revised to be based on a moving average of median adjusted family incomes rather than using the median only for the current year. Further, it would be scaled up or down for each of the same geographic areas as are used for the MBM. This scaling would use the same variations in the cost of shelter as the current MBM, the average rents for two- and three-bedroom apartments in each geographic area.

The result, either way, is a measure combining the most important features of both the MBM and the LIM. We can refer to this hybrid simply as the NCPL = New Canada Poverty Line.

It might be argued that using only shelter costs, to the exclusion of food, clothing, and transportation as already included in the MBM, omits important regional variations in the costs of the “market basket”. However, empirically (as shown in the Appendix) these expenditures do not vary as much or plausibly across the MBM’s geographic areas. Further, while appearing precise, there are very significant elements of arbitrariness buried in these basket components.

Arbitrariness in the construction of any poverty line is inevitable. The choice, rather, is how transparent to be about this arbitrariness, and just where to place the arbitrary judgments. Transparency is enhanced by simplicity. Therefore, based on the correlation patterns with size of urban area in the 2016 MBM, as shown in the Appendix, and the general conclusions drawn there, we propose that only shelter costs be used as the basis for determining the extent of geographic variations in the NCPL

Specifically, we propose that the New Canada Poverty Line start with these two premises:

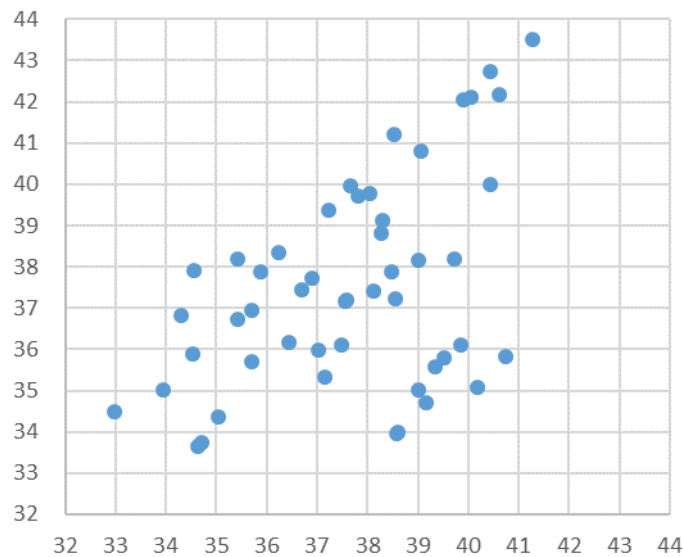
- (1) for the general level of the line, use a moving average of median adjusted family income, and
- (2) use geographic variations in MBM shelter costs as currently defined.

We can then add two further premises to complete the specification of the New Canada Poverty Line:

- (3) use the same equivalence scale as already used by both the LIM and MBM to account for family units of varying size and composition (and as used by the OECD), the square root of family size, and
- (4) set a fraction that shelter costs should form for the geographic variation in the line.

The graph below shows the correlation between our proposed NCPL and the current MBM. It uses \$37,500 as the line for a 4-person family, and 33% as the importance of shelter cost variations across the MBM geographic regions. The result is a moderately close correlation between the current MBM and the NCPL. Further details are given in the Appendix.

Hybrid MBM & LIM vs MBM (\$000s)



Concluding Comments

Specifying an official poverty line as proposed here is a first step. Next steps should include the following:

- Empirical analysis of the implications of the NCPL is needed. One high priority should be back-casting – estimating the extent and depth of poverty measured with the NCPL going back in time.
 - These results should be compared to the historical trends for the LIM and MBM, both overall and for a variety of population groups, e.g. for geographic areas, age groups, and family types.
- Even with just one poverty line, there are several important measures or indicators that it can and should support.
 - The most widely used indicator, given a line, is the number of people below this line, the “headcount ratio”.
 - another fairly widely used indicator, again given a line, is the “poverty gap” – the aggregate amount of income hypothetically needed to bring everyone whose income is below the line just up to the line.
 - However, the headcount ratio makes no distinction between a family whose income is \$100 below the line and another whose income is \$5,000 below the line. Similarly, the standard poverty gap measure makes no distinction between a change that increases the income of either of these families by \$100, even though it can be argued that “deep” poverty should be a greater concern than “shallow” poverty. Thus, another group of measures based on the CPL could be indicators of the “depth of poverty”. For example, one indicator could be the headcount ratio for those below 70 or 80% of the CPL; these families would be in “deeper” poverty.

