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| <h1>The P20: methods for tracking the status of people in the poorest 20%</h1>    |  | <h2>2016</h2> <p>July</p>   |
|   |  | <p>Our vision is a world without poverty that invests in human security, where everyone shares the benefits of opportunity and growth</p> |
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## Introducing the P20

The 2030 Agenda for Sustainable Development is clear in its ambitions – everyone should be included in global progress over the next 15 years. But most discussions of progress focus on aggregated economic numbers such as gross domestic product (GDP) growth, not on the status of people. Even key measures about people such as GDP per capita are aggregated to the point that they cannot meaningfully say if people are being left behind or not.

The first Sustainable Development Goal (SDG) indicator to eliminate extreme poverty by 2030 – gets closer to ensuring that no one is left behind. But the goal could be achieved even if hundreds of millions of people were only a cent above the poverty line. This would be progress but it would be hard to truly say that these people had been fully included in growth.

We are working on an additional frame of reference. Instead of looking at specific poverty lines, we focus on the progress among the group of people who are most likely to be left behind. Over the next 15 years, we will track progress of people in the poorest 20% globally, which we call the P20. By focusing on the conditions of a fifth of the world's population, we will have a continuously applicable measure of inclusion, regardless of poverty lines.

The P20 Initiative is not designed to provide a new indicator; rather, we are interested in analysing existing data in a new way to see what it can tell us about the P20. There are a number of measures that shine light on this group including the Multidimensional Poverty Index, PovcalNet, and other surveys and administrative data sources. We hope to draw on these and other sources to track and bring public attention to the status of the P20.

Unfortunately, there are considerable data quality and data availability issues that emerge when trying to identify the status of the P20. In fact, many major datasets are unable to say anything at all about many people who likely live in the P20. A key part of the P20 Initiative is to drive progress on new data sources and data improvements that will allow us to take new approaches to understanding the P20 over the next 15 years.

## Defining the P20: starting with PovcalNet

To best measure the status of the P20 on a global scale, we need data that is comparable across countries. We also need to be able to disaggregate this data to see basic trends by gender, age, geography, disability and more. Rather than having a poverty line that is fixed across time, we need a measure that allows us to adjust our cut-off point to include 20% of the global population annually.

Currently, the most appropriate data source for tracking the P20 is the World Bank's PovcalNet, which will also be used as the indicator for SDG 1, to end extreme poverty. PovcalNet has drawn on a number of national surveys to compare poverty rates across countries and time. There is lively debate about many of the methods used in PovcalNet. Fortunately, the World Bank has gone to great lengths to be transparent about the [strengths](#) and [weaknesses](#) of many of its methodological choices. This does not solve the problems in the data but allows us to understand what problems exist.

PovcalNet also provides a familiar and intuitive sense of poverty. Most people have a relatively intuitive understanding of the World Bank's concept of "living on X dollars a day" and can thereby understand the measure of the number of people living below the line they have established. Other measures of poverty do not have such a straightforward intuition. PovcalNet also allows users to adjust poverty lines and see how adjustments affect poverty headcounts (the actual number of people in poverty) in regions and specific countries. For our purposes, it is easy to adjust poverty lines until 20% of the world's population falls below a certain line. This option is not possible through other existing measures of poverty where the definition of poverty cannot be easily adjusted.

PovcalNet is a very powerful and useful tool for monitoring the welfare of people around the world. The World Bank has put immense resources into making hundreds of surveys comparable across countries and across time and has provided careful documentation of many of the weaknesses. We outline some of the methodological weaknesses of PovcalNet in Box 1 not to diminish the efforts of PovcalNet but because they highlight many of the key challenges that exist in measuring the status of the P20.

Despite the limitations of PovcalNet, we think it is the best way to get an approximate idea of the number of people living in the P20 in countries around the world and to get a notion of their incomes. PovcalNet's latest data is for 2012 and uses 2011 PPP \$. We adjusted the poverty line until it included one-fifth of the world's population in 2012 (1.42 billion people). PovcalNet indicates that this population live under a threshold of PPP\$2.38 per day.

PovcalNet also provides information on the depth of poverty. This allows us to estimate the average daily income of people in the P20. Using the same technique for different years, we are able to estimate the daily income of people in the P20 going back more than two decades. Because of the measurement issues described above, these numbers should not be taken as precise but should give a sense of the order of magnitude.

To understand how this growth compares with the rest of the world, we did a very rough estimate of the gross national income (GNI) of the P20 by multiplying the average daily income by the population of the P20. We then subtracted this amount from the global GNI and calculated the average daily GNI per capita of the non-P20. These methods are not meant to provide a definitive estimate of the incomes per capita of the non-P20 but again to give a sense of the order of magnitude.

### **Box 1: PovcalNet's methodological challenges**

In its current form, PovcalNet provides poverty headcounts and other indications of income distribution at the national level but does not allow for subnational disaggregation. For instance, PovcalNet provides data on how much of a country's income goes to a certain proportion of the population (eg the bottom 20%) but it does not provide other details about these groups, such as which districts they live in, their gender, age, disability and so on.

