

TRISTAT RESOURCES

Defining Poverty and Determining the Number Poor – Long-Term Trends

REPORT

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Defining Poverty and Determining the Number Poor – Long-Term Trends

Background

For more than 40 years Statistics Canada has been publishing statistics on Canadians who live in ‘straitened circumstances’. The measures, which are not labeled as “poverty measures”, have been used to comment on poverty by virtually all researchers, advocates, the media, civil servants and indeed the federal government.

The Low-Income Cut-Off (LICO) has been the most common measure despite its complexities but it has morphed from a relative measure to an absolute measure as rebasing was abandoned. These LICOs which are indexed to prices only are used in a number of pieces of federal legislation.

The Low-Income Measure (LIM) was introduced and it has also been modified for some uses.

The Market Basket Measure (MBM) now has about 10 years of history and itself was recently modified.

The paper will:

- review the desirable characteristics of a poverty measure
- the history of poverty measurement highlighting changing definitions and their impact on poverty rates, and
- recommend a version of LIM which might best meet those desirable characteristics

What do we Mean by Poverty?

Concern about the human condition(s) called “poverty” and debate over what constitutes poverty has a long history.

Adam Smith described poverty as lacking “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.”¹

¹ Smith, A. (1776): *An Inquiry into the Nature and Causes of the Wealth of Nations*, Edinburg, 1776, Book 5, Chapter 2, Article 4.

The more recent writings of Nobel Prize laureate Amartya Sen state that poverty is a standard at which one cannot “achieve adequate participation in communal activities ... and be free from public shame from failure to satisfy conventions.”²

It is worth noting that these, like almost all concepts of poverty, refer to some sense of what is decent:

Adam Smith: “... indecent for creditable people.”³

Leonard Marsh’s interpretation was living standards: “...should cover the costs of bare ‘essentials for health and self respect.’”⁴

Amartya Sen: “... free from public shame.”⁵

Economic Council of Canada: “...certain goods, services and conditions of life ... accepted as basic to a decent minimum standard of living.”⁶

Council of Europe: “...exclude them from the minimum acceptable way of life.”⁷

Christopher Sarlo: “...the nature and quality of the items fulfilling the basic need will be that which is considered acceptable and 'decent' in one’s own society.”⁸

² Sen, A. (1983): “Poor, Relatively Speaking” *Oxford Economic Papers, New Series*, Vol. 35 No. 2, July 1983, 167.

³ Smith, Book 5, Chapter 2, Article 4.

⁴ As interpreted from Scott, K. and B. Haggart (2008): “Poverty and Low Income in Canada: Definitions and Measures” Canadian Council on Social Development; July 2008; (prepublication manuscript), 8.

⁵ Sen, 167.

⁶ As quoted from Osberg, L. (2007): “The Evolution of Poverty Measurement - with special reference to Canada” February 2007, 3.
<<http://myweb.dal.ca/osberg/classification/research/working%20papers/The%20Evolution%20of%20Poverty%20Measurement/PaperFebruary9The%20Evolution%20of%20Poverty.pdf>> Accessed 19 Nov 2008.

⁷ As quoted from Rio Group. (2006): *Compendium of Best Practices in Poverty Measurement* United Nations Statistics Division, Expert Group on Poverty Statistics, United Nations, Sept 2006, 124.

⁸ Sarlo, C. (2008): “What is Poverty? Providing Clarification for Canada” Fraser Institute Digital Publication, May 2008, 4.
<http://www.fraserinstitute.org/commerce.web/product_files/What_is_Poverty.pdf> Accessed 19 Nov 2008.

United Nations Committee on Economic, Social and Cultural Rights: “A human condition characterized by sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights.”⁹

In these examples, central to defining poverty is a sense of what is “decent,” or minimally acceptable. Some see basic needs as an inherently social concept; what is minimally acceptable is influenced by the typical standards of the day.

Even the most rudimentary measure of poverty, one that identifies the minimal standard of living, most assume some metric for what is decent in society.

Comparator Population

These approaches to understanding the term “poverty” imply some social context wherein the poor reside. A social context implies a comparator population. When one thinks of a minimally acceptable living standard, one might ask “by whose standard?”

The social context has two dimensions, one geographic, the other temporal. Geography defines a community of interest, which may be one’s neighbourhood, city, province or country.

One might assume that the comparison would be with others at the same point in time. But some poverty lines use reference standards of living that are five, twenty, or even forty or more years out of date. The poverty question could be framed as follows: “Does this standard of living offend that deemed acceptable by today’s standards, or are we asking based on the standards of our parents?”

One notes that the U.S. poverty line was defined in the 1960’s and uses that temporal frame of reference. The LICOs were last set using spending patterns from 1992. Only the LIMs, when calculated annually, use a contemporary frame of reference.

In summary, poverty refers to a standard of living that offends our sense of decency. For my purpose I assert that the concept is only meaningful if the sense decency is that of contemporary society – not our forefathers. Since the poor we speak of live in Canada, we will use Canadian standards of decency not those of third world countries.

⁹ United Nations Committee on Economic, Social and Cultural Rights (2009)): *What is Poverty?* Accessed 11 May 2009 from ?, United Nations: Human Rights in Development.<<http://www.unhcr.ch/development/poverty-02.html>> Accessed 11 May 2009.

