

Child Poverty and Deprivation in Mali

The First National Estimates

In Brief

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Introduction¹

Understanding child poverty and deprivation in society is an important step towards defining and ultimately implementing programmes and policies to address children's development. Traditionally the analysis of poverty has focused on monetary well-being and utilises income or expenditure measures to assess the poverty status of the household that individuals live in. However for children in particular, access to income at the household level may not translate directly into improvements in child well-being, both because children are not decision-makers and because their needs are unique and not necessarily addressed by income alone. Consequently, there is a relatively recent attempt to complement traditional income-based measures of poverty with multidimensional deprivation analysis, which assesses directly whether a child lacks access to particular goods and services. The MODA methodology, pioneered by UNICEF and applied in this report, is an approach to define and quantify multidimensional child deprivation and to study how deprivation and monetary poverty coincide to identify the most vulnerable children. Such an approach is both holistic and child-friendly, and provides better information for designing appropriate interventions for any particular child, being income support or provision of particular services.

Methodology

This child poverty analysis uses the MODA methodology² adjusted to the Mali setting. The methodology includes both a monetary poverty and deprivation analysis for children using a unique data set in which a consumption module was administered to a sub-set of households in the Multiple Indicators Cluster Survey (MICS) in 2009/10. In addition to following the child-rights framework, country-specific age groups, dimensions and indicators were selected through a process of consultations with key national and international partners, e.g. government ministries and the national bureau of statistics, and data availability. The analysis is based on the information of 24 indicators which feed into a total of nine different dimensions. It distinguishes four age groups (i.e. 0-23 months; 24-59 months; 5-14 years; 15-17 years), each comprising of six or seven dimensions relevant for children at the given life-stage.

The multidimensional deprivation analysis consists of four elements, namely single deprivation analysis, analysis of the total number of deprivations experienced per child and the overall deprivation distribution, and the multidimensional deprivation indices. The deprivation analysis has been supported by a monetary poverty analysis for children, identifying children as poor using the national food- and total consumption

¹ Based on de Milliano, M. and S. Handa (2014). 'Child Poverty and Deprivation in Mali: The first national estimates', *Innocenti Working Paper* 2014-20, UNICEF Office of Research. Prepared by M. de Milliano (mdemilliano@unicef.org) and S. Handa (shanda@unicef.org) in collaboration with UNICEF Mali and the participants at the N-MODA workshops.

² De Neubourg, C., Chai, J., de Milliano, M., Plavgo, I., Wei, Z. (2012). 'Step-by-Step Guidelines to the Multiple Overlapping Deprivation Analysis (MODA)', *Innocenti Working Paper* 2012-10, UNICEF Office of Research.

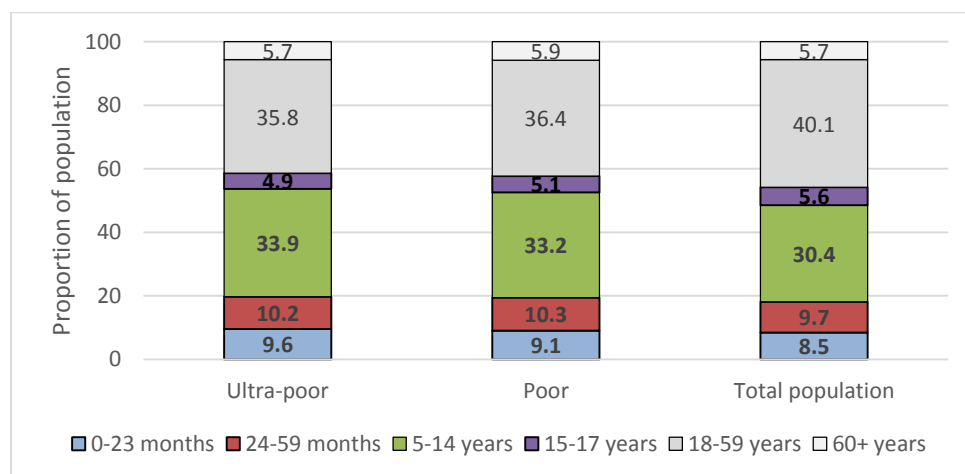
poverty lines. The monetary child poverty and multidimensional child deprivation have been combined to examine the extent of overlap between the two measures of poverty. These results are complemented by further research to better explore the relation between monetary child poverty and deprivation using, for example, factor and regression analysis.