By design many of these surveys in PovcalNet do not record information on homeless people, people living in institutions, refugees, migrant workers and nomadic groups. These household surveys are also likely to miss other groups less intentionally. They are very sensitive to the time of year that surveys are administered, whether people are asked to recall their consumption for the past week or two weeks, or the past month, and various arbitrary choices about survey design. Changes in the recall period for India's survey are likely to dramatically change poverty estimates.

PovcalNet is also likely to have lower quality data in the countries where people in the P20 are most likely to live. For many countries, PovcalNet does not have adequate data. To create global and regional estimates of poverty, PovcalNet takes regional averages and applies them to countries that are missing data. For instance, Somalia does not have any data in PovcalNet. To estimate regional poverty in Africa, PovcalNet would apply the regional poverty rate to Somalia and add that to regional total. Clearly, this could lead to misleading global and regional estimates.

The household surveys used for PovcalNet are not administered more frequently than every three years. PovcalNet estimates poverty rates in the years between surveys by equally applying GDP growth rates to the income distributions found in the latest surveys. This could be a reasonable assumption if surveys were frequently administered, but many countries have not had a survey for a long time, making GDP growth approximations very crude estimates. A 2015 World Bank [report](#) says that many countries are "extremely deprived" of good poverty data.

There have also been disagreements about PovcalNet's currency conversions. In 2014, PovcalNet switched from 2005 purchasing power parity (PPP) \$ to 2011 PPP \$.<sup>1</sup> Methodological changes in the way that the 2011 numbers were generated compared with the 2005 numbers led to [surprising changes](#) in poverty headcounts. There is debate about [whether](#) or [not](#) the 2011 PPP numbers are valid. PovcalNet has adopted the 2011 PPP conversion factors but provides some information using 2005 PPP conversions.

PovcalNet also treats two different methods of measuring poverty as equivalent and misses other measures. Some household surveys included in PovcalNet rely on estimates of the average daily income per person. Others rely on average daily consumption per person. While income and consumption are related, there are a number of ways they can diverge. For instance, a person could not survive on zero (or negative) consumption but they could survive through a period of zero (or negative) income. Additionally, PovcalNet does not look at household wealth (a stock), but income and consumption (flows). In many cases, a person's wellbeing may be better predicted by their access to wealth accumulated rather than current income. This underscores the point that PovcalNet only measures one dimension of poverty at a time and the other dimensions matter.

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<sup>1</sup> PPPs are constructed by comparing the cost of a common basket of goods in different countries.

PovcalNet gives us a powerful tool for approximating the relative growth of the P20 and the rest of the world. It also provides a useful approximation of the geographic distribution of poverty but it cannot give us a good sense of many basic characteristics of members of the P20. We turn to other tools for that analysis.

## DHS and MICS: surveys on people in the P20

While PovcalNet allows us to define who the poorest 20% of the population are by income, the P20 Initiative is about going beyond income and understanding more about who the P20 are, the challenges they face and how they are faring. For information on these people, we need household surveys. One of the biggest international data collection efforts is USAID's Demographic and Health Surveys (DHS). A similar programme has been initiated by UNICEF, the Multiple Indicator Cluster Survey (MICS). These two programmes may become the most important sources of indicators for the SDGs. DHS and MICS conduct household surveys in low- and middle-income countries primarily to provide better data on the conditions of women of reproductive ages (typically defined as 15–49 years) and children under five. These surveys have been adapted in a number of ways and may include modules on men (ages 15–49 or 15–54), domestic violence, child labour and may include biometric test such as measuring height, weight, testing for anaemia, testing for HIV and other customised questions.

There are a number of limitations to these surveys. First, they are generally likely to miss the same groups of people as the income and consumption surveys used for PovcalNet. They also focus on collecting data on women and children under five. The surveys measure the education, marital status, age, sex and relation to head of household of each and every household member. These basic questions are asked of any household that respondents encounter but the surveys ask many more questions to people in target groups. This means that there is significantly less data available for people aged 5–17 and over 49, but some data on basic characteristics is available. For instance, the latest standard DHS survey would ask nine questions about people of all ages but more than 180 questions about a woman aged 15–49.

DHS and MICS are similar programmes but are not identical. [Recent work](#) from [Joined-up Data Standards](#) maps the similarities between the two surveys. It re-emphasises the [recommendation](#) of the UN Statistical Commission to increase cooperation and coordination between household surveys.

DHS and MICS surveys also have series of questions to find out the household's means of human waste disposal, source of drinking water, roofing materials, flooring materials, wall materials, and include questions about whether the household has certain assets (for instance, a car, chair, watch and telephone).

