



BACKGROUND

# How do we measure poverty?

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The federal government has committed to developing its first-ever Canadian Poverty Reduction Strategy. In developing this strategy, the government is considering how it can improve existing measures of poverty or possibly introduce a new measure. It is also considering what specific poverty reduction targets and timelines the strategy should seek to achieve, to fulfill its commitment to publicly report on its progress in a “meaningful way.”<sup>1</sup> To support this discussion, and the conversation about poverty reduction more generally, this backgrounder outlines the main measures of low income currently used in Canada, alternative measures of poverty, and how we might improve on measurement and monitoring through the Canadian Poverty Reduction Strategy.

We have no standard measure of poverty in Canada. Three measures of poverty are routinely published by Statistics Canada, though Statistics Canada itself refers to them as “low income” measures, as the term “poverty” means different things to different people. Each measure has pros and cons. Having three measures provides us with a rich picture of the nature of income poverty and how it is changing, which allows policy responses to be more informed.

In public debate, these three measures are often used interchangeably as headline statistics referring to the number of people in poverty. With multiple statistics to choose from, politicians, governments and media can choose the one that best makes their point, even if it only captures part of the picture.

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<sup>1</sup> Government of Canada. “Towards a Poverty Reduction Strategy – Discussion Paper,” October, 2016, <https://www.canada.ca/en/employment-social-development/programs/poverty-reduction/discussion-paper.html#h2.4>

# Why does measuring poverty matter?

Measuring poverty helps us to tackle it. It helps us understand trends and causes, and develop informed responses. Good measurement also allows us to monitor how effective those responses are, and how poverty is changing.

## Why do we use income to measure poverty?

Being in “poverty” is generally understood to mean lacking the resources to meet your basic needs, though “resources” and “basic needs” mean different things to different people. In everyday conversation, these differences are mostly arbitrary. But if we want to measure poverty, we need a consistent way to quantify these concepts.

Across the world, the main way of measuring poverty is to look at household income. While income is not the only resource households have access to (other resources include savings and assets along with human capital such as skills and education), an income-based poverty measure has some major advantages. First, income is easily quantifiable and data is readily available to measure it. Second, income is a good proxy for poverty as it is the main way we access the goods and services required to meet our basic needs. Finally, income measures of poverty have been found to closely (but not perfectly) correlate with other indicators of poverty such as food insecurity and material deprivation.

## Where does the data come from?

The primary source of data on household income is the Canadian Income Survey (CIS). Each year, Statistics Canada collects income data through the CIS from a sample of households that are representative of Canada as a whole. This data is then used to estimate how many people across Canada as a whole are in poverty. The actual number of people in poverty will be slightly higher or lower (this is referred to as the “margin of error”), so a small change in the poverty estimate from one year to the next should not be interpreted as a meaningful shift in poverty.

Collecting, cleaning, and analyzing this survey data takes time. It is usually published 18 months after the period of data collected. At the time of publishing this backgrounder, the latest poverty estimates are for 2015.

## What are the measures of income poverty?

In Canada, Statistics Canada publishes three national measures of low income. (It does not refer to them as “poverty measures” as it sees “poverty” as a subjective term). The main difference between the measures is how each sets the threshold at which someone is defined as having low income:

- **Low income cut-off (LICO)** - An income threshold below which a family will devote a much larger share of its income than the average family on the necessities of food, shelter, and clothing.
- **Low income measure (LIM)** – An income threshold substantially below what is typical in society.
- **Market Basket Measure (MBM)** – An income threshold tied to the cost of a specific “basket” of goods and services representing a modest, basic standard of living.

Each measure has strengths and weaknesses, but all of them provide some insight into the extent and nature of poverty in Canada.

Despite the different approaches, on the whole, they deliver similar results and follow the same pattern year-to-year.

## **Low income cut-off (LICO)<sup>2</sup>**

### **HOW DOES IT WORK?**

The LICO uses a working definition of low income as having to devote a much larger share of income than the average family on the necessities of food, shelter, and clothing. The approach estimates an income threshold at which families are expected to spend 20 percentage points more than the average family on these necessities. As the costs will vary by family size and community, the thresholds are set separately for seven different family sizes and five community sizes.

In 2015, 9.2 per cent of people in Canada (or 3.2 million people) were in poverty under the LICO.

### **HOW WELL DOES IT WORK?**

The LICO threshold was last set in 1992, based on a survey that year to determine the average share of household income needed to cover essentials. Since then, this income threshold has been increased each year in line with overall prices, using the Consumer Price Index (CPI) measure of inflation.