Review of poverty measures

There are broadly three methods used to measure income deprivation by Statistics Canada¹⁰.

Statistics Canada has cautioned that the LICOs are not a poverty measure. Nevertheless, they have been repeatedly used as a poverty measure by academic researchers, NGOs, other government departments, and the government of Canada, as the statement below attests:

*While Canada has no official measure of poverty, the Government of Canada typically uses Statistic[s] Canada's after-tax low-income cut-offs (LICOs) as a proxy.*¹¹

These measures are listed below:

- Low-Income Cut-Offs (LICO) – these are incomes set where families are spending a substantial share of their incomes on necessities, for example 20% higher than the Canadian norm.
- Low Income Measures (LIM) – this cut-off is 50% of median income adjusted for family size.
- Market Basket Measures (MBM) – this cut-off is based on the cost of a basket of goods and services sufficient for a standard of living “between the poles of subsistence and social inclusion”.

Each poverty line inherently reflects a level of stringency, a standard of living below which one is considered poor. There is some difficulty in comparing the thresholds inherent in the various lines because the income concepts vary, before tax or after tax,

¹⁰ The Fraser Institute has developed a Basic Needs Measures (BNM) but it is not used by any other organization.

¹¹ Government of Canada (2005): *Implementation of the International Covenant on Economic, Social and Cultural Rights: Fifth periodic reports submitted by States parties under articles 16 and 17 of the Covenant*. United Nations Economic and Social Council, Substantive sessions 2006. 17 Aug 2005, para 121, p.29. <[http://www.unhchr.ch/tbs/doc.nsf/898586b1dc7b4043c1256a450044f331/4f07de4ea236e858c125711500574ff8/\\$FILE/G0543784.pdf](http://www.unhchr.ch/tbs/doc.nsf/898586b1dc7b4043c1256a450044f331/4f07de4ea236e858c125711500574ff8/$FILE/G0543784.pdf)> Accessed 19 Nov 2008.

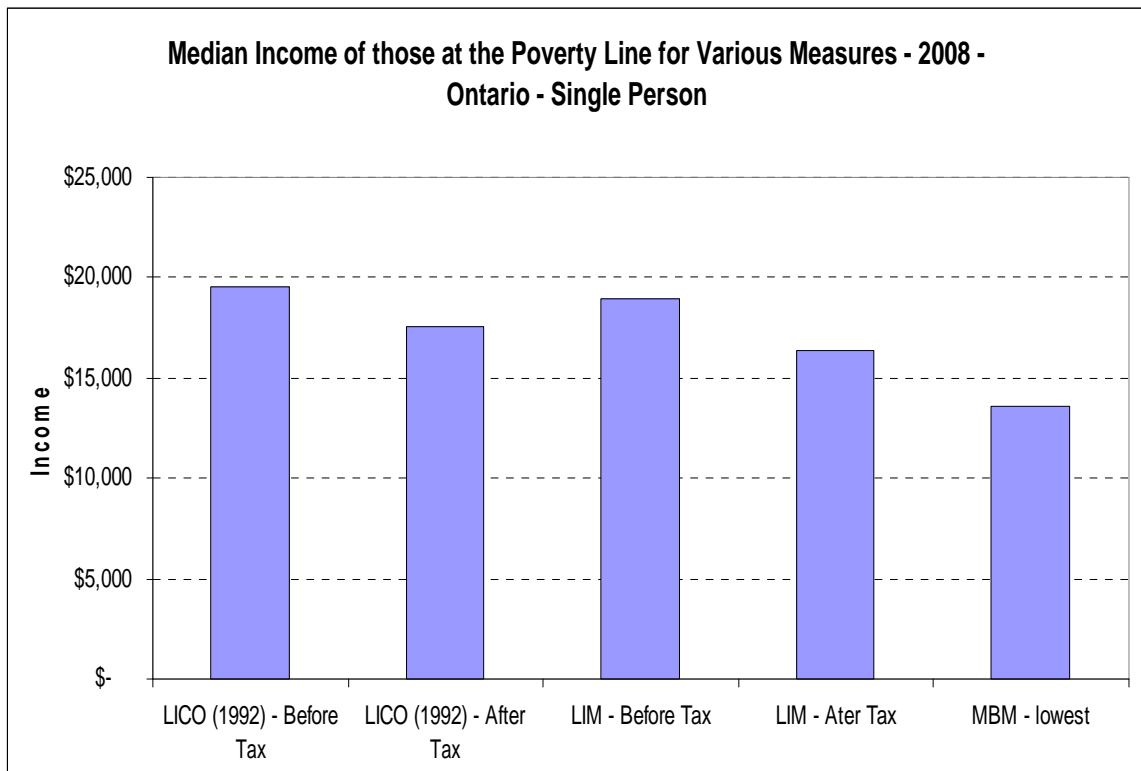
or in the case of MBM a measure of consumption. To avoid this problem the following chart estimates the average total income before tax of those living near the poverty line.

The following chart is for 2008 for a single person (Ontario is used for illustration). What one sees is that the income ranges from almost \$20,000 for the LICO-before tax to about \$17,500 for the LICO after tax down to less than \$15,000 for the MBM.

