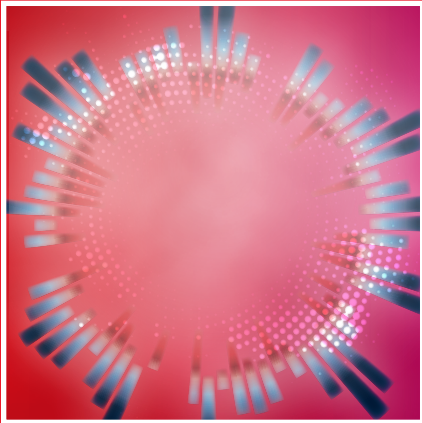




*Empowered lives.
Resilient nations.*

**GLOBAL
MULTIDIMENSIONAL
POVERTY INDEX 2019**

**ILLUMINATING
INEQUALITIES**



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Global Multidimensional Poverty Index 2019

Illuminating Inequalities



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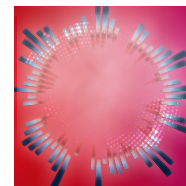
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Global Multidimensional Poverty Index 2019

Illuminating inequalities

What is the global Multidimensional Poverty Index?

Sustainable Development Goal (SDG) 1 aims to end poverty in all its forms and dimensions.¹ Although often defined according to income, poverty can also be defined in terms of the deprivations people face in their daily lives. The global Multidimensional Poverty Index (MPI) is one tool for measuring progress against SDG 1. It compares acute multidimensional poverty for more than 100 countries and 5.7 billion people and monitors changes over time.

The global MPI scrutinizes a person's deprivations across 10 indicators in health, education and standard of living (figure 1) and offers a high-resolution lens to identify both who is poor and how they are poor. It complements the international \$1.90 a day poverty rate by showing the nature and extent of overlapping deprivations for each person. The 2019 update of the global MPI covers 101 countries—31 low income, 68 middle income and 2 high income—and uses data from 50 Demographic and Health Surveys (DHS), 42 Multiple Indicator Cluster Surveys (MICS), one DHS-MICS and eight national surveys that provide comparable information to DHS and MICS.² Data are from 2007–2018, though 5.2 billion of the 5.7 billion people covered and 1.2 billion of the 1.3 billion multidimensionally poor people identified are captured by surveys from 2013 or later.

The global MPI is disaggregated by age group and geographic area to show poverty patterns within countries. It is also broken down by indicator to highlight which deprivations characterize poverty and drive its reduction or increase. These analyses are vital for policymakers.

The global MPI was developed in 2010 by the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford and the Human Development Report Office of the United Nations Development

Programme (UNDP) for the flagship Human Development Report. The figures and analysis are updated at least once a year using newly released data. See the back cover for more details on the global MPI.

Key findings

- Across 101 countries, 1.3 billion people—23.1 percent—are multidimensionally poor.³
- Two-thirds of multidimensionally poor people live in middle-income countries (p. 3).
- There is massive variation in multidimensional poverty within countries. For example, Uganda's national multidimensional poverty rate (55.1 percent) is similar to the Sub-Saharan Africa average (57.5 percent), but the incidence of multidimensional poverty in Uganda's provinces ranges from 6.0 percent to 96.3 percent, a range similar to that of national multidimensional poverty rates in Sub-Saharan Africa (6.3–91.9 percent).
- Half of the 1.3 billion multidimensionally poor people are children under age 18. A third are children under age 10 (p. 6).
- This year's spotlight on child poverty in South Asia reveals considerable diversity. While 10.7 percent of South Asian girls are out of school and live in a multidimensionally poor household, that average hides variation: in Afghanistan 44.0 percent do (p. 7).
- In South Asia 22.7 percent of children under age 5 experience intrahousehold inequality in deprivation in nutrition (where at least one child in the household is malnourished and at least one child in the household is not). In Pakistan over a third of children under age 5 experience such intrahousehold inequality (p. 8).
- Of 10 selected countries for which changes over time were analysed, India and Cambodia reduced their MPI values the fastest—and they did not leave the poorest groups behind (p. 9).

The global Multidimensional Poverty Index (MPI) compares acute multidimensional poverty for more than 100 countries and 5.7 billion people and monitors changes over time

There is wide variation across countries in inequality among multidimensionally poor people—that is, in the intensity of poverty experienced by each poor person

- There is wide variation across countries in inequality among multidimensionally poor people—that is, in the intensity of poverty experienced by each poor person. For example, Egypt and Paraguay have similar MPI values, but inequality among multidimensionally poor people is considerably higher in Paraguay (p. 13).
- There is little or no association between economic inequality (measured using the Gini coefficient) and the MPI value (p. 13).
- In the 10 selected countries for which changes over time were analysed, deprivations declined faster among the poorest 40 percent of the population than among the total population (p. 15).

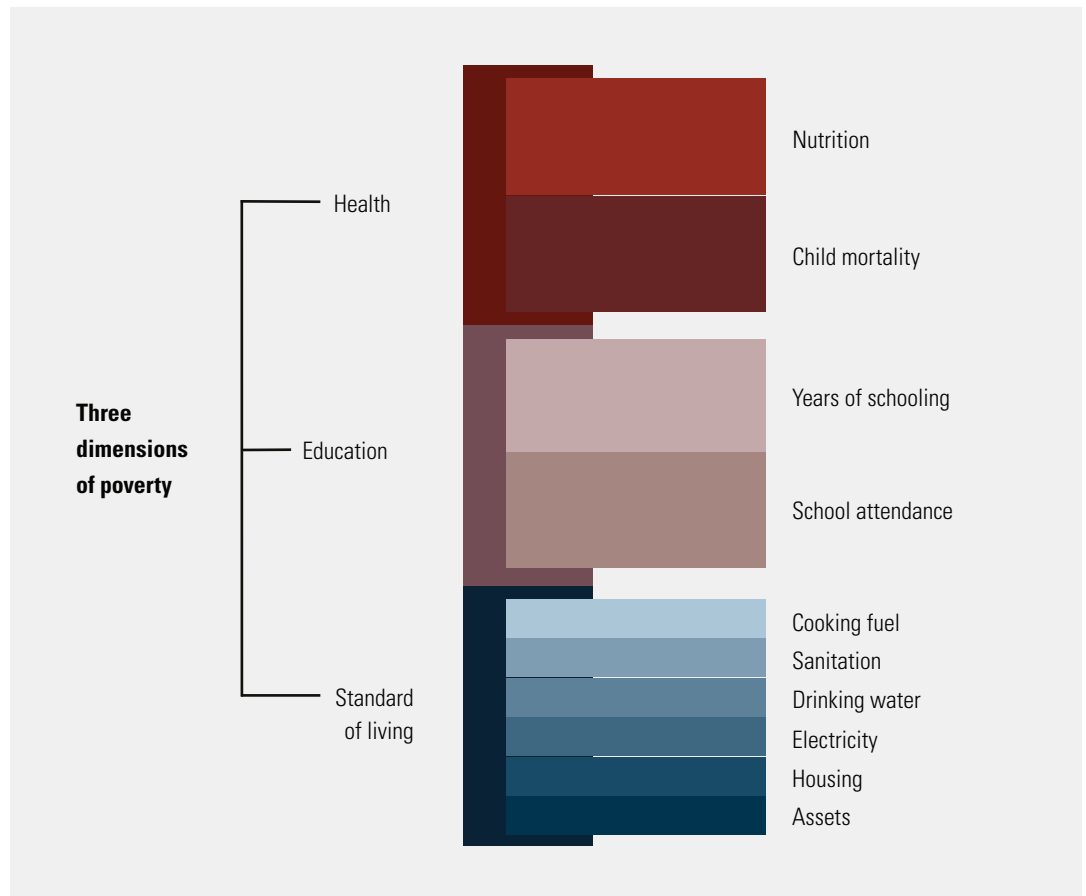
What can the global Multidimensional Poverty Index tell us about inequality?

The world is increasingly troubled by inequality. Citizens and politicians alike recognize the growing inequality in many societies and its potential influence on political stability, economic growth, social cohesion and even happiness. But how is inequality linked to poverty?

Poverty identifies people whose attainments place them at the bottom of the distribution. Inequality considers the shape of the distribution: how far those at the bottom are from the highest treetops and what lies in between. Though inequality is complex, if the bottom of the distribution rises—if the poorest improve the fastest—one troubling aspect of inequality is addressed.

FIGURE 1

Structure of the global Multidimensional Poverty Index



Source: Oxford Poverty and Human Development Initiative 2018.

Showcasing inequalities multidimensionally

The SDGs call for disaggregated information in order to identify who is catching up and who is being left behind. To meet this need, the MPI has been disaggregated by 1,119 subnational regions as well as by age and rural-urban area. This report uses that information to highlight gender and intrahousehold inequalities in South Asia and track whether countries that

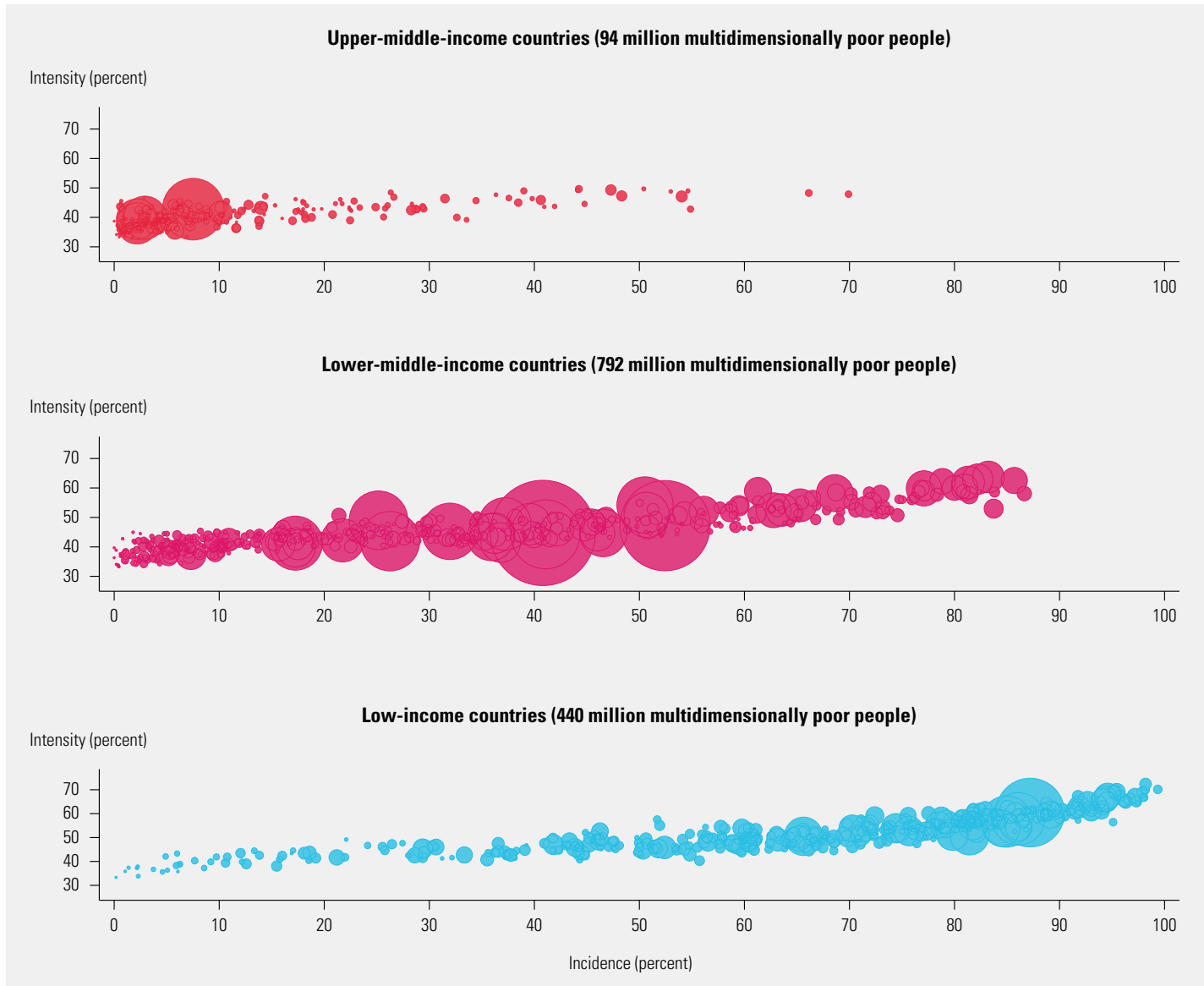
reduce multidimensional poverty are leaving no one behind.

Beyond averages

Low- and middle-income countries have extensive subnational inequality (figure 2).⁴ Of the 1.3 billion multidimensionally poor people worldwide, 886 million—more than two-thirds of them—live in middle-income countries:

FIGURE 2

Both low- and middle-income countries have a wide range of multidimensional poverty



Note: Each bubble represents a subnational region; the size of the bubble reflects the number of multidimensionally poor people. The figure is based on 1,119 subnational regions in 83 countries plus national averages for 18 countries. Data are from surveys conducted between 2007 and 2018.

