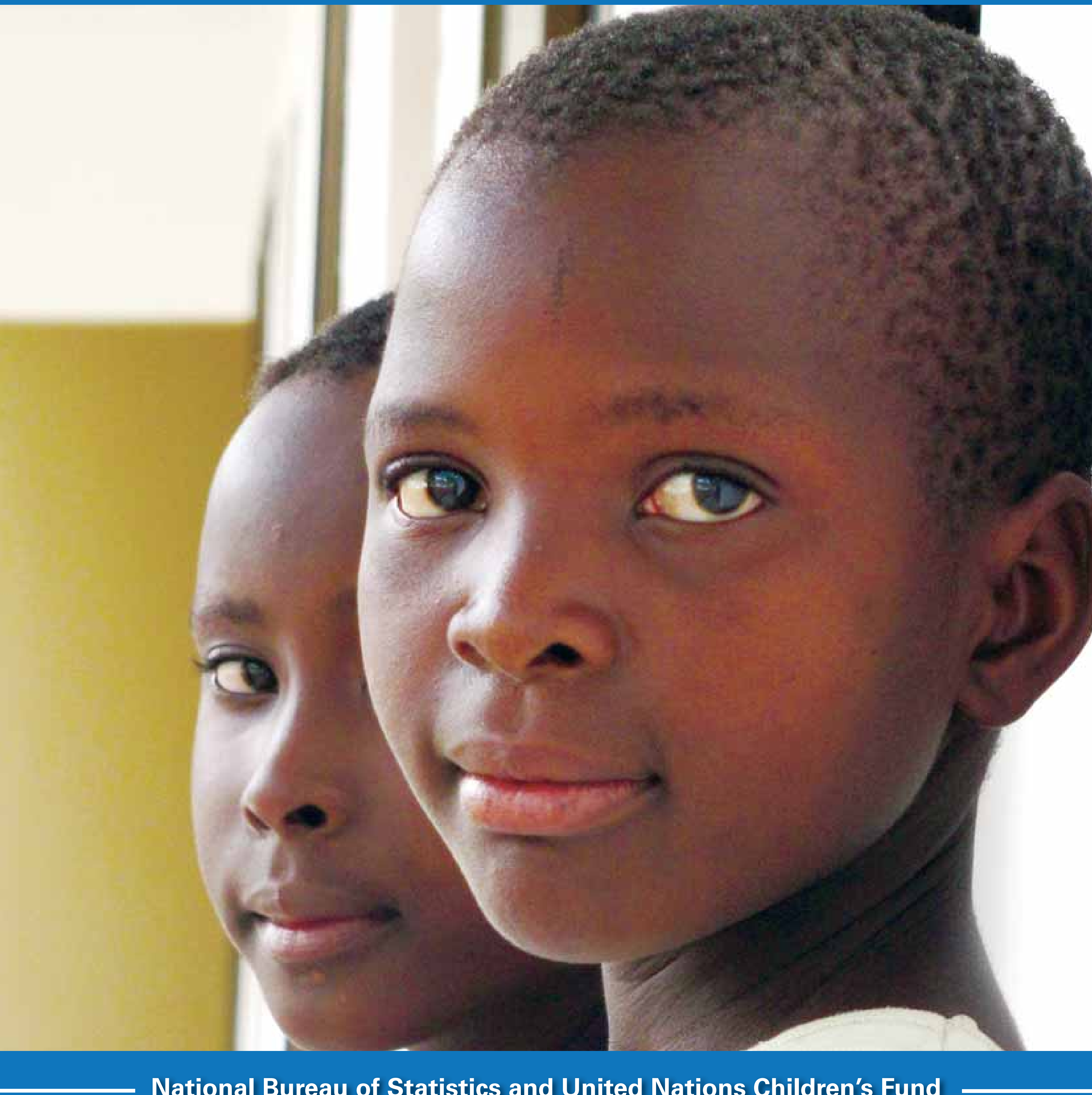
THE UNITED REPUBLIC OF TANZANIA

Child Poverty in Tanzania



National Bureau of Statistics and United Nations Children's Fund

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Dar es Salaam, Tanzania

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Acronyms

BMI	Body Mass Index
CC-MODA	Cross Country Multiple Overlapping Deprivation Analysis
DHS	Demographic and Health Survey
HBS	Household Budget Survey
MCPI	Multidimensional Child Poverty Indicator
MODA	Multiple Overlapping Deprivation Analysis
NBS	National Bureau of Statistics
NPS	National Panel Survey
PSSN	Productive Social Safety Net
SDG	Sustainable Development Goal
TWG	Technical Working Group
TASAF	Tanzania Social Action Fund
THMIS	Tanzania HIV/AIDS and Malaria Indicator Survey
UN	United Nations
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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Dr. Albina A. Chuwa
Director General, National Bureau of Statistics
June 2016

Executive Summary

This report presents the first national estimates of child monetary and deprivation poverty in Tanzania. A multidimensional child poverty indicator (MCPI) has been developed using UNICEF's Multiple Overlapping Deprivation Analysis (MODA) methodology applied to the Tanzanian context and using the National Panel Survey (NPS) datasets. The resulting national measure of multidimensional poverty, along with an estimate of child monetary poverty are both defined and explained in order to build a comprehensive understanding of the extent of child well-being in Tanzania.

Potential deprivation in six or seven dimensions (i.e. nutrition, health, protection, education, information, sanitation, water, and housing) was assessed across four age groups (0-23 months, 24-59 months, 5-13 years, and 14-17 years), with number of dimensions varying per age group. This report is primarily based on data from the 2012/13 NPS, which surveyed 5,010 households, including 3,947 households with children. However, longitudinal dynamics of child monetary and deprivation poverty are also assessed through analysis of data from the first (2008/09) compared to the third (2012/13) NPS waves (NBS 2009; NBS 2014).

Overall child deprivation and poverty rates are high. Seventy four percent of all Tanzanian children live in multidimensional poverty, using a nationally agreed cut-off threshold of being deprived in 3 or more dimensions, while 29 percent live in households below the monetary poverty line. Deprivation and poverty rates are highest among children 5-13 and 14-17 years of age.

Some specific deprivations are higher in urban areas, although overall monetary and deprivation poverty is highest in rural areas for nearly all dimensions. Eighty one percent of rural children are deprived in 3 or more dimensions, while 33 percent live in poverty, as compared to urban areas where 40 percent are deprived in 3 or more dimensions and 10 percent are monetarily poor. However, housing deprivation tends to be higher in urban areas, driven by overcrowding. Further, among older children (age 5-17 years), nutrition deprivation as measured by the Body Mass Index and not having breakfast the previous day are comparable across urban and rural areas.

The overlap of child monetary and deprivation poverty is limited. Among those children who are deprived in three or more dimensions simultaneously, less than half live in income poor households. This suggests that a significant group of children will be entirely missed if targeting of social programs is based wholly on monetary poverty status. The report identifies four groups of children: those who are neither poor nor deprived (23 percent); those who are income poor only (3 percent); those who are deprived only (48 percent); and those who are both deprived and live in income poor households (26 percent). This latter group is the most vulnerable in the country and should be a priority for social sector programmes, in line with the Sustainable Development Goal (SDG) agenda's emphasis on leaving nobody behind.


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Increased income can reduce child deprivation among the poorest households, but less so among other households. The relationship between income and deprivation is strongest among the most income poor households, suggesting that income-support programs, such as the Tanzania Social Action Fund (TASAF) III /Productive Social Safety Net (PSSN), have a strong potential to reduce child deprivations among these households. The link between income and deprivations weakens considerably even for households just above the poverty line, especially among children living in urban households. For these children, non-income forms of interventions are necessary to reduce deprivations.

Parental education is the single most important determinant of childhood deprivation. Among younger children (age 0-59 months), the mother's education is the most important determinant of the number of deprivations a child experiences. This relationship is linear, with increasingly higher levels of schooling of the mother associated with fewer deprivations experienced by children. Indeed having a mother with even some primary schooling significantly reduces the probability of a child being deprived in three or more dimensions, relative to children whose mothers have no schooling at all. For older children (age 5-17 years), the education of the household head - typically the father - is more strongly associated with the number of deprivations a child experiences. For such older children, the father's education is a strong protective factor for child labor, while for younger children the mother's education is a strong protective factor for nutrition and water deprivation, therefore stressing the importance of a holistic approach to poverty reduction.

Childhood poverty is dynamic, but income poverty is more persistent than deprivation poverty. There is some movement in and out of poverty among children in Tanzania. Between 2008/09 and 2012/13, 28 percent of children changed income poverty status, while 32 percent changed deprivation poverty status, defined as experiencing three or more deprivations simultaneously. Schooling of the head of household was a key factor reducing the risk of falling into monetary or deprivation poverty, while overall rural children were more likely than urban children to fall into poverty during this period. Despite these movements, about 70 percent of children remained in the same poverty status, suggesting that structural factors are extremely important in determining childhood poverty in Tanzania.

Findings in this report have important policy and programmatic implications. First and foremost, almost half of all deprived children do not

"74%
of Tanzanian children live in multidimensional poverty

"29%
of Tanzanian children live in households below the monetary poverty line

"26%
of children experience both monetary and multidimensional poverty

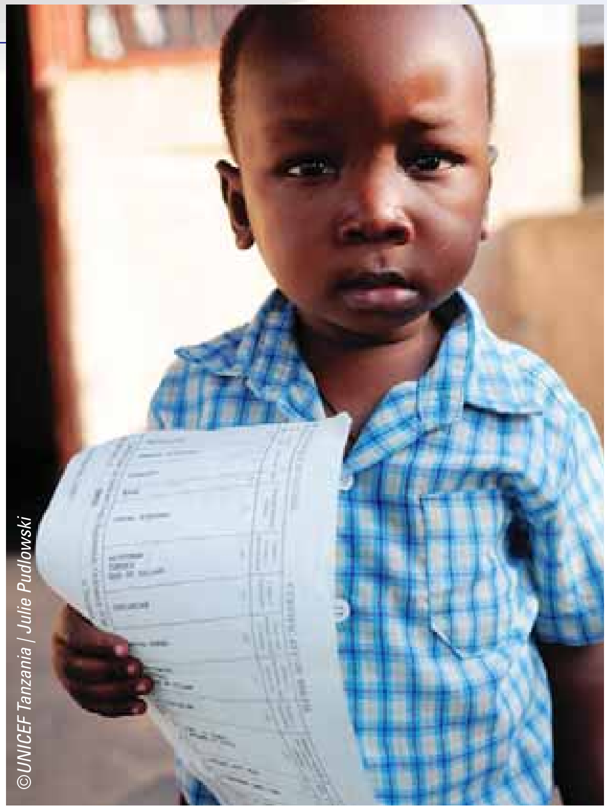
live in income poor households, suggesting that targeting interventions towards specific childhood deprivations must be nuanced and sensitive to sector specific determinants. Second, income growth alone is not enough to eliminate or even significantly reduce childhood deprivations. Third, the study's dynamic analysis indicates that childhood poverty is driven by structural factors, which will require sustained interventions addressing the root causes of poverty. Fourth, the finding that current levels of poverty in the household is a strong predictor of future poverty level indicates that children who experience poverty in childhood will be at a disadvantage when it comes to realizing their full potential. It is therefore essential to invest early in children in order to develop a skilled and healthy workforce in Tanzania, as a precondition for economic transformation and achieving the government's vision for 2025.

The study found a large degree of overlap in deprivations, which suggests that integrated approaches are needed in order to adequately address child poverty and deprivation. For households living below the poverty line, who are eligible for a cash transfer, a model of social protection where cash transfer recipients are linked to complimentary services such as nutrition, health and birth registration via community extension workers and other local government structures, would provide enormous added value. These linkages are referred to as 'social protection plus' or 'cash plus'. In Tanzania the 'cash plus' model is being developed through strong linkages with health and education services within TASAF III / PSSN, including a forthcoming community engagement toolkit, where recipients on cash transfer days can participate in a community session on topics of importance to child wellbeing such as nutrition and child health. Cash recipients will also be linked to other available community interventions in their local environment. Further, a pilot will be developed targeting adolescents and youth living in a sub-set of TASAF beneficiary households, with the goal of facilitating safe transition to adulthood.

This report has also highlighted areas which warrant further investigation. In order to adequately respond to the high level of poverty, it is necessary to explore further the causes and consequences of poverty among children. Although overall monetary and deprivation poverty are found to be highest in rural areas, it will be necessary to conduct research to understand better the dynamics and specific risks associated with poverty in an urban context, considering that the urban population is predicted to rapidly increase over the next years. Further, in order to alleviate child poverty, a costing exercise should be undertaken to assess the level of investment needed to reverse the situation. Addressing child poverty in all its forms requires adequate, efficient, effective and equitable public spending. Further, sub-national estimates of both monetary and deprivation poverty should be generated in order to show disparities in child well-being.

Child poverty, in all its dimensions, is explicitly targeted in the United Nations Sustainable Development Goals (SDGs). SDG Goal 1.2 states: "By 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions" (UN 2015).Therefore, countries will be required to define and track multidimensional child poverty over the next 15 years. Towards that end, this study has constructed a Tanzania-specific indicator, taking into account local conditions and norms, which can serve as the SDG baseline for child multidimensional poverty in Tanzania. This indicator could be incorporated into routine reporting from national surveys such as the NPS, as part of Tanzania's reporting on Goal 1.2 of the SDGs. Reflecting the importance of child poverty, both as a rights issue and a constraint for the development of the country, child poverty related targets and indicators should be added to key national development plans and strategies, including the Five-Year Development Plan (FYDP II) and MKUZA II's Successor strategy in Zanzibar for 2016-2021.

1. Introduction



In Tanzania, as elsewhere in the world, many children's rights are not met. Those rights may include food and water, as well as basic services, such as health care and education. In many cases children are deprived of these rights because they live in poor households which do not have enough income to afford the relevant goods or services.

Often, however, additional factors come into play and children may experience a range of different kinds of deprivations. For example, one child might have a nutritionally balanced diet but not be enrolled in school, while another might have good sanitation and water services at home but need protection. To develop policies and programs which address these issues comprehensively, it is critical to first understand the particular dimensions of child poverty and deprivation in Tanzania.

Historically, analysts have assessed poverty at the household level using monetary measures, such as income and expenditures. This approach provides valuable information, particularly as income is a key determinant of access to basic services for families and children. However, such analysis does not evaluate the extent to which different needs are actually met, and it also does not assess how they are met at the individual level. Measuring well-being and deprivation at the individual level is especially important with children, because children typically do not control household income and they have very little direct say in how that income is spent. In addition, children have different needs from those of adults; for example, children have variable feeding needs, depending on their age, as well as need for protection and education. Deprivation of needs in childhood may have irreversible consequences.

This report employs a methodology that was developed by the United Nations Children's Fund (UNICEF) Office of Research to define and quantify multidimensional child poverty and deprivation (de Neubourg et al. 2012; de Neubourg et al. 2014). The methodology also overlays poverty and deprivation results to enable identification of the most vulnerable children in Tanzania. The study primarily drew on data collected in Tanzania's 2012/13 National Panel Survey (NPS), which contained a consumption module to assess monetary well-being, as well as many indicators of well-being for children (National Bureau of Statistics 2014). The NPS is part of the Living Standards Measurement Study, which was developed by the World Bank and has been undertaken by governments in seven sub-Saharan African countries to generate nationally representative, household panel data with a strong focus on agriculture and rural development (National Bureau of Statistics 2009a). As a panel survey in which households are revisited over time, the NPS series allows for the longitudinal study of poverty, welfare transitions, and determinants of living standard changes.

This report presents the first comprehensive estimates of child poverty and deprivation for Tanzania. First, broad poverty and deprivation findings are provided for all children. Second, detailed poverty and deprivation findings are provided for four key age groups: 0-23 month olds, 24-59 month olds, 5-13 year olds, and 14-17 year olds. The final section of the report takes advantage of the longitudinal nature of the NPS and analyses changes in child poverty and deprivation over the four years between the 2008/09 and 2012/13 NPS rounds.