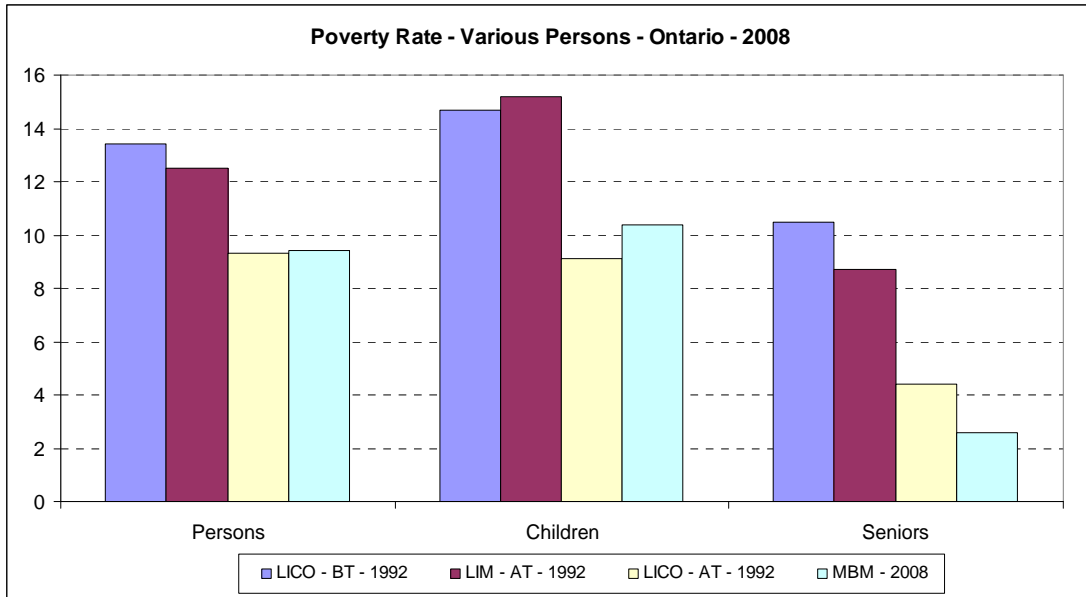
In the chart the measures are arranged based on the period when they've been used. Twenty years ago the LICO-before tax was the predominate poverty measure (there were poverty measures defined by CCSD and the Senate – but they were not widely used).

Currently, Statistics Canada highlights the LICO measured using income after tax; the LICO using before tax income is calculated but not given prominence. The shift from before tax income to after tax reduced the threshold by more than \$2,000. The MBM is now favored by HRSDC and its threshold is more than \$5,000 lower than the LICO.

The chart illustrates how over the last 20 years the income threshold associated with new poverty measures are far below previously accepted thresholds.



As one goes from traditional poverty measures to the newer versions, the poverty rate for Ontario drops from about 13% to 9% for all persons, 15% to 10% for children and 11% to 3% for seniors.



What do we want of our poverty measures?

To be useful in policy discussions a poverty measure needs to be credible, transparent and consistent over time.

The income threshold should be credible as a threshold below which a standard of living violates society's norms of decency; most would accept that for a single person of poverty threshold in a large city of \$12,000 is too low; \$30,000 is too high.

The statistics needs to be measured so published data are valid and reliable.

It would be helpful if the measurement were derived in a simple fashion adjusting for important considerations such as family size and location in a way which is easy to understand and explain. It would be helpful if the statistics can be published for neighborhoods based on Census data (assuming income data from the next Census will themselves be reliable).

A useful poverty measure assesses trends on a consistent fashion, free of political manipulation. Since poverty is considered a negative reflection on society, governments both federal and provincial would find it useful if poverty rates were low and/or declining.

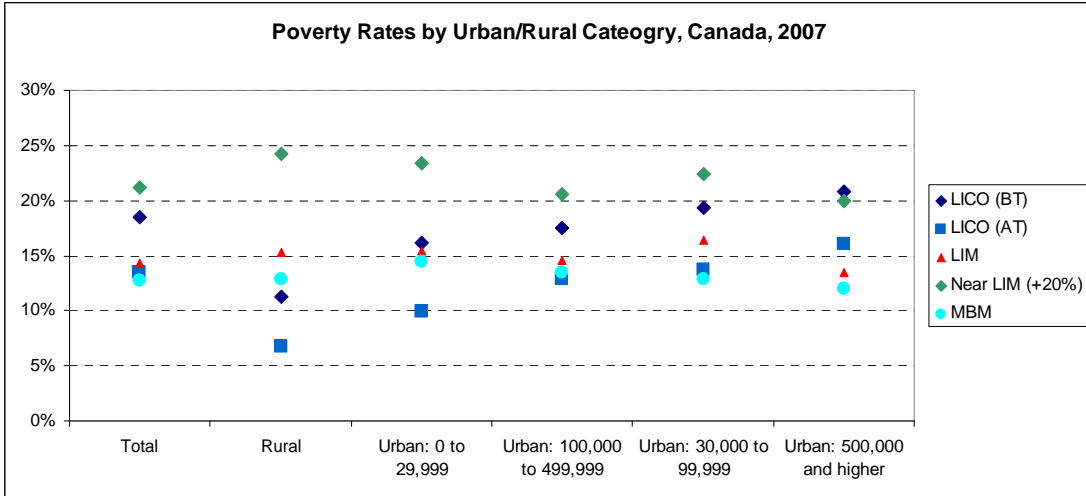
It would also be useful of poverty measures could be used for international comparisons.