The questions on household assets and household materials have been used to create a relative [wealth index](#) for each household. The wealth index was started by DHS and has been adopted by MICS. A 'principal components analysis' is applied to the assets and building materials recorded for each household to estimate the wealth of a country. This analysis creates an index for a set of variables that captures the largest amount of information about those variables. The wealth is estimated at a household level. Like PovcalNet, the wealth index does not attempt to measure the extent to which specific individual members of a household have access to the household wealth.

The DHS/MICS wealth index does not have a simple monetary equivalent and is not currently internationally comparable but has been shown to correlate well with the kinds of deprivations associated with poverty. The wealth index is a widely used tool for estimating how wealth interacts with various indicators. For instance, UNICEF reports birth registration by wealth quintile using this index. DHS and MICS have provided microdata for nearly every survey including the wealth index number for each household.

To better understand the P20, we make an assumption that the people with the lowest wealth index scores in a country compare with the people with the lowest incomes in PovcalNet in a country. If we had information on income levels and wealth index scores, we certainly would not find a perfect correlation but, in broad terms, we assume that these groups are roughly equivalent. We use the percentage of people in the P20 in each country in PovcalNet and find a wealth index score threshold that includes an equivalent proportion of people in each DHS or MICS survey. For instance, PovcalNet says that 47% of Ugandans would be in the P20. We therefore looked at the wealth index score in Uganda's latest survey and identify a wealth score cut off that would include 47% of Uganda's population. We then analyse the characteristics of the people below that wealth score in Uganda.

Again, we stress that PovcalNet and the DHS wealth index are measuring different things. We hope that better and more open data will provide alternatives to our methods but for now see them as a reasonable approximation for our purposes. We could wait for years for ideal datasets to emerge without being able to say anything on the status of the most vulnerable people but we feel that it is more important to make reasonable use of data that is available now for decision-making.

## Data coverage

Our main dataset for analysis included data on 97 countries that have had DHS or MICS surveys since 2005. We used the most recent survey available for each country. No DHS or MICS were available for China or Brazil. Following the methodology used by the Multidimensional Poverty Index, we used the 2006 Brazil National Demographic and Health Survey of Children and Women and the 2012 China Family Panel Survey.

Our database included microdata on 1.29 million households and 6.2 million people. These surveys have excluded all high income countries. This is a problem for our methodology if we believe that significant numbers of people in the P20 live in high income countries. PovcalNet recently added some data on high income countries suggesting there may be as many as 7 million people who live on less than \$2.38/day in high income countries. There is debate over whether these numbers are accurate. The primary argument against using them is that household surveys in high income countries measure wealth by income and that measuring the consumption of these people would push them above the poverty line. Those with lower incomes than PPP \$2.38 in high income countries account for, at most, 0.5% of the P20. For this year, they have been dropped from the P20 analysis. Over the coming years the P20 Initiative will be looking in greater depth at people left behind in every country.

For some indicators, UNICEF or the World Health Organization provides data on countries of all income levels. When possible we add the relevant populations to the non-P20 population trends. In some cases, we have not been able to find data on high income countries. In these cases, we indicate that we are comparing members of the P20 only to other people who have been surveyed by DHS or MICS.

Our methodology allows us to see if women compose a higher percentage of the P20 than the non-P20. We find that they do not; and we found similar results for older persons. However, this could reflect the methodological challenges above. To make this measurement, we counted up the number of women in households in the P20 and compared that to the number of women outside the P20. However, simply being in a household that falls outside the P20 does not mean that each individual member of the household will be better off than individuals who have fallen within the poorest 20% of the world's population. In reality, intra-household inequalities could result in women or older persons being more likely to live with deprivations associated with being in the P20 but at the moment, we have not got sufficient data to measure that.

When we make comparisons between the P20 and the non-P20, we have used standard errors to estimate the 95% confidence intervals for the proportions we have generated. In no case did the upper and lower bounds of our confidence intervals suggest that the trends we have identified may be problematic. As an example, our point estimates – upper bound estimates and lower bound estimates – all suggest that the P20 is highly concentrated in rural areas, when compared with the rest of the world.

## **Better data for the P20**

There are many data sources currently available that provide information on poverty. By shifting our perspective to focus on people, rather than poverty lines, we find that there are significant opportunities and challenges to better understanding the status of those most likely to be left behind in global progress. Our methods have allowed us to get a reasonable approximation of the status of people in the P20 as measured by a few major indicators. We are able to develop methods to see basic patterns by age, education level, sex, and at first administrative level. However, there are a number of issues that remain. There is a need for better international data on issues that are relevant to older people, men, disability, and groups missed by household surveys. Many countries have outdated or missing data. Data openness remains a challenge. To better understand wealth and inequality, more data should be generated to explore intra-household wealth dynamics. Nevertheless, our work on the P20 indicates that clear differences exist between the P20 and the rest of the world along a number of dimensions. We will be using the best available data to track and bring public attention to people who are left behind and to the inclusion of the P20 in global progress.

## **Contact**

**Zach Christensen, Senior Analyst**

[zach.christensen@devinit.org](mailto:zach.christensen@devinit.org)