2. Methodology

2.1. THE TANZANIAN NATIONAL PANEL SURVEY (NPS) SERIES

In Tanzania, the three NPS rounds have been conducted by the National Bureau of Statistics (NBS) at two-year intervals, with the first taking place in 2008/09, the second in 2010/11, and the third in 2012/13 (NBS 2009; NBS 2011; NBS 2014). These three NPS rounds have collected self-reported data at the household and individual level on a variety of subjects, including agricultural production, non-farm income-generating activities, consumption expenditures, and other socio-economic characteristics. This report is primarily based on data collected in Tanzania's 2012/13 NPS, which surveyed 5,010 households, including 3,947 households with children. In total, data were collected for 11,843 children in that survey (NBS 2014). However, longitudinal dynamics of child poverty and deprivation are also assessed through analysis of data from the first (2008/09) and third (2012/13) NPS waves (NBS 2009; NBS 2014). Specifically, broad indicator trends over time are examined, while data from individual children are also linked and analyzed across survey rounds.

To date, the NPS has not been as comprehensive as the Demographic and Health Survey (DHS) in collecting data on young child health deprivations in Tanzania. The NPS also has collected data from a smaller sample than other national surveys, so it is not possible to analyze its results at the regional level. However, the NPS sample size is nationally representative and allows for disaggregation for Dar es Salaam, Zanzibar, and urban and rural areas. In addition, the NPS has several strengths relative to more specialized surveys, particularly as a means to better understand child poverty and multidimensional deprivation. First, the NPS measures poverty at the household level. Second, it collects anthropometric measures for the whole population, which allows tracking of important variables such as nutrition, even for older children for whom such data are relatively rare. Third, the NPS provides detailed information on different aspects of individual-level well-being, including education and labor. Finally, the NPS contains enough basic information to construct an individual-level deprivation measure, so that poverty and deprivation can be directly compared and analyzed together to provide a more comprehensive picture of children's living conditions. Levels and trends of poverty and consumption presented in this report are based on NPS data, so the NPS approach to these topics is briefly described in Box 1, with some discussion of differences with the Household Budget Survey (HBS).

Box 1. *Consumption and poverty according to the Tanzanian National Panel Surveys and Household Budget Surveys (HBS)*

Levels and trends of monetary poverty as presented in this report are fully based on NPS and differ from those reported in the HBS. According to the HBS there has been an overall reduction in poverty from 33.6 % in 2007 to 28.2 in 2011/12. NPS shows an opposite trend, moving from 14.8% in 2008/09 to 22% in 2012/13.

The Household Budget Surveys (HBS) provide the official poverty figures in Tanzania. The NPS however was designed to produce poverty estimates on its own. Unfortunately the findings between surveys are not directly comparable mainly because of the methodological differences in the collection of consumption data in the NPS and the HBS.

The NPS measures population welfare using an estimate of real consumption per adult equivalent. "Consumption" is defined here as the total value of food and non-food goods and services used, including the estimated value of non-purchased items. Nominal consumption in each round of the NPS was adjusted for temporal and spatial price differences, so real consumption is expressed in Tanzanian prices.

The NPS uses the Cost of Basic Needs Approach to identify a single national poverty line. The food poverty line is the minimal amount of money a household needs to acquire 2,200 kilocalories of food (a "food bundle") for each adult equivalent per day. The food bundle consumed by the bottom 50 percent of the population ranked in terms of real consumption is scaled to provide the required energy intake. The food poverty line is the value of this food bundle at median prices paid by the same reference group. The non-food poverty line is based on the food share of the bottom 25 percent of the population in the country ranked in terms of real consumption. The total poverty line is the value of the food poverty line after scaling it up with the food share of the non-food reference group. A household is considered poor in the NPS if it's per adult equivalent real consumption is lower than the total poverty line.

The HBS and the NPS measures of consumption differ substantially in many ways which contribute to these contrasting results. First, food consumption is collected in the HBS through a diary that is left with the household for a month, while it is gathered in the NPS by using a recall period of the last seven days. Second, food eaten outside of the household is captured in the HBS through an additional diary filled in only by adult household members, while it is collected in the NPS by way of a recall period of the last seven days asked of all household members. Third, the value of non-purchased, consumed food is provided directly by the household in the HBS, whereas households do not need to offer such subjective assessments in the NPS. The valuation of non-purchased food in the NPS is based on the prices paid by households that purchased similar food items in the same month and in the same region or stratum. Fourth, the list of food and non-food items for which consumption is collected is more extensive in the HBS than in the NPS. Fifth, the NPS does not collect information about rent (actual or estimated), whereas the HBS does and thus correctly includes that as part of the consumption aggregate. Finally, clothing expenses are not included in the NPS consumption aggregate, while they are in the HBS estimates. The reason for that exclusion is comparability over time across the NPS rounds: the third round asks for those expenses but the first two rounds do not.

Sources: Haughton and Khandker 2009; NBS 2014

2.2. THE MULTIPLE OVERLAPPING DEPRIVATION ANALYSIS (MODA) METHODOLOGY

This study adapted the Multiple Overlapping Deprivation Analysis (MODA) methodology developed by UNICEF's Office of Research in order to assess the nature and extent of poverty and deprivation experienced by children (de Neubourg et al. 2012; de Neubourg et al. 2014). MODA employs child-specific indicators and produces a child-deprivation scale, with the particular contribution of analyzing to what extent deprivations overlap. The MODA approach consists of first identifying a set of dimensions which align very closely with children's rights as defined within the United Nations (UN) Convention on the Rights of the Child (UN 1989). Next, specific indicators are chosen to capture potential deprivation within each dimension. A child is considered deprived in a dimension if he or she is deprived of one or more of its indicators. For example, a child is considered to be deprived of water if he or she does not have access to clean water, and/or if a household member needs to walk thirty minutes roundtrip to obtain water, or both. The bulk of analysis in this report is concentrated on deprivation of multiple dimensions. These are measured by a simple count, in which each dimension has an equal weight. This is in line with the principle that, given each dimension reflects a human right, all of them are considered of equal importance (de Neubourg et al. 2014). The logic behind this approach is that one cannot trade one human right for another, which is a fundamental pillar of a rights-based approach to programming and policy analysis.

This study employed MODA's three multidimensional deprivation indices (de Milliano and Plavgo 2014a). The first of these measures is the multidimensional deprivation headcount ratio (H) which determines the proportion of multidimensionally deprived children according to a given cut-off point, for example, the percent deprived of at least two out of six dimensions. The second measure determines the average intensity of deprivation among deprived children (A), showing, for example, what percentage of deprived children experience all possible deprivations. This measure is analogous to the poverty gap when studying monetary poverty. While the poverty gap gives an idea of how far the poor are from the poverty line, the adjusted deprivation headcount gives an idea of how far deprived children are below the deprivation cut-off. The third measure combines the aspects of incidence and breadth of deprivation into one number: the adjusted multidimensional deprivation headcount ratio, M_0. It is calculated by multiplying the headcount with the average intensity (M_0=H*A), leading to a rate between 0 and 1. The M_0 does not have a meaning on its own, so it is most useful in comparing populations.

2.3. ADAPTATION OF MODA IN TANZANIA

MODA was adapted for the Tanzanian context under the guidance of the Tanzanian Child Poverty Technical Working Group (TWG), which was convened by the NBS and UNICEF Tanzania and was composed of key government ministries, NGO's and development partners. The TWG considered international and national standards as well as data availability in determining the specific age groups, dimensions, indicators, and thresholds which were used to assess child poverty and deprivation.

MODA adopts a life-cycle approach. As recommended by the TWG, analysis in this study was broken down by four age groups in order to capture the varying needs of children across their lives (Table 1). For infants (0 to 23 months) and young children (24 to 59 months), age-specific indicators of nutrition, health, and protection were selected. For children of school-age (5 to 13 years) and/or middle adolescence (14 to 17 years), the analysis included age-specific indicators on nutrition, education, protection, plus access to information for the older age group. For all age groups, household-level indicators of water, sanitation and housing were measured to assess deprivation in the direct environment in which a child grows up.

Table 1. *Dimensions analyzed in this report, by age group*

INDICATOR LEVEL	DIMENSION	AGE GROUP			
		0-23 months	24-59 months	5-13 years	14-17 years
Individual	Nutrition	√	√	√	√
	Health	√	√		
	Protection	√	√	√	√
	Education			√	√
Household-level	Information				√
	Sanitation	√	√	√	√
	Water	√	√	√	√
	Housing	√	√	√	√

The TWG discussed and agreed on the specifics of each dimension and its indicators in this study, including the cut-off point at which an essential condition was considered lacking to the extent that it was categorized as deprivation. This sometimes involved a compromise between what was considered the best possible measure of what it means to be deprived for a child in a specific age group, and the availability of data. Generally, a deprivation corresponds to a violation of a child's basic rights (UN 1989). In this regard, deprivations are different from predictors or correlates of deprivation. For example, being an orphan might make a child more vulnerable to deprivation, but it is not a deprivation in itself, since it is not a violation of a right (de Neubourg et al. 2014). Some variables used in this study are particular to Tanzania, such as a child being two grades behind his or her scheduled grade-for-age as an indicator of educational deprivation. However, the majority of indicators used in this study are the same as those used in similar exercises in other countries. Data constraints also influence the choice of indicators. For example, the NPS only collected limited

data on young child health. Similarly, measures of protection were limited to birth registration (for all children) and child labor or early marriage for older children. Other critical areas of protection, such as violence against children at home or in school - which research has found are important in Tanzania - are not assessed (UNICEF Tanzania et al. 2011).

In summary, deprivation was assessed for eight dimensions in this study, drawing on 21 indicators. Specifically, for each age group, deprivation in a particular dimension was assessed using one to four indicators. Appendix Table A1 details the specific indicators used in this study, by age group and threshold.

Box 2. *Definition of Key Terms*

An "***Adult Equivalent***" is a statistical adjustment used in poverty, welfare, and consumption analyses because household members have different consumption needs based on their age and sex

In the NPS, the adult-equivalent scale ranks 19-59 year old males and females as 1.0 and 0.88, respectively. Boys and girls under 10 years receive equal ranking for their age, ranging from 0.40 for 0-2 year olds, to 0.76 for 9-10 year olds. However, male and female ranks increase from 0.80/0.88 for 11-12 year olds, to 1.00/1.00 for 13-14 year olds, to 1.20/1.00 for 15-18 year olds, respectively.

Consumption is the total value of food and non-food goods and services used, including the estimated value of non-purchased items, such as those produced by a household or received as gifts.

In this report, consumption is measured in Tanzanian Shillings per month per adult equivalent.

Deprivation is the lack or denial of a basic need or right.

The eight broad categories of deprivation which are examined in this report are insufficient nutrition, health, protection, education, information, sanitation, water, and housing. Deprivation is also assessed at the indicator level.

Dimension: *In this report, dimensions refer to different aspects of well-being and deprivation, such as nutrition, health, protection, education, information, sanitation, water, and housing.*

Food poverty refers to a lack of income necessary to satisfy basic food needs - usually defined on the basis of minimum calorie requirements. Often called extreme poverty, *for the NPS analyses that are the basis of this study, the Cost of Basic Needs method was used to estimate the food poverty line (NBS 2014).*

Basic needs poverty refers to a lack of income necessary to satisfy essential non-food needs - such as for clothing, energy and shelter - as well as food needs.

Unless otherwise specified, when the term "monetary poverty" is used in this report, it refers to basic needs poverty at the household level. The 2012/13 poverty line used for analyses is 32,905.41 Tanzanian Shillings per month per adult equivalent. Both the monetary and food poverty lines were taken from consumption aggregate data provided by the NBS. These estimates differ from those used in the "National Panel Survey Wave 3, 2012-2013" report (NBS 2014), because that report calculated poverty lines and consumption aggregates in 2010/11 prices. See Box 1 for further description of poverty line calculations.

3. Monetary and Deprivation Poverty among All Children

3.1. MULTIPLE DEPRIVATION ANALYSIS

As noted in Table 1, this study identified eight dimensions of wellbeing for children. However, children aged 13 years and under were only assessed for deprivation in six dimensions, while children aged 14-17 years are measured in terms of seven, so the older children have a higher chance of being found to be deprived.

Figure 1 shows the percent of all children who are deprived, by numbers of deprivations per child. Ninety-seven percent of children experience at least one deprivation; 89 percent experience two or more; and 74 percent experience three or more. Four deprivations per child is the most common finding. These figures are similar to those from a deprivation analysis of 2010 Tanzanian DHS data which was developed for a Cross Country Multiple Overlapping Deprivation Analysis (CC-MODA) study. That study found that 92 percent of children were deprived in at least one dimension, and 76 percent were deprived in at least two (de Milliano and Plavgo 2014b). However, the definition of dimensions and cut-offs were different and less refined in the cross-country analysis, as its main objective was to provide cross-national estimates. The indicator developed in this study is more context-specific, so it is the preferred indicator when studying poverty within Tanzania.

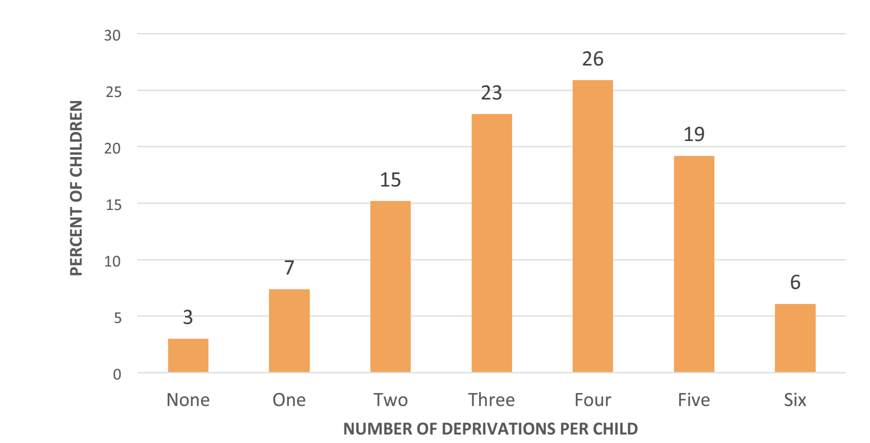


Figure 1 | Percent of children, by number of deprivations per child

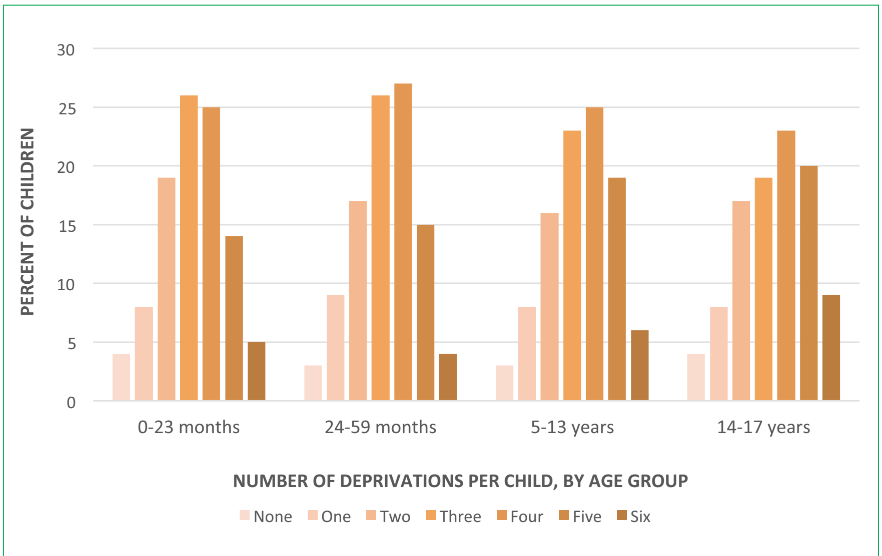


Figure 2 | Percent of children, by number of deprivations per child and age group

Figure 2 and Table 2 show these same data broken down by the four age groups of interest. The four distributions are similar: they are skewed to the right, showing a higher percentage of children deprived in more dimensions, with about two-thirds of children in all age groups deprived in three or more dimensions. This skewing towards the right is most pronounced for children aged 5 to 13 years, while the oldest age group is slightly better off.

Most children in every age group are deprived in at least one or more dimensions, and about two thirds are deprived in three or more. Around one in ten are deprived in five or more dimensions. The number of deprived children is very high at lower cut-off, while it decreases sharply between four and five dimensions, meaning that most children in all age groups are deprived in three or four dimensions at the same time.