A common criticism of the LICO measure is that the costs considered exclude many essentials (for example, energy, communications, and transportation costs are omitted). But as the measure is not about who cannot afford these essentials, but who would have to spend a disproportionate amount of their income on those items, this does not necessarily distort the overall picture of poverty it presents.

Another criticism of LICO is that by using CPI to adjust the low income threshold each year, it assumes that the cost of essentials has increased at the same rate as costs in general and that it has increased at the same rate across the country. But this has not been the case.

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<sup>2</sup> A summary of LICO from Statistics Canada is available here: <http://www.statcan.gc.ca/pub/75f0002m/2015002/lico-sfr-eng.htm>

For example, in the last 25 years, the cost of housing has changed differently than prices in general; it has changed differently for those with a mortgage and those who rent; and it has changed differently from one community to the next.

In 1992, the LICO was an effective measure of having to devote a much larger share of income than the average family on the necessities of food, shelter and clothing. Twenty-five years on, it is probably no longer an accurate measure of this. However, it is still a useful measure. It continues to provide us with a set of long-standing (if somewhat arbitrary) income thresholds and shows how the number and types of households below that line have changed over the last 25 years.

## **WHEN IS IT USED?**

LICO is the most established measure of poverty in Canada. The first set of thresholds were established in 1959 and a consistent time series using the 1992-based thresholds is available going back to 1976. It is the main poverty measure used by the federal government and is the most widely-used measure in general across Canada.

## **Low income measure (LIM)<sup>3</sup>**

### **HOW DOES IT WORK?**

Under the LIM, a household has low income if its income is substantially below the average. The LIM is calculated at 50 per cent of the national household median income. Using “equivilisation factors,” incomes are adjusted to account for the household size (because a couple would need more income than a single person to reach the same living standard, but not double) so the poverty threshold can be adjusted to fit any household composition. Unlike the other two measures, LIM makes no adjustments for different provinces or community sizes.

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<sup>3</sup> A summary of LIM from Statistics Canada is available here: <http://www.statcan.gc.ca/pub/75f0002m/2015002/lim-mfr-eng.htm>

The LIM has two ways of measuring poverty. The *fixed* LIM uses a threshold based on the median income in a particular year. The *variable* LIM uses a threshold based on the median income in the year the data was collected (so the poverty threshold moves each year in line with the median income).

In 2015, 14.2 per cent of people (or 4.9 million people) were in poverty under the variable LIM.

## **HOW WELL DOES IT WORK?**

The LIM is the most overtly relative measure of poverty. In theory, it is a measure of inequality, not between the bottom and the top but between the bottom and the middle. With LIM, the concept of poverty is having substantially less than what is typical in society (either typical today using the variable LIM or, with the fixed LIM, what was typical in the recent past).

The fixed LIM has no standardized base year. This flexibility allows us to use the base year most suited to the context. For example, if monitoring the impact of a poverty reduction strategy, it makes sense to use the year prior to the strategy's implementation as the base year. However, it also means the base year could be chosen to produce statistics that best suit the case being made by whoever is using them.

The variable LIM results can be misleading. With a moving poverty threshold, it is possible for poverty to reduce even when the incomes of the poorest drop, as long as the median income drops by more. Likewise, poverty can increase even when the poorest become better off, if the median income rises by more than the incomes of the poorest.

These issues can be overcome by looking at shifts in the fixed and the variable LIM together, which is standard practice among poverty researchers. The table below illustrates how using these measures together can show how the incomes of the poorest have changed and if they have kept pace with those in the middle. Alone they can present a misleading picture, but combined they tell a reliable story of how low incomes have changed.

## What changes in the fixed and variable LIM tell us about the incomes of the poorest

Variable poverty rate Fixed poverty rate	Increases	Decreases
Increases	The incomes of the poorest have fallen and at a faster rate than income in the middle	The incomes of the poorest have fallen but at a slower rate than income in the middle
Decreases	The incomes of the poorest have risen but at a slower rate than income in the middle	The incomes of the poorest have risen and at a faster rate than income in the middle

### WHEN IS IT USED?

Unlike the LICO or MBM, which are Canada-specific, LIM is widely used across OECD countries. While it is principally used for international comparisons of poverty, it is also increasingly used to look at poverty within Canada.

## Market Basket Measure (MBM)<sup>4</sup>

### HOW DOES IT WORK?

Using this measure, low-income households are those with a disposable income lower than the cost of a specific “basket” of goods and services representing a modest, basic standard of living.

<sup>4</sup> A summary of MBM from Statistics Canada is available here: <http://www.statcan.gc.ca/pub/75f0002m/2015002/mbm-mpc-eng.htm>



The basket includes food, clothing, footwear, transportation, shelter, and other expenses. Its cost is adjusted to reflect the different cost of transport by province, community size, and specific cities.