The following table summarizes my assessment of the poverty measures on these dimensions.

	LICOs	LIMs	MBMs
Credible	Does not adjust well for urban/rural differences.	Widely used internationally by the UN, OECD and UNDP.	Seen as too low by many, and subject to methodological criticism.
Transparent and easy to understand	Very difficult to explain	Relatively easy to understand.	Easy concept to understand – a basket – involves many assumptions.
Maintains its consistency over time.	Was once relative – now it is an absolute measure.	Automatically adjusts for changes in income.	The recent update reduced the income thresholds – indicating a smaller basket than 10 years ago.

One would like to use poverty measures to track poverty over time. Is poverty becoming more or less prevalent? One would also like to use a poverty measure to identify locations or populations with higher poverty rates.

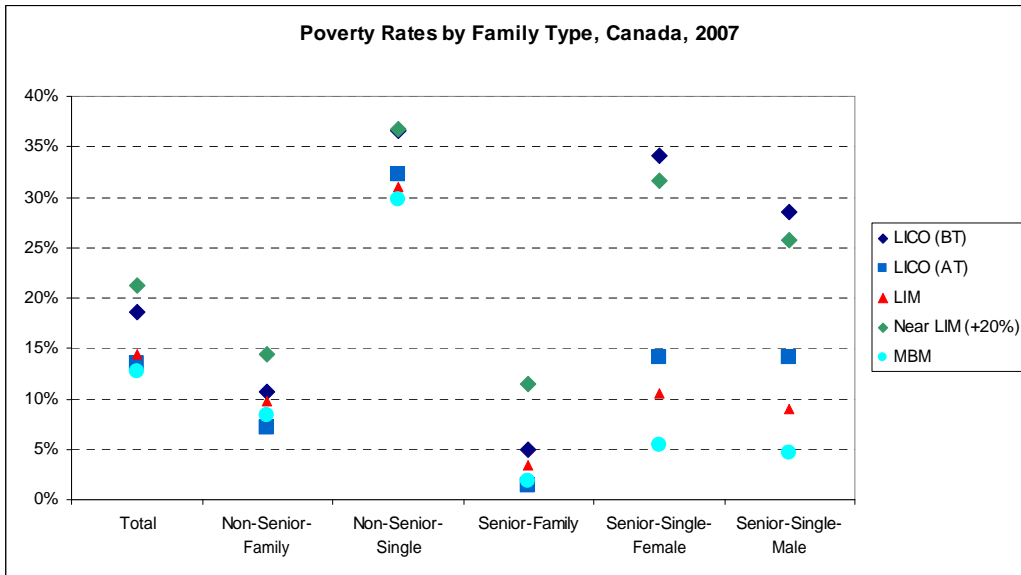
The following chart illustrates range of poverty rates based on various measures. The range is narrowest at the national level. But there are more important differences in the rates particularly in rural areas.



The following chart is organized by family type. One notes that for the general population the differences between the poverty measures are less extreme than for populations concentrated in the low-income range. Thus the range from high to low poverty rates for non-seniors is about 7 percentage points. For senior families the range is bigger.

For senior individuals the differences between rates are dramatic, ranging from about 5% to almost 35%.

These ranges in poverty rates for single seniors are sufficient to have important political impacts.



Changes in the measures of Poverty

The next two sections will review two changes in how Statistics Canada calculates the LICO and its impact on poverty measurement.

The Shift from Before to After Tax

The LICO is set at an income where families spend on average 20% more of income on necessities than typical families.

Statistics Canada took the view, in the early 1990s, that this was better measured using after tax than before dollars. This important decision for the LICO moved from relying on income before tax to income after-tax while keeping the same 20% increment to assess straitened circumstances.

The 20% increment in relative spending on necessities inherent in the LICO was arbitrary. So Statistics Canada could have defined an after-tax LICO which approximated the same standard of living as the before tax. Spending 20% more of after tax income on necessities is a much more stringent life-style than spending 20% more of before tax income.

By analogy, one recognizes that while one could be comfortable at a room temperature 20 degrees above freezing in Centigrade but that 20 degrees about freezing in Fahrenheit would be cold.