Table 2. *Percent of children, by number of deprivations and age group*

NUMBER OF DEPRIVATIONS / CHILD	AGE GROUP (PERCENT OF CHILDREN)			
	0 - 23 months	24 - 59 months	5 - 13 years	14 - 17 years
One or more	95	95	96	94
Two or more	82	82	88	79
Three or more	62	61	69	58
Four or more	32	33	41	33
Five or more	13	12	14	10

Figure 3 shows the distribution of deprivation counts by urban and rural areas. The distribution for rural children is more skewed to the right than for urban children, indicating that higher proportions of rural children than urban children experience three or more deprivations. Likewise, there are more urban children who experience none, or only one – two deprivations. For example, 29 percent of rural children experience four deprivations, compared to 11 percent of urban children.

Table 3 shows the multidimensional deprivation measures H, A, and M_0, which were described in the Methodology section. The Headcount (H) column shows that 90 percent of children are deprived in two or more dimensions, while 25 percent are deprived in five or more dimensions. The Intensity (A) column shows that, for the 90 percent of children who are deprived in two or more dimensions, on average they are deprived in 51 percent of the seven possible dimensions, that is, they are deprived of 3.5 dimensions on average. In contrast, the 25 percent of children who are deprived in five or more dimensions are deprived in 5.25 dimensions on average.

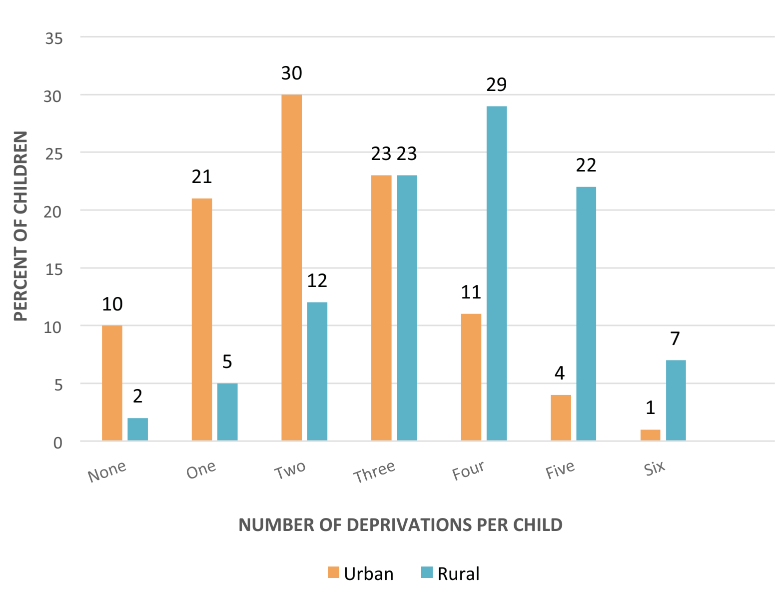


Figure 3 | Percent of children, by number of deprivations per child and urban/rural status

Table 3. *Multidimensional deprivation measures for all children*

NUMBER OF DEPRIVATIONS / CHILD	HEADCOUNT (H) (Percent children at different thresholds)	INTENSITY (A) (Percent total deprivations)	ADJUSTED HEADCOUNT RATIO (M_0)
One or more	97	51	0.49
Two or more	90	54	0.48
Three or more	74	59	0.44
Four or more	51	66	0.34
Five or more	25	75	0.19
Six or more	6	86	0.05

Table 4 details the multidimensional deprivation findings for urban and rural areas. These indicate that, not only are children less likely to be deprived in urban areas, but the "intensity" of deprivations among those who are deprived is lower than in rural areas. In other words, not only are more children deprived in rural areas, but - for any threshold - the average number of deprivations is higher among rural children compared to urban ones. This is clearly shown in the last column, which combines the aspects of incidence and intensity of deprivation into one adjusted headcount ratio that is always higher for rural children than urban ones.

Table 4: *Multidimensional deprivation measures for all children, by urban/rural status.*

NUMBER OF DEPRIVATIONS / CHILD	HEADCOUNT (H) (Percent children at different thresholds)		INTENSITY (A) (Percent total deprivations)		ADJUSTED HEADCOUNT RATIO (M_0)	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
One or more	90	98	35	54	0.32	0.53
Two or more	69	94	42	56	0.29	0.52
Three or more	40	81	51	60	0.20	0.49
Four or more	17	59	63	66	0.10	0.39
Five or more	5	30	74	75	0.04	0.22
Six or more	1	7	86	86	0.01	0.06

Figures 4 and 5 present rates of deprivation by dimensions in Zanzibar. Deprivation rates are generally lower in Zanzibar than in Tanzania overall, especially in the areas of sanitation, water, and protection. Only about one-third (29 percent) of children in Zanzibar are deprived in three or more dimensions.

One of the main differences between the national and Zanzibar rates of child deprivation is in the area of protection. In this study, birth registration was a key indicator of child protection. Zanzibar excels in birth registration relative to mainland Tanzania, and this is reflected in its much lower

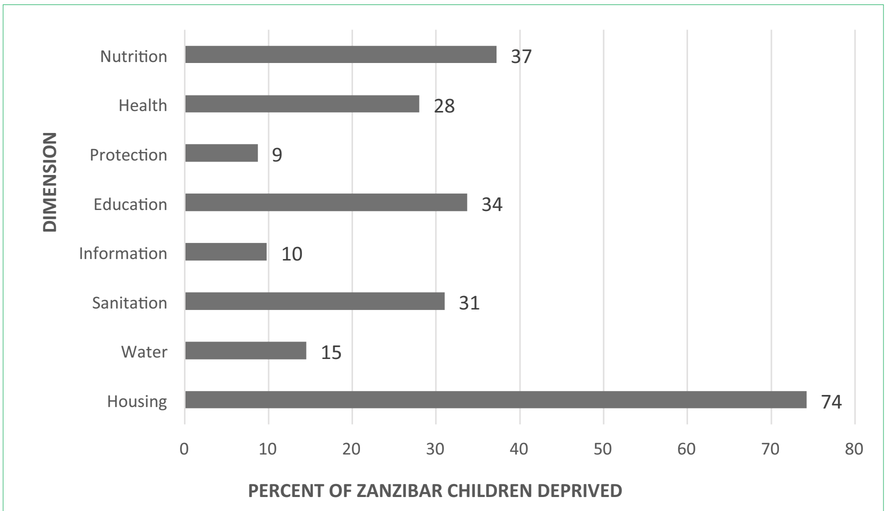


Figure 4 | Percent of Zanzibar children deprived, by dimension

estimates of child protection deprivation. However, even if protection deprivation rates are calculated without birth registration, the picture remains similar. The national proportion of children who experience high numbers of deprivations becomes lower in general, while slightly higher in Zanzibar than it was before. However, rural mainland Tanzania remains the most deprived area.

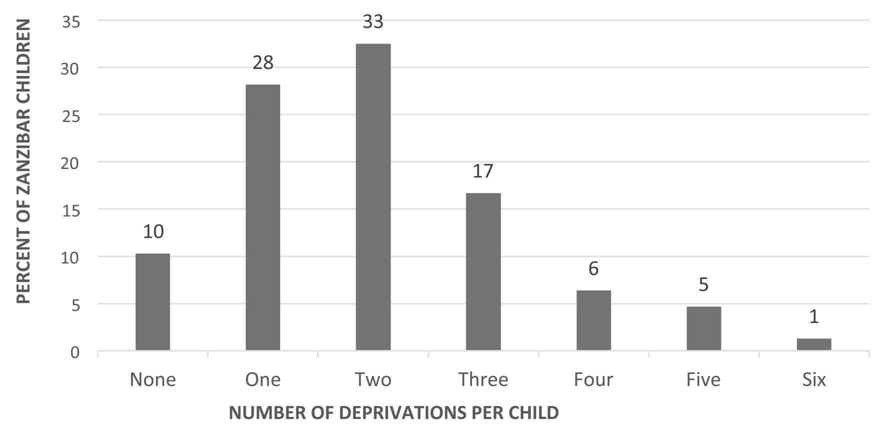


Figure 5 | Percent of Zanzibar children, by number of deprivations per child

3.2. MONETARY POVERTY (BASIC NEEDS POVERTY AND FOOD POVERTY) IN THE TOTAL POPULATION

We now briefly turn to monetary poverty among children before investigating the relationship between the two concepts of poverty. It is worth reminding the reader that child monetary poverty is actually defined as the proportion of children living in households whose consumption is below the poverty line—monetary poverty is a household measure.

Table 5 reports poverty rates for the total population by adult and child age groups and urban/rural residency. The overall poverty rate is 22 percent, while the child poverty rate is 29 percent. The national food poverty rate, a measure of extreme poverty, is 11 percent, and the corresponding child food poverty rate is higher at 13 percent. For any poverty line, poverty rates are higher among children than adults. The highest poverty rates are consistently seen in the 5-13 and 14-17 year age groups; notably, 5-13 year olds also registered the highest deprivation rates in Table 2. These patterns remain true when the data are analyzed by urban and rural sub-populations.

Table 5. *Percent of monetary poor (basic needs) and food poor, by age group and urban/rural status*

AGE GROUP	PERCENT OF POPULATION					
	Urban		Rural		Total	
	Monetary (basic needs) Poor	Food Poor	Monetary (basic needs) Poor	Food Poor	Monetary (basic needs) Poor	Food Poor
CHILDREN:						
0-23 months	7	1	29	15	23	11
24-59 months	6	2	29	16	24	13
5-13 years	8	2	32	17	26	14
14-17 years	8	3	32	18	26	14
0-17 years	10	3	33	18	29	16
ADULTS:						
18-35 years	5	2	24	12	17	8
36-64 years	5	2	26	14	20	11
Over 65 years	5	3	24	11	20	9
TOTAL	6	2	28	15	22	11

The next section shows the age distribution of children and adults who are below the monetary poverty line (Figure 6) and food poverty line (Figure 7), respectively. These graphs illustrate the important fact that, in Tanzania, the majority (58 percent) of people living in poor households are children, even though they represent only 50 percent of the population overall. This figure probably under-estimates child poverty, because of the way that monetary poverty is measured at the household level.

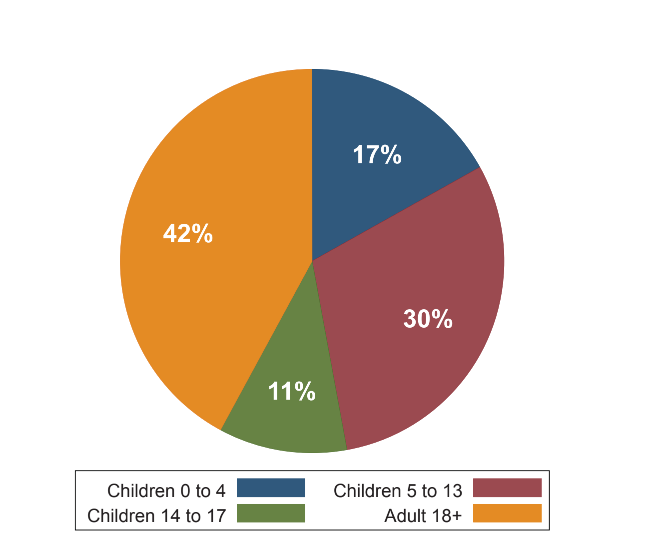


Figure 6 | Percent of monetary poor in the total population, by age group

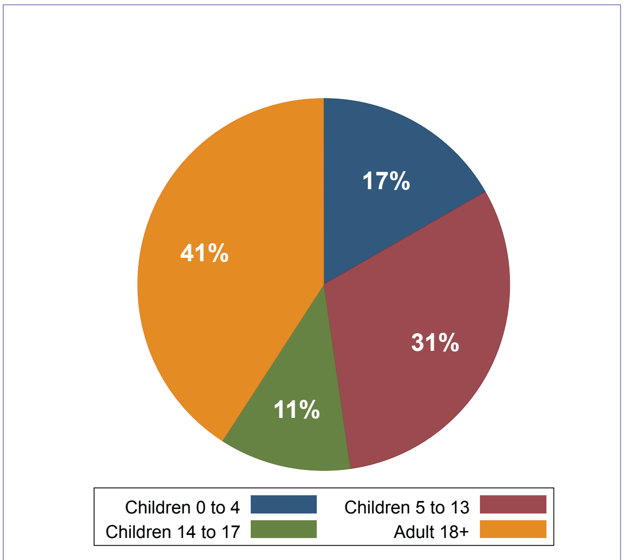


Figure 7 | Percent of food poor in the total population, by age group

3.3. CHILD POVERTY AND DEPRIVATION

Figure 8 shows the relationship between household per capita consumption and the number of deprivations per child. The 2012/13 poverty line (32,905.41 Tanzanian Shillings per month per adult equivalent) is indicated by the vertical red line. The steeper the slope of this graph, the stronger the relationship between the two variables. At low levels of consumption, below the poverty line, the graph is steep, especially for rural areas. However, beyond 100,000 Tanzanian Shillings per adult equivalent per month, the line becomes quite flat, particularly for urban residents. This indicates that, beyond that point, additional income or consumption does little to reduce child deprivation. Additional resources thus are likely to benefit children in poor households, but increased income is unlikely to alleviate much child deprivation in non-poor households.

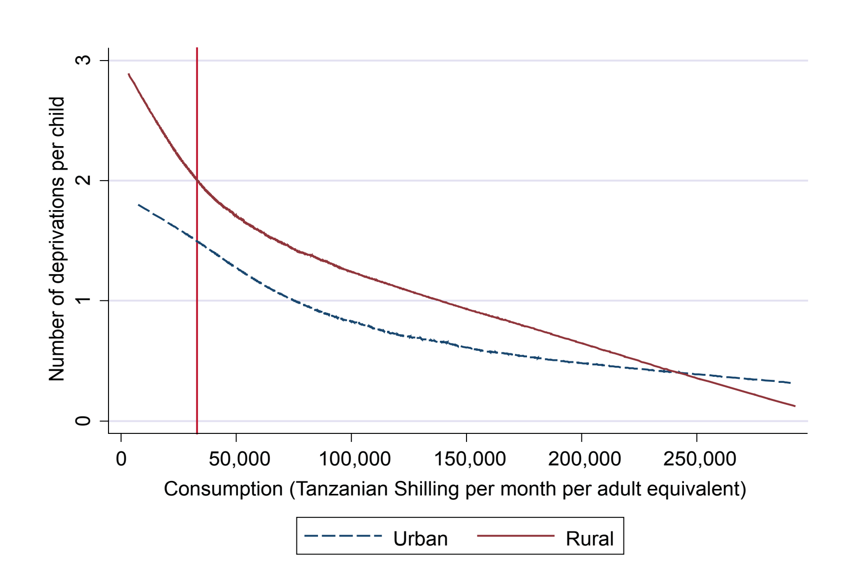


Figure 8 | Relationship between deprivation and consumption, by urban/rural status

Figure 9 shows the overlap between the percent of children who live in income poor households and the percent who experience three or more deprivations simultaneously. Seventy-seven percent of all Tanzanian children are either poor, deprived, or both. Only 3 percent of children are poor but not deprived, while notably half (48 percent) of all children are deprived even though they do not live in poor households. This means that child poverty reduction programs which target based on monetary poverty as an indicator of child vulnerability would miss a large number of children who experience non-monetary poverty.

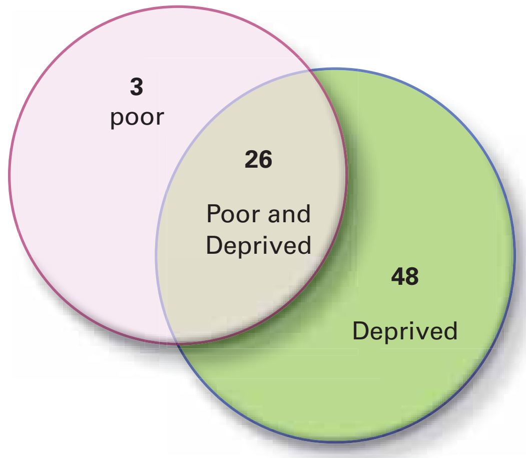


Figure 9 | Overlap between the percent of children who are poor, and the percent who are deprived in three or more dimensions

Based on the above analysis, four groups of children can be defined with respect to their well-being status: (1) neither poor nor deprived, (2) poor only, (3) deprived only, and (4) both poor and deprived. Table 6 indicates the proportion of children in each of these four groups. Appendix Table A4 shows the same groups with disaggregation for Zanzibar and mainland Tanzania. Consistent with the figure above, 26 percent of all children are deprived and live in households that are below the poverty line. Importantly, a much higher proportion of rural children (31 percent) than urban children (7 percent) fall in this category. For rights-based programming, children in this category should be ranked as highest priority, because they experience the greatest child rights violations.