Findings

Monetary poverty among children

The percentage of children living in households below the poverty line is 46%, slightly higher than the overall national poverty rate of 44%. Children also have a higher extreme poverty rate, defined as those in households below the food poverty line, of 25% versus 22% of extreme poverty among the total population. The decomposition of the monetary poor by age groups (Figure 1) shows that children are slightly over-represented among the poor, since 53% of the monetary poor are children below age 15 while in the total population children of 0 to 14 years represent only 49%.

Figure 1 Monetary poverty shares by age group (ELIM 2009-10)



Multidimensional deprivation analysis by age group

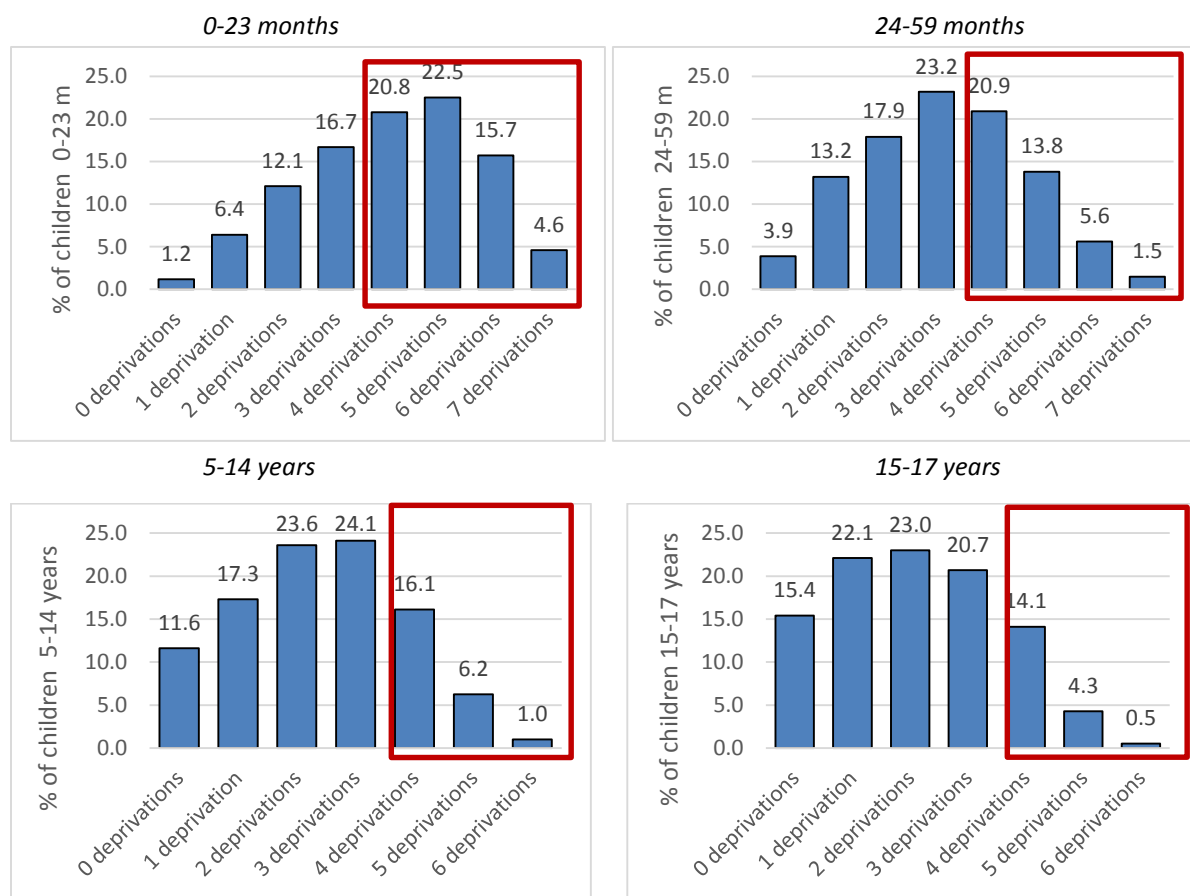
The **single deprivation analysis** by age group highlights some interesting differences and parallels between the deprivations across various ages. Even though deprivation dimensions are the same for children 0-23 and 24-59 months there are remarkable differences in individual deprivation rates across dimensions. The younger age group has highest deprivation levels in nutrition (82%) and health (72%) followed by sanitation (69%), while for the 24-59 month age group the highest deprivation is for sanitation (67%). A closer look at the indicator level reveals that the deprivations for children up to 2 years result from non-exclusive breastfeeding (80%), inadequate infant feeding (72%), and unskilled assistance at birth (70%). These particular indicators are not used in the deprivation analysis for children aged 24 to 59 months due to data limitations.