Source: Alkire, Kanagaratnam and Suppa (2019) based on Human Development Report Office and Oxford Poverty and Human Development Initiative calculations.

Across the 101 countries covered by the global MPI, 23.1 percent of people are multidimensionally poor, but the incidence of multidimensional poverty varies across developing regions—from 1.1 percent in Europe and Central Asia to 57.5 percent in Sub-Saharan Africa

- 94 million multidimensionally poor people live in upper-middle-income countries, where the subnational incidence of multidimensional poverty ranges from 0 percent to 69.9 percent.
 - 792 million multidimensionally poor live in lower-middle-income countries, where the subnational incidence of multidimensional poverty ranges from 0 percent to 86.7 percent.
 - 440 million multidimensionally poor people live in low-income countries, where the subnational incidence of multidimensional poverty ranges from 0.2 percent to 99.4 percent.
- This shows that the challenge of reducing multidimensional poverty is not confined to low-income countries.

Inequality between and within countries

The global MPI highlights inequalities at the global, regional, national, subnational and even household level. Each layer of analysis yields a new understanding of inequality and provides a far richer picture than the \$1.90 a day poverty rate. Two examples illustrate how subnational disaggregations shine a light on inequality.

Where multidimensionally poor people live

The global MPI indicates that 1.3 billion people live in multidimensional poverty. But where are they? Increasing levels of disaggregation can help locate them:

- **Poorest two developing regions:** Ranking developing regions by average MPI value reveals that Sub-Saharan Africa and South Asia are the poorest (figure 3).
- **Poorest 49 countries:** Ranking countries by MPI value reveals that the poorest 49 countries are home to as many multidimensionally poor people as Sub-Saharan Africa and South Asia. These 49 countries are spread across all developing regions except Europe and Central Asia.
- **Poorest 675 subnational regions:** Ranking subnational regions by MPI value reveals that the poorest 675 subnational regions, located in 65 countries in all developing regions

except Europe and Central Asia, are home to as many poor people as Sub-Saharan Africa and South Asia combined.⁵

Without disaggregation, the striking inequality within countries is easily missed.

Disaggregation matters

Across the 101 countries covered by the global MPI, 23.1 percent of people are multidimensionally poor, but the incidence of multidimensional poverty varies across developing regions—from 1.1 percent in Europe and Central Asia to 57.5 percent in Sub-Saharan Africa. In Sub-Saharan Africa the incidence varies across countries—from 6.3 percent in South Africa to 91.9 percent in South Sudan (see figure 3). And within countries the incidence varies across subnational regions. For instance, the incidence of multidimensional poverty in Uganda is 55.1 percent—similar to the Sub-Saharan Africa average. But within Uganda the incidence ranges from 6.0 percent in Kampala to 96.3 percent in Karamoja—meaning that some regions of the country have an incidence similar to that of South Africa, while others have an incidence similar to that of South Sudan.

Poverty is everywhere

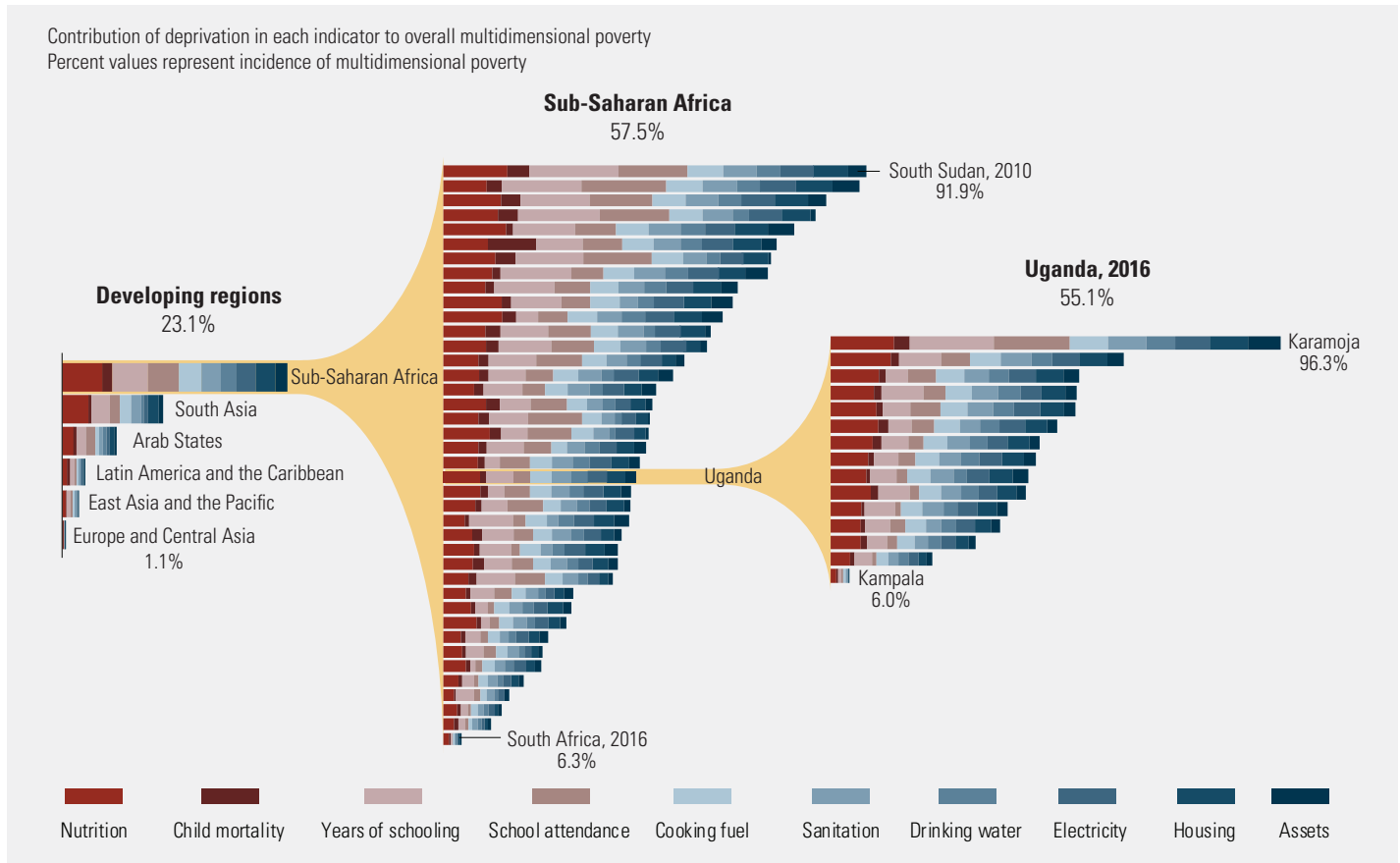
Action against poverty is needed in all developing regions. While Sub-Saharan Africa and South Asia are home to the largest proportions of multidimensionally poor people (84.5 percent of all multidimensionally poor people live in the two regions), countries in other parts of the world also have a high incidence of multidimensional poverty: Sudan (52.3 percent), Yemen (47.7 percent), Timor-Leste (45.8 percent) and Haiti (41.3 percent).

Stark inequalities across countries in the same developing region

In Sub-Saharan Africa the incidence of multidimensional poverty is 91.9 percent in South Sudan and 90.5 percent in Niger but 14.9 percent in Gabon and 6.3 percent in South Africa. In South Asia it is 55.9 percent in Afghanistan but 0.8 percent in the Maldives. In the Arab States it is 52.3 percent in Sudan and

FIGURE 3

Going beyond averages shows great subnational disparities in Uganda



Source: Alkire, Kanagaratnam and Suppa (2019) based on Human Development Report Office and Oxford Poverty and Human Development Initiative calculations.

47.7 percent in Yemen but less than 1.0 percent in Jordan. In Latin America it is 41.3 percent in Haiti but 0.6 percent in Trinidad and Tobago. In East Asia and the Pacific it is 45.8 percent in Timor-Leste but 3.9 percent in China and 0.8 percent in Thailand. In Europe and Central Asia it is 7.4 percent in Tajikistan but 0.2 percent in Armenia.

What intensity adds

The MPI is the product of the incidence and the intensity of multidimensional poverty, and both are important aspects. Any reduction in intensity reduces MPI (even if incidence

remains unchanged) and reflects progress towards moving people out of poverty. The poorest countries exhibit not just higher incidence of multidimensional poverty, but also higher intensity, with each poor person deprived in more indicators. Some countries have similar incidences but very different intensities. The incidence of multidimensional poverty in Pakistan and Myanmar is 38.3 percent, but the intensity is considerably higher in Pakistan (51.7 percent) than in Myanmar (45.9 percent). Another stark contrast is Nigeria, with incidence of 51.4 percent and intensity of 56.6 percent, and Malawi, with incidence of 52.6 percent, and intensity of 46.2 percent.

Children bear the greatest burden

Disaggregating the global MPI by age reveals inequality across age groups. Children under age 18 bear the greatest burden of multidimensional poverty. This section spotlights the 2 billion children—1.1 billion of whom are under age 10—living in the 101 countries covered by the global MPI.

Half of multidimensionally poor people are children, and a third are children under age 10

Of the 1.3 billion people who are multidimensionally poor, 663 million are children—and 428 million of them (32.3 percent) are under age 10.

One adult in six is multidimensionally poor—compared with one child in three

While 17.5 percent of adults in the countries covered by the MPI are multidimensionally poor, the incidence of multidimensional poverty among children is 33.8 percent.

Over 85 percent of multidimensionally poor children live in South Asia and Sub-Saharan Africa

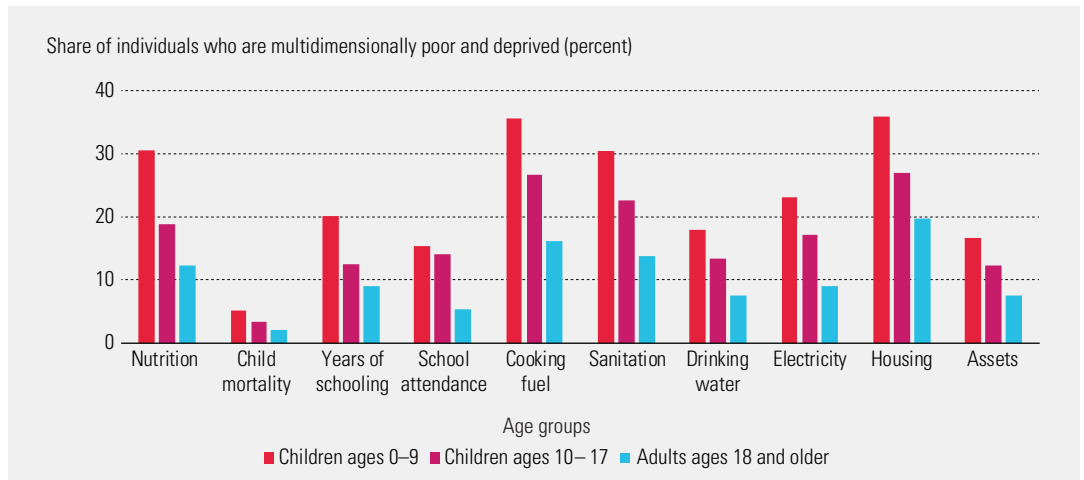
- Most of the 663 million multidimensionally poor children live in South Asia and Sub-Saharan Africa, split roughly equally between both regions.⁶
- Some 63.5 percent of children in Sub-Saharan Africa are multidimensionally poor—the highest incidence among all developing regions.
- In Burkina Faso, Chad, Ethiopia, Niger and South Sudan 90 percent or more of children under age 10 are multidimensionally poor.

Children are more likely than adults to be multidimensionally poor and deprived in all indicators

A higher proportion of children than of adults are multidimensionally poor and deprived in every one of the MPI indicators, and the youngest children bear the greatest burden (figure 4). This is a clarion call for action.

FIGURE 4

A higher proportion of children than of adults are multidimensionally poor, and the youngest children bear the greatest burden



Note: Data are from surveys conducted between 2007 and 2018.

Source: Alkire, Kanagaratnam and Suppa (2019) based on Human Development Report Office and Oxford Poverty and Human Development Initiative calculations.

Inside the home: a spotlight on children in South Asia

There are many lenses through which to view the experience of children in poverty.⁷ The global MPI identifies each child's deprivation by gender and age and places it in the context of the deprivation of other children in the household and of the household as a whole.

This section synthesizes a new United Nations Children's Fund–supported study of individual child-level data for three of the global MPI indicators in South Asia: nutrition, school attendance and years of schooling (figure 5).

Nutrition

In South Asia 70 million children under age 5—42.8 percent—are stunted or underweight.⁸ Intra-household disparities in deprivation in nutrition among children under age 5 in

the region are stark. Some 22.7 percent of children under age 5 live in a household in which at least one child is malnourished and at least one child is not. In Pakistan over a third of children under age 5 experience intra-household inequality in deprivation in nutrition.