Table 6. *Distribution of poor and deprived children, by urban/rural status*

WELL-BEING STATUS	PERCENT OF CHILDREN		
	Urban	Rural	Total
Neither poor nor deprived*	58	16	23
Poor only	3	3	3
Deprived only	32	51	48
Poor and deprived	7	31	26

**Deprived in three or more dimensions simultaneously.*

Figure 10 shows the rate of deprivation for each dimension among the 48 percent of children who are deprived but not poor. The main types of deprivation for these children are sanitation, housing, water, and protection. The areas where the rural children experience the greatest deprivation are sanitation, water, and protection, while for urban children they are sanitation, housing, and protection. For rural children who are deprived but not poor, the highest deprivation overlap (55 percent) occurs between protection, water, and sanitation, while for urban children it is water, sanitation, and housing (36 percent).

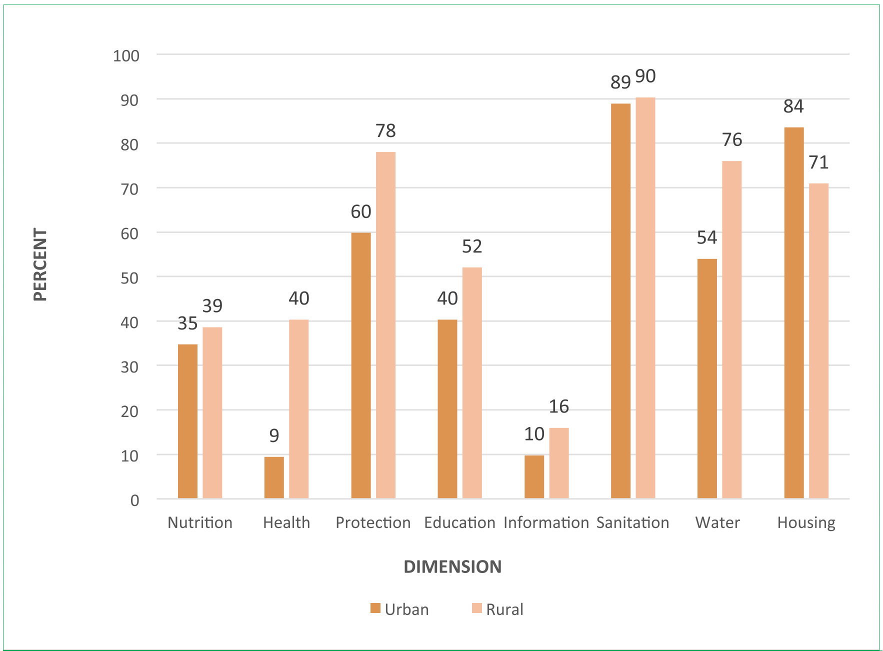


Figure 10 | Percent of non-poor children who are deprived in three or more dimensions, by dimension and urban/rural status

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Table 7 shows background characteristics of children who are poor and/or deprived; children who are poor only are not included because the group is too small. A higher proportion of children who are both poor and deprived than other children have a head of household with no schooling or only some primary school education. Only 1 percent of children who are both poor and deprived live with a head of household who has completed primary school, in contrast to 26 percent of children who are neither poor nor deprived. The education level of the head of household is a strong predictor of deprivation for all age groups. Another relevant difference is in the activity of the head of the household, as the great majority of children who are poor and deprived live in farmers' households, compared to only one-third of children who are neither poor nor deprived. Similarly, the majority of children who are both poor and deprived live in rural areas, compared to just over half of the children who are neither poor nor deprived. The marital status of the head of the household and the presence of parents in the household do not appear to have a particular relevance. Children who are both poor and deprived are only slightly more likely to live in a female-headed household (26 percent) than children who are deprived only, or neither (21 percent in both cases).

Table 7. *Background characteristics of poor and deprived children, by urban/rural status*

BACKGROUND CHARACTERISTICS	PERCENT OF CHILDREN		
	Neither poor nor deprived*	Deprived only	Poor and deprived
HEAD OF HOUSEHOLD:			
Female	21	21	26
Separated or divorced	0.06	0.07	0.07
Widowed	0.03	0.02	0.02
No formal education	11	24	29
Some primary education	63	69	70
Completed primary education	26	7	1
Self-employed	30	14	8
Wage worker	28	14	9
Works on own farm	36	64	71
Rural area	54	85	94
PARENTS:			
Both parents deceased	0.01	0.01	0.01
Both parents living elsewhere	0.12	0.09	0.10

*Deprived in three or more dimensions simultaneously.

4. Poverty and Deprivation among Younger Children (0-59 Months Old)

Table 8 shows the dimensions used to build the multidimensional poverty indicator for young children in this study. Children in these age groups share the same dimensions and indicators.

Table 8. *Indicators and dimensions for children aged 0-59 months*

INDICATOR LEVEL	DIMENSION	INDICATOR OF DEPRIVATION FOR 0-59 MONTH OLD CHILDREN
Individual	Nutrition	1. Stunted
		2. Less than three meals/day*
	Health	3. Inadequate antenatal care
		4. Unskilled birth attendance
	Protection	5. No birth registration
Household	Sanitation	6. Unimproved or shared sanitation
		7. Inadequate disposal of stool
	Water	8. Unimproved, untreated water
		9. 30+ minutes roundtrip to fetch water
	Housing	10. Overcrowding
		11. Natural flooring and roof

*For select ages; see Appendix Table A1 for specific indicator definitions and thresholds.

The exact indicators and thresholds are reported in Appendix Table A1. This section will first present the main findings for the two young age groups separately, and then proceed to a comparative analysis and discussion.

4.1. MAIN FINDINGS

4.1.1. Children aged 0-23 months

Almost all children (96 percent) in this age group are deprived in at least one dimension, and 70 percent are deprived in three or more. The highest prevalence of deprivations are in sanitation (82 percent), housing (65 percent), and water (57 percent), all of which are household-level indicators. The highest individual-level deprivation prevalence is in protection (51 percent), which is driven by birth registration. Children in rural areas are significantly more deprived than urban children in health, protection, water, and sanitation, while there are no significant differences in nutrition and housing. There is a high degree of overlap between deprivations for this age group. The three deprivations which overlap the most for children under two years old are water, protection, and housing.

Monetarily poor children are significantly more deprived in every dimension than non-poor children, with the largest differences occurring in the area of protection. Using the cut-off of three or more deprivations, the overlap between monetary and deprivation poverty is quite moderate at 21 percent. Children who are deprived but not poor represent almost one half (48 percent) of all children in this age group, which is the same as the proportion among all children aged 0-17 years. The relationship between income poverty and deprivation is strong among rural children, and relatively weak among urban children living in households above the poverty line.

4.1.2. Children aged 24-59 months

Sixty-one percent of children in this age group experience three or more deprivations, which is slightly lower than the rate for children aged 0-23 months. Again, the highest rates of deprivation were found in the dimensions measured by household-level indicators: sanitation (81 percent), housing (64 percent), and water (60 percent). The highest deprivation prevalence found in the dimensions measured by individual-level indicators was again in protection, due to birth registration. Nutrition deprivation is higher amongst the 24-59 month old children than the 0-23 month old children, mostly driven by high levels of stunting. Stunting increases consistently from birth to around age 36-48 months in sub-Saharan Africa, due to the cumulative effect of health and nutrition deficiencies. Children aged 24-59 months are consistently more deprived in rural than urban areas for almost every indicator, with the largest difference found in the dimension of protection.

The difference in single dimension deprivation between poor and non-poor 24-59 month old children is highest in the areas of protection and nutrition, as children living in monetarily poor households have deprivation rates over 20 percentage points higher than non-poor children. Similar to 0-23 month old children, 22 percent of 24-59 month old children are both deprived and poor, while the largest group of children (49 percent) are deprived but not poor. The relationship between deprivation and consumption is quite strong for children living in rural areas, especially among children living in households below the poverty line. Among urban children this relationship is not as strong, although it is slightly stronger than it is for urban children aged 0-23 months.

4.2. SINGLE DEPRIVATION ANALYSIS

This section begins with presentation of the results for each dimension and indicator. This is the first step in deprivation analysis, as it highlights the sectors in which the children are most deprived. This analysis is of particular relevance for sector-specific programming.

The 0-23 month and 24-59 month age groups share the same dimensions and indicators, so the analysis has been grouped to allow for easier comparison between the two. However, it should be noted that for the indicators of antenatal care and assistance of a skilled attendant at birth, the NPS reports on the most recent child born in the last 24 months to women aged 12-49 years only. Hence, for some children in this combined age group, if they are not their mother's most recent child in the last 24 months, there is no direct information on these indicators and so they are imputed from a younger sibling, which is a younger child of the same mother. In fact, half of children in the age group of 24-59 months have a younger sibling, in which case data are imputed from those of an eligible younger sibling. Alternatively, if there are no children born to their mother in the last 24 months, the variable is left empty. This results in slightly higher measurement error. While these indicators are not ideal, they at least provide proxy information on access to health care for very young children, which is used to assess health welfare and deprivation.

Figures 11 and 12 show the rate of deprivation for each dimension and indicator, for these two age groups. Generally, children aged 0-23 months and 24-59 months have high deprivation rates across dimensions, and they are most deprived in the areas of protection, water, sanitation, and housing. Of particular note is that more than half of children in these age groups are not registered at birth; this deprivation is highest (57 percent) for children aged 24-59 months, suggesting that high deprivation rates in birth registration are not caused by a delay in registration.

Generally, however, these two age groups have similar rates of deprivation. More than eight in ten young children live in households with unimproved and/or shared sanitation facilities. About one in two young children live in overcrowded households. More than one-third have floors and roofs made of natural materials, contributing to two out of three children being categorized as deprived in the dimension of housing. Similarly, 57 and 60 percent of 0-23 month old and 24-59 month old children, respectively, are deprived of water. Notably, the two indicators of water deprivation do not seem to overlap much , as 35% of 24-59 month olds have unimproved and untreated water, and 44% are in a household where it takes thirty or more minutes to fetch water. This suggests that, for almost all of the 24-59 month olds who are deprived of water, one of the indicators is met satisfactorily, while the other is not.

Children in the older age group have higher rates of deprivation in nutrition compared to younger children, which is driven mainly by stunting. This finding is expected, as in Sub-Saharan Africa stunting tends to consistently increase from birth to around 36 – 48 months due to accumulation of health and nutrition related deficiencies.

Figures 13 and 14 detail deprivation rates by area of residence, illustrating how young children

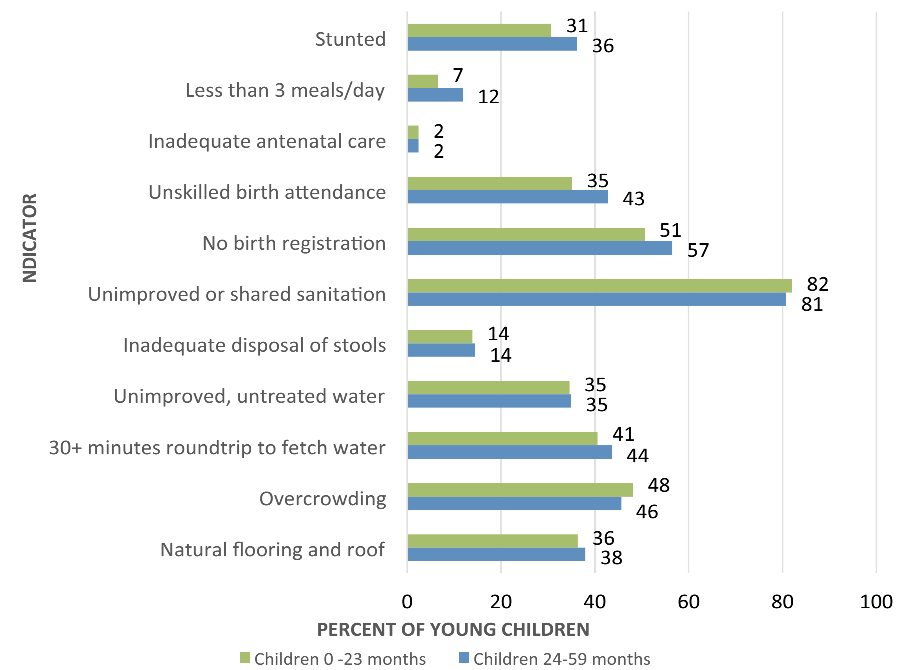


Figure 11 | Percent of young children deprived, by indicator and age group

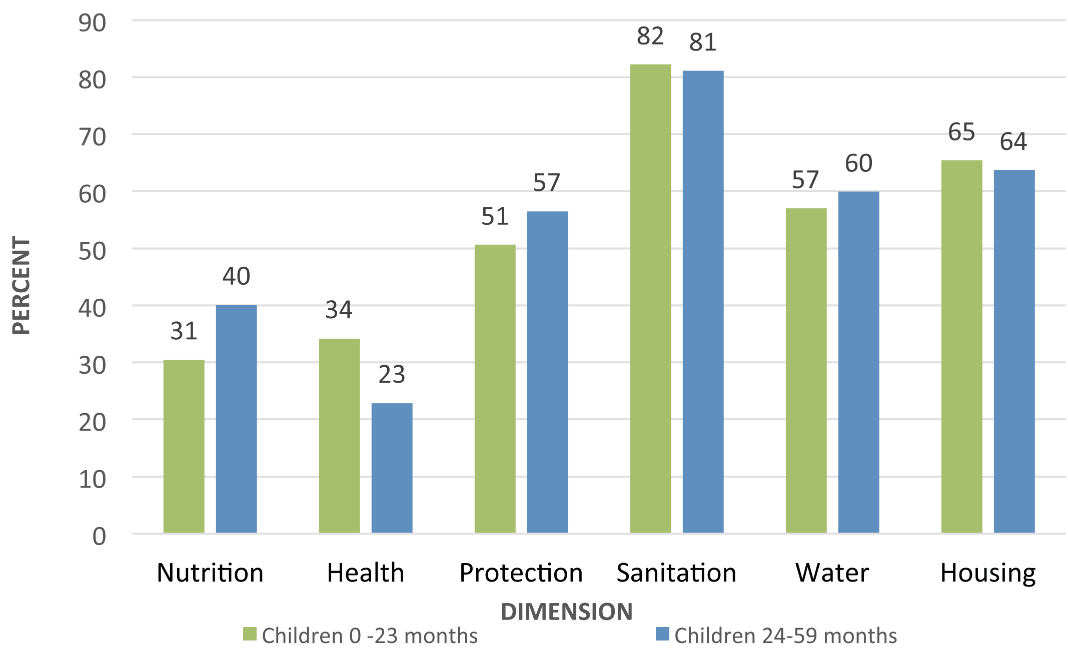


Figure 12 | Percent of young children deprived, by dimension and age group

in rural areas are considerably more deprived than their urban counterparts in almost all indicators, with the notable exception of overcrowding. For 0-23 month old children, the largest differences between urban and rural children relate to unskilled birth attendance (5 versus 44 percent); unimproved, untreated water (7 versus 43 percent); and natural flooring and roof (7 versus 45 percent), respectively. The patterns are very similar but generally more pronounced for 24-59 month old children, for whom the largest differences are unskilled birth attendance (6 versus 48 percent), lack of birth registration (28 versus 62 percent), and natural flooring and roof (10 versus 44 percent). These indicators drive the broader urban-rural deprivation differences seen in the areas of health, protection, and water. The only exception to this urban-rural deprivation pattern is in the area of overcrowding, both for 0-23 month olds (56 and 45 percent) and 24-59 months olds (46 and 44 percent), respectively.