Both the age groups for children between 5 and 14 years, and for children 15 years and older identify sanitation as the dimension with the highest deprivation level (67% and 57%, respectively). Noteworthy differences occur between the age-specific dimensions for education and labour. The child labour deprivation is relatively higher for the younger age group (33% and 14%, respectively), whereas education deprivation is more common among children aged 15 and older (56% compared to 40%).

The relationship between education and child labour in the **deprivation overlap analysis** finds that nearly one-third of the children aged 5 to 14 and deprived in education or child labour are experiencing both deprivations at the same time (this is equal to 16% of the given age group). For children 15 years and older the deprivation overlap between education and child labour is lower (19% of those deprived in education and/or labour; and 11% of the entire age group). Thus while deprivation in child labour and education is not mutually exclusive, they are also not perfectly correlated suggesting that addressing school dropouts will not automatically reduce or eliminate child labour.

The **deprivation distributions** by age group are presented in Figure 2, which shows that the distribution shifts from a heavily left-skewed distribution to an almost normal distribution for children in the second and third age group and a right-skewed distribution for the oldest age group. In other words, the younger the age group the higher the intensity of deprivation (i.e. the average number of deprivations experienced by a particular child) and the lower the proportion of children without any deprivations.

Figure 2 Deprivation distribution, by age group



(Source: MICS 2009-10)

Monetary poverty and deprivation among children (0 to 17 years)

The proportion of children defined as ‘multidimensionally deprived’ depends on the threshold (K) that is applied: Table 1 shows deprivation rates for different cut-offs for each age group along with monetary poverty rates (last two columns). This report suggests the use of cut-off 4 for the first two age groups and cut-off 3 for the third and fourth age group (e.g. respectively, being deprived in at least 4 out of 7 dimensions, or at least 3 out of 6 dimensions). This threshold leads to an overall child deprivation rate of 50%.