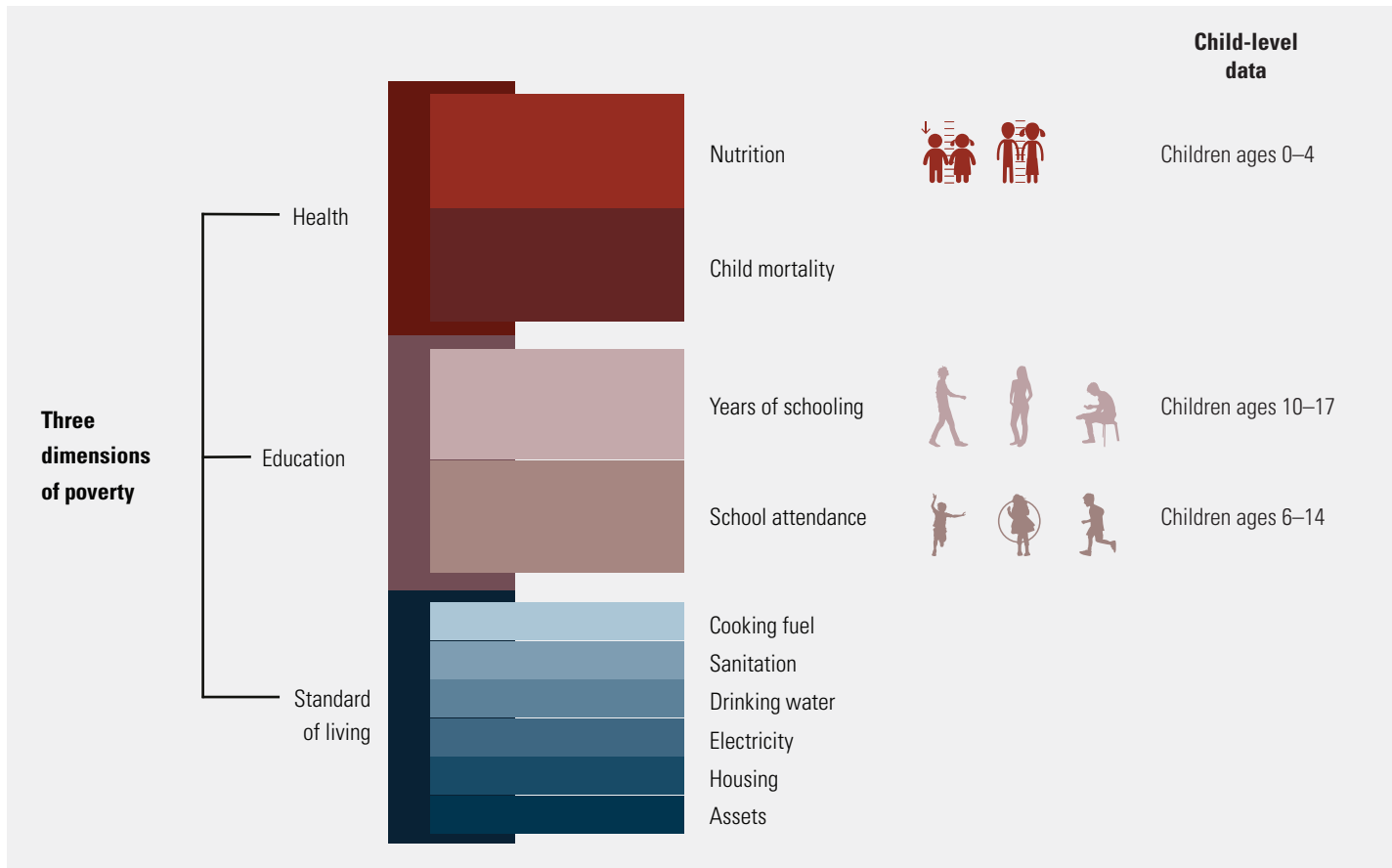
Out-of-school children

Across South Asia 36.7 million children do not attend school through grade 8. Some 32.3 million (88.0 percent) out-of-school children live in multidimensionally poor households.

In terms of gender disparities, 9.0 percent of boys in South Asia are out of school and live in a multidimensionally poor household, compared with 10.7 percent of girls (figure 6). Country patterns vary considerably. In Afghanistan 24.8 percent of boys ages 7–15 are multidimensionally poor and out of school, compared with 44.0 percent of girls. In Bangladesh

FIGURE 5

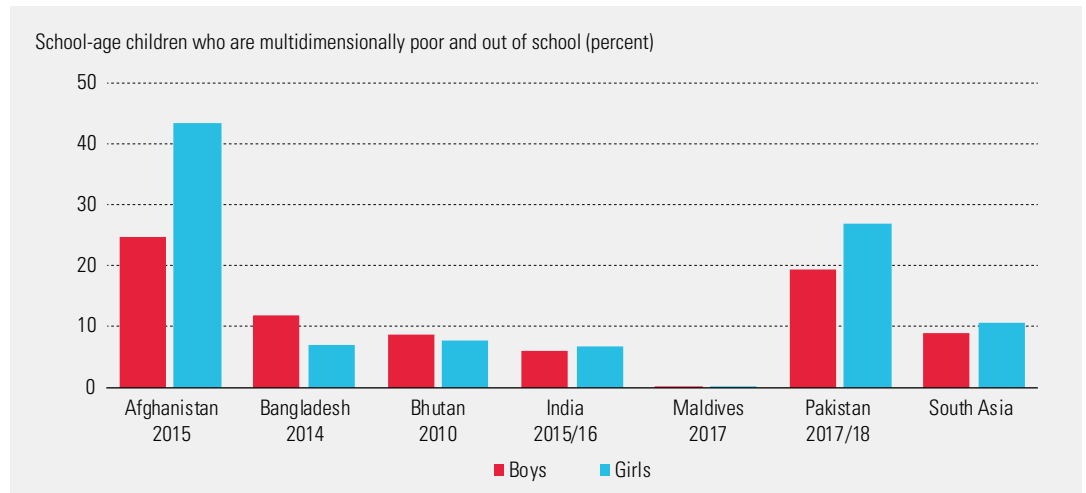
Child-level data in the global Multidimensional Poverty Index



Source: Oxford Poverty and Human Development Initiative 2018.

FIGURE 6

In South Asia the percentage of school-age children who are multidimensionally poor and out of school varies by country



Note: Out-of-school children are school-age children who do not attend school through grade 8.
Source: Alkire, Ul Haq and Alim 2019.

Children are bringing about change in South Asia. Of 436 million people who live in a household in which no adult has completed six years of schooling, 135 million live with a child age 10–17 who has completed six years of schooling

the gender pattern is reversed: 12.1 percent of boys are multidimensionally poor and out of school, compared with 7.2 percent of girls.

Do all children in the same household fare the same? No. In South Asia one child in nine is multidimensionally poor and lives in a household where some school-age children attend school but others do not.

Pioneer children: a story of hope

Education deprivations continue to affect South Asia. A shocking 436 million South Asians—one in four—live in a household in which no adult has completed six years of schooling. But children are bringing about change. Of those 436 million people, 135 million—just under a third—live with a child age 10–17 who has completed six years of schooling.

As the only people in their households to have completed six years of schooling, these

“pioneer children” are breaking new ground. While they might seem to be a rare phenomenon, 37.5 million children ages 10–17 in South Asia—or one in eight—are pioneer children. And more than half of those children are girls.

However, completing six years of schooling is no panacea. Schools may be ramshackle, and teachers may not teach, so six years of schooling may convey little. Nor does schooling snuff out poverty at once. Some 28.4 percent of pioneer children live in a multidimensionally poor household, which means they experience other deprivations that may affect their capacity to learn. And inequalities continue to plague even those households. For instance, 31.5 percent of pioneer children in Afghanistan live with at least one other child age 10–17 who has not completed six years of schooling and has already left school. Yet, despite the adversity in their lives, these 37.5 million children can bring change.

Leaving no one behind

The global MPI shows the incidence of multidimensional poverty each year.⁹ Disaggregating trends by age or location—which requires strictly harmonized datasets—indicates whether people are being left behind. This section uses 10 countries from a larger OPHI study to illustrate different patterns of reduction in MPI value over time.¹⁰ Their combined population is about 2 billion people, they cover every developing region and they span three income categories: upper middle (Peru), lower middle (Bangladesh, Cambodia, India, Nigeria, Pakistan, Viet Nam) and low (Democratic Republic of the Congo, Ethiopia, Haiti).

The big picture

Overall, the 10 countries made progress towards SDG 1. Eight countries saw a statistically significant reduction in their MPI value and a combined drop in the number of multidimensionally poor people from 1.1 billion to 782 million. This improvement occurred despite the rapid population growth in African countries that unfortunately led to an increase in the number of multidimensionally poor people in Democratic Republic of the Congo, Ethiopia and Nigeria.

The fastest absolute reductions in MPI value were in India, Cambodia and Bangladesh, followed by Ethiopia and Haiti. Peru joined Cambodia in experiencing the largest reduction relative to its starting MPI_T (7.1 percent a year).

Signs of progress

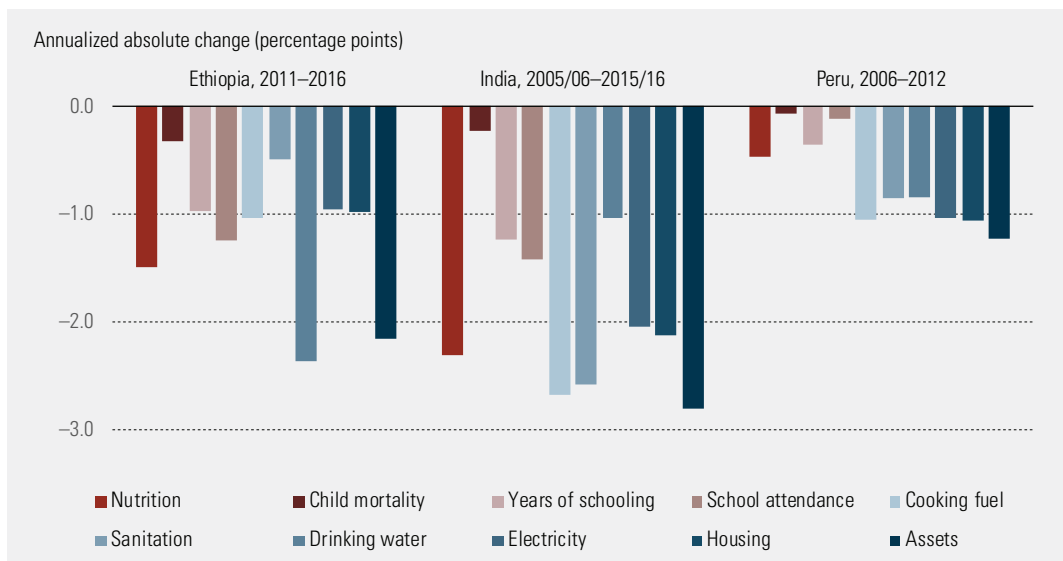
Examples of pro-poor reduction, where the poorest regions improved the fastest, included Mondol Kiri and Rattanak Kiri in Cambodia, which reduced the incidence of multidimensional poverty from 71.0 percent to 55.9 percent between 2010 and 2014, and Jharkhand in India, which reduced it from 74.9 percent to 46.5 percent between 2005/06 and 2015/16.

Ethiopia, India and Peru significantly reduced deprivations in all 10 indicators, each in different ways (figure 7). Ethiopia made improvements in nutrition, school attendance, drinking water and assets. India strongly improved assets, cooking fuel, sanitation and nutrition. And Peru developed clean energy, electricity, housing and assets. The other seven countries significantly reduced deprivations in many—but not all 10—indicators: Bangladesh and Cambodia reduced deprivations in nine, Haiti reduced deprivations in eight and Democratic Republic of the Congo and Pakistan reduced deprivations in six indicators.

An analysis of 10 countries with a combined population of about 2 billion people illustrates different patterns of reduction in MPI value over time

FIGURE 7

Ethiopia, India and Peru significantly reduced deprivations in all 10 indicators, each in different ways



Source: Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Pettee 2019.

Who is being left behind?

The trends in these 10 countries also shine a light on where poverty reduction has been uneven, despite the good progress overall.

Among selected countries with a significant reduction in MPI_T value, India demonstrates the clearest pro-poor pattern at the subnational level: the poorest regions reduced multidimensional poverty the fastest in absolute terms (figure 8).

In all 10 countries rural areas are poorer than urban areas. In Cambodia, Haiti, India and Peru poverty reduction in rural areas outpaced that in urban areas—demonstrating pro-poor development—and in Bangladesh and Democratic Republic of the Congo poverty fell at the same speed in rural and urban areas. In Ethiopia urban areas progressed faster than rural areas, though both reduced poverty significantly.

FIGURE 8

Trends in poverty reduction in subnational regions for selected countries



MPI_T is the Multidimensional Poverty Index value based on harmonized survey data.

Note: Horizontally, subnational regions are placed according to their initial MPI_T value, with the poorest region on the right. Vertically, the regions with the fastest absolute rate of reduction in MPI_T value appear at the bottom. If improvements have benefited the poorest most, the regions to the right in each panel are closest to the bottom (indicating that they had the largest drop in MPI_T value). The size of the bubbles reflects the number of multidimensionally poor people in the starting year. Grey bubbles indicate that no statistically significant change in MPI_T value occurred for that region.