Tables 9 and 10 present the deprivation rates for each dimension by different background characteristics, including gender, number of children in a household, and characteristics of the head of the household. The tables confirm that children in rural areas are significantly more deprived than urban children in the areas of health, protection, water, and sanitation, while there are no significant differences between the two groups for nutrition

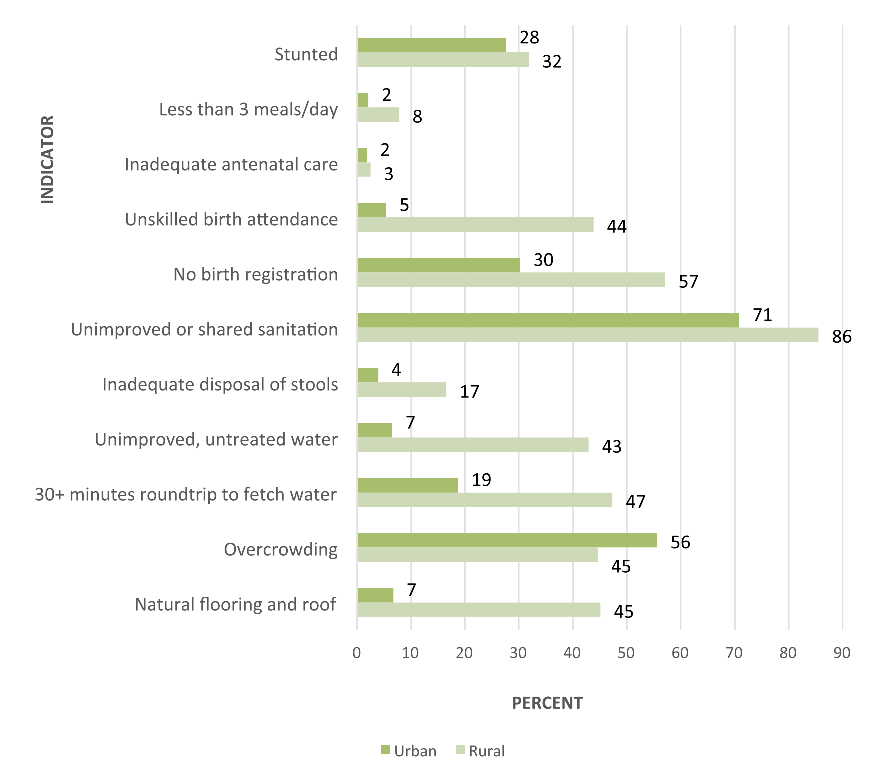


Figure 13 | Percent of 0-23 month old children deprived, by indicator and urban/rural status

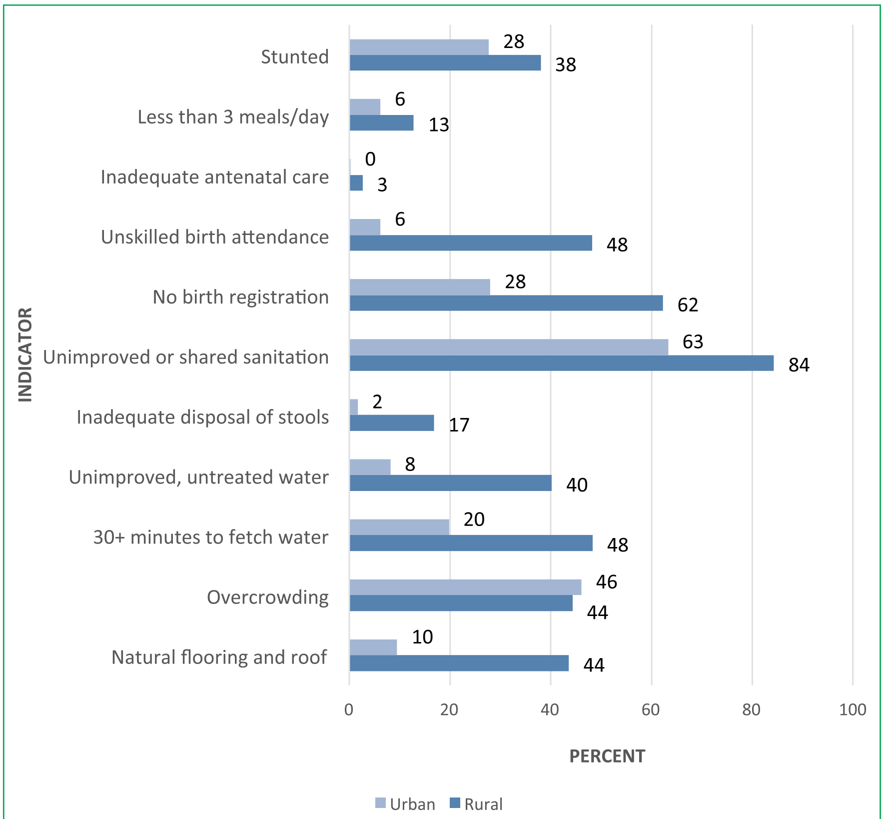


Figure 14 | Percent of 24-59 month old children deprived, by indicator and urban/rural status

or housing. It is found that the number of children in the household is associated with higher deprivation, and the education of the mother and the head of household are associated with lower deprivation. Children in households with less than four children, or with a head of household with primary education or more, are significantly less deprived in all dimensions, except nutrition.

One limitation of this kind of bivariate analysis is that it does not take into account the simultaneous effect of other variables. Thus we cannot be sure whether the difference observed is due to the particular characteristic under analysis or an underlying cause. Appendix Tables A5 and A6 show and discuss the results of a probit model regression on each of the dimensions, which provides more insight into the relative importance of different household and child characteristics in predicting deprivation in each dimension.

Table 9. *Bivariate analysis of dimensional deprivation by background characteristic, for 0-23 month old children*

BACKGROUND CHARACTERISTIC	DIMENSION DEPRIVATION RATE (PERCENT)					
	Nutrition	Health	Protection	Sanitation	Water	Housing
GENDER:						
Male	35*	34	48	82	56	64
Female	26*	34	53	83	58	67
URBAN/RURAL STATUS:						
Urban	24	6*	30*	71*	24*	59
Rural	32	43*	57*	86*	67*	66
HOUSEHOLD:						
Three or fewer children	32	25*	40*	80	50*	61*
More than three children	29	42*	60*	84	64*	70*
HEAD OF HOUSEHOLD:						
Male	30	34	51	82	58	65
Female	34	33	47	85	51	67
Single, divorced, or widowed	31	29	49	89*	52	64
Married or living with partner	31	36	52	82*	59	65
Younger than 60 years	31	33*	50	84	57	65
60 years or older	29	46*	61	74	63	61
Some primary education	32	38*	55*	85*	62*	68*
Completed primary education	25	15*	29*	65*	27*	41*
PARENTS:						
Mother has some primary education	33	38	54	85	61	67
Mother completed primary education	17*	16*	32*	65*	35*	47*
ALL	31	34	51	82	57	65

**Indicates t-test for difference in means between groups is significant at the 95% confidence level.*

Table 10. *Bivariate analysis of dimensional deprivation by background characteristic, for 24-59 month old children*

BACKGROUND CHARACTERISTIC	DIMENSION DEPRIVATION RATE (PERCENT)					
	Nutrition	Health	Protection	Sanitation	Water	Housing
GENDER:						
Male	42	22	57	81	59	63
Female	39	24	56	81	61	64
URBAN/RURAL STATUS:						
Urban	28*	2*	28*	64*	25*	52*
Rural	43*	27*	62*	84*	67*	65*
HOUSEHOLD:						
Three or fewer children	35*	12*	49*	80	52*	55*
More than three children	44*	30*	62*	82	65*	70*
HEAD OF HOUSEHOLD:						
Male	40	24	57	81	62*	64
Female	42	18	55	81	50*	64
Single, divorced, or widowed	41	16*	51	84	54	62
Married or living with partner	40	24*	58	81	61	63
Younger than 60 years	41	22	56	81	59	63
60 years or older	33	29	59	81	67	62
Some primary education	41*	25*	60*	84*	63*	66*
Completed primary education	27*	7*	26*	53*	28*	37*
PARENTS:						
Living with at least one parent	40	24	57	81	60	64
Living without parents	39	15	55	78	56	61
Mother had some primary education	42*	25*	59*	84*	64*	65*
Mother completed primary education	22*	8*	28*	51*	22*	43*
ALL	40	23	57	81	60	64

*Indicates t-test for difference in means between groups is significant at the 95% confidence level.

These tables indicate two major aspects of deprivation in Tanzania: one structural, which relates to broader differences between urban and rural areas, and one more specific to the household level, as represented by education of the head of household. Both of these factors can directly influence and build upon one another in influencing the extent of child deprivation. Children in rural households which have heads of household with little education are more likely to be deprived of protection, water, and sanitation. Water and sanitation both have components which can be influenced by education. For example, higher levels of education may increase household understanding and use of safe practices related to the treatment of water or the disposal of feces. This is particularly important as only 10 percent of rural households have a head of household who completed primary education, compared to 30 percent of urban households. Given protection deprivation in this age group is only measured in terms of birth registration, the finding of higher protection deprivation among rural and/or low-education households probably reflects relatively low knowledge of the importance of registration as well as limited access to birth registration services in those settings.

Finally, for both age groups there is little difference in these findings by gender. For children aged 0-23 months, being a boy considerably increases the chance of being deprived of nutrition, but otherwise there are no significant differences. For children aged 24-59 months, there are no significant differences at all between boys and girls. There also are almost no significant deprivation differences related to the gender of the head of household, except that significantly higher proportions of 24-59 month old children are deprived of water in male-headed households (62 percent) than female-headed ones (50 percent).

4.3. OVERLAP OF DEPRIVATIONS

A key innovation in the MODA approach is to analyze the overlap of dimensional deprivation, to understand how they interact and move together. This helps to identify the children who are most deprived and who might therefore be a priority for equity- and rights-based programming.

Figures 15 and 16 again show the percent of 0-23 and 24-59 month old children deprived by dimension (Figure 12), but break the data down further to also indicate the percent of overlap of each type of deprivation with 1-5 other deprivations. These figures illustrate how no deprivation is "stand-alone", that is, all types of deprivations seem to have a high degree of overlap with each other. This partly relates to the fact that the overall number of deprivations experienced by children in Tanzania is quite large. It also is a function of the pattern of vulnerability in the country. For example, among 0-23 month old children who are deprived of protection, less than 1 percent are deprived of protection only, while 18 percent are deprived in at least three other dimensions. The most overlap occurs in the area of sanitation, where 24 percent of 0-23 month old children are deprived in two other dimensions and 23 percent are deprived in three other dimensions; the pattern is the same for 24-59 month old children (22 percent and 25 percent, respectively).

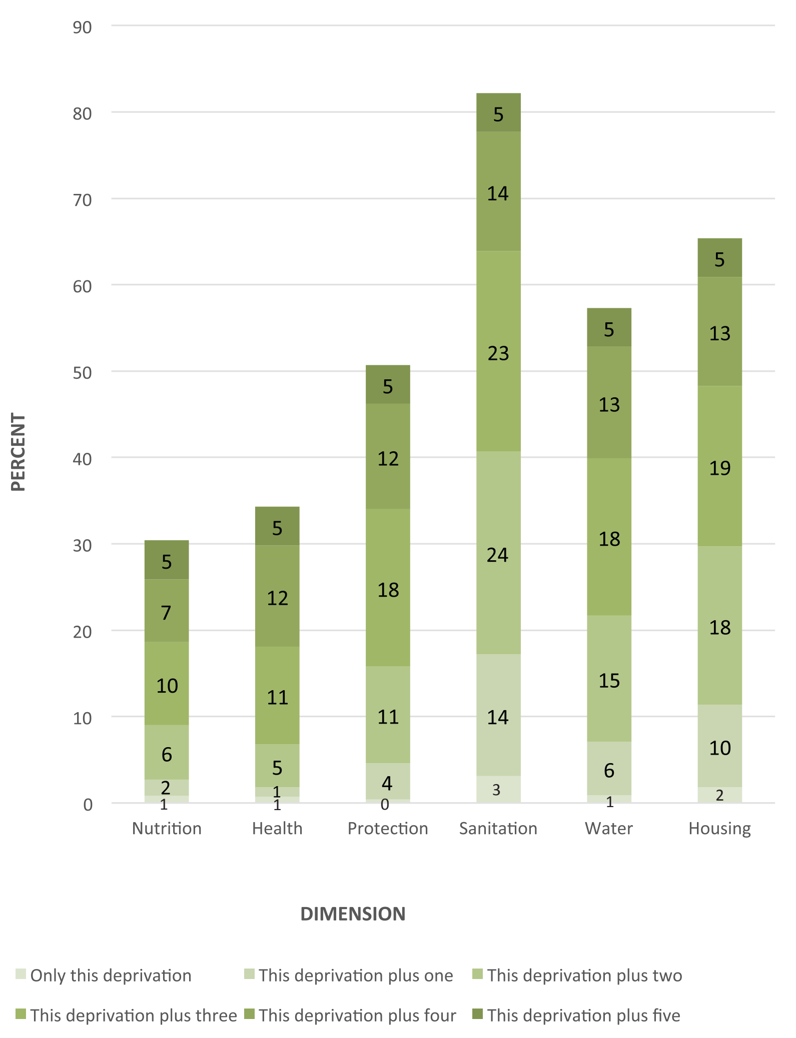


Figure 15 | Percent of overlap of specific deprivations with 1-5 other deprivations, for 0-23 month old children

For children in the two younger age groups in this study, the three dimensions of deprivation that overlap the most are protection, water, and housing. Nine out of ten children (89 percent) are deprived of one or more of these dimensions, and almost one-quarter (23 percent) are deprived in all three (Figure 17). Results are very similar for 24-59 month old children (Figure 18).

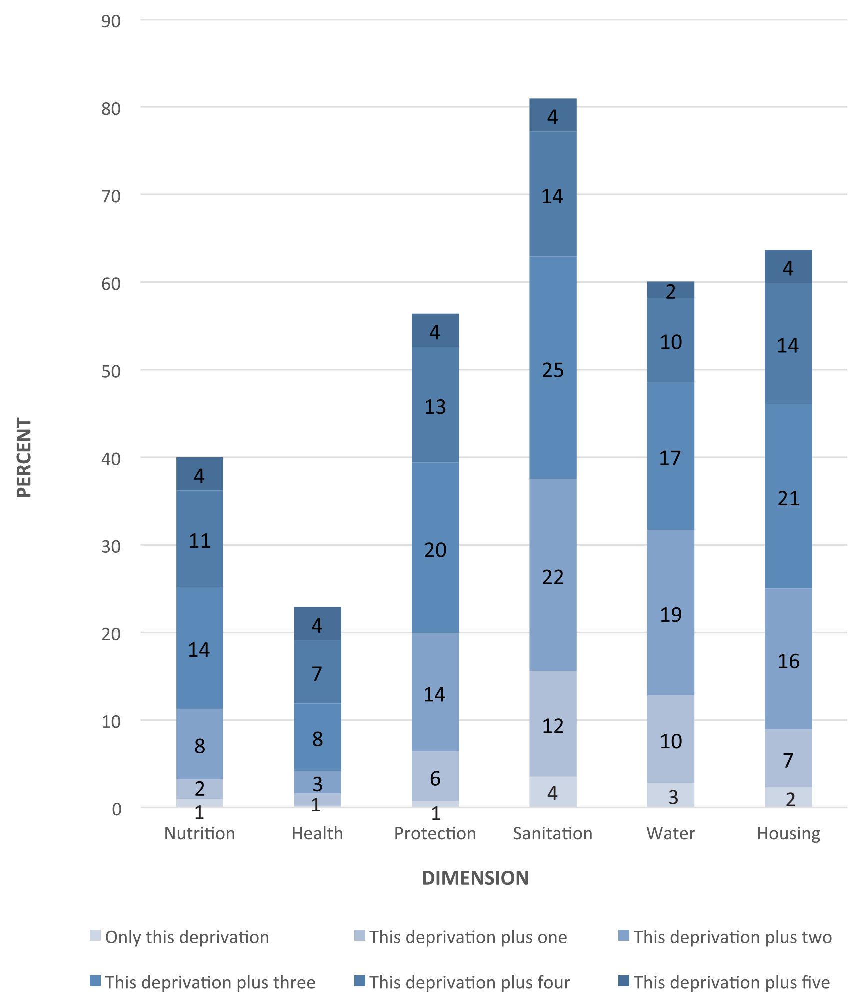


Figure 16 | Percent of overlap of specific deprivations with 1-5 other deprivations, for 24-59 month old children

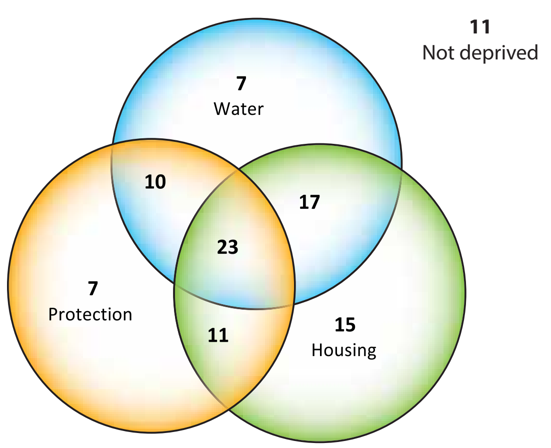


Figure 17 | Percent of overlap of deprivation in protection, water, and housing for 0-23 month old children

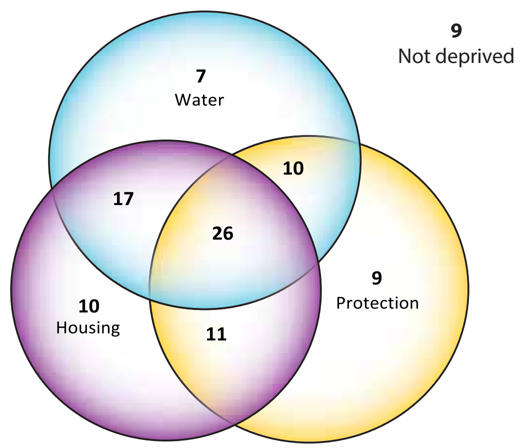


Figure 18 | Percent of overlap of deprivation in protection, water, and housing for 24-59 month old children

4.4. MULTIPLE DEPRIVATION ANALYSIS

Multiple deprivation analysis investigates how many deprivations a child experiences at any given time. Figure 19 shows the percent of children aged 0-23 months and 24-59 months by number of deprivations per child. Rates of deprivation are very similar for both age groups, with children aged 24-59 months slightly more likely than the youngest children to be deprived in four or five dimensions. About one-quarter (26 percent) of both age groups are deprived in three dimensions simultaneously, and another quarter (25 and 27 percent, respectively) are deprived in four. Both distributions are somewhat right-skewed, demonstrating that a larger proportion of children in both age groups experiences four to six deprivations (44 and 46 percent, respectively) than experience zero to two deprivations (31 and 29 percent, respectively).