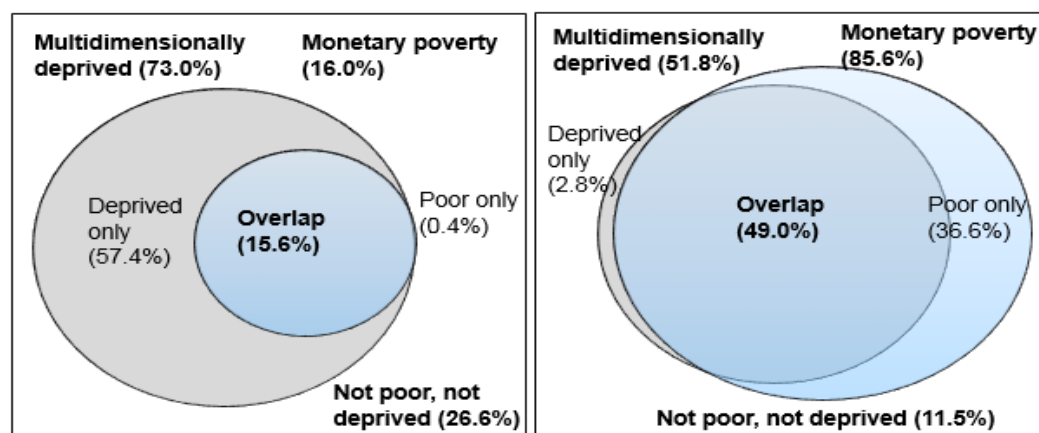
Table 1 Multidimensional child deprivation and monetary child poverty (0 to 17 years)

	Multidimensional child deprivation				Monetary child poverty	
	0-4 years: K≥3; 5-17 years: K≥2	0-4 years: K≥3; 5-17 years: K≥3	0-4 years: K≥4; 5-17 years: K≥3	0-4 years: K≥5; 5-17 years: K≥4	Food poor (acc. food pl)	Poor (acc. to NPL)
National	72.2	56.5	49.8	26.6	23.6	45.9
Urban	37.0	22.7	16.0	5.3	8.4	22.8
Rural	82.6	66.6	59.9	33.0	28.2	52.9
Bamako	27.2	14.6	8.9	2.1	2.7	10.4
Kidal	83.9	76.5	73.0	56.9	5.5	15.7
Gao	80.6	66.6	59.0	31.7	11.0	29.1
Tombouctou	89.6	76.7	72.3	44.9	12.4	32.6
Mopti	88.3	73.6	68.2	41.6	20.1	48.8
Ségou	78.0	62.1	55.8	31.4	26.2	48.5
Sikasso	75.1	58.7	51.8	25.6	59.5	85.3
Koulikoro	69.4	53.6	46.5	24.1	18.3	44.0
Kayes	76.0	57.2	47.8	22.1	7.5	28.1

While the national rates of child poverty (46%) and deprivation (50%) are similar the correlation between the two measures changes sharply across areas and regions in Mali. The highest monetary poverty rate is in Sikasso (85%), where the child deprivation rate is just above the national average (52%). Regions with particular high levels of child deprivation such as Kidal (73%) and Tombouctou (72%) have monetary poverty rates which are below the average (16% and 33%, respectively).

The poverty overlap analysis in Figure 3 shows the precise interrelation between the two measures for Kidal and Sikasso. The figure for Kidal demonstrates that the vast majority of all children (73%) are multidimensionally deprived, and in fact none of the children are monetary poor without being simultaneously deprived. In Sikasso the monetary poverty rates is much higher at 86% but many of these children are not deprived, as 37% of children live in monetary poor households yet suffer no deprivation.