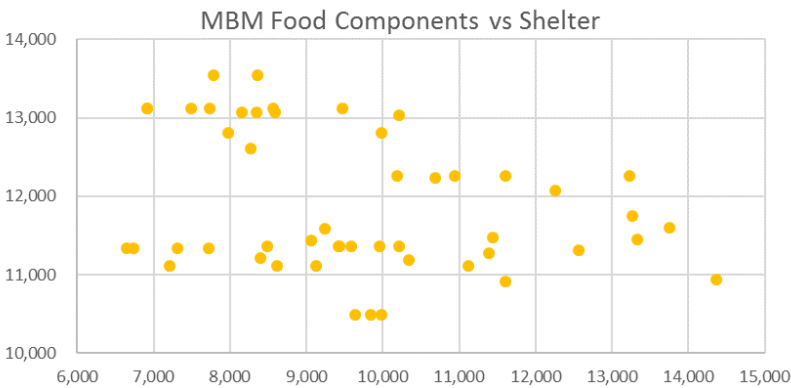
- There are several key judgements embodied in the proposed NCPL:
 - the fraction of the moving average of median family size adjusted median income to use as the basis for the line – e.g. 50% as in the current LIM (\$44,675 for 2016) or another fraction that could align with the current MBM (about \$37,500 or about 42%); and
 - the share that housing costs should play in determining the range of regional variability in the line.
 - While these kinds of judgments are essential, further empirical sensitivity analysis of their effects on the resulting line can inform the discussions needed to make these judgments. As a start, the accompanying spreadsheet allows these parameters to be modified.

We commend these ideas to the Committee charged with supporting the Minister in the choice of indicators for a Canadian Poverty Reduction Strategy.

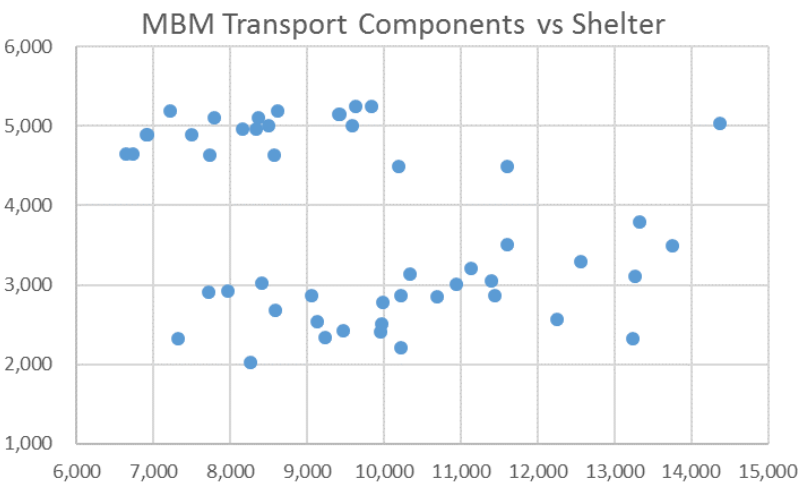
Appendix – The New Canadian Poverty Line

The MBM is based on four specific baskets of goods and services: shelter, food, clothing, and transportation. There is a fifth basket of “other” items, but its geographic variation is tied to a 3-year moving average of selected components of the specific food and clothing baskets (p44, 2010 update document). The following scatter plots show the relationships between the shelter component of the MBM and the three other specific components. (Note: all three graphs have been scaled so that all the squares are \$1,000 on a side.)

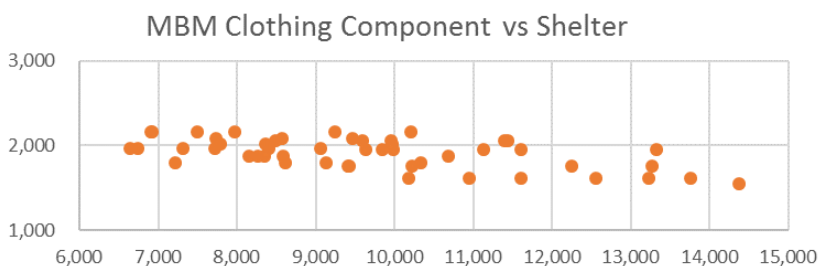
In the case of food, there appear to be two distinct groups of regions, one where food costs are fairly stable across geographies at about \$11,000 per year, regardless of shelter costs, and another declining from about \$13,000 to about \$11,000 as shelter costs more than double from about \$6,500 to \$14,500.



For transport costs, there appear also to be two rather distinct groups of geographic regions – one averaging about \$5,000 per year, the other averaging about \$3,000. For these costs, though, neither cluster looks correlated with shelter costs. Rather, the difference between these two clusters may be due to the judgement in constructing the MBM that those living in areas without public transit should be able to purchase and run a car.



Finally, clothing expenditures at about \$2,000 per year show almost no important correlation with shelter costs across the MBM geographic regions.