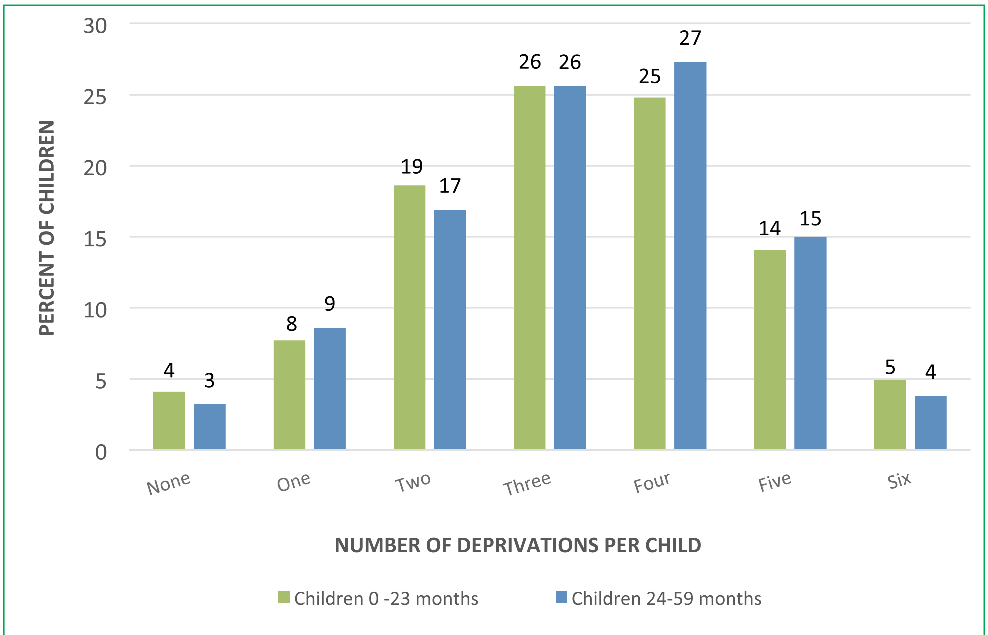


Figure 19 | Percent of children, by number of deprivations per child

Table 11 shows the deprivation headcount at different cut-offs, the intensity of deprivation and the adjusted headcount ratio for younger children. The findings for 0-23 and 24-59 month old children are very similar. Almost all young children (96-97 percent) are deprived in at least one dimension. On average, those children are deprived in 3.1 dimensions (i.e. 56 percent of the six possible dimensions). Furthermore, 70-71 percent of young children are deprived in three or more dimensions, and those children are deprived, on average, in 3.9 dimensions (i.e. 66 percent of the six possible dimensions). A slightly higher proportion of 24-59 month old children (46 percent) than 0-23 month old children (43 percent) are deprived in four or more dimensions, but they also experience a slightly lower intensity of deprivation (75 and 76 percent, respectively). These factors balance each other out within the final adjusted head count ratios, which are very similar (0.33 and 0.34, respectively). One feature of the adjusted headcount, is that it can be decomposed by subgroups of population, showing how much each group contributes to the overall deprivation. Predictably, for both age groups children in rural areas and children with a lower educated head of household, contribute more to the adjusted headcount ratio, indicating that these children experience higher levels of deprivation poverty than others.

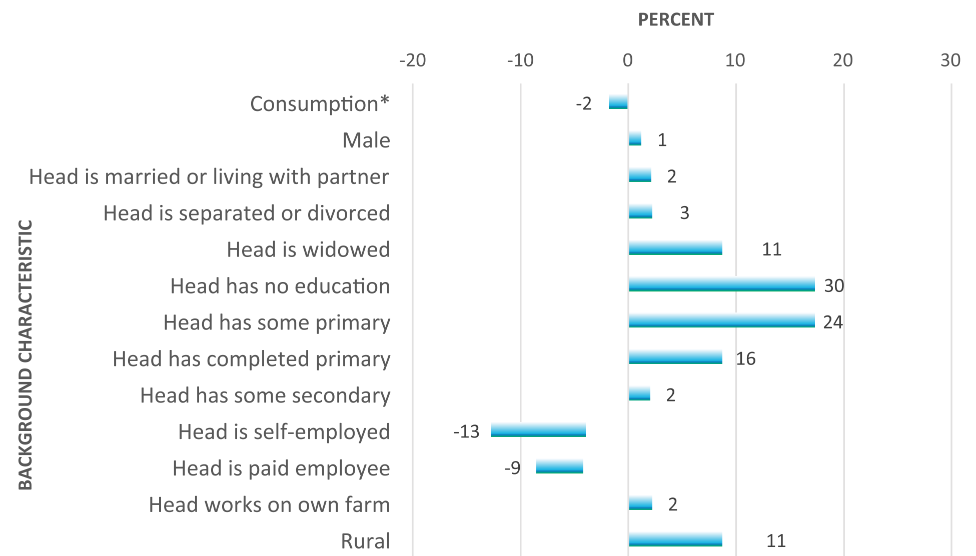
Table 11. *Multidimensional deprivation measures for 0-23 and 24-59 month old children*

NUMBER OF DEPRIVATIONS / CHILD	HEADCOUNT (H) (Percent children at different thresholds)		INTENSITY (A) (Percent total deprivations)		ADJUSTED HEADCOUNT RATIO (M_0)	
	0-23 months old	24-59 months old	0-23 months old	24-59 months old	0-23 months old	24-59 months old
One or more	96	97	56	56	0.53	0.54
Two or more	88	88	59	60	0.52	0.53
Three or more	70	71	66	66	0.46	0.47
Four or more	43	46	76	75	0.33	0.34
Five or more	19	18	87	87	0.16	0.16

*The maximum number of dimensional deprivations is five. The intensity (A) is the number of deprivations experienced by a child deprived at the specified cut-off, divided by 6. M0 is the product of A and H.

Figure 20 illustrates the effects of different factors on the probability that a child will be deprived in three or more dimensions. If the head of household is widowed, the probability of being deprived increases by 11 percentage points, compared to the benchmark condition of never having been married. The education level of the head of household is the single most important determinant of the risk of being deprived. Taking the benchmark of a head of household having completed secondary school, living with a head of household who has no education increases the likelihood of three or more deprivations by 30 percentage points. Similarly, when a non-working head of household is taken as a benchmark, children who live with a head of household who is a paid employee are 9 percentage points less likely to be deprived in three or more dimensions. Finally, living in a rural area increases the probability of being deprived by 11 percentage points.

Complete regression analyses for children aged 0-59 months, including results for number of deprivations, are reported in Appendix Table A7.



*10,000 Tanzanian Shillings per month per adult equivalent

Figure 20 | Change in probability of being deprived in three or more dimensions, for 0-59 month old children

4.5. MONETARY POVERTY AND DEPRIVATION

In order to achieve sustainable poverty reduction, it is crucial to understand the relationship between monetary poverty and child deprivation. Using the 2012/13 basic needs poverty line estimate of 32,905.41 Tanzanian Shillings per month per adult equivalent, Figures 21 and 22 examine the relationship between poverty and dimensional deprivation, as experienced by 0-23 and 24-59 month old children. The figures demonstrate that poor children are systematically more deprived in every dimension than non-poor children. However, deprivation rates in sanitation and housing are high for both poor and non-poor children.

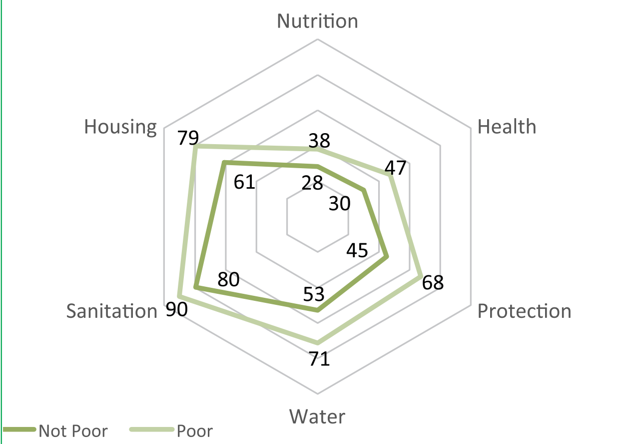


Figure 21 | Percent of 0-23 month old children deprived, by dimension and poverty status

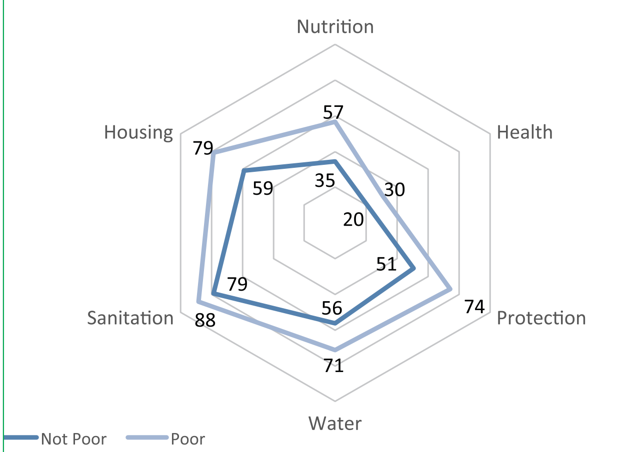


Figure 22 | Percent of 24-59 month old children deprived, by dimension and poverty status

Figures 23 and 24 show the relationship between consumption and number of deprivations per child, for young children in both urban and rural areas. The poverty line is indicated by the vertical red line. For both 0-23 and 24-59 month olds, in both urban and rural settings, the slope is steepest before the poverty line, indicating that the relationship between deprivation and consumption is strongest for poor children. This means that increases in consumption among poor children could contribute to substantial decline in the number of deprivations per child.

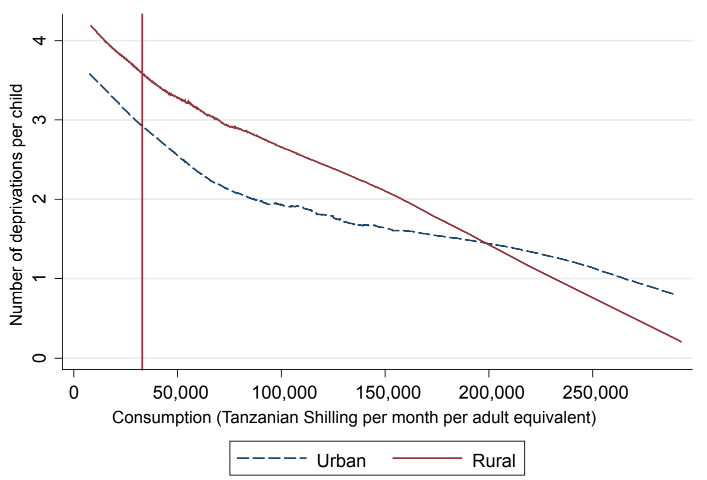


Figure 23 | Relationship between consumption and number of deprivations per child, for 0-23 month old children

To the right of the poverty line in both figures, the slope flattens, showing a stronger resistance of deprivation to an increase in consumption. This indicates that deprivations experienced by non-poor children are unlikely to be substantially reduced by an increase in consumption alone. Urban children in both age groups tend to have flatter graphs than those for rural children, suggesting a weaker relationship between consumption and number of

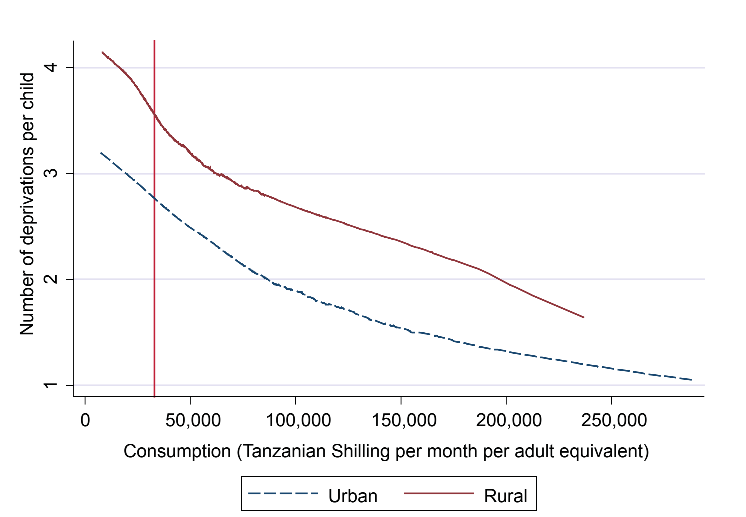


Figure 24 | Relationship between consumption and number of deprivations per child, for 24-59 month old children

deprivations per child in urban areas. Notably, above approximately 200,000 Tanzanian Shillings per month– that is, six times the poverty line – 0-23 month old children in rural areas become less deprived than their counterparts in urban settings. For the 24-59 months age group the lines do not cross, with urban children always experiencing less deprivation than rural ones.

Figures 25 and 26 examine the relationships between consumption and each dimension, for 0-23 and 24-59 month old children, respectively. The forms of the graphs vary greatly. For children aged 0-23 months, health and nutrition have almost flat curves, indicating a weak relationship between consumption and deprivation. In contrast, the graphs focused on protection and housing deprivation are steeper, especially for poor children, indicating that those dimensions are quite sensitive to an increase in expenditures. This seems to especially be the case for 0-23 month old children in rural areas, where after a certain level of expenditure, the likelihood of deprivation substantially reduces and becomes lower than in urban areas.