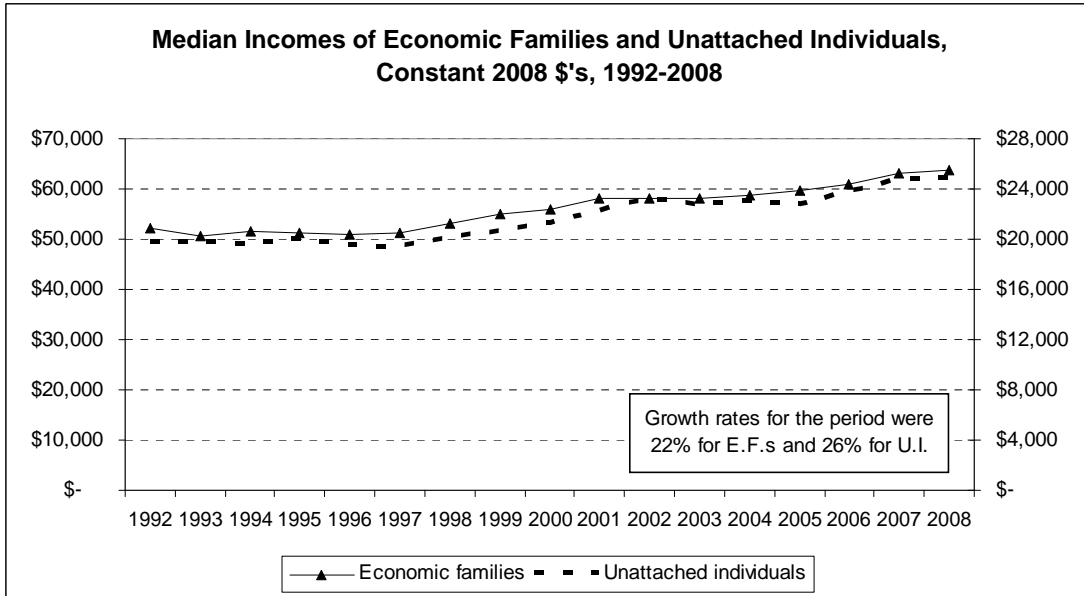
Unfortunately, Statistics Canada decided to shift from a before-tax to an after-tax income measure without adjusting the 20% increment in spending used to assess straitened circumstances. This decision reduced the number poor by about 30% .

I have no objection about the move from before to after-tax income measures, it is using the same 20% with quite different income measures which had a dramatic impact of the LICO thresholds.

Adjustments over Time

Over the short term, the importance of “real growth”, wages in excess of inflation, is usually modest. Although real growth was significant during the decades of the 1950s, 1960s and 1970s, its importance during the 1980s, 1990s, and 2000s has been minimal.

The following chart illustrates that over the past 17 years that real median incomes and families and unattached individuals have increased.



Two historical perspectives illustrate the importance of the adjustment for real growth. We'll discuss first the experience in the United States with their poverty measure and then the Canadian experience with the LICO.

The official poverty line for the United States was developed in the early 1960s. It has been indexed to prices, but not otherwise updated, for almost 50 years and is not commonly used in its original form because it has lost relevance. Some administrators use 2 times and 3 times the official poverty line for program qualification.¹²

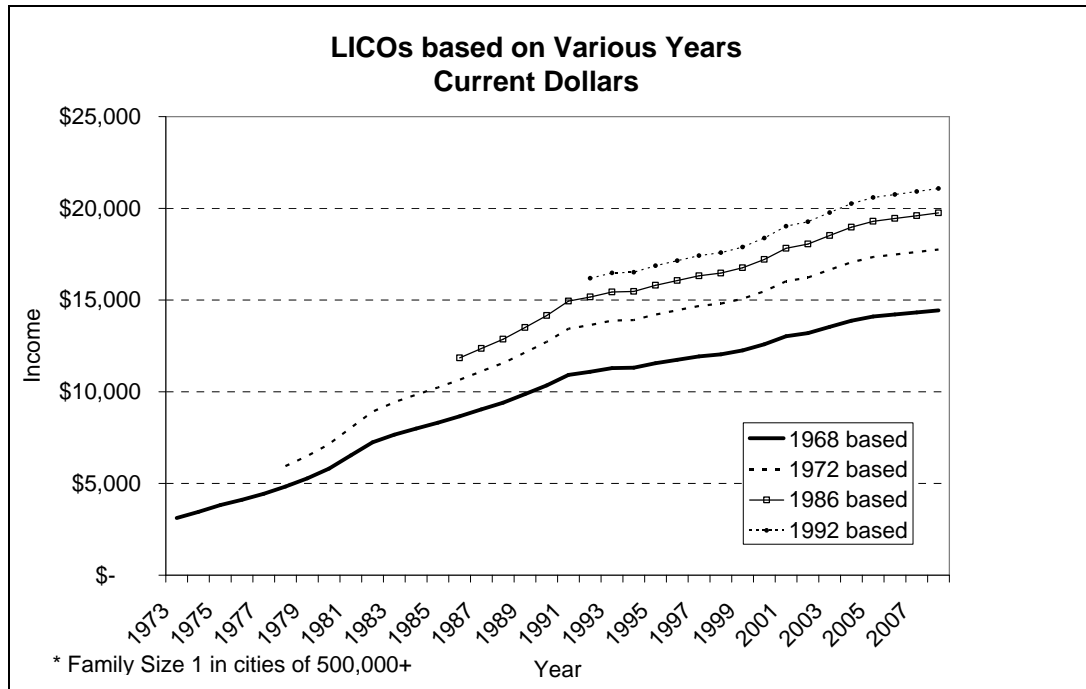
As the American example shows, the adjustment for real income is important over the long term.