Source: Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Petee 2019.

Children are poorer than adults in all 10 countries. Child poverty fell markedly faster than adult poverty in Bangladesh, Cambodia, Haiti, India and Peru. But children fell further behind in Ethiopia, and their progress—together with that of adults—stalled in Democratic Republic of the Congo and Pakistan.

Case study: Ethiopia

Between 2011 and 2016 Ethiopia reduced its MPI value from 0.545 to 0.489. The percentage of multidimensionally poor people fell from 88.4 percent to 83.5 percent, and the intensity of poverty dropped from 61.6 percent to 58.5 percent.¹¹ Ethiopia made substantial improvements in all MPI indicators, with the largest annual absolute improvements in drinking water, assets and nutrition deprivations (figure 9).

Based on the \$1.90 a day poverty measure, only 27.3 percent of people were classified as monetarily poor in 2015—far below the 83.5 percent classified as multidimensionally poor. In fact, of all the countries covered by the global MPI, Ethiopia has the biggest difference between the incidence of multidimensional poverty and the \$1.90 a day poverty rate.

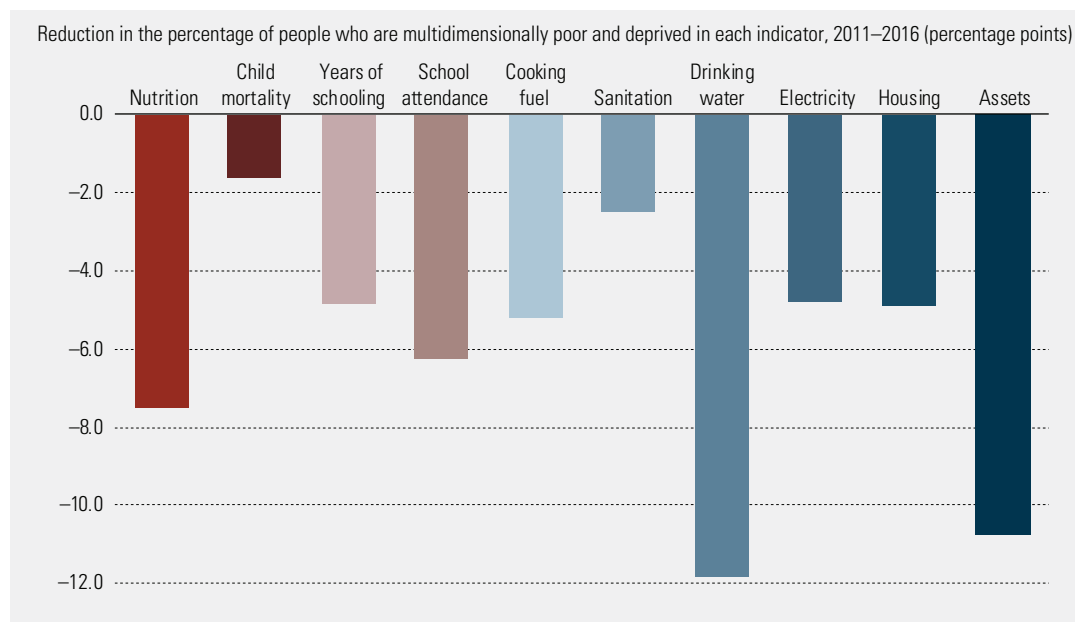
Of Ethiopia’s 102 million inhabitants, 85.5 million are multidimensionally poor, meaning that the country has more multidimensionally poor people than the total population of Germany—and more multidimensionally poor people than any of the 101 countries covered by the MPI except India and Nigeria.¹² Over half the population is multidimensionally poor and has a malnourished person in the household, and half is multidimensionally poor and lives in a household in which no one has completed six years of schooling (figure 10). A third of the population is multidimensionally poor and lives with a child who is not attending school. Nearly three-quarters of the population is multidimensionally poor and lacks electricity, and 80 percent is multidimensionally poor and lacks adequate sanitation facilities.

All age cohorts reduced the incidence of multidimensional poverty significantly between 2011 and 2016. Among children ages 0–17 the incidence dropped from 91.2 percent to 87.5 percent, and intensity fell from 63.5 percent to 60.5 percent. But the incidence among adults fell faster, meaning that children are falling further behind adults—a worrying trend. Indeed, the incidence of multidimensional poverty is highest, 90 percent, among children under age 10.

Between 2011 and 2016 Ethiopia reduced its MPI value from 0.545 to 0.489

FIGURE 9

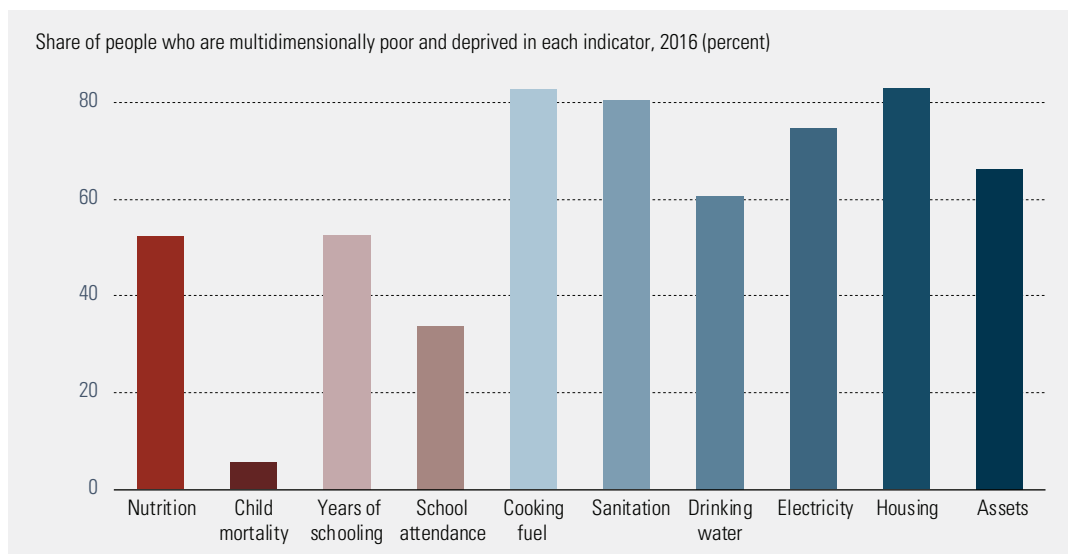
Ethiopia has made substantial improvements in all Multidimensional Poverty Index indicators



Source: Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Petee 2019.

FIGURE 10

Deprivations among multidimensionally poor people in Ethiopia are particularly high for standard of living indicators



Source: Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Pettee 2019.

Disaggregating by rural-urban area reveals that 93.3 percent of multidimensionally poor people in Ethiopia live in rural areas

Disaggregating by rural-urban area reveals that 93.3 percent of multidimensionally poor people live in rural areas.

Disaggregating by region provides an example of a reduction in the intensity of poverty in a way that risks leaving some of the poorest groups behind. There is a clear difference between the trajectories of high- and low-MPI regions. Eight of the country’s 11 regions saw a significant reduction in the incidence of multidimensional poverty, but Somali—the second poorest region, where 91.9 percent of the population is multidimensionally poor—did not. The capital city Addis Ababa had the largest reduction, nearly halving its MPI value and reducing the percentage of multidimensionally poor people by 44 percentage points, to 15.5 percent.

What is distinctive in Ethiopia is the extent to which changes in intensity between 2011 and 2016 drove changes in some regions. In Oromia, home to the largest number of multidimensionally poor people, the incidence of multidimensional poverty fell from 91.7 percent to 87.2 percent, but there was

no significant reduction in intensity. Amhara had a similar reduction in incidence—but also significantly reduced intensity. The reduction in MPI value in both Tigray, from 0.520 to 0.450, and the Southern Nations, Nationalities, and Peoples’ Region (SNNPR), from 0.567 to 0.482, was due to a decrease in intensity of over 5 percentage points. The SNNPR also reduced the incidence of multidimensional poverty by 6.5 percentage points. Tigray did not; its progress was due solely to the reduction in intensity.

In addition, the poorest quintile reduced multidimensional poverty faster than the second poorest and the richest quintiles.¹³

Overall, multidimensional poverty in Ethiopia improved significantly, albeit without regional equalization and with growing differences across generations and between rural and urban areas. Progress was also affected by rapid population growth. Yet, a positive trend is evident, and most regions reduced intensity significantly. So while most people remain multidimensionally poor, their lives are improving in multiple indicators.

Inequality among multidimensionally poor people

This section looks at inequality among multidimensionally poor people—that is, the difference in the intensity of poverty experienced by each poor person.¹⁴ Inequality among poor people is measured using the variance, which is calculated by subtracting each multidimensionally poor person's deprivation score from the average intensity, squaring the difference, summing the squared differences, and dividing the sum by the number of multidimensionally poor people.¹⁵ Inequality among multidimensionally poor people is also reported in the 2019 global MPI table.

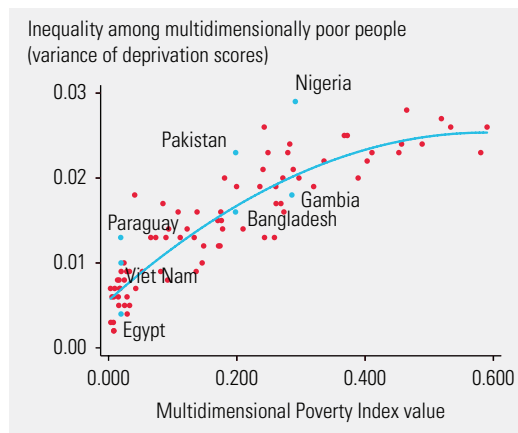
Why investigate inequality among multidimensionally poor people? Because multidimensionally poor people are deprived in anything from a third to 100 percent of MPI indicators—so even though they are all identified as multidimensionally poor, the intensity of poverty that they face differs. This can be measured using the variance. While the measurement and analysis of economic inequality are well established, inequality among multidimensionally poor people has been explored less.¹⁶

Clearly, inequality among multidimensionally poor people tends to increase with MPI value, but there is wide variation across countries (figure 11). For example, Egypt and Paraguay have similar MPI values (around 0.190), but inequality among multidimensionally poor people is much higher in Paraguay (variance of 0.013) than in Egypt (0.004). In South Asia, Pakistan and Bangladesh have similar MPI values (0.198), but inequality is higher in Pakistan (variance of 0.023) than in Bangladesh (0.016). In Sub-Saharan Africa, Gambia and Nigeria have similar MPI values (around 0.290), but inequality is higher in Nigeria (variance of 0.029) than in Gambia (0.018).

The measurement of inequality among multidimensionally poor people summarizes the distribution of their deprivation scores within intensity. Variance adds an additional piece of information: it signals when average intensity is highly heterogeneous, as in Nigeria and Pakistan. Policies can be tailored to different groups of poor people, including the most and the least intensely deprived.

FIGURE 11

Inequality among multidimensionally poor people tends to increase with Multidimensional Poverty Index value, but there is wide variation across countries



Note: Data are from surveys conducted between 2007 and 2018.
Source: Alkire and Santos 2019.

While variance provides useful insights, it is important to emphasize that the primary objective of SDG 1 is to end poverty—not merely to reduce inequality among poor people.

Multidimensional poverty and economic inequality

Do more economically unequal countries have a higher incidence of multidimensional poverty?¹⁷ It turns out that there is little or no correlation between economic inequality in a country (as measured by the Gini coefficient) and the country's MPI value (figure 12).