Figure 26 indicates that, for both urban and rural 24-59 month old children living under the poverty line, an increase in expenditure could have a notable impact on nutrition and housing deprivation, though beyond the poverty line the slopes flatten considerably. This also seems likely for poor rural

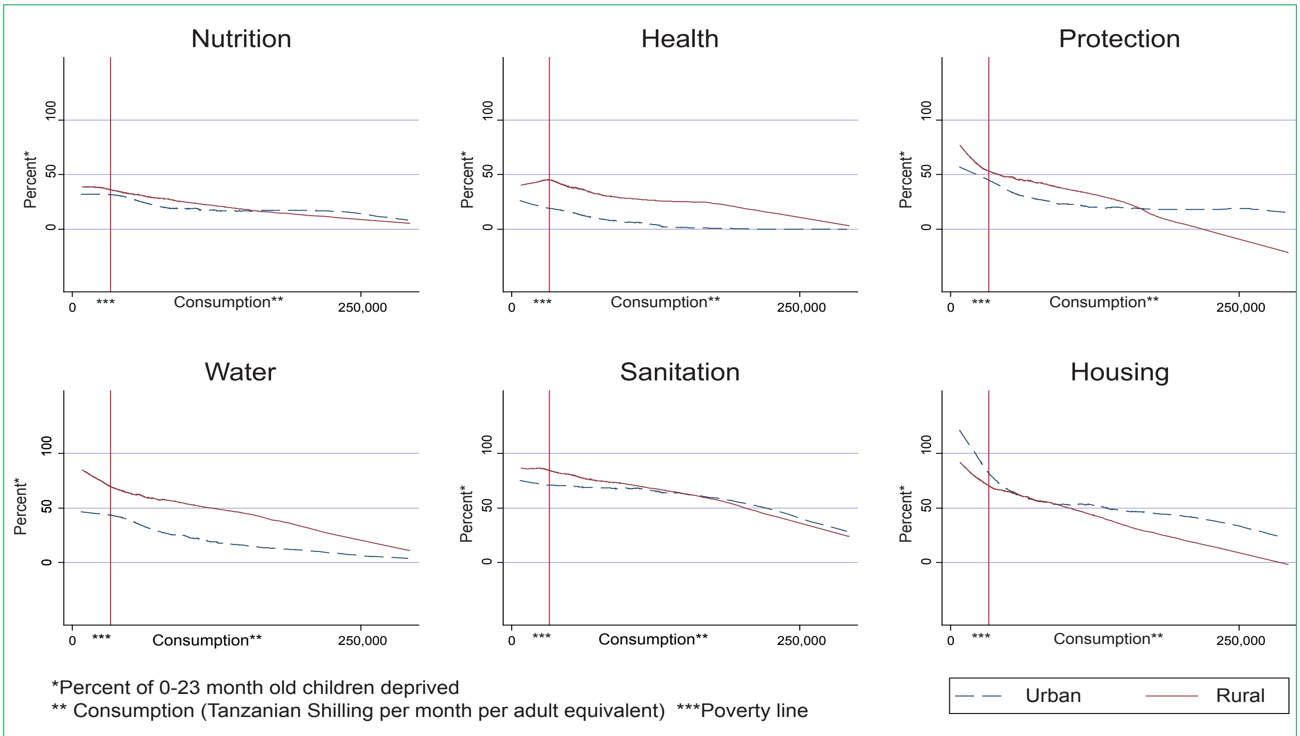


Figure 25 | Relationship between consumption and dimensional deprivation, for 0-23 month old children

24-59 month old children who are deprived of protection and water. For both urban and rural children in this age group, the graphs representing health and sanitation deprivations are the flattest, which suggests they are the deprivations which are least sensitive to increases in consumption.

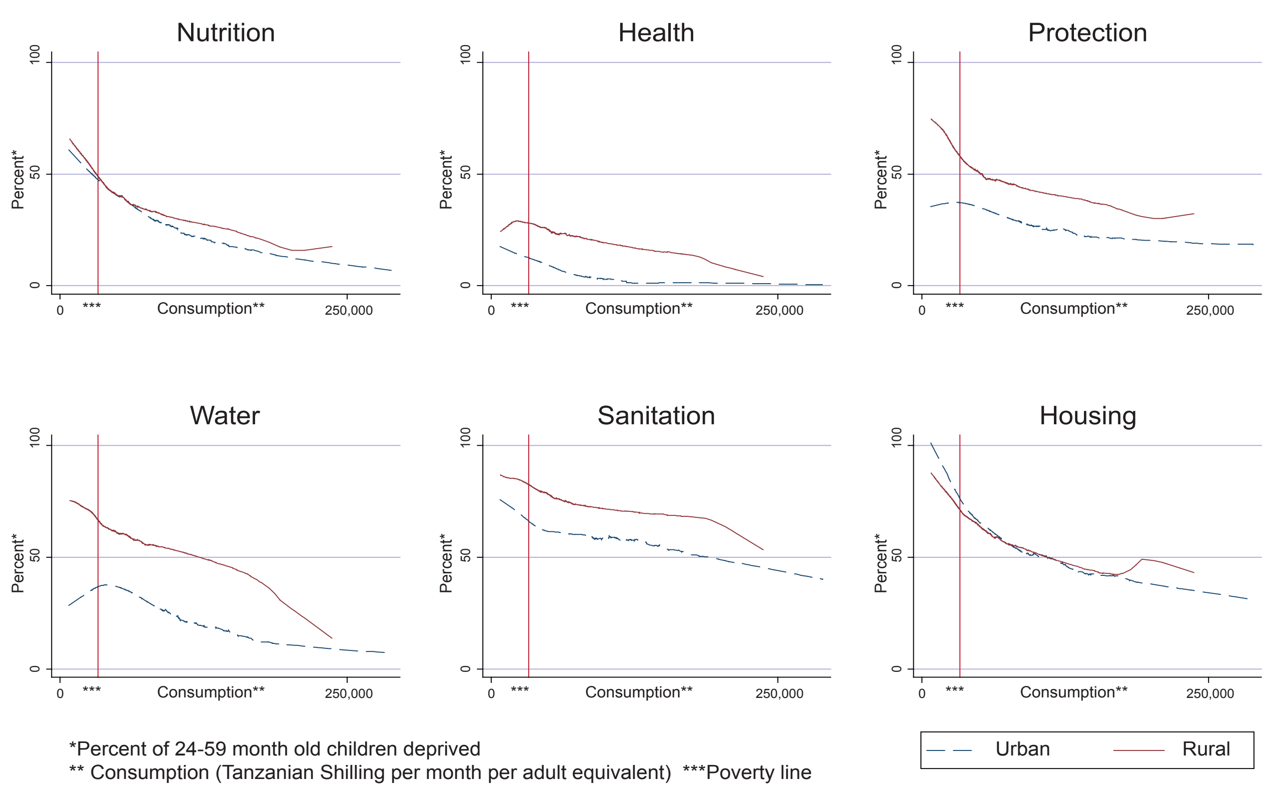


Figure 26 | Relationship between consumption and dimensional deprivation, for 24-59 month old children

Finally, Figures 27 and 28 show the overlap between monetary poverty and deprivation among young children. The overlap is moderate, for both 0-23 and 24-59 month old children (21 and 22 percent, respectively). A small proportion (3 percent) of young children are poor only, but almost half are not poor but deprived (48 and 49 percent, respectively). This again illustrates that income growth alone is unlikely to improve child deprivation after a minimum level.

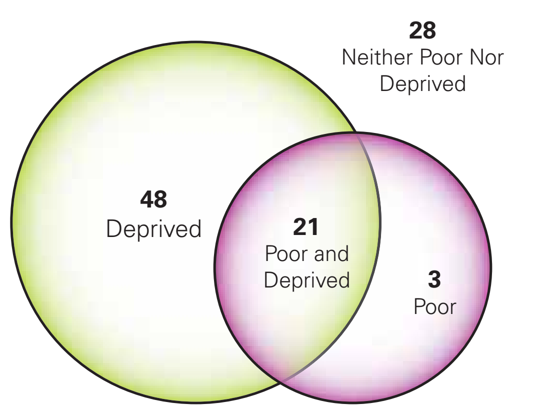


Figure 27 | Overlap between the percent of 0-23 month old children who are poor, and the percent who are deprived in three or more dimensions

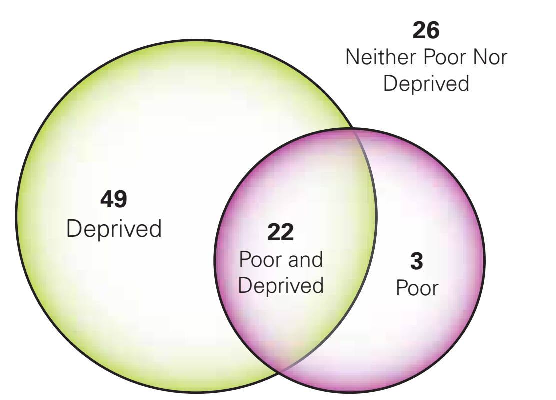


Figure 28 | Overlap between the percent of 24-59 month old children who are poor, and the percent who are deprived in three or more dimensions

5. Poverty and Deprivation among Older Children (5-17 Years Old)

Table 12 shows the dimensions used to build the multidimensional poverty indicator for children aged 5-17 The main differences with analyses for 0-59 month old children is that deprivation in health was not assessed for older children, while deprivation in education and information were assessed. Deprivation of information was only assessed for children aged 14-17 years; this measured whether their households had an electronic informational device, such as a television, radio, mobile phone, or computer.

In addition, two of the dimensions which were assessed across all age groups (i.e. nutrition and protection) were measured using different indicators in the older groups than the younger groups. For example, for 5-13 year old children, lack of breakfast the day before the survey or having less than three meals per day were used as measures of nutritional deprivation. In addition, for all 5-17 year old children, nutritional deprivation was identified as a Body Mass Index (BMI) two standard deviations below the mean of reference, which the World Health Organization (WHO) categorizes as thinness (de Onis et al. 2007).[1] There were some other differences in indicators between age groups. For example, disposal of stools was directly reported for younger children only. However, this was used as an indicator of sanitation for 5-17 year old children, because the manner of stool disposal affects general sanitary conditions and the disease environment, which affects all household members. In fact, half of the households of the older age groups have a child aged three or less.

These differences limit the direct comparability of findings between younger and older age groups (0-59 month olds and 5-17 year olds), and also between the two older age groups (5-13 year olds and 14-17 years olds). A full list of indicators and thresholds is provided in Appendix Table A1.

1 Obesity has been considered for both age groups, but not included since only a very small percentage of children fall into this category (0.5% of children 5-17 years old).

Table 12. *Indicators and dimensions for children aged 5-13 and 14-17 years*

INDICATOR LEVEL	DIMENSION	INDICATOR	AGE GROUP	
			5-13 Years	14-17 Years
Individual	Nutrition	1. Less than three meals/day*	√	
		2. No breakfast	√	
		3. Low Body Mass Index	√	√
	Protection	4. No birth registration*	√	√
		5. Engaged in child labor[2]	√	√
		6. Married before 18 years		√
	Education	7. Not enrolled in preschool[2]	√	
		8. Not enrolled in school	√	√
		9. Cannot read or write[2]	√	√
		10. 2+ years behind grade for age[2]	√	√
		11. Not completed primary		√
Household	Information	12. No communication devices*		√
	Sanitation	13. Unimproved or shared sanitation*	√	√
		14. Inadequate disposal of stool*	√	√
	Water	15. Unimproved, untreated water*	√	√
		16. 30+ minutes roundtrip to fetch water*	√	√
	Housing	17. Overcrowding*	√	√
		18. Natural flooring and roof*	√	√

Notes: "√" signifies that the indicator is assessed for this age group.

* Indicator also assessed for 0-59 month old children.

1. The frequency of meals is assessed at the household level for 5-13 year old children.

2. For select ages; see Appendix Table A1 for specific indicator definitions and thresholds.

5.1. MAIN FINDINGS

5.1.1. Children aged 5-13 years

The highest deprivation rates are found in this age group: overall 73 percent of children are deprived in three or more dimensions. The highest single deprivation rates are in sanitation (77 percent) and protection (68 percent), the latter driven by birth registration and, to a lesser degree, child labor. These are followed by housing deprivation (64 percent). The lowest deprivation rates occur in education, since most children in this age group in Tanzania are enrolled in school. Children aged 5-13 years who live in rural areas, in large families, or with a head of household with low levels of education are more deprived across all dimensions than urban children, children in small families, and children with a head of household with relatively high education. It is found that 5-13 year old girls are less deprived of education than same-age boys.

The relationship between consumption and the number of deprivations per child is again stronger in rural areas than in urban areas, and stronger for children in households below the poverty line than for those in households above it. Higher proportions of poor than non-poor children are deprived in all dimensions, the largest differences being in the areas of nutrition (22 percentage points), protection (17 percentage points), and housing (16 percentage points). The overlap between monetary poverty and deprivation is largest among 5-13 year olds, with 25 percent of children experiencing both types of poverty. Nevertheless, the largest group of 5-13 year old children (44 percent) again is those who are deprived only.

5.1.2. Children aged 14-17 years

Overall deprivation rates are lowest among this age group, in which 50 percent of children are deprived in three or more dimensions. Children aged 14-17 years are most deprived of education (72 percent), sanitation (71 percent), and protection (67 percent). Boys are more deprived than girls in nutrition and education, and children living in a female-headed household are more deprived of sanitation and information than those living in a male-headed household. Living in relatively large families and having a head of household or mother with a relatively low level of education increases the risk of deprivation in almost all dimensions.

Due to the lower level of overall deprivation in this age group, only 20 percent of children are both poor and deprived, and 38 percent are deprived only. Children living in monetarily poor households experience higher rates of deprivation of every dimension than non-poor children, except for nutrition, for which deprivation rates are very low overall (7 percent). The largest differences are seen in housing (22 percentage points) and education (18 percentage points). As with other age groups, the relationship between consumption and the number of deprivations per child is strong in rural areas and for children living in households below the poverty line, and is considerably weaker for urban children and those above the poverty line. The relationship between consumption and education deprivation is exceptionally strong for 14-17 year old rural children. The relationship between consumption and protection is also very strong, being particularly driven by child labor among the poorest households in rural areas.

5.2. SINGLE DEPRIVATION ANALYSIS

Figures 29 and 30 report the proportion of 5-13 year old children who are deprived in each dimension and its related indicators. The indicators with the highest deprivation rates are unimproved sanitation (77 percent), pre-school enrollment for children aged 5-6 years (63 percent), birth registration (61 percent), overcrowding (50 percent), and frequency of meals (37 percent). These drive the dimension deprivation rates, the highest of which are sanitation, protection, housing, and nutrition. One of the lowest deprivation rates is for school enrollment (5 percent), since most children in this age group in Tanzania are enrolled in school. Other indicators of educational deprivation, such as literacy and grade-for-age status, are only defined for children older than 9 years of age. The BMI indicator also only showed a 5 percent deprivation rate, that is, only 5 percent of 5-13 year olds were found to be thin by WHO definitions.

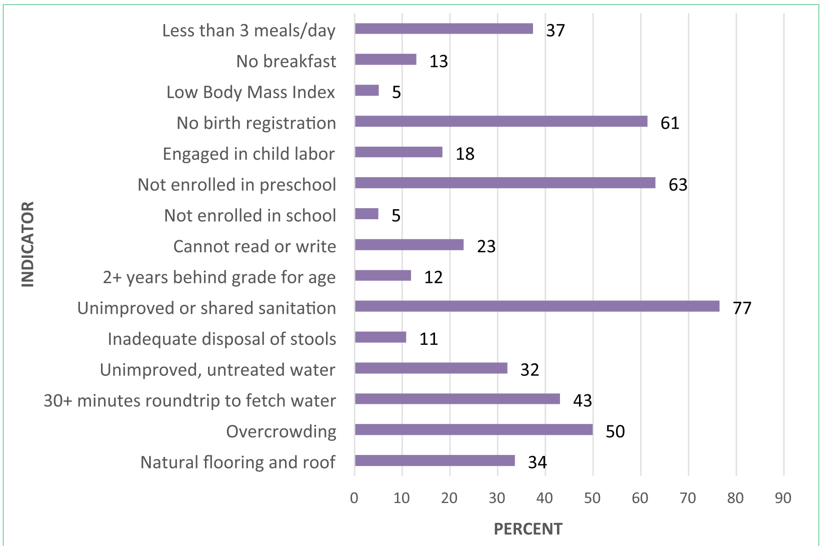


Figure 29 | Percent of 5-13 year old children deprived, by indicator

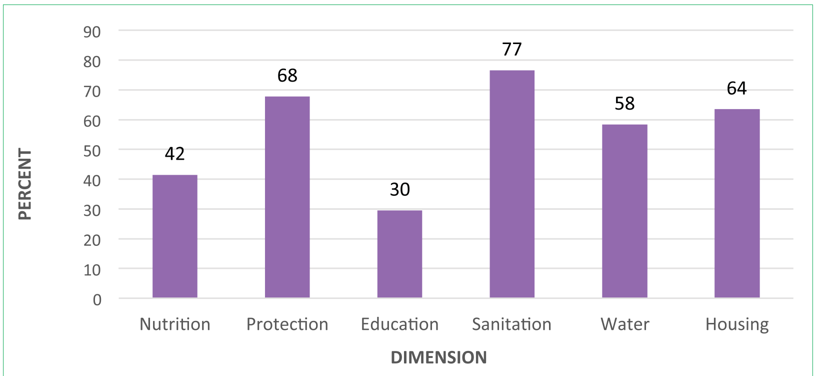


Figure 30 | Percent of 5-13 year old children deprived, by dimension

Figures 31 and 32 show similar results for 14-17 year old children. The highest deprivation rates are found in sanitation (71 percent), birth registration (61 percent), overcrowding at home (46 percent), and time to water source (40 percent). These four indicators drive the high rates of deprivation seen in the broader areas of sanitation, protection, education, housing and water.