The following chart tracks the adjustments to LICOs that were made up to 1992. The original 1968-based LICO for a single person in a large city would be about \$14,500 in 2008. The 1992-based line is about \$21,000 (about 40% higher). So the occasional rebasing of the LICO has added significantly to what is considered, by this standard, as minimally acceptable.

¹² For an example, see:

http://www.workworld.org/wwwwebhelp/food_stamp_income_tests.htm (accessed 14 Nov 2008), where the description of some benefits such as the Individual Development Account (IDA) and food stamp programs use more than 100 per cent of the poverty threshold to determine eligibility (based on the same income measure used to determine one's poverty status).

LICOs Based on Various Years in Current Dollars



Source: Special tabulations using LICO data from Statistics Canada Catalogue 75F0002M – 004, and Statistics Canada's All Items CPI.

The LICOs are out of date as STC has decided not to update them from 1992. In that time period average incomes have increased by just over 20%. This real growth has not been included in the LICO's.

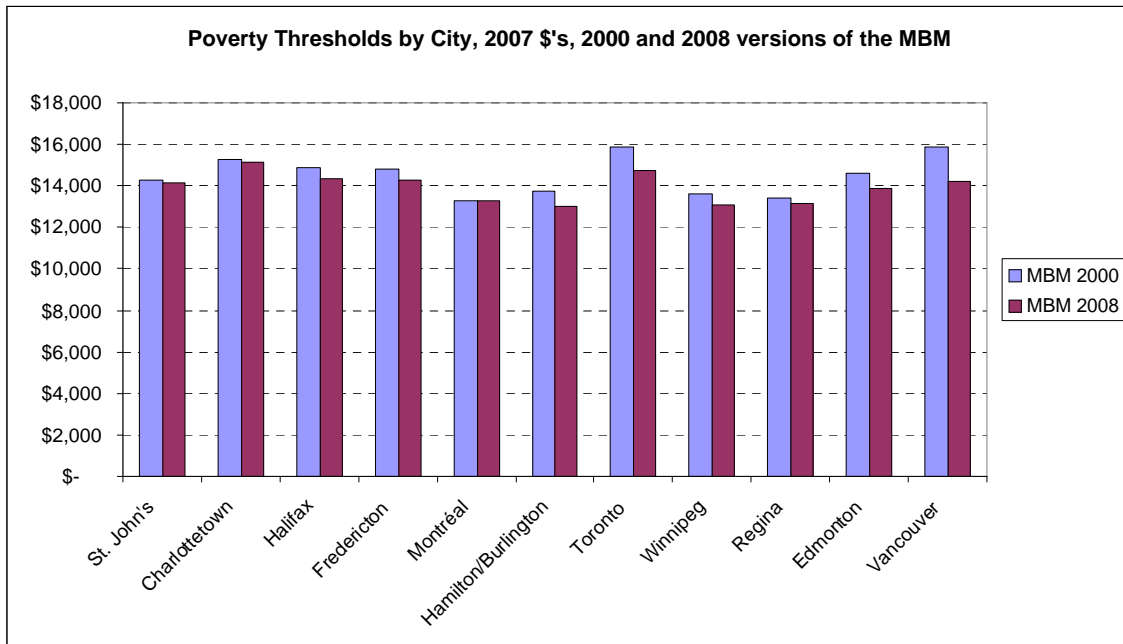
The LIM is designed to adjust for real growth automatically. But governments would appear to prefer absolute measures of poverty.

One notes that as part of the implementation of the Ontario government's Poverty Reduction Strategy they proposed a totally new poverty measure, a LIM calculated in 2008 and adjusted for CPI only thereafter. This new adjusted LIM combines features of an absolute and relative measure. It would lead over 5 years to a significant reduction in measured poverty compared to a LIM measure calculated in the usual fashion.

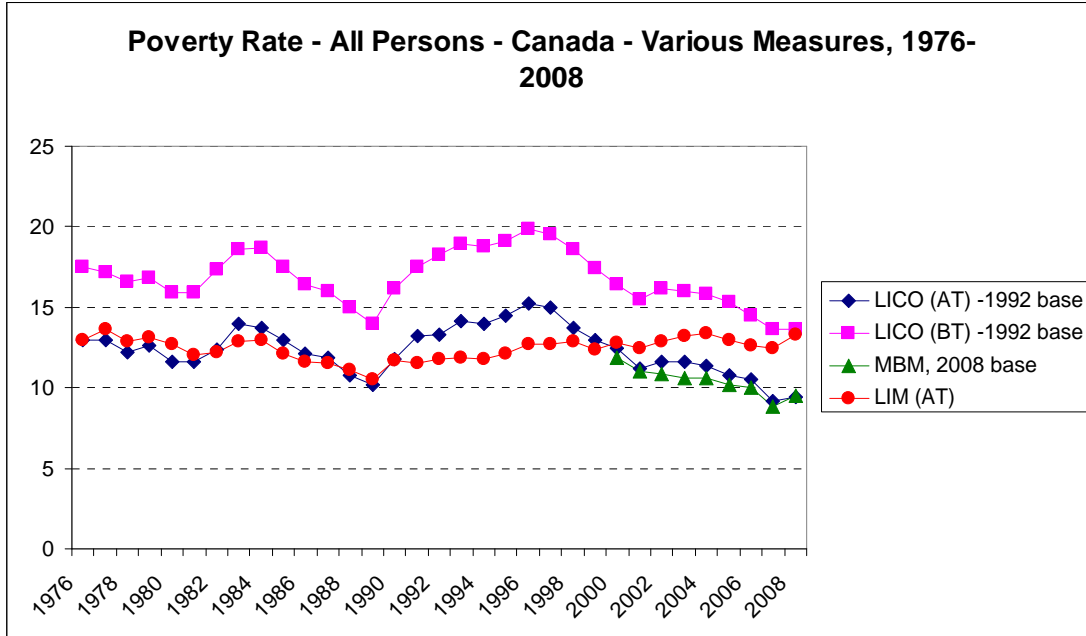
There has been one adjustment to the MBM recently conducted to create a MBM with a 2008 basket. Contrary to the expected pattern when the LICO was being rebased the 2008 MBM actually has a lower income threshold and poverty rate than the previous, 2000 version, despite a real growth of median incomes since 2000 of about 15%.

