

Distribution of Deprivations among Children in Sub-Saharan Africa

MODA In Brief 2

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The MODA methodology has been developed by UNICEF to define and measure child poverty both at a national and international level, taking into consideration the complex, multifaceted realities of poverty children experience at different stages of their lives. The Cross-Country Multiple Deprivation Overlapping Deprivation Analysis (CC-MODA) is a specific application of the general MODA methodology, designed as a child poverty measure to analyse multidimensional child deprivation in low- and middle-income countries. The dimensions, indicators and thresholds defining deprivation are standardised to be comparable across countries. This Brief discusses the depth of deprivation experienced by children, and the distribution of the total number of deprivations across sub-Saharan Africa.

Multidimensional child deprivation measurement

Within the CC-MODA study multidimensional child deprivation is measured as the non-fulfilment of basic rights covering aspects of survival, development, protection and participation. The MODA methodology seeks to analyse dimensions of deprivation, which are relevant to the child at a particular stage in life, making the analysis not only child-, but also age-specific. CC-MODA distinguishes two age groups, with dimensions on water, sanitation and housing being available to all children; nutrition and health specifically to children under the age of five; and education and information are selected as age-specific dimensions for children of five years and older (see Figure 1). The inclusion of 'Protection from violence' depends on data availability. Based on these dimensions, deprivation analyses are carried out by country using the most recent MICS or DHS household survey data from the period 2008-2012. The results of all these analyses can be found and compared on the interactive MODA web portal.¹ The outcomes of 30 selected sub-Saharan African countries² have been used as part of a specific study on multidimensional child deprivation analysing deprivation incidence and intensity within the selected sub-Saharan African countries and across the region as a whole (see de Milliano & Plavgo, 2014).

Figure 1: CC-MODA dimensions by age group

Nutrition	Education
Health	Information
Water	Water
Sanitation	Sanitation
Housing	Housing
Protection from violence	Protection from violence
Age 0-4	Age 5-17

The depth of children's deprivation

The aim of the MODA methodology and the CC-MODA application is to go beyond the knowledge that can be obtained by single-sector analysis, and to provide a holistic picture of child poverty and deprivation. As described in Brief 1 of this series, the MODA methodology uses various methods of analysis such as

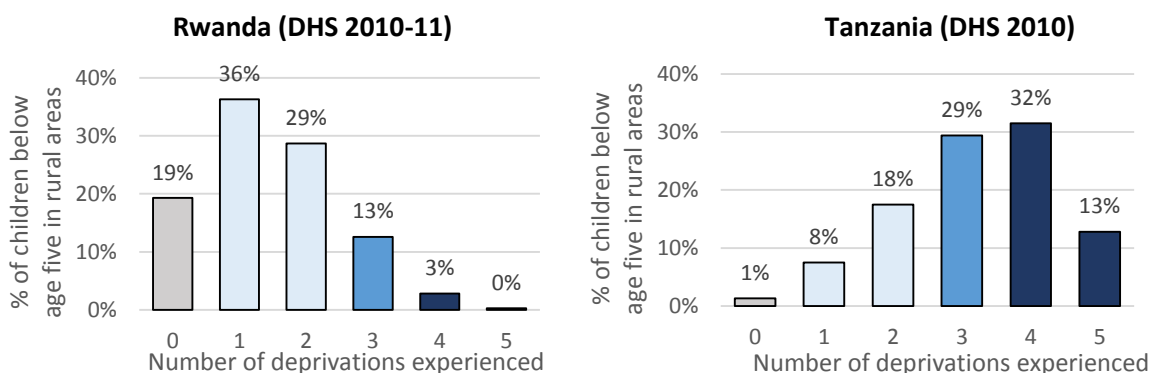
¹ <http://www.unicef-irc.org/MODA/>

² Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, DR Congo, Eq. Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Malawi, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Swaziland, Tanzania, Togo, Uganda, Zimbabwe.

counting, overlap analysis and the analysis of indices. This Brief highlights the results emerging from counting the number of deprivations experienced per child as they are used in the CC-MODA study on child deprivation in 30 sub-Saharan African countries (de Milliano & Plavgo, 2014). The study uses five deprivation dimensions per age group (excluding 'protection from violence'). The analysis of the total number of dimensions in which a child is deprived provides information on **the depth of deprivation experienced by children**, and gives insight on **the distribution of deprivations within a given society**, pointing out possible inequalities.