These correlation patterns suggest the following conclusions:

- the variations across geographic regions in the costs of the food, clothing and transportation components of the MBM could be sensitive to arbitrary but generally obscure choices by those constructing the market baskets; and
- these variations are either uncorrelated (clothing, each of the two transportation clusters, and one of the food clusters) or negatively correlated (the other food cluster) with the shelter component of the MBM.

In this context, it is simpler, more transparent, and more aligned with general public perceptions to focus only on geographic variations in shelter costs in constructing a hybrid MBM+LIM = NCPL.

The following table shows the MBM data for all its geographic regions. The first six columns show the overall MBM threshold and then its five components. The rightmost column then shows a proposed hybrid MBM & LIM. The bottom four rows show the max, min, average and median for each column. (Note that these statistics do not take any account of the population sizes in each geographic region, i.e. they are unweighted.)

The proposed hybrid has been set to reproduce approximately these four statistics from the current MBM, with the central tendency (averages and medians) at about \$37,500. The shelter component has been set at 33% for its contribution to geographic variability. In other words, the geographic variability in the CPL is a weighted average of two-thirds no variation across regions plus one-third equal to the observed shelter cost variation.

There are a number of alternative criterion for constructing the hybrid MBM & LIM. For example, instead of using the MBM average threshold of around \$37,500, the 5-year moving average of median family size adjusted income used for the LIM, \$44,675 in 2016, could be used. This would result in significantly higher proposed thresholds.

Also, instead of 33% for the contribution of shelter costs to the geographic variability of the hybrid, another figure like 25% or 50% could be used. 25% is about the fraction that shelter costs contribute to the current MBM. However, it might be judged that geographic variations in shelter costs are such a concern in assessing (income) poverty, that 50% would be a more appropriate figure.

Of course, both of these numbers – the \$37,500 or \$44,675 and 33% vs 25% or 50% -- are clearly arbitrary. But they are simple and transparent. In contrast, there are myriad judgements in the 100-page document for the 2010 MBM update. Those are no less arbitrary, and much more obscure.