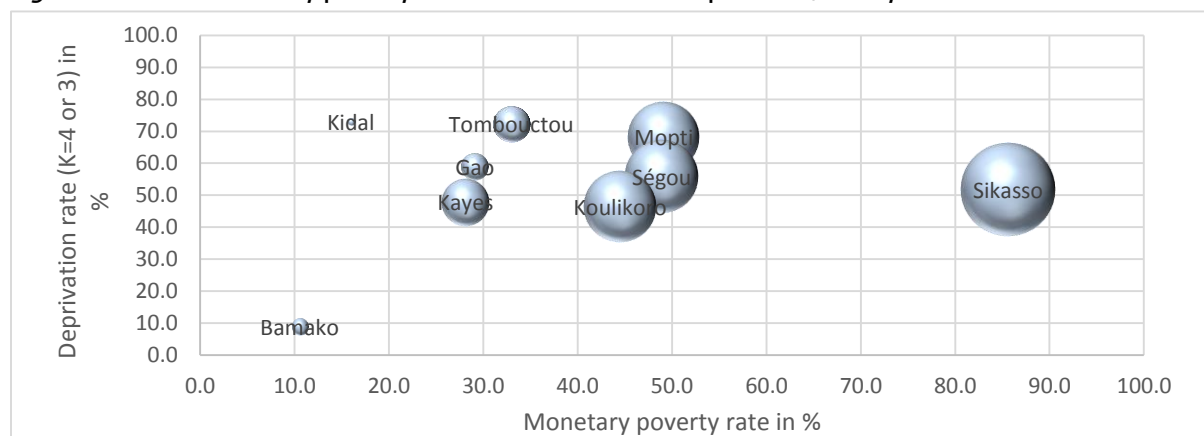
Figure 3 Monetary child poverty and deprivation overlap, 0-17 years
Kidal Sikasso



(Source: MICS-ELIM 2009-10). Multidimensionally deprived if: 0-4 years: K≥4; 5-17 years: K≥3; Monetary poverty according to national poverty line)

Figure 4 summarises the findings on both child poverty measures for all of the regions. The bubbles closer to the upper right corner experience higher rates of both multidimensional deprivation and monetary poverty. The size of each of the bubbles represents the number of children poor and deprived in a given region. In line with the aforementioned results, Sikasso is represented by a particularly large bubble. In addition, Mopti and Ségou have relatively high levels for both poverty measures, and have a large absolute number of children who are suffering from monetary poverty and multidimensional deprivation at the same time. Together these results highlight the importance of considering both monetary poverty and deprivation together when studying child well-being and identifying approaches to address children’s development.

Figure 4 Monetary poverty and multidimensional deprivation, 0-17 years

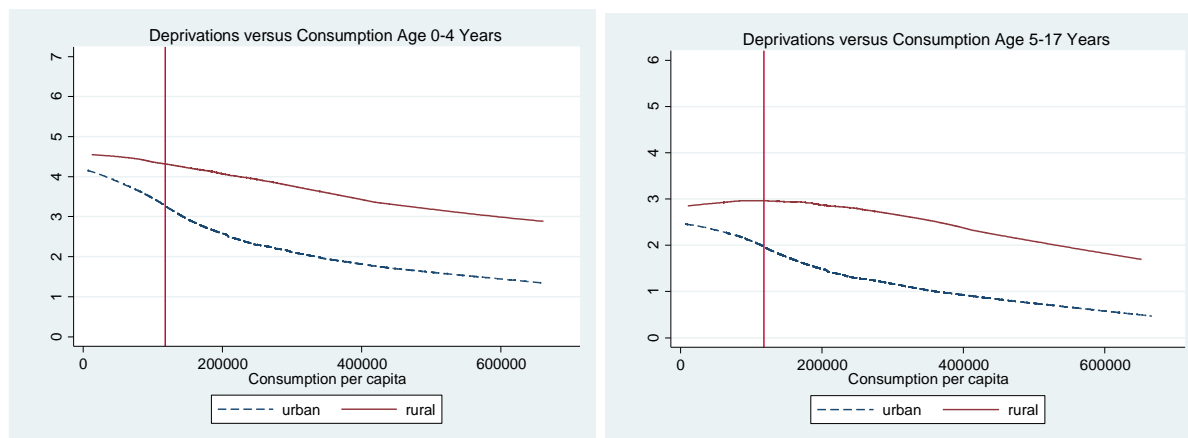


(Source: MICS-ELIM 2009-10)