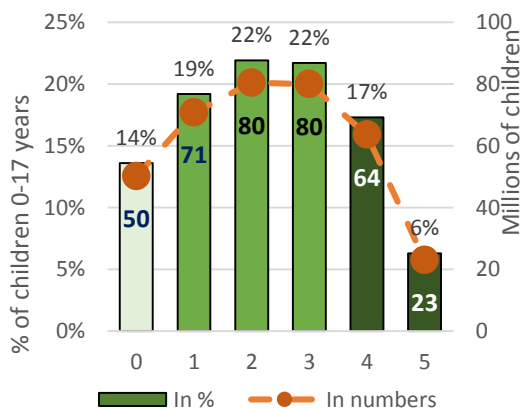
The findings show that a large variation can be observed within the sub-Saharan region in terms of the distribution of deprivations among children at the country level, indicating differences in the incidence and depth of child deprivation. As an illustration, the bar graphs in Figure 2 show the distribution of deprivations among children younger than five in two countries, Rwanda (DHS 2010-11) and Tanzania (DHS 2010). The shape of the distribution gives a first indication of the severity of deprivation in the country. In rural Rwanda the peak of the distribution is to the left of the centre while in rural Tanzania it is to the right, consequently Tanzania has a larger proportion of young children experiencing high numbers of deprivations. The incidence of not having any deprivation in the rural areas in Rwanda is noticeably higher (19%) than in rural areas in Tanzania (1%). The distributions also indicate a large difference in the proportion of severe deprivation (with four or five simultaneous deprivations), 45% of children under the age of five are highly deprived in rural Tanzania compared to only 3% in rural Rwanda.

Figure 2: Deprivation distribution in rural areas by country - children below the age of five



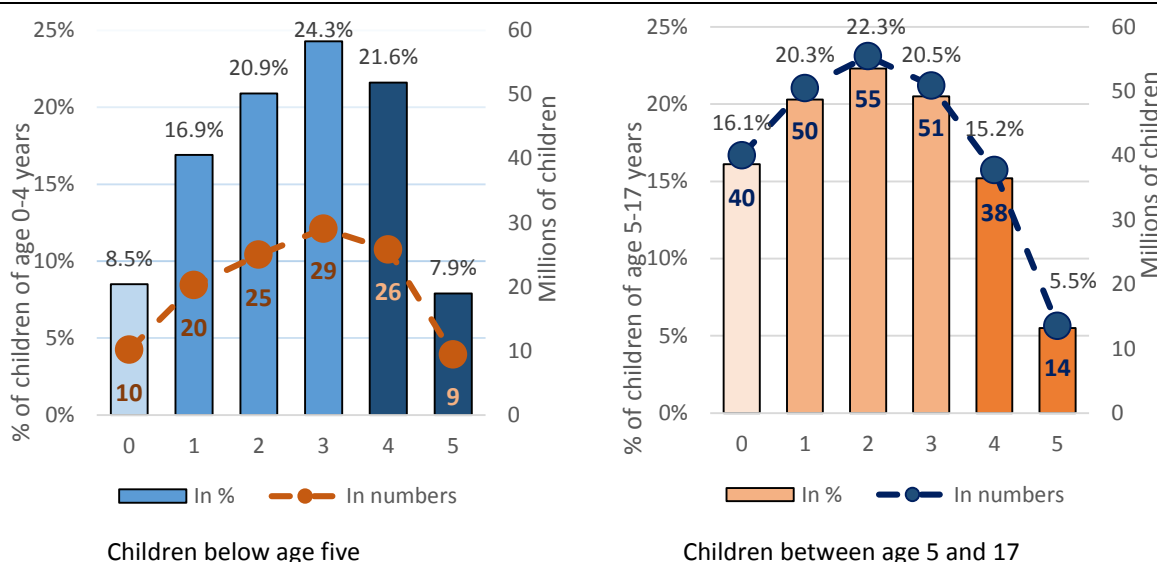
Moving from the results of single countries to the distribution of deprivations across the 30 sub-Saharan African countries that are included in this study, it is found that 14% of all children in the selected region are not deprived, while 19% are deprived in only one dimension. In total, 63% of all children are moderately deprived in 1 to 3 dimensions, representing 231 million children. Even more striking, is the proportion of extreme deprived suffering from 4 or 5 deprivations out of the possible 5 selected dimensions. **In the 30 African countries selected 23% or 86.6 million children are extremely deprived experiencing deprivation in four or five dimensions at the same time.**