	threshold	shelter	Current MBM			food	proposed MBM/LIM
			transport	clothing	other		
Newfoundland and Labrador, rural	40,172	7,789	5,103	2,014	11,724	13,542	35,093
Newfoundland and Labrador, population under 30,000	40,744	8,361	5,103	2,014	11,724	13,542	35,825
St. John's, Newfoundland and Labrador	38,481	9,977	2,509	2,014	11,172	12,809	37,893
Prince Edward Island, rural	39,021	7,736	4,627	2,086	11,457	13,116	35,025
Prince Edward Island, population under 30,000	39,855	8,569	4,627	2,086	11,457	13,116	36,091
Charlottetown, Prince Edward Island	38,542	9,467	2,417	2,086	11,457	13,116	37,240
Nova Scotia, rural	39,336	8,158	4,962	1,874	11,267	13,075	35,565
Nova Scotia, population under 30,000	39,520	8,343	4,962	1,874	11,267	13,075	35,802
Nova Scotia, population 30,000 to 99,999	37,487	8,589	2,683	1,874	11,267	13,075	36,117
Halifax, Nova Scotia	38,284	10,685	2,854	1,874	10,634	12,236	38,799
Cape Breton, Nova Scotia	35,695	8,267	2,026	1,874	10,917	12,611	35,705
New Brunswick, rural	38,598	6,921	4,889	2,163	11,513	13,113	33,982
New Brunswick, population under 30,000	39,171	7,494	4,889	2,163	11,513	13,113	34,716
New Brunswick, population 30,000 to 99,999	38,592	6,914	4,889	2,163	11,513	13,113	33,973
Fredericton, New Brunswick	39,721	10,214	2,867	2,163	11,449	13,028	38,196
Saint John, New Brunswick	37,143	7,971	2,927	2,163	11,279	12,803	35,326
Moncton, New Brunswick	35,698	9,240	2,339	2,163	10,366	11,591	36,950
Quebec, rural	34,624	6,648	4,649	1,964	10,025	11,338	33,633
Quebec, population under 30,000	34,714	6,738	4,649	1,964	10,025	11,338	33,748
Quebec, population 30,000 to 99,999	32,970	7,314	2,330	1,964	10,025	11,338	34,485
Quebec, population 100,000 to 499,999	33,947	7,718	2,902	1,964	10,025	11,338	35,002
Québec, Québec	34,540	8,403	3,026	1,964	9,933	11,215	35,879
Montréal, Québec	35,428	9,057	2,862	1,964	10,104	11,442	36,716
Ontario, rural	36,894	9,839	5,242	1,948	9,375	10,491	37,717
Ontario, population under 30,000	36,689	9,633	5,242	1,948	9,375	10,491	37,453
Ontario, population 30,000 to 99,999	34,565	9,978	2,774	1,948	9,375	10,491	37,894
Ontario, population 100,000 to 499,999	37,241	11,126	3,211	1,948	9,844	11,113	39,364
Ottawa-Gatineau, Ontario part, Ontario/Quebec	40,614	13,333	3,797	1,948	10,093	11,444	42,188
Hamilton/Burlington, Ontario	37,672	11,605	3,510	1,948	9,694	10,915	39,977
Toronto, Ontario	41,287	14,371	5,030	1,547	9,406	10,933	43,516
Manitoba, rural	35,043	7,212	5,189	1,792	9,731	11,119	34,355
Manitoba, population under 30,000	36,447	8,617	5,189	1,792	9,731	11,119	36,153
Brandon, Manitoba	34,303	9,127	2,535	1,792	9,731	11,119	36,805
Winnipeg, Manitoba	36,237	10,339	3,131	1,792	9,785	11,191	38,356
Saskatchewan, rural	37,023	8,493	5,009	2,054	10,109	11,359	35,994
Saskatchewan, population under 30,000	38,120	9,589	5,009	2,054	10,109	11,359	37,397
Saskatchewan, population 30,000 to 99,999	35,892	9,955	2,415	2,054	10,109	11,359	37,865
Saskatoon, Saskatchewan	38,032	11,438	2,864	2,054	10,198	11,477	39,763
Regina, Saskatchewan	37,815	11,391	3,044	2,054	10,048	11,278	39,703
Alberta, rural	39,021	10,184	4,488	1,622	10,465	12,263	38,158
Alberta, population under 30,000	40,446	11,609	4,488	1,622	10,465	12,263	39,982
Alberta, population 30,000 to 99,999	39,902	13,233	2,319	1,622	10,465	12,263	42,060
Alberta, population 100,000 to 499,999	38,306	10,943	3,014	1,622	10,465	12,263	39,129
Edmonton, Alberta	38,535	12,564	3,293	1,622	9,746	11,310	41,204
Calgary, Alberta	40,430	13,756	3,491	1,622	9,963	11,598	42,729
British Columbia, rural	37,572	9,415	5,151	1,757	9,887	11,362	37,174
British Columbia, population under 30,000	37,588	9,431	5,151	1,757	9,887	11,362	37,194
British Columbia, population 30,000 to 99,999	35,432	10,217	2,209	1,757	9,887	11,362	38,200
British Columbia, population 100,000 to 499,999	39,063	12,252	2,559	1,757	10,422	12,072	40,805
Vancouver, British Columbia	40,045	13,267	3,103	1,757	10,174	11,743	42,104
average	37,650	9,670	3,751	1,912	10,413	11,904	37,500
max	41,287	14,371	5,242	2,163	11,724	13,542	43,516
min	32,970	6,648	2,026	1,547	9,375	10,491	33,633
median	37,924	9,449	3,392	1,948	10,109	11,461	37,217g

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INCOME SECURITY PANEL MEMBERS

Russell Robinson, Chair. Former Policy Research and Planning ADM, Health & Welfare Canada; ADM for Federal-Provincial Relations and Social Policy, Finance Canada. russrobinson@rogers.com

Bob Baldwin. Former Director, Social and Economic Policy, Canadian Labour Congress; member and Chair of the Canada Pension Plan Advisory Board. bob.baldwin@sympatico.ca

Bernard Dussault. Former Chief Actuary of Canada; Consulting Actuary with focus on pension issues. Member, executive of the Canadian Coalition for Retirement Security. bdussault@rogers.com

Peter Hicks. Former Policy ADM in several social departments and in central agencies; internationally, coordinated OECD's work on policy implications of aging populations. peterhicks@sympatico.ca

Andrew Jackson. Former Chief Economist and Director of Social and Economic Policy, Canadian Labour Congress. Adviser to the Broadbent Institute; adjunct professor, Carleton University. ajacksonclc@gmail.com

Jennifer Robson. Associate Professor, Carleton University. Research and publications on social and tax policy, poverty in Canada and public administration. jennifer.robson@carleton.ca

Richard Shillington. Statistician, researcher, consultant and commentator on social policy. Author of reports and books on seniors' poverty and their income. richard@shillington.ca

John Stapleton. Former Ontario government official; member of numerous governmental review panels, advisory groups and task forces, including current federal advisory committee on poverty reduction. jsbb@rogers.com

Michael Wolfson. Former Assistant Chief Statistician, Statistics Canada, and Canada Research Chair in Population Health Modeling. Research and publications on wide range of social policy issues and reforms, including income security policies. mwolfson@uottawa.ca

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