Monetary poverty, deprivation and public policy

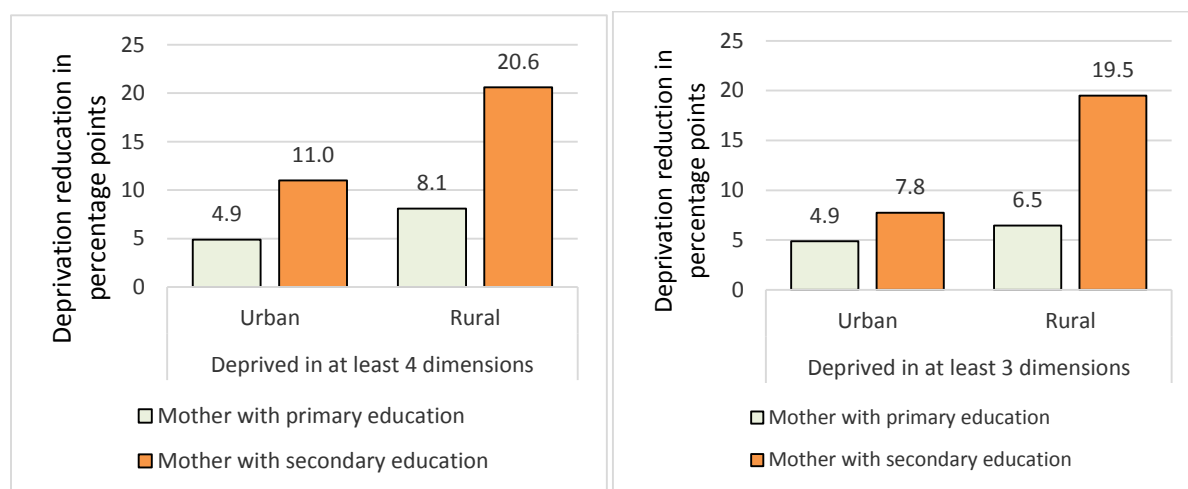
Further research on the relationship between consumption and deprivations shows that the number of deprivations diminishes consistently when consumption per capita goes up for children under the age of 5. With the exception of a small increase for the deprivations of children in rural areas the same pattern holds for children 5 years and older. For both age categories the graph is steepest for urban children living with a per capita consumption around the poverty line. The differences between urban and rural areas suggest income as an important determinant in the experience of deprivations in urban areas, while in rural areas certain goods or services may not be available despite a households’ income level.

Figure 5 Comparing deprivations and consumption per capita, by age



Lastly, the possible effects of policy are measured by simulating the reductions in the probability of being multidimensionally deprived when changing the household's income or human capital. Providing the household with an additional US\$1 per person per day reduces the likelihood of being multidimensionally deprived by 18 and 25 percentage points in urban and rural areas for children under 5 years. For children of 5 years and older the reductions are respectively 13 and 23 percentage points in urban and rural areas indicating that income is indeed an important determinant of the probability of suffering deprivation for a child. Similarly, maternal education up to secondary level reduces the likelihood of suffering a deprivation by 11 and 21 percentage points in urban and rural areas for the younger children, and 8 and 20 percentage points for older children respectively (Figure 6).

Figure 6 Probability of reducing deprivation through increasing maternal education from none to complete primary or secondary (children 0-59 months and 5-17 years)



Concluding remarks

The findings represent the first attempt at estimating child deprivation in Mali, comparing it to child monetary poverty and estimating the relationship between the two. Several clear policy implications emerge from the present analysis. First and foremost, the results serve as a reminder that while financial constraints are one of the most important determinants of child deprivation, not all poor children are deprived nor are all deprived children poor. Targeting programmes to poor children will thus not eliminate child deprivation, a fact most clearly evident in regions such as Kidal and Tombouctou which have extremely high deprivation rates in the face of relatively low poverty. A further implication of the results is the importance of maternal education in determining children's deprivation, particularly in rural areas of the country. This effect is net of income and can therefore be attributed to either information access and efficiency at processing information, or values and culture. These three pathways serve as potential programming entry points in the short run for demand side interventions to address child deprivation. In the long run, increasing girls schooling today can have a spillover effect on reducing the inter-generational link in deprivation.