Fig. 3: Deprivation distribution across 30 countries – children below age 18



Separating the findings by age group indicates that among children below the age of five in the 30 countries analysed, 8.5% (10.2 million out of a total of 119.7 million) are not deprived in any of the five selected dimensions. Within the same age group, 62% (74 million) are moderately deprived (with 1-3 deprivations) and **30% or 35 million are extremely deprived (with 4 or 5 deprivations)**. Among children of the older age group, the breadth of deprivation is relatively lower, with 16% of children between the age of 5 and 17 not being deprived in any of the five dimensions studied. **21% of the older children are highly deprived, lacking basic needs in four or five dimensions; they represent 51 million children out of the 248.2 million children in this age group** across the 30 sub-Saharan African countries.

Figure 4: Number of deprivations children suffer from, by age group



Children under the age of five have a higher probability of being deprived, however the difference between the two age groups is partially driven by the dimension choice. Apart from water, sanitation and housing that are common and relevant to all children, for younger children the critical dimensions of health and nutrition are included to capture their survival and developmental rights. These dimensions have considerably higher deprivation rates than the age-specific dimensions (education and information) which are selected for the children of primary school-age and adolescents.

Concluding remarks

This Brief has addressed the depth of multidimensional deprivation for children in 30 selected sub-Saharan African countries. The results show that children below the age of five experience higher numbers of deprivations as compared to children of five years and older. Of the children below five years 62% (74 million) are moderately deprived (with 1 to 3 deprivations) and 30% or 35 million experience extreme deprivation (with 4 or 5 deprivations). For children in the older age group, a comparable proportion of 63% are moderately deprived (representing 157 million children), while one fifth of all children of age 5 to 17 (51 million) are extremely deprived lacking basic needs in four or five dimensions. **Across the two age groups in the 30 selected countries there are thus 231 million children moderately deprived (63% of all children) and 86.6 million children (23% of all children) extremely deprived.**

SOURCES

MODA web portal:

<http://www.unicef-irc.org/MODA/>

CC-MODA Technical Note:

De Neubourg, C., J. Chai, M. de Milliano, I. Plavgo, Z. Wei (2012). 'Cross-country MODA Study: Multiple Overlapping Deprivation Analysis (MODA) - Technical note', *Innocenti Working Paper* 2012-05, UNICEF Office of Research, Florence. [\[EN pdf\]](#) [\[FR pdf\]](#)

CC-MODA results of sub-Saharan Africa:

de Milliano, M. and I. Plavgo (2014). Analysing Child Poverty and Deprivation in sub-Saharan Africa: CC-MODA – Cross Country Multiple Overlapping Deprivation Analysis, *Innocenti Working Paper* No.2014-19, UNICEF Office of Research, Florence.

[\[EN pdf\]](#)

MODA guidelines:

De Neubourg, C., J. Chai, M. de Milliano, I. Plavgo, Z. Wei (2012). 'Step-by-Step Guidelines to the Multiple Overlapping Deprivation Analysis (MODA)', *Innocenti Working Paper* 2012-10, UNICEF Office of Research, Florence. [\[EN pdf\]](#) [\[FR pdf\]](#)

Background on MODA and multidimensional poverty analysis:

De Neubourg, C., M. de Milliano, I. Plavgo (2014). Lost (in) Dimensions: Consolidating progress in multidimensional poverty research, *Innocenti Working Paper* No. 2014-04, UNICEF Office of Research, Florence. [\[EN pdf\]](#)

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- **BRIEF 2: DISTRIBUTION OF DEPRIVATIONS AMONG CHILDREN IN SUB-SAHARAN AFRICA**
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