If one accepted that poverty measures compare lower-income Canadians to contemporary living standards one would have expected an adjusted MBM to have higher income thresholds as compared to the 2000 basket not lower (the chart above shows that constant dollar median incomes increased by about X%).

The following chart illustrates that in every city the income threshold based on the 2008 basket was lower, leading to a lower poverty rate as compared to the previous 2000 basket.



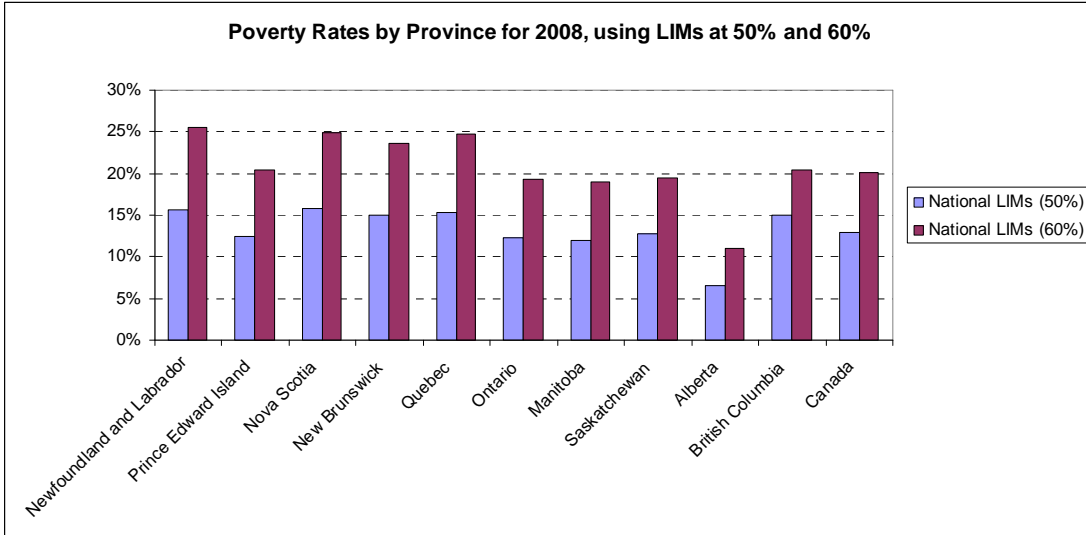
The following chart illustrates the long term trend in various poverty rates. One notes that the poverty rates using the two LICOs peaked in about 1997. One also notes that, post 1992, the poverty rate using LIMs is relatively flat and perhaps trending slightly upward.



One might ask if the fall poverty rates using LICO's is totally due to the absolute nature of the calculations. The LIM trend would suggest as much. The data have not been published that would allow us to answer this question.

Where to from here

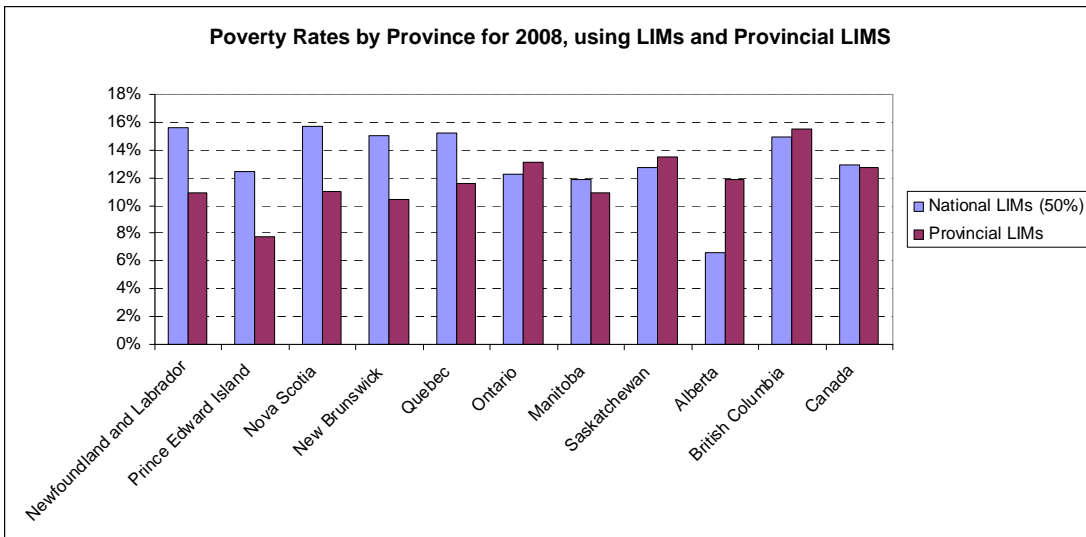
The LIM has a useful feature of comparability with international standards. Several international bodies use the LIM to measure poverty in developed countries (some use 60% instead of 50% of medians). The chart presented below demonstrates that the difference between 50% of median and 60% of median is significant, increasing the overall poverty rates from 13% to about 20%.