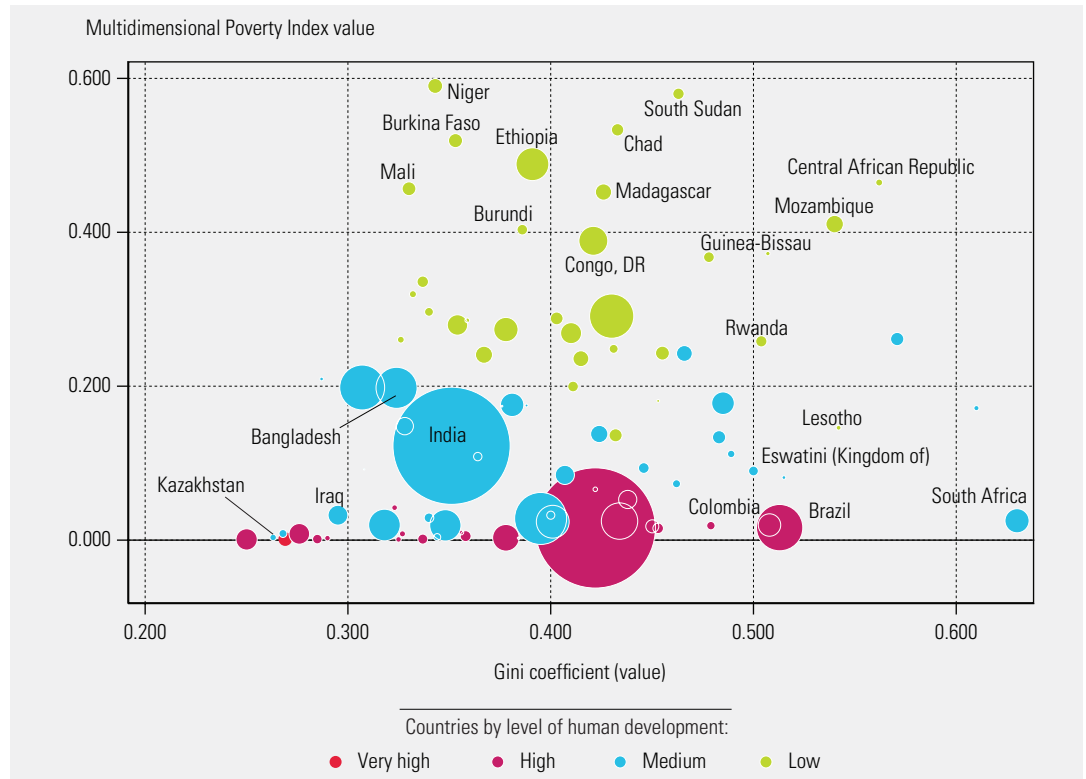
Inequalities in human capabilities are important in any assessment of human development that goes beyond averages. The Inequality-adjusted HDI (IHDI), produced by the Human Development Report Office since 2010, adjusts each dimension of the Human Development Index (HDI)—health, education and standard of living—by the Atkinson inequality measure, which offers a way to explore inequalities in capabilities.¹⁸

But the IHDI does not capture overlapping inequalities—whether the same person is at the lower end of the distribution of all three dimensions. The MPI uses information about the magnitude of overlapping inequalities at

Why investigate inequality among multidimensionally poor people? Because multidimensionally poor people are deprived in anything from a third to 100 percent of MPI indicators—so even though they are all identified as multidimensionally poor, the intensity of poverty that they face differs

FIGURE 12

There is no correlation between economic inequality and Multidimensional Poverty Index value



Note: Data are from surveys conducted between 2007 and 2018. The size of each bubble reflects the size of the population.
Source: Kovacevic 2019.

The MPI, economic inequality (as measured by the Gini coefficient) and the IHDI each contribute important and distinctive information for policy action

the bottom of the distribution to provide a better understanding of the multidimensional nature of inequality in human development and its association with multidimensional poverty.

Consider the association between inequality in the education dimension of the HDI and the incidence of multidimensional poverty (figure 13). The correlation coefficient of 0.737 indicates a strong association. The association tends to be strongest in Europe and Central Asia, where the incidence of multidimensional poverty and education inequality are low, and in Sub-Saharan Africa, where both are higher.

But some differences are worth noting. Kenya and Pakistan have a similar incidence of multidimensional poverty, but inequality in

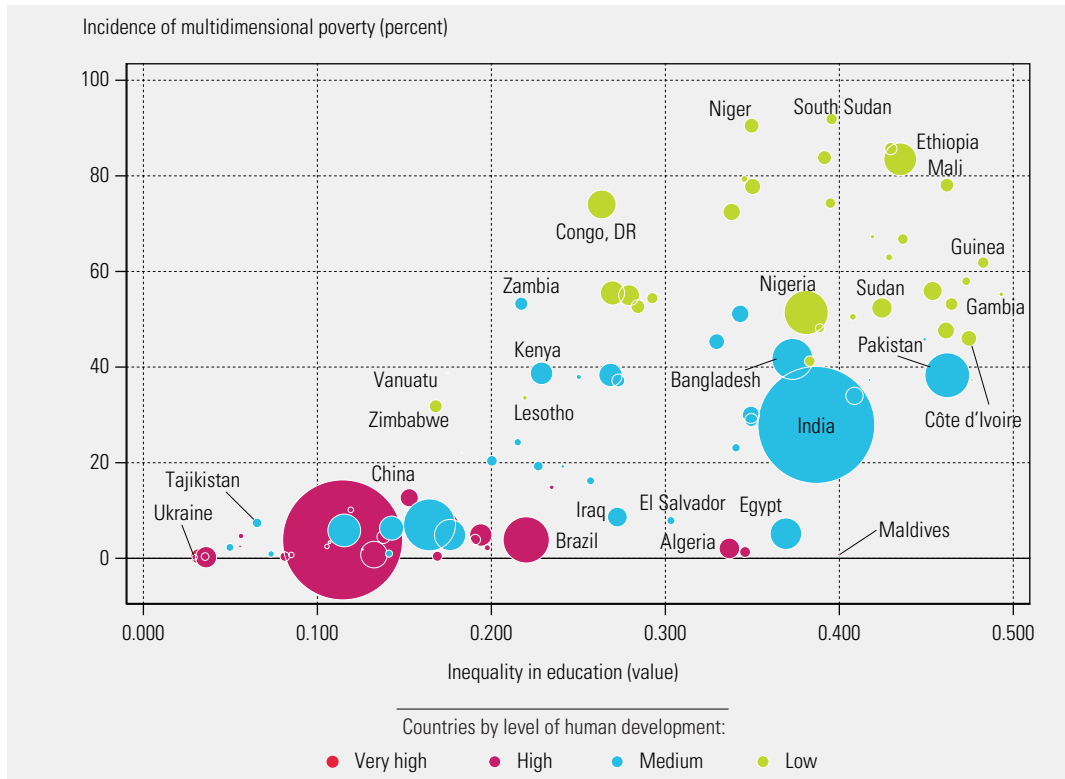
education in Pakistan is twice that in Kenya. And Democratic Republic of the Congo and Iraq have similar inequality in education, but the incidence of multidimensional poverty in Democratic Republic of the Congo is 65 percentage points higher.

Across the other dimensions of the HDI, the association with the incidence of multidimensional poverty is highest for inequality in life expectancy (0.869) and lowest for inequality in standard of living (0.086).

The conclusion is evident: no single measure is a sufficient guide to both inequality and multidimensional poverty. The MPI, economic inequality (as measured by the Gini coefficient) and the IHDI each contribute important and distinctive information for policy action.

FIGURE 13

The incidence of multidimensional poverty is strongly but imperfectly correlated with inequality in education.



Note: Data are from surveys conducted between 2007 and 2018. The size of each bubble reflects the size of the population.
Source: Kovacevic 2019.

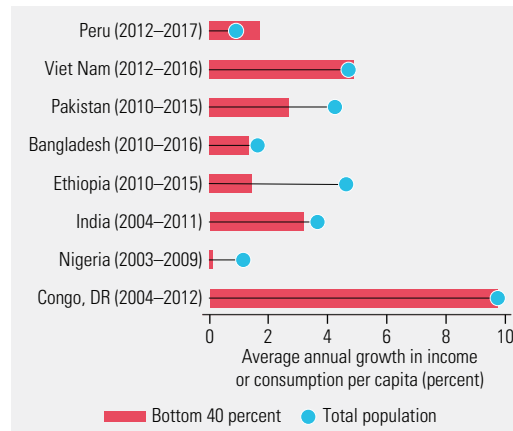
The bottom 40 percent: growing together?

SDG target 10.1 calls for tracking progress of the bottom 20 percent of the population compared with that of the total population. The World Bank calls this comparison “shared prosperity.”¹⁹ Of the 10 selected countries from the OPHI study that are discussed in the section on leaving no one behind, 8 had data on shared prosperity, and only 2—Peru and Viet Nam, to some extent—exhibited equalizing growth (figure 14).

What about nonmonetary indicators? The 10 selected countries discussed above showed mostly equalizing growth in attainments (the opposite of deprivations) across the 10 MPI indicators, regardless of whether growth was measured in absolute terms (as the change between two years divided by the number of years elapsed) or in relative terms (as the change between two years divided by the value in the

FIGURE 14

Of eight selected countries with data, only Peru and Viet Nam saw higher growth in income or consumption per capita among the poorest 40 percent than among the total population



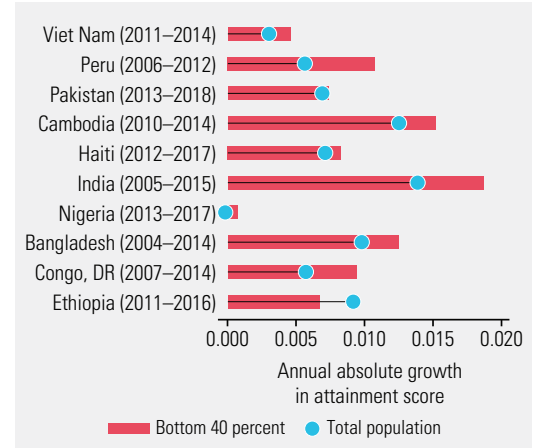
Note: Countries are ordered from highest to lowest income or consumption per capita in the first year of the period shown.
Source: World Bank Global Database of Shared Prosperity (www.worldbank.org/en/topic/poverty/brief/global-database-of-shared-prosperity), retrieved 2 May 2019.

first year). In absolute terms the average attainment score (the proportion of MPI indicators in which a person is not deprived) grew faster among the bottom 40 percent than among the total population in all countries except Ethiopia (figure 15). India and Peru had the largest difference between the two groups, followed by Democratic Republic of the Congo, Cambodia and Bangladesh. Haiti and Pakistan had only slightly equalizing patterns. In relative terms, growth in the average attainment score among the bottom 40 percent exceeded that among the total population in all 10 countries.

Growth in attainments among the bottom 40 percent across the 10 MPI indicators is not the same as shared prosperity in income per capita. Attainments cover only 10 indicators and are bounded, so they cannot increase indefinitely. Nonetheless, exploring the patterns of growth provides novel information on multidimensional trajectories of change.

FIGURE 15

In all but one of the 10 selected countries the bottom 40 percent are improving Multidimensional Poverty Index attainments faster than the total population



Note: Countries are ordered from highest to lowest average attainment score in the first year of the period shown.
Source: Seth and Alkire 2019.

Notes

- 1 United Nations 2015.
- 2 As of 15 April 2019, MPI statistics have been updated for 14 countries using new datasets: Albania (DHS 2017/18), Benin (DHS 2017/18), Congo (MICS 2014/15), Haiti (DHS 2016/17), Iraq (MICS 2018), Jordan (DHS 2017/18), Lao People's Democratic Republic (MICS 2017), the Maldives (DHS 2016/17), Pakistan (DHS 2017/18), Philippines (DHS 2017), Senegal (DHS 2017), Sierra Leone (MICS 2017), South Africa (DHS 2016) and Tajikistan (DHS 2017).
- 3 All population aggregates in this report use 2017 population data from UNDESA (2017), unless otherwise indicated. Online data tables provide results using population data for survey years.
- 4 The analysis in this section is based on 1,119 subnational regions in 83 countries plus national averages for 18 countries. Unless otherwise indicated, all data are based on Alkire, Kanagaratnam and Suppa (2019).
- 5 The analysis of subnational disaggregation includes South Sudan, for which disaggregated data are unavailable.
- 6 With standard errors, the regions cannot be distinguished.
- 7 This section draws on Alkire, Ul-Haq and Alim (2019), who used 2016 population weights and covered Afghanistan (2015), Bangladesh (2014), Bhutan (2010), India (2015/16), the Maldives (2017), Nepal (2016) and Pakistan (2017/18).
- 8 Data on child nutrition in Afghanistan in 2015 are unavailable.
- 9 This section synthesizes Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Pettee (2019). Population data in this section refer to the year of the survey.
- 10 To compare the incidence of multidimensional poverty over time, surveys were harmonized to create full comparability for one country (see Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Pettee 2019). Due to these adjustments, the harmonized results may differ from published global MPI values and are therefore denoted MPI_r. The number of years between surveys must also be considered in interpreting results.
- 11 This section summarizes Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Pettee's (2019) analysis of Ethiopia's reduction in MPI value.
- 12 Population figures in this section refer to the year of the survey.
- 13 For quintile analysis of all 10 countries, see Seth and Alkire (2019).
- 14 This section synthesizes Alkire and Santos (2019).
- 15 Alkire and Foster, 2019; Alkire and Santos 2019.
- 16 Kolm (1977) and Atkinson and Bourguignon (1982) pioneered the analysis of inequality in the multidimensional poverty space. See also Alkire and others (2015), Alkire and Foster (2016, 2019), Seth and Alkire (2019), and Seth and Santos (2019).
- 17 This section draws on Kovacevic (2019). Because current data on inequality refer to income or consumption inequality, the generic term "economic inequality" is used.
- 18 For details on the IHDI, see www.hdr.undp.org/en/content/inequality-adjusted-human-development-index-ihdi.
- 19 This section synthesizes Seth and Alkire (2019).