The baseline basket is for items for two adults and two children with the costs adjusted for different household sizes using the same “equivilisation factors” as the LIM. It was last calculated in 2011 and is adjusted each year for inflation.

In 2015, 12.2 per cent of people (or 4.2 million people) were in poverty under the MBM.

## **HOW WELL DOES IT WORK?**

MBM is a relatively new measure. It was developed in the late 1990s by a working group of federal, provincial and territorial officials, led by what was then called Human Resources and Skills Development Canada (now Employment and Social Development Canada). The contents of the basket are periodically reviewed by statisticians, academics and government officials, but not by the general public.

The MBM is a more complex way of calculating income than LICO and LIM. Rather than looking at total household income after tax, MBM makes a range of adjustments to make it a more realistic estimate of disposable income. It is adjusted to reflect that people who own their homes outright have vastly lower shelter costs. It deducts union dues, payroll deductions and child-care spending from income, which makes it a better reflection of disposable income among those who work. It also deducts spending on health-related expenses from income, making it a better measure for those with chronic health conditions. None of these adjustments are perfect, but it is the only measure that attempts to recognize the additional unavoidable costs faced by working parents, those with a health condition, or who are paying rent or mortgages.

## **WHEN IS IT USED?**

MBM is the least widely-used measure of poverty, as it is relative new. Data in the 2011 edition has been calculated going back to 2002.

## Summary of low income measures

	<b>Low income cut-off (LICO)</b>	<b>Low income measure (LIM)</b>	<b>Market Basket Measure (MBM)</b>
<b>Concept</b>	Low income threshold is the point where a household would devote a much larger share of their income on necessities than the average.	Low income threshold is half the typical (median) income.	Low income threshold is amount required by family to buy a basket of goods and services representing a modest, basic standard of living.
<b>Frequency of updates</b>	Threshold set in 1992; adjusted for inflation since	Threshold varies each year in line with average income	Threshold set in 2011; adjusted for inflation since
<b>Geography</b>	Canada	Used across the OECD	Canada
<b>Established</b>	1960s	Early 1990s	Late 1990s
<b>2015 stats</b>	3.2 million in low income (9.2%)	4.9 million in low income (14.2%)	4.2 million in low income (12.2%)

# What other measures can further our understanding of poverty?

## Depth and persistence of poverty

The LICO, LIM and MBM allow us to quantify how many people are in poverty in Canada, sometimes called a poverty “headcount.” But to better understand and respond to poverty, we also need to understand other dynamics such as the depth and duration of poverty.

The dominant measure of poverty depth is the “low income gap ratio,” which shows the average distance (amount of income) that a low-income household is from the poverty threshold. It is also possible to get detailed information on the depth of poverty, such as the number of people with an income just above, just below, or substantially below the poverty threshold.

In theory, we can also measure the duration of poverty among households. But to do this, the same households need to be surveyed about their income on a regular basis. In the past, Statistics Canada ran a survey called the Survey of Labour and Income Dynamics (SLID), which tracked this type of data over time, however this survey was cancelled and data on poverty duration in Canada ends in 2010. Its replacement, the Canadian Income Survey, does not have a longitudinal aspect.

Calculating income poverty requires us to make a set of assumptions about people’s resources and needs. But once those metrics are established, it provides a rich source of data beyond just the number of people in poverty. It allows us to look at the nature of income poverty and to inform policy responses. For example, a household in deep poverty for a short period would have different needs and require different policy solutions than a household just below the poverty line for a prolonged period. Income measures of poverty can allow us to identify who and how many people are in each of these groups.

## Material deprivation

All income measures of poverty rely on assumptions about how much income a family requires to meet its basic needs. Even the most refined approaches will not fully account for the range of circumstances that Canadian families face, such as variations in housing costs, child care costs, and the costs faced by those with a disability. An alternative approach is to measure material deprivation, which simply asks families directly if they can afford basic goods and services. By quantifying the standard of living directly, rather than using income as a proxy, material deprivation measures do not have to assume that all families of a particular size in a particular area need the same income to avoid poverty.

Typically, material deprivation is measured by including questions in household surveys (from which income data is sourced) that ask if the household lacks certain essential items due to their costs. This self-reporting can pose a problem as households will interpret and answer such questions differently. Some people might feel embarrassed to report they cannot afford something (for example, it could imply that a parent is unable to adequately provide for their child), while others may claim they lack something due to cost despite having a high enough income to afford it.