For those interested in a LIM that adjusts for location one could calculate a provincial LIM using provincial medians.

The following chart compares two different patterns for LIMs based on to national and provincial LIMs. Using LIMS based on national medians yields poverty rates highest in Quebec and Maritime provinces. They are particularly low in Alberta.

LIMs based on province medians, assess income inequality within provinces; with this approach poverty rates are lower in PEI and higher in Ontario, Saskatchewan and British Columbia.



My unpublished analysis has demonstrated that calculating separate LIMs using medians calculated by urban/rural areas within province has little effect on poverty rates.

Conclusions

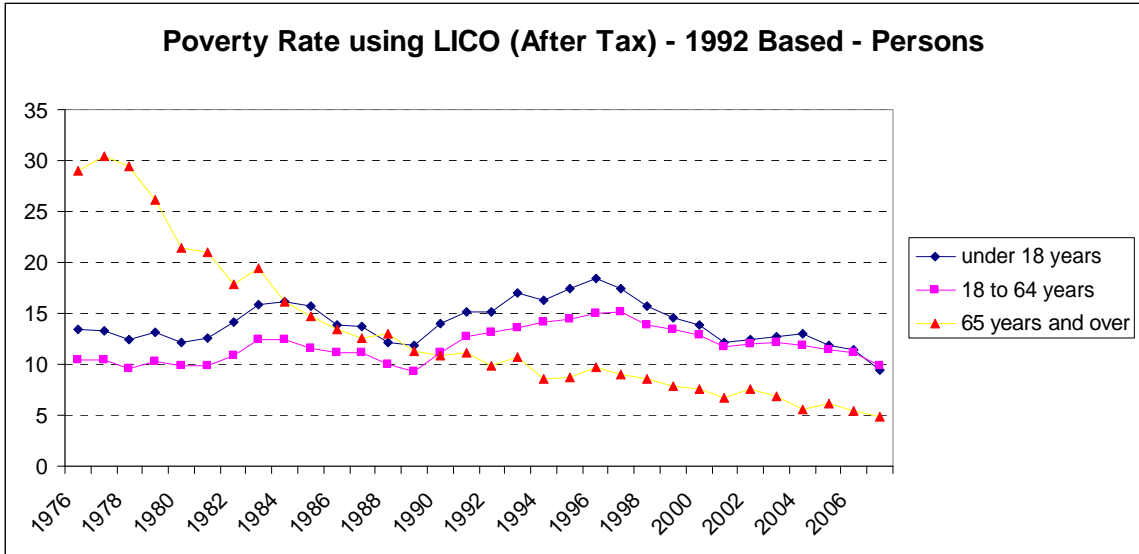
There have been changes in how poverty is measured in Canada which have had enormous impacts. Twenty years ago the LICO (before-tax), a relative measure, was the consensus measure of poverty. Now there are several measures, the LIM is the only relative measure and governments control the adjustment for living standards of the absolute measures.

The biggest impacts on poverty rates over the past 25 years were as follows:

- Moving from a before-tax LICO to after-tax (using the same 20% increment) reduced the number poor by about 30%.
- The end to rebasing the LICO has further reduced poverty by an unknown amount.
- The recent rebasing of the MBM illustrates that its basket will be truly absolute. The increase in real median incomes over the last decade are not reflected in the new MBM. The 2008 MBM has, in fact a smaller basket than the MBM calculated in 2000.

As the analysis of the poverty measures has demonstrated the succession of poverty measures, from before-tax LICOs, to the LIM and the MBM have lower poverty thresholds and lower calculated poverty rates than previous measures would have had.

The following chart illustrates the policy confusion. It shows a dramatic drop in the poverty rate of seniors using LICOs. How much of this is due to the improved circumstances of seniors, which are very real, and how much is due to a comparator spending pattern which is almost 20 years old? Based on current measures we can't tell.



The setting of an actual income threshold for poverty is unavoidably arbitrary. For that reason, poverty lines are more useful for measuring poverty trends than poverty levels. But to measure trends usefully, they must be measured consistently over time.

Based on how they have been adjusted over recent years, I would no longer publish the LICO. The LIM should be used to measure poverty in Canada. The provincial LIM could also be measured to provide a partial adjustment for provincial differences in incomes.

Our understanding of an important policy is undermined because we are not measuring and reporting poverty measures using contemporary standards.

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