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Multidimensional Poverty Index: developing countries

	Year and survey ^a	Multidimensional Poverty Index ^a		SDG 1.2 Population in multidimensional poverty ^a						Contribution of deprivation in dimension to overall multidimensional poverty ^a			SDG 1.2 SDG 1.1 Population living below income poverty line	
		Value	In survey year	Headcount		Intensity of deprivation	Inequality among the poor	Population in severe multidimensional poverty	Population vulnerable to multidimensional poverty ^a	Health	Education	Standard of living	National poverty line (%)	
				(thousands)									National poverty line	PPP \$1.90 a day
				(%)	(%)									
2007–2018	2017	(%)	(%)	Value	(%)	(%)	(%)	(%)	(%)	(%)	2007–2018 ^b	2007–2017 ^c		
Afghanistan	2015/2016 D	0.272 ^d	55.9 ^d	19,376 ^d	19,865 ^d	48.6 ^d	0.020 ^d	24.9 ^d	18.1 ^d	10.0 ^d	45.0 ^d	45.0 ^d	54.5	..
Albania	2017/2018 D	0.003	0.7	21	21	39.1	.. ^e	0.1	5.0	28.3	55.1	16.7	14.3	1.1
Algeria	2012/2013 M	0.008	2.1	805	868	38.8	0.006	0.3	5.8	29.9	46.8	23.2	5.5	0.5
Angola	2015/2016 D	0.282	51.1	14,725	15,221	55.3	0.024	32.5	15.5	21.2	32.1	46.8	36.6	30.1
Armenia	2015/2016 D	0.001	0.2	5	5	36.2	.. ^e	0.0	2.7	33.1	36.8	30.1	25.7	1.4
Bangladesh	2014 D	0.198	41.7	66,468	68,663	47.5	0.016	16.7	21.4	23.5	29.2	47.3	24.3	14.8
Barbados	2012 M	0.009 ^f	2.5 ^f	7 ^f	7 ^f	34.2 ^f	.. ^e	0.0 ^f	0.5 ^f	96.0 ^f	0.7 ^f	3.3 ^f	..	..
Belize	2015/2016 M	0.017	4.3	16	16	39.8	0.007	0.6	8.4	39.5	20.9	39.6	..	..
Benin	2017/2018 D	0.368	66.8	7,672	7,465	55.0	0.025	40.9	14.7	20.8	36.3	42.9	40.1	49.5
Bhutan	2010 M	0.175 ^g	37.3 ^g	272 ^g	302 ^g	46.8 ^g	0.016 ^g	14.7 ^g	17.7 ^g	24.2 ^g	36.6 ^g	39.2 ^g	8.2	1.5
Bolivia (Plurinational State of)	2008 D	0.094	20.4	1,958	2,254	46.0	0.014	7.1	15.7	21.6	26.6	51.8	36.4	5.8
Bosnia and Herzegovina	2011/2012 M	0.008 ^f	2.2 ^f	80 ^f	77 ^f	37.9 ^f	0.002 ^f	0.1 ^f	4.1 ^f	79.7 ^f	7.2 ^f	13.1 ^f	16.9	0.1
Brazil	2015 N ^h	0.016 ^{d,g,h}	3.8 ^{d,g,h}	7,913 ^{d,g,h}	8,041 ^{d,g,h}	42.5 ^{d,g,h}	0.008 ^{d,g,h}	0.9 ^{d,g,h}	6.2 ^{d,g,h}	49.8 ^{d,g,h}	22.9 ^{d,g,h}	27.3 ^{d,g,h}	26.5	4.8
Burkina Faso	2010 D	0.519	83.8	13,083	16,091	61.9	0.027	64.8	7.4	20.0	40.6	39.4	40.1	43.7
Burundi	2016/2017 D	0.403	74.3	8,067	8,067	54.3	0.022	45.3	16.3	23.3	27.5	49.2	64.9	71.8
Cambodia	2014 D	0.170	37.2	5,679	5,952	45.8	0.015	13.2	21.1	21.8	31.7	46.6	17.7	..
Cameroon	2014 M	0.243	45.3	10,081	10,903	53.5	0.026	25.6	17.3	23.2	28.2	48.6	37.5	23.8
Central African Republic	2010 M	0.465 ^g	79.4 ^g	3,530 ^g	3,697 ^g	58.6 ^g	0.028 ^g	54.7 ^g	13.1 ^g	27.8 ^g	25.7 ^g	46.5 ^g	62.0	66.3
Chad	2014/2015 D	0.533	85.7	12,002	12,765	62.3	0.026	66.1	9.9	20.1	34.4	45.5	46.7	38.4
China	2014 N ⁱ	0.016 ^{j,k}	3.9 ^k	53,688 ^{j,k}	54,437 ^{j,k}	41.3 ^{j,k}	0.005 ^{j,k}	0.3 ^{j,k}	17.1 ^{j,k}	35.2 ^{j,k}	39.2 ^{j,k}	25.5 ^{j,k}	3.1	0.7
Colombia	2015/2016 D	0.020 ^d	4.8 ^d	2,358 ^d	2,378 ^d	40.6 ^d	0.009 ^d	0.8 ^d	6.2 ^d	12.0 ^d	39.5 ^d	48.5 ^d	27.0	3.9
Comoros	2012 D	0.181	37.3	270	303	48.5	0.020	16.1	22.3	20.8	31.6	47.6	42.4	17.9
Congo	2014/2015 M	0.112	24.3	1,212	1,277	46.0	0.013	9.4	21.3	23.4	20.2	56.4	46.5	37.0
Congo (Democratic Republic of the)	2013/2014 D	0.389	74.0	54,590	60,230	52.5	0.020	43.9	16.8	26.1	18.4	55.5	63.9	76.6
Côte d'Ivoire	2016 M	0.236	46.1	10,916	11,192	51.2	0.019	24.5	17.6	19.6	40.4	40.0	46.3	28.2
Dominican Republic	2014 M	0.015 ^d	3.9 ^d	404 ^d	418 ^d	38.9 ^d	0.006 ^d	0.5 ^d	5.2 ^d	29.1 ^d	35.8 ^d	35.0 ^d	30.5	1.6
Ecuador	2013/2014 N	0.018 ^g	4.5 ^g	714 ^g	746 ^g	40.0 ^g	0.007 ^g	0.8 ^g	7.5 ^g	40.8 ^g	23.4 ^g	35.8 ^g	23.2	3.2
Egypt	2014 D	0.019 ^l	5.2 ^l	4,742 ^l	5,038 ^l	37.6 ^l	0.004 ^l	0.6 ^l	6.1 ^l	39.8 ^l	53.2 ^l	7.0 ^l	27.8	1.3
El Salvador	2014 M	0.032	7.9	494	501	41.3	0.009	1.7	9.9	15.5	43.4	41.1	29.2	1.9
Eswatini (Kingdom of)	2014 M	0.081	19.2	249	263	42.3	0.009	4.4	20.9	29.3	17.9	52.8	63.0	42.0
Ethiopia	2016 D	0.489	83.5	85,511	87,643	58.5	0.024	61.5	8.9	19.7	29.4	50.8	23.5	27.3
Gabon	2012 D	0.066	14.8	261	301	44.3	0.013	4.7	17.5	31.0	22.2	46.8	33.4	3.4
Gambia	2013 D	0.286	55.2	1,027	1,160	51.7	0.018	32.0	21.8	28.2	34.4	37.5	48.6	10.1
Ghana	2014 D	0.138	30.1	8,109	8,671	45.8	0.016	10.4	22.0	22.3	30.4	47.2	23.4	13.3
Guatemala	2014/2015 D	0.134	28.9	4,694	4,885	46.2	0.013	11.2	21.1	26.3	35.0	38.7	59.3	8.7
Guinea	2016 M	0.336	61.9	7,668	7,867	54.3	0.022	37.7	17.2	18.7	38.7	42.6	55.2	35.3
Guinea-Bissau	2014 M	0.372	67.3	1,161	1,253	55.3	0.025	40.4	19.2	21.3	33.9	44.7	69.3	67.1
Guyana	2014 M	0.014	3.4	26	26	41.8	0.008	0.7	5.8	31.5	18.7	49.8	..	..
Haiti	2016/2017 D	0.200	41.3	4,532	4,532	48.4	0.019	18.5	21.8	18.5	24.6	57.0	58.5	25.0
Honduras	2011/2012 D	0.090 ^m	19.3 ^m	1,642 ^m	1,788 ^m	46.4 ^m	0.013 ^m	6.5 ^m	22.3 ^m	18.5 ^m	33.0 ^m	48.5 ^m	61.9	17.2
India	2015/2016 D	0.123	27.9	369,546	373,735	43.9	0.014	8.8	19.3	31.9	23.4	44.8	21.9	21.2
Indonesia	2012 D	0.028 ^d	7.0 ^d	17,452 ^d	18,512 ^d	40.3 ^d	0.009 ^d	1.2 ^d	9.1 ^d	23.2 ^d	30.0 ^d	46.8 ^d	10.6	5.7
Iraq	2018 M	0.033	8.6	3,397	3,305	37.9	0.005	1.3	5.2	33.1	60.9	6.0	18.9	2.5
Jamaica	2014 N	0.018 ^l	4.7 ^l	134 ^l	135 ^l	38.7 ^l	.. ^e	0.8 ^l	6.4 ^l	42.1 ^l	17.5 ^l	40.4 ^l	19.9	..
Jordan	2017/2018 D	0.002	0.4	43	42	35.4	.. ^e	0.0	0.7	37.5	53.5	9.0	14.4	0.1
Kazakhstan	2015 M	0.002 ^g	0.5 ^g	80 ^g	82 ^g	35.6 ^g	.. ^e	0.0 ^g	1.8 ^g	90.4 ^g	3.1 ^g	6.4 ^g	2.5	0.0
Kenya	2014 M	0.178	38.7	17,801	19,223	46.0	0.014	13.3	34.9	24.9	14.6	60.5	36.1	36.8
Kyrgyzstan	2014 M	0.008	2.3	132	138	36.3	0.002	0.0	8.3	52.8	13.0	34.3	25.6	1.5
Lao People's Democratic Republic	2017 M	0.108	23.1	1,582	1,582	47.0	0.016	9.6	21.2	21.5	39.7	38.8	23.4	22.7
Lesotho	2014 D	0.146	33.6	720	750	43.4	0.010	8.5	24.4	20.6	21.5	57.9	57.1	59.7
Liberia	2013 D	0.320	62.9	2,698	2,978	50.8	0.019	32.1	21.4	19.7	28.2	52.1	50.9	40.9
Libya	2014 P	0.007	2.0	124	127	37.1	0.003	0.1	11.3	39.0	48.6	12.4	..	..
Madagascar	2008/2009 D	0.453	77.8	15,995	19,885	58.2	0.023	57.1	11.8	17.5	31.8	50.7	70.7	77.6
Malawi	2015/2016 D	0.243	52.6	9,520	9,799	46.2	0.013	18.5	28.5	20.7	23.1	56.2	51.5	70.3
Maldives	2016/2017 D	0.003	0.8	3	3	34.4	.. ^e	0.0	4.8	80.7	15.1	4.2	8.2	7.3
Mali	2015 M	0.457	78.1	13,640	14,479	58.5	0.024	56.6	10.9	22.0	41.6	36.3	41.1	49.7
Mauritania	2015 M	0.261	50.6	2,115	2,235	51.5	0.019	26.3	18.6	20.2	33.1	46.6	31.0	6.0
Mexico	2016 N ^a	0.025 ^f	6.3 ^f	8,039 ^f	8,141 ^f	39.2 ^f	0.008 ^f	1.0 ^f	4.7 ^f	67.0 ^f	14.1 ^f	18.8 ^f	43.6	2.5
Moldova (Republic of)	2012 M	0.004	0.9	38	38	37.4	.. ^e	0.1	3.7	9.2	42.4	48.4	9.6	0.1
Mongolia	2013 M	0.042	10.2	292	313	41.7	0.007	1.6	19.2	24.0	20.9	55.1	21.6	0.6
Montenegro	2013 M	0.002 ^g	0.4 ^g	2 ^g	2 ^g	45.7 ^g	.. ^e	0.1 ^g	4.3 ^g	24.4 ^g	46.0 ^g	29.7 ^g	24.0	0.0
Morocco	2011 P	0.085 ^g	18.6 ^g	6,101 ^g	6,636 ^g	45.7 ^g	0.017 ^g	6.5 ^g	13.2 ^g	25.6 ^g	42.1 ^g	32.3 ^g	4.8	1.0