Statistics Canada does not presently measure material deprivation. However, a child material deprivation index was piloted by the government of Ontario in 2009. It was developed by the Caledon Institute of Social Policy with the Daily Bread Food Bank and the government of Ontario.<sup>5</sup> The index was intended to complement rather than replace low income measures of poverty. It defined children as having a poverty-level standard of living if at least two out of ten items were missing from the child's household because the family cannot afford them. The list of ten items was developed with the involvement of people with lived experience of poverty and the wider community through surveys and focus groups. Following the

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<sup>5</sup> Ministry of Children and Youth Services. "Ontario Deprivation Index - Archived Backgrounder," December 2, 2009, <https://news.ontario.ca/mcys/en/2009/12/ontario-deprivation-index.html>

pilot survey, the index was incorporated into the SLID in Ontario, but SLID was ultimately cancelled.<sup>6,7</sup>

We do not have an international, standard way of measuring material deprivation, though one is used across the European Union as part of its measurement of living standards. This measure defines material deprivation as the inability to afford some items considered by most people to be desirable or necessary to have an adequate standard of living. Using this measure, a household is materially deprived if it lacks three out of nine specific items and severely materially deprived if it lacks four or more of them.<sup>8</sup>

## How can we improve?

If the aim of measuring poverty is to understand it better, then the best measures are the ones that provide us with the most insight. For a nation-wide poverty reduction strategy, consensus and transparency are also important. People need to be able to understand the measures used and agree that they accurately capture poverty.

One of the major flaws with all three official measures of low income is their timeliness – they are all published 18 months after the period in which the data was collected. This makes it very difficult for policy to be responsive to changes in poverty and for us to judge the impact of a strategy. An acceleration of the publication of this data would greatly improve our ability to reduce poverty through policy.

### **DO WE NEED A NEW MEASURE?**

The government is considering if a new measure of poverty is required as part of its consultations on the Poverty Reduction Strategy. In 2010, an independent review<sup>9</sup> of the three standard measures concluded that for policy development, it is best to look

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6 Ibid

7 Statistics Canada. “Survey of Labour and Income Dynamics (SLID) - A Survey Overview,” June 27, 2013 <http://www.statcan.gc.ca/pub/75f0011x/75f0011x2013001-eng.htm>

8 More information about the EU measure of material deprivation is available here: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Material\\_deprivation](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Material_deprivation)

9 Zhang, Xuelin. “Low income Measurement in Canada: What do different Lines and Indexes tell us?,” May, 2010, <http://www.statcan.gc.ca/pub/75f0002m/75f0002m2010003-eng.htm>

at the various existing measures together. Each measure has its limitations, but that is unavoidable when quantifying a subjective concept such as poverty. The relative newness and ongoing development of the MBM is testament to the difficulty of establishing a new poverty measure.

One of the main virtues of the existing poverty measures is that they exist. They are widely known and it is possible to see how they have changed over time. Having a time series is important as it allows us to judge how significant current progress is compared to previous years. One reason that the LICO continues to be so widely used as a poverty measure is that it is the best known and oldest measure, allowing us to observe trends going back decades.

All of the current measures are income-based, which provides a somewhat narrow view of poverty. An additional material deprivation measure could broaden the understanding of poverty and how it links to income. The 2009 Ontario pilot provides a methodological framework for this.

However, a material deprivation measure cannot be backdated so the value of such a measure for monitoring purposes would be limited until a time series is developed. Realistically, this would take around a decade. Nonetheless, even a single year of data on material deprivation provides insight into the nature of poverty beyond income.

We could also gain a more nuanced view of poverty by using other measures of deprivation beyond income. To realize their right to be free of poverty, people need to have access to health care, housing that meets their needs and public education, for example, as well as a means of income. We have measures of educational attainment, health standards and housing need, so we should be looking at them alongside income.

## **USING THESE MEASURES BETTER**

To achieve meaningful progress in reducing poverty in Canada, we need the information to understand the problem and monitor our progress. Right now, our understanding falls short, especially in timeliness and in capturing the multiple dimensions of poverty. The development of a Canadian Poverty Reduction Strategy presents an opportunity to put in place more effective measurement and monitoring.

But it's not only the quality of these measures that matters - it's how we use them. Too often we resort to quoting a single headline poverty statistic without context. We should aim to use the data we have to paint a picture of poverty that is timely and nuanced, reflecting the dimensions of our right to be free of poverty. This means looking at the data we have in more detail to understand how low income affects different groups in different ways, so that a Poverty Reduction Strategy can respond to those shifts. It means understanding levels of deprivation in health care, education and housing access, not just income.

Using the data better also means making information as widely available as possible, and in widely accessible formats, to support an informed public discussion about how well we are faring at protecting people's right to live free of poverty and which policies are proving effective at advancing this goal. A conversation informed by data supports both better outcomes and better accountability which, in turn, will support continued progress towards eliminating poverty.

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