	Year and survey ^a	Multidimensional Poverty Index ^a		Population in multidimensional poverty ^a						Contribution of deprivation in dimension to overall multidimensional poverty ^a			Population living below income poverty line	
		Value	SDG 1.2 (%)	Headcount		Intensity of deprivation (%)	Inequality among the poor	Population in severe multidimensional poverty (%)	Population vulnerable to multidimensional poverty ^a (%)	Health (%)	Education (%)	Standard of living (%)	National poverty line (%)	PPP \$1.90 a day
				In survey year										
				(thousands)	2017									
2007–2018	Value	(%)	In survey year	2017	(%)	Value	(%)	(%)	(%)	(%)	2007–2018 ^b	2007–2017 ^c		
Mozambique	2011 D	0.411	72.5	18,069	21,496	56.7	0.023	49.1	13.6	17.2	32.5	50.3	46.1	62.4
Myanmar	2015/2016 D	0.176	38.3	20,263	20,449	45.9	0.015	13.8	21.9	18.5	32.3	49.2	32.1	6.2
Namibia	2013 D	0.171	38.0	880	963	45.1	0.012	12.2	20.3	30.3	14.9	54.9	17.4	13.4
Nepal	2016 D	0.148	34.0	9,851	9,961	43.6	0.012	11.6	22.3	31.5	27.2	41.3	25.2	15.0
Nicaragua	2011/2012 D	0.074	16.3	956	1,011	45.2	0.013	5.5	13.2	11.1	36.5	52.4	24.9	3.2
Niger	2012 D	0.590	90.5	16,042	19,431	65.2	0.026	74.8	5.1	20.3	37.3	42.4	44.5	44.5
Nigeria	2016/2017 M	0.291	51.4	98,175	98,175	56.6	0.029	32.3	16.8	27.0	32.2	40.8	46.0	53.5
North Macedonia	2011 M	0.010 ^f	2.5 ^f	52 ^f	53 ^f	37.7 ^f	0.007 ^f	0.2 ^f	2.9 ^f	62.5 ^f	17.0 ^f	20.5 ^f	22.2	5.2
Pakistan	2017/2018 D	0.198	38.3	76,976	75,520	51.7	0.023	21.5	12.9	27.6	41.3	31.1	24.3	3.9
Palestine, State of	2014 M	0.004	1.0	43	47	37.5	0.003	0.1	5.4	53.3	32.8	13.9	29.2	1.0
Paraguay	2016 M	0.019	4.5	303	307	41.9	0.013	1.0	7.2	14.3	38.9	46.8	26.4	1.2
Peru	2012 D	0.053	12.7	3,818	4,072	41.6	0.009	2.9	12.5	20.3	23.7	56.0	21.7	3.4
Philippines	2017 D	0.024 ^d	5.8 ^d	6,081 ^d	6,081 ^d	41.8 ^d	0.010 ^d	1.3 ^d	7.3 ^d	20.3 ^d	31.0 ^d	48.7 ^d	21.6	7.8
Rwanda	2014/2015 D	0.259	54.4	6,329	6,644	47.5	0.013	22.2	25.7	13.6	30.5	55.9	38.2	55.5
Saint Lucia	2012 M	0.007 ^f	1.9 ^f	3 ^f	3 ^f	37.5 ^f	.. ^e	0.0 ^f	1.6 ^f	69.5 ^f	7.5 ^f	23.0 ^f	25.0	4.7
Sao Tome and Principe	2014 M	0.092	22.1	42	45	41.7	0.008	4.4	19.4	18.6	37.4	44.0	66.2	32.3
Senegal	2017 D	0.288	53.2	8,428	8,428	54.2	0.021	32.8	16.4	22.1	44.9	33.0	46.7	38.0
Serbia	2014 M	0.001 ^g	0.3 ^g	30 ^g	30 ^g	42.5 ^g	.. ^e	0.1 ^g	3.4 ^g	20.6 ^g	42.7 ^g	36.8 ^g	25.7	0.1
Sierra Leone	2017 M	0.297	57.9	4,378	4,378	51.2	0.020	30.4	19.6	18.6	28.9	52.4	52.9	52.2
South Africa	2016 D	0.025	6.3	3,505	3,549	39.8	0.005	0.9	12.2	39.5	13.1	47.4	55.5	18.9
South Sudan	2010 M	0.580	91.9	9,248	11,552	63.2	0.023	74.3	6.3	14.0	39.6	46.5	82.3	42.7
Sudan	2014 M	0.279	52.3	19,748	21,210	53.4	0.023	30.9	17.7	21.1	29.2	49.8	46.5	14.9
Suriname	2010 M	0.041 ⁱ	9.4 ⁱ	49 ⁱ	53 ⁱ	43.4 ⁱ	0.018 ⁱ	2.5 ⁱ	4.5 ⁱ	45.7 ⁱ	25.5 ⁱ	28.8 ⁱ	..	..
Syrian Arab Republic	2009 P	0.029 ^h	7.4 ^h	1,539 ^h	1,350 ^h	38.9 ^h	0.006 ^h	1.2 ^h	7.7 ^h	40.7 ^h	49.0 ^h	10.2 ^h	35.2	..
Tajikistan	2017 D	0.029	7.4	664	664	39.0	0.004	0.7	20.1	47.8	26.5	25.8	31.3	4.8
Tanzania (United Republic of)	2015/2016 D	0.273	55.4	30,814	31,778	49.3	0.016	25.9	24.2	21.1	22.9	56.0	28.2	49.1
Thailand	2015/2016 M	0.003 ^g	0.9 ^g	541 ^g	542 ^g	39.1 ^g	0.007 ^g	0.1 ^g	7.2 ^g	35.0 ^g	47.4 ^g	17.6 ^g	8.6	0.0
Timor-Leste	2016 D	0.210	45.8	581	594	45.7	0.014	16.3	26.1	27.8	24.2	48.0	41.8	30.7
Togo	2013/2014 D	0.249	48.2	3,481	3,755	51.6	0.023	24.3	21.8	21.7	28.4	50.0	55.1	49.2
Trinidad and Tobago	2011 M	0.002 ^g	0.6 ^g	8 ^g	9 ^g	38.0 ^g	.. ^e	0.1 ^g	3.7 ^g	45.5 ^g	34.0 ^g	20.5 ^g	..	..
Tunisia	2011/2012 M	0.005	1.3	144	153	39.7	0.006	0.2	3.7	25.7	50.2	24.1	15.2	0.3
Turkmenistan	2015/2016 M	0.001	0.4	23	23	36.1	.. ^e	0.0	2.4	88.0	4.4	7.6	..	..
Uganda	2016 D	0.269	55.1	22,857	23,614	48.8	0.017	24.1	24.9	22.4	22.5	55.1	21.4	41.7
Ukraine	2012 M	0.001 ^d	0.2 ^d	109 ^d	106 ^d	34.5 ^d	.. ^e	0.0 ^d	0.4 ^d	59.7 ^d	28.8 ^d	11.5 ^d	2.4	0.1
Vanuatu	2007 M	0.174 ^g	38.8 ^g	85 ^g	107 ^g	44.9 ^g	0.012 ^g	10.2 ^g	32.3 ^g	21.4 ^g	22.5 ^g	56.2 ^g	12.7	13.1
Viet Nam	2013/2014 M	0.019 ^d	4.9 ^d	4,530 ^d	4,677 ^d	39.5 ^d	0.010 ^d	0.7 ^d	5.6 ^d	15.2 ^d	42.6 ^d	42.2 ^d	9.8	2.0
Yemen	2013 D	0.241	47.7	12,199	13,475	50.5	0.021	23.9	22.1	28.3	30.7	41.0	48.6	18.8
Zambia	2013/2014 D	0.261	53.2	8,317	9,102	49.1	0.017	24.2	22.5	23.7	22.5	53.7	54.4	57.5
Zimbabwe	2015 D	0.137	31.8	5,018	5,257	42.9	0.009	8.0	27.4	27.3	12.3	60.4	72.3	21.4
Developing countries	—	0.114	23.1	1,279,663	1,325,994	49.4	0.018	10.5	15.3	25.8	29.5	44.7	21.3	14.2
Regions														
Arab States	—	0.076	15.7	48,885	52,251	48.4	0.018	6.9	9.4	26.2	35.3	38.6	25.2	4.6
East Asia and the Pacific	—	0.024	5.6	110,775	113,247	42.3	0.009	1.0	14.9	27.4	35.6	37.0	6.6	2.1
Europe and Central Asia	—	0.004	1.1	1,237	1,240	37.9	0.004	0.1	3.6	52.8	23.3	23.9	11.9	0.6
Latin America and the Caribbean	—	0.033	7.5	38,067	39,324	43.1	0.011	2.0	7.7	35.4	25.7	38.9	31.5	4.1
South Asia	—	0.142	31.0	542,492	548,048	45.6	0.016	11.3	18.8	29.2	27.9	42.9	22.9	17.5
Sub-Saharan Africa	—	0.315	57.5	538,206	571,884	54.9	0.022	35.1	17.2	22.2	29.6	48.1	43.7	44.7

NOTES

- a Not all indicators were available for all countries, so caution should be used in cross-country comparisons. When an indicator is missing, weights of available indicators are adjusted to total 100 percent. See *Technical note 5* at http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf for details.
- b D indicates data from Demographic and Health Surveys; M indicates data from Multiple Indicator Cluster Surveys; N indicates data from national surveys and P indicates data from Pan Arab Population and Family Health Surveys (see <http://hdr.undp.org/en/faq-page/multidimensional-poverty-index-mpi> for the list of national surveys).
- c Data refer to the most recent year available during the period specified.
- d Missing indicator on nutrition.
- e Value is not reported because it is based on a small number of multidimensionally poor people.
- f Missing indicator on child mortality.
- g Considers child deaths that occurred at any time because the survey did not collect the date of child deaths.
- h The methodology was adjusted to account for missing indicator on nutrition and incomplete indicator on child mortality (the survey did not collect the date of child deaths).
- i Based on data accessed on 7 June 2016.

- j Missing indicator on housing.
- k Child mortality was constructed based on deaths that occurred between surveys—that is, between 2012 and 2014. Child deaths reported by an adult man in the household were taken into account because the date of death was reported.
- l Missing indicator on cooking fuel.
- m Missing indicator on electricity.
- n Multidimensional Poverty Index estimates are based on the 2016 National Health and Nutrition Survey. Estimates based on the 2015 Multiple Indicator Cluster Survey are 0.010 for Multidimensional Poverty Index value, 2.6 for multidimensional poverty headcount (%), 3,125,000 for multidimensional poverty headcount in year of survey, 3,200,000 for projected multidimensional poverty headcount in 2017, 40.2 for intensity of deprivation, 0.4 for population in severe multidimensional poverty, 6.1 for population vulnerable to multidimensional poverty, 39.9 for contribution of deprivation in health, 23.8 for contribution of deprivation in education and 36.3 for contribution of deprivation in standard of living.

DEFINITIONS

Multidimensional Poverty Index: Percentage of the population that is multidimensionally poor adjusted by the intensity of the deprivations. See *Technical note 5* at http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf for details on how the Multidimensional Poverty Index is calculated.

Multidimensional poverty headcount: Population with a deprivation score of at least 33 percent. It is expressed as a share of the population in the survey year, the number of people in the survey year and the projected number of people in 2017.

Intensity of deprivation of multidimensional poverty: Average deprivation score experienced by people in multidimensional poverty.

Inequality among the poor: Variance of individual deprivation scores of poor people. It is calculated by subtracting the deprivation score of each multidimensionally poor person from the average intensity, squaring the differences and dividing the sum of the weighted squares by the number of multidimensionally poor people.

Population in severe multidimensional poverty: Percentage of the population in severe multidimensional poverty—that is, those with a deprivation score of 50 percent or more.

Population vulnerable to multidimensional poverty: Percentage of the population at risk of suffering multiple deprivations—that is, those with a deprivation score of 20–33 percent.

Contribution of deprivation in dimension to overall multidimensional poverty: Percentage of the Multidimensional Poverty Index attributed to deprivations in each dimension.

Population living below national poverty line: Percentage of the population living below the national poverty line, which is the

poverty line deemed appropriate for a country by its authorities. National estimates are based on population-weighted subgroup estimates from household surveys.

Population living below PPP \$1.90 a day: Percentage of the population living below the international poverty line of \$1.90 (in purchasing power parity (PPP) terms) a day.

MAIN DATA SOURCES

- Column 1:** Refers to the year and the survey whose data were used to calculate the country's Multidimensional Poverty Index value and its components.
- Columns 2–12:** HDRO and OPHI calculations based on data on household deprivations in health, education and standard of living from various household surveys listed in column 1 using the methodology described in *Technical note 5* (available at http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf) and Alkire, Kanagaratnam and Suppa (2015). Columns 4 and 5 also use population data from United Nations Department of Economic and Social Affairs, 2017, *World Population Prospects: The 2017 Revision*. New York: <https://esa.un.org/unpd/wpp/>. Accessed 30 April 2019.
- Columns 13 and 14:** World Bank, 2019. World Development Indicators database. Washington, DC: <http://data.worldbank.org>. Accessed 21 June 2019.

Multidimensional Poverty Index: changes over time

	Year and survey ^e	Multidimensional Poverty Index ^{a,b}	Population in multidimensional poverty ^b		People who are multidimensionally poor and deprived in each indicator ^b										
			Headcount		Intensity of deprivation	Nutrition	Child mortality	Years of schooling	School attendance	Cooking fuel	Sanitation	Drinking water	Electricity	Housing	Assets
			(thousands)	In survey year											
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Bangladesh	2004 D ^T	0.344	66.3	93,657	52.0	47.4	5.6	41.8	20.7	64.4	34.5	2.5	48.2	65.6	58.1
Bangladesh	2014 D ^T	0.216	46.7	74,374	46.2	28.9	2.4	26.3	10.1	44.5	21.8	1.9 ^d	26.7	46.1	44.3
Bangladesh	2014 D ^N	0.198	41.7	66,468	47.5	25.6	2.3	25.2	9.6	40.0	30.7	4.3	26.5	38.7	28.3
Cambodia	2010 D ^T	0.228	47.7	6,825	47.8	29.2	3.1	26.4	10.4	47.1	42.4	27.2	42.8	29.2	14.6
Cambodia	2014 D ^T	0.170	37.2	5,679	45.8	20.4	1.8	21.6	10.8	36.2	30.6	21.3	26.2	21.8	6.6
Cambodia	2014 D ^N	0.170	37.2	5,679	45.8	20.4	1.8	21.6	10.8 ^d	36.2	30.6	21.3	26.2	21.8	6.6
Congo (Democratic Republic of the)	2007 D ^T	0.439	77.6	45,335	56.6	49.4	14.4	21.7	41.5	77.3	66.4	62.6	73.2	70.9	59.3
Congo (Democratic Republic of the)	2013/2014 D ^T	0.388	73.7	54,350	52.6	48.9 ^d	11.8	18.4	24.5	73.5	61.8	59.9 ^d	70.7 ^d	68.8 ^d	52.2
Congo (Democratic Republic of the)	2013/2014 M ^N	0.389	74.0	54,590	52.5	49.1	11.8	18.4	24.6	73.8	62.0	60.0	70.8	69.8	52.2
Ethiopia	2011 D ^T	0.545	88.4	79,558	61.6	59.7	7.3	57.3	40.1	87.9	82.8	72.4	79.2	87.8	76.9
Ethiopia	2016 D ^T	0.489	83.5	85,520	58.5	52.2	5.6	52.5	33.9	82.7	80.4	60.6	74.4	83.0	66.2
Ethiopia	2016 D ^N	0.489	83.5	85,511	58.5	52.2	5.6	52.5	33.9	82.7	80.4	60.6	74.4	82.9	66.1
Haiti	2012 D ^T	0.237	48.4	4,982	48.9	19.3	4.8	32.6	6.2	48.0	43.1	36.2	42.5	34.5	33.3
Haiti	2016/2017 D ^T	0.192	39.9	4,382	48.1 ^d	15.5	3.8	22.8	6.5 ^d	39.7	35.1	28.6	35.7	29.0	31.4 ^d
Haiti	2016/2017 M ^N	0.200	41.3	4,532	48.4	18.3	3.9	22.8	6.6	41.0	36.1	29.2	36.7	29.7	32.0
India	2005/2006 D ^T	0.283	55.1	640,550	51.3	44.3	4.5	24.0	19.8	52.9	50.4	16.6	29.1	44.9	37.6
India	2015/2016 D ^T	0.123	27.9	369,546	43.9	21.2	2.2	11.7	5.5	26.2	24.6	6.2	8.6	23.6	9.5
India	2015/2016 D ^N	0.123	27.9	369,546	43.9	21.2	2.2	11.7	5.5	26.2	24.6	6.2	8.6	23.6	9.5
Nigeria	2013 D ^T	0.280	50.2	86,341	55.8	32.4	11.9	26.1	26.6	49.1	36.0	33.9	36.4	40.9	17.6
Nigeria	2016/2017 M ^T	0.295 ^d	52.1 ^d	99,445	55.6 ^d	35.8	12.0 ^d	25.7 ^d	31.2	51.0 ^d	39.3	31.6	37.9 ^d	39.0 ^d	17.6 ^d
Nigeria	2016/2017 M ^N	0.291	51.4	98,175	56.6	35.4	11.8	25.3	30.9	50.4	38.8	30.9	37.5	38.6	17.4
Pakistan	2012/2013 D ^T	0.233	44.5	80,818	52.3	32.3	8.7	25.7	27.5	38.2	29.4	9.1	6.3	35.9	17.3
Pakistan	2017/2018 D ^T	0.198	38.3	76,976	51.7 ^d	27.0	5.9	24.8 ^d	24.3 ^d	31.2	21.7	7.9 ^d	7.1 ^d	30.6	12.2
Pakistan	2017/2018 D ^N	0.198	38.3	76,976	51.7	27.0	5.9	24.8	24.3	31.2	21.7	7.9	7.1	30.6	12.2
Peru	2006 D ^T	0.088	20.2	5,647	43.6	9.2	1.0	8.1	2.7	18.9	17.2	11.9	13.2	19.9	14.6
Peru	2012 D ^T	0.053	12.7	3,818	41.6	5.9	0.5	5.6	1.9	11.5	11.2	6.0	6.0	12.5	6.0
Peru	2012 D ^N	0.053	12.7	3,818	41.6	5.9	0.5	5.6	1.9	11.5	11.2	6.0	6.0	12.5	6.0
Viet Nam ^e	2010/2011 M ^T	0.039 ^{fg}	9.3 ^{fg}	8,290 ^{fg}	42.1 ^{fg}	—	5.0 ^{fg}	4.4 ^{fg}	1.7 ^{fg}	7.3 ^{fg}	5.9 ^{fg}	2.1 ^{fg}	0.5 ^{fg}	4.4 ^{fg}	1.7 ^{fg}
Viet Nam ^e	2013/2014 M ^T	0.036 ^{d,h,i}	8.8 ^{d,h,i}	8,154 ^{h,j}	41.3 ^{d,h,i}	—	5.1 ^{d,h,i}	3.8 ^{d,h,i}	1.5 ^{d,h,i}	6.6 ^{d,h,j}	5.0 ^{d,h,i}	2.0 ^{d,h,i}	0.5 ^{d,h,i}	3.7 ^{d,h,i}	1.2 ^{h,j}
Viet Nam	2013/2014 M ^N	0.019 ^h	4.9 ^h	4,530 ^h	39.5 ^h	—	0.9 ^h	3.6 ^h	1.3 ^h	4.4 ^h	4.0 ^h	1.5 ^h	0.4 ^h	3.1 ^h	1.2 ^h

NOTES

Suggested citation for harmonized estimates: Alkire, S., F. Kovesdi, C. Mitchell, M. Pinilla-Roncancio and S. Scharlin-Pettee. 2019. "Changes over Time in the Global Multidimensional Poverty Index: A Ten-Country Study." OPHI MPI Methodological Note 48. University of Oxford, Oxford Poverty and Human Development Initiative, Oxford, UK.

- a** Not all indicators were available for all countries, so caution should be used in cross-country comparisons. When an indicator is missing, weights of available indicators are adjusted to total 100 percent. See *Technical note 5* at http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf for details.
- b** Users are advised to calculate changes over time in indicators using the harmonized estimates.
- c** *D* indicates data from Demographic and Health Surveys, and *M* indicates data from Multiple Indicator Cluster Surveys.
- d** The difference between harmonized estimates is not statistically significant.

- e** Because child deaths that occurred at any time are the only indicator in the health dimension, changes in all deprivation indicators between the two years are not well reflected in the harmonized estimates of the Multidimensional Poverty Index and its components. More detailed analyses of Viet Nam's trends in multidimensional poverty are forthcoming.
- f** For harmonization purposes, the indicator on nutrition was removed.
- g** Considers child deaths that occurred at any time because the survey did not collect the date of child deaths.
- h** Missing indicator on nutrition.
- i** Considers child deaths that occurred at any time for a strict comparison with the Multidimensional Poverty Index value for 2010/2011.
- T** Multidimensional Poverty Index value and its components have been harmonized for strict comparison across time.
- N** Multidimensional Poverty Index value and its components have not been harmonized—that is,

estimates include all indicators that are available in a particular year and survey.

DEFINITIONS

Multidimensional Poverty Index: Percentage of the population that is multidimensionally poor adjusted by the intensity of the deprivations. See *Technical note 5* at http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf for details on how the Multidimensional Poverty Index is calculated.

Multidimensional poverty headcount: Population with a deprivation score of at least 33 percent. It is expressed as a share of the population in the survey year and the number of poor people in the survey year.

Intensity of deprivation of multidimensional poverty: Average deprivation score experienced by people in multidimensional poverty.

People who are multidimensionally poor and deprived in each indicator: Percentage of the

population that is multidimensionally poor and deprived in each of the 10 indicators.

MAIN DATA SOURCES

Column 1: Refers to the year and the survey whose data were used to calculate the country's Multidimensional Poverty Index value and its components.

Columns 2–15: Data and methodology for the first two (harmonized) rows of each country are described in Alkire, Kovesdi, Mitchell, Pinilla-Roncancio and Scharlin-Pettee (2019); the source for third row of each country is the same as in table 1. Column 4 also uses population data from United Nations Department of Economic and Social Affairs. 2017. *World Population Prospects: The 2017 Revision*. New York. <https://esa.un.org/unpd/wpp/>. Accessed 30 April 2019.

How the global Multidimensional Poverty Index is calculated

The global MPI is calculated using a flexible method developed by Alkire and Foster (2011) that can be used with different dimensions, indicators, weights and cutoffs, as well as with individual- or household-level data, to create measures tailored to different situations. The MPI is the product of the incidence of multidimensional poverty (the percentage of people who are multidimensionally poor—also referred to as the headcount ratio or the multidimensional poverty rate, H) and the intensity of multidimensional poverty (the average share of indicators in which poor people are deprived, A): $MPI = H \times A$. To be multidimensionally poor, a person must be deprived in at least a third of the weighted indicators. A person who is deprived in 50 percent or more of the weighted indicators is considered severely multidimensionally poor.



Tamang,* a 56-year-old landless woman from an indigenous minority caste, lives near a remote jungle in Nepal with her husband, who is living with significant disabilities and a low body mass index (less than 18.5), and two granddaughters, who are attending school, the older of whom just started 7th grade.

Her livelihood is collecting and selling wood. Waking before dawn, she feeds the chickens then walks with friends to the jungle to collect wood, often going deep inside, which is not safe due to wild animals. After chopping the wood, she carries it on her back to the market, because she does not own any means of transportation. If it sells, she buys some rice and vegetables for the family, returning home around 11 am. After cooking lunch, she returns to the jungle to fetch her own cooking fuel.

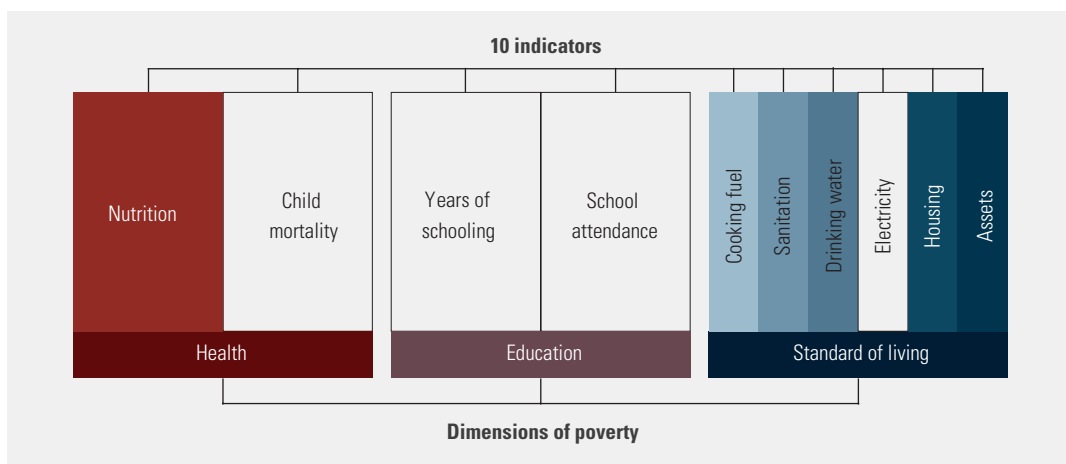
Tamang lives in a single room rudimentary hut with a dirt floor. She has no toilet and uses her neighbour's unprotected well for drinking water. She has electricity but does not own a phone, refrigerator, television or even a radio.

Despite plentiful obstacles, she is happy because the family bonds of affection are strong. She observes that happiness is something that we cannot buy in the market.

Tamang is poor according to the global MPI. She is deprived in 44.4 percent of weighted indicators (see figure).

**Some details have been changed.*

The global Multidimensional Poverty Index builds on each person's deprivation profile



Source: Oxford Poverty and Human Development Initiative 2018.

OPHI

Oxford Poverty & Human
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*Empowered lives.
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Find out more

The global MPI 2019 is accessible online at <http://hdr.undp.org/en/content/2019-MPI> and www.ophi.org.uk/multidimensional-poverty-index, including the following resources:

- HDRO's interactive databank and MPI HTML table page (<http://hdr.undp.org/en/composite/MPI>).
- HDR Technical Note 5 (http://hdr.undp.org/sites/default/files/hdr2019_technical_notes.pdf).
- MPI Frequently Asked Questions (<http://hdr.undp.org/en/faq-page/multidimensional-poverty-index-mpi>).
- OPHI's interactive databank (<https://ophi.org.uk/multidimensional-poverty-index/databank/>) provides visualizations of the data for the 2019 global MPI and enables users to study the multidimensional poverty of 101 developing countries, disaggregated by age, rural-urban area and subnational region. Interactive data visualizations allow users to explore which indicators people are deprived in and to see how MPI values compare with complementary data, such as \$1.90 a day poverty rates.
- Country briefing files (<https://ophi.org.uk/multidimensional-poverty-index/mpi-country-briefings/>) that explain MPI values and contain graphs and maps are available for 101 countries.
- Excel data tables and do-files (<https://ophi.org.uk/multidimensional-poverty-index/mpi-resources/>) have all the details of MPI data plus population values, standard errors, sample sizes and much more.
- Methodological notes (<https://ophi.org.uk/mpi-methodological-notes/>) provide the particularities of each country's survey data treatment.