This study found the marriage rates for 14-17 year old children to be surprisingly low at three percent, which was almost entirely reported for girls and coincided very closely with the reported pregnancy rate.[2]

Access to information through electronic media - the dimension that was only assessed for 14-17 year olds - shows a moderate rate of 16 percent deprivation. Protection, water, sanitation, and housing deprivations were much higher, but not very different from those of 5-13 year old children.

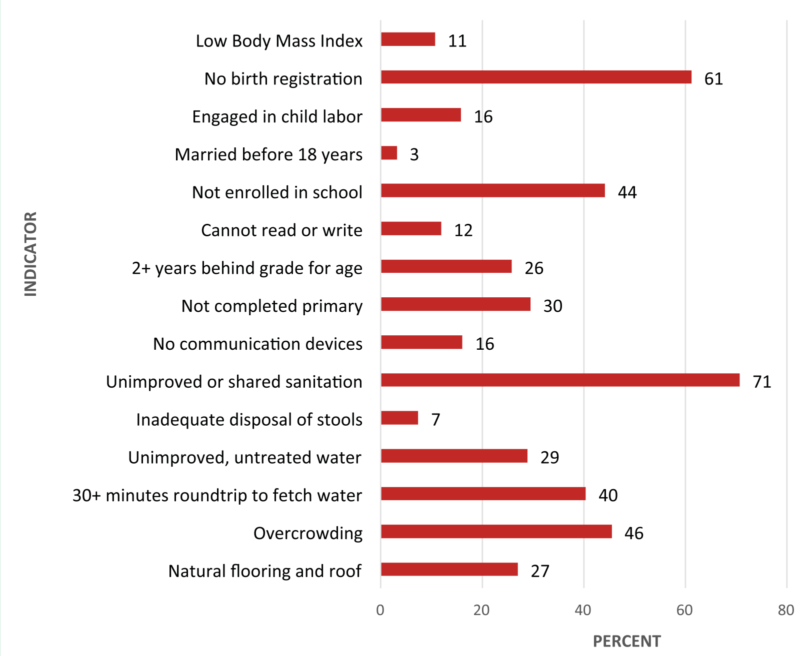


Figure 31 | Percent of 14-17 year old children deprived, by indicator

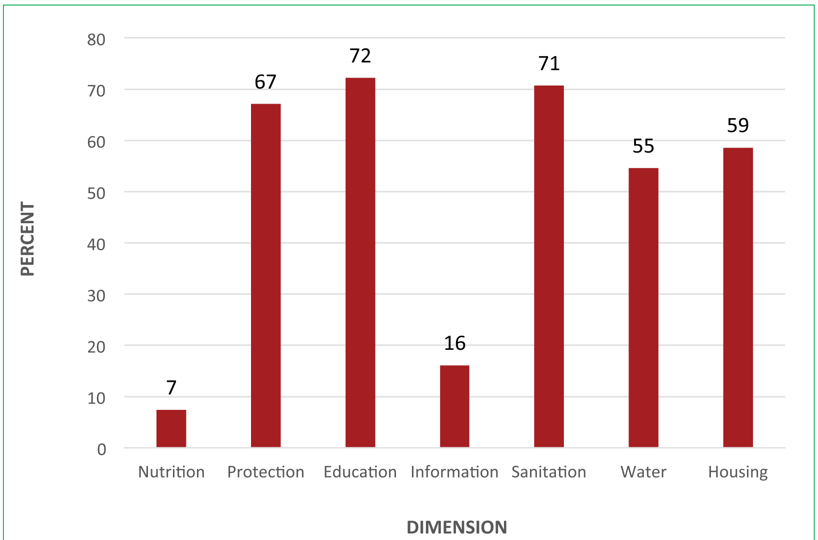


Figure 32 | Percent of 14-17 year old children deprived, by dimension

However, marked differences were seen between the two age groups in the areas of nutrition and education. Specifically, nutrition deprivation is 42 percent for the younger age group, but only 7 percent for older age group. This is largely due to the nutrition dimensional deprivation rate being driven up by frequency of meals for the younger group, which was not assessed for the older one. The rate of thinness as an indicator of nutritional deprivation is low for both groups, but somewhat higher for 14-17 year olds (11 percent) than for 5-13 year olds (5 percent).[3]

In contrast, education deprivation is much greater (72 percent) among the older age group than the younger one (30 percent), a reflection of a higher drop-out rate and a large proportion of older

2 This contrasts with findings from 2010 DHS, where 37 percent of women aged 20-24 years reported having married before age 18, while 7 percent reported marrying before age 14

3 Given nutrition in 14-17 year old children is only measured by the BMI in this study, the resulting proportions might be expected to be the same. However, BMI data were only collected from 1,575 14-17 year olds, while nutritional deprivation was assessed for the entire sample of 2,283 14-17 year olds. The larger denominator resulted in the different deprivation rates seen for BMI (11 percent) and nutrition overall (7 percent).

children who are two or more years behind in school. In fact, lack of school enrollment is one of the highest indicators of deprivation for 14-17 year olds. Among those who go to school, one in four are more than two grades behind their grade-for-age.

Figures 33 and 34 show that rural 5-17 year olds experience worse deprivation of almost all indicators than their urban counterparts, except for overcrowding, similar to the youngest age groups. Rural children are more likely than urban children to have less than three meals per day, and to be categorized as thin according to their BMI results. Rural children also are less likely to be able to read and write, and are more often behind their scheduled grade for age in school. Notably, there is almost no difference between rural and urban 5-13 year old children in school enrollment.

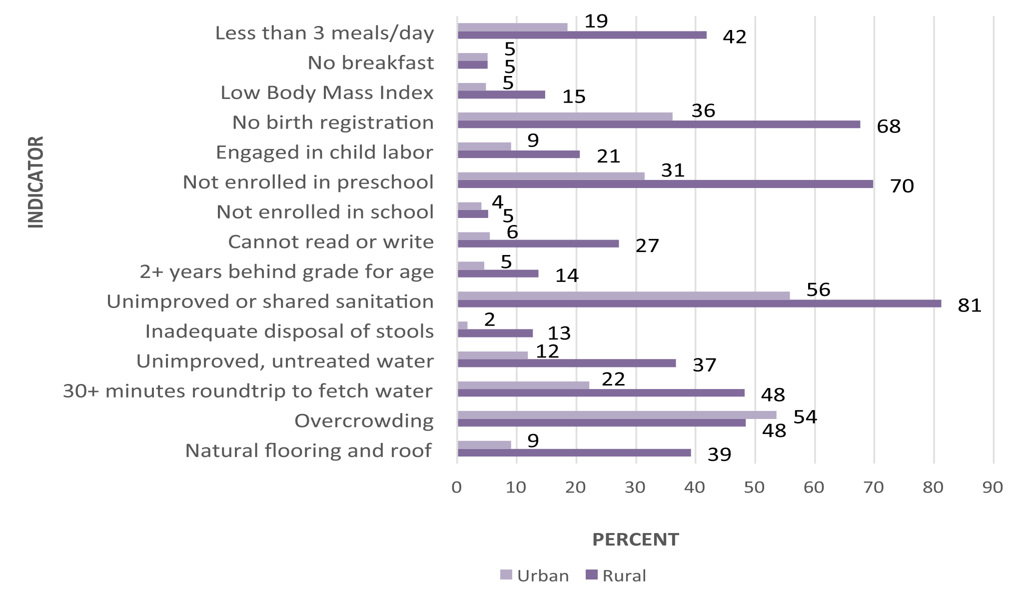


Figure 33 | Percent of 5-13 year old children deprived, by indicator and urban/rural status

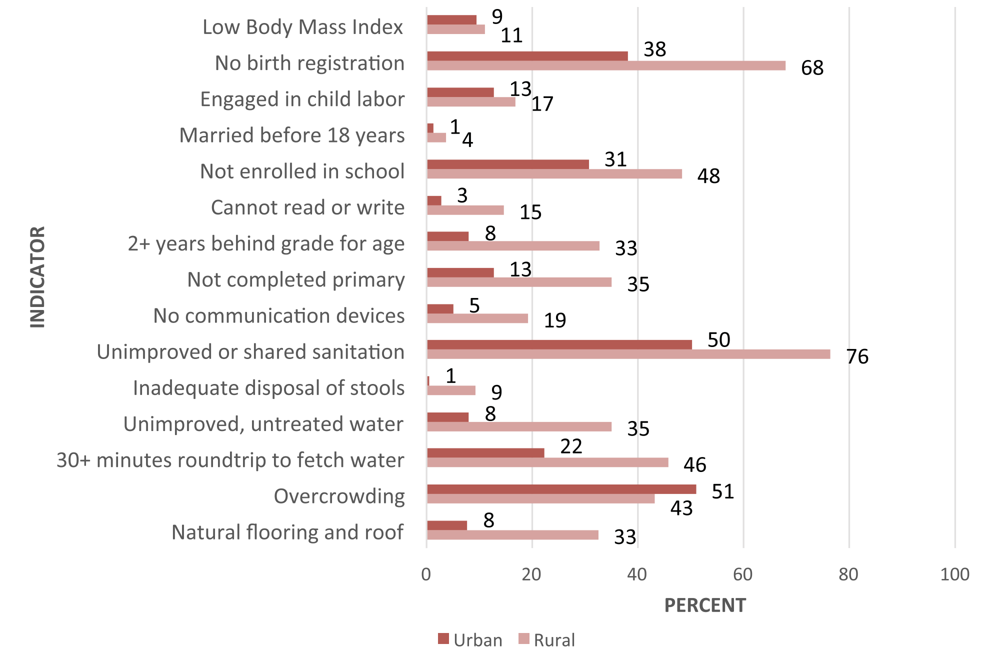


Figure 34 | Percent of 14-17 year old children deprived, by indicator and urban / rural status

Rural children aged 14-17 years are more deprived in almost all indicators than their urban counterparts. They are consistently more deprived of birth registration and all indicators of education. Specifically, almost one half (48 percent) of rural children are not enrolled in school, one in three are more than two grades behind and have not finished primary school (33 and 35 percent, respectively), and 15 percent are not able to read and write. Rural children – particularly those aged 5-13 years – also experience higher rates of child labor than urban children. Twenty-one percent of 5-13 year olds and 17 percent of 14-17 year olds in rural areas are engaged in child labor, compared to 9 and 13 percent of their urban counterparts, respectively.

Table 13 shows that rural 5-13 year olds are significantly more deprived across all six dimensions than their urban counterparts. Table 14 shows a similar pattern for rural 14-17 year olds, i.e. significantly greater deprivation of five out of the seven dimensions assessed for them, relative to their urban counterparts. The education level of the head of the household and the mother play an important role in countering deprivation. For both age groups, having a head of household with a relatively low level of education increases the chance of deprivation in almost all dimensions. Similarly, children aged 5-13 years with a mother who has completed primary school are three times less deprived than children whose mother had no schooling. Results from this bivariate analysis and regression analysis presented later in the report clearly show that the education of adult household members is key in reducing child deprivation, and particularly educational deprivation.

Table 13. *Bivariate analysis of dimensional deprivation by background characteristic, for 5-13 year old children*

BACKGROUND CHARACTERISTIC	DIMENSION DEPRIVATION RATE (PERCENT)					
	Nutrition	Protection	Education	Sanitation	Water	Housing
GENDER:						
Male	41	69	32*	76	59	63
Female	42	67	27*	77	58	64
URBAN/RURAL STATUS:						
Urban	23*	42*	14*	56*	28*	58*
Rural	46*	74*	33*	81*	66*	64*
HOUSEHOLD:						
Three or fewer children	39	58*	23*	72	48*	54*
More than three children	43	71*	32*	78	62*	67*
HEAD OF HOUSEHOLD:						
Male	41	67	28*	75	60	62
Female	45	70	34*	83	54	68
Single, divorced or widowed	44	68	31	82*	51*	65
Married or living with partner	41	68	29	75*	60*	63
Younger than 60 years	42	67	29	77	58	64
60 years or older	40	73	33	73	62	61
Some primary education	43*	72*	32*	80*	62*	65*
Completed primary education	25*	30*	11*	43*	28*	49*
PARENTS:						
Living with at least one parent	42	68	30	78	60*	64
Living without parents	38	66	29	72	49*	61
Mother has some primary education	43*	71*	31*	80*	63*	64*
Mother completed primary education	26*	25*	8*	36*	23*	49*
ALL	42	68	30	77	58	64

*Indicates t-test for difference in means between groups is significant at the 95% confidence level.

Table 14. *Bivariate analysis of dimensional deprivation by background characteristic, for 14-17 year old children*

BACKGROUND CHARACTERISTIC	DIMENSION DEPRIVATION RATE (PERCENT)						
	Nutrition	Protection	Education	Information	Sanitation	Water	Housing
GENDER:							
Male	11*	68	76*	17	71	53	60
Female	4*	66	69*	16	71	56	57
URBAN/RURAL STATUS:							
Urban	6	44*	44*	5*	50*	26*	53
Rural	8	74*	80*	19*	76*	63*	60
HOUSEHOLD:							
Three or fewer children	5	59*	62*	15	64	43*	45*
More than three children	9	72*	78*	17	75	61*	66*
HEAD OF HOUSEHOLD:							
Male	9*	66	74	12*	69	55	58
Female	4*	69	68	30*	76	55	59
Single, divorced or widowed	4*	66	68	28*	74	52	59
Married or living with partner	8*	67	73	13*	70	55	58
Younger than 60 years	7	66	72	16	71	54	58
60 years or older	8	71	74	17	69	56	59
Some primary education	8	70*	76*	18*	75	59*	61*
Completed primary education	5	42*	46*	3*	40	21*	41*
PARENTS:							
Living with at least one parent	8*	66	72	17	73	57*	59
Living without parents	5*	69	74	13	65	48*	56
Mother has some primary education	8	69*	75*	19*	76*	59*	61
Mother completed primary education	4	26*	28*	2*	30*	21*	46
ALL:	7	67	72	16	71	55	59

*Indicates t-test for difference in means between groups is significant at the 95% confidence level.

When education results were disaggregated by gender as shown in Figure 35, this study found that 14-17 year old girls are less deprived than boys. Specifically, higher proportions of 14-17 year old boys than girls are: not enrolled in school (45 versus 44 percent, respectively); not able to read and write (14 versus 10 percent); two years or more behind their grade for age (33 versus 19 percent); and have not completed primary school (34 versus 26 percent) (Figure 36).

Notably, boys are more likely than girls to have a low BMI (16 and 5 percent, respectively), and also more likely to be engaged in child labor (20 and 13 percent, respectively). These differences result in

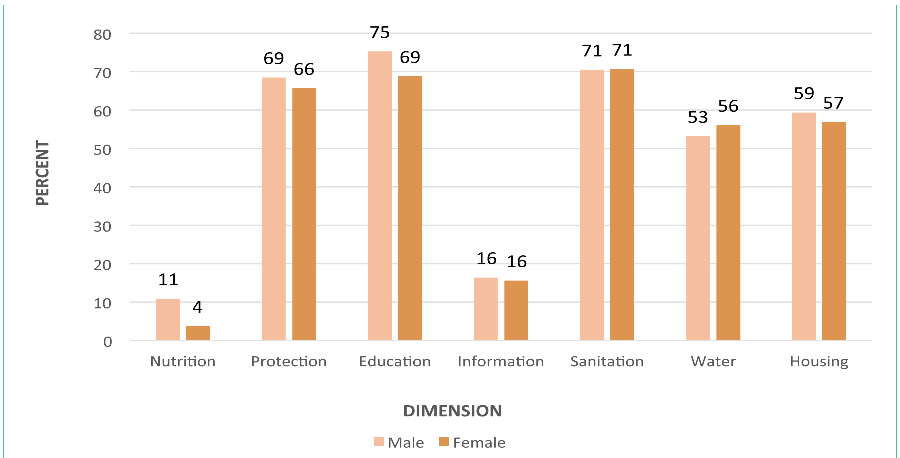


Figure 35 | Percent of 14-17 year old children deprived, by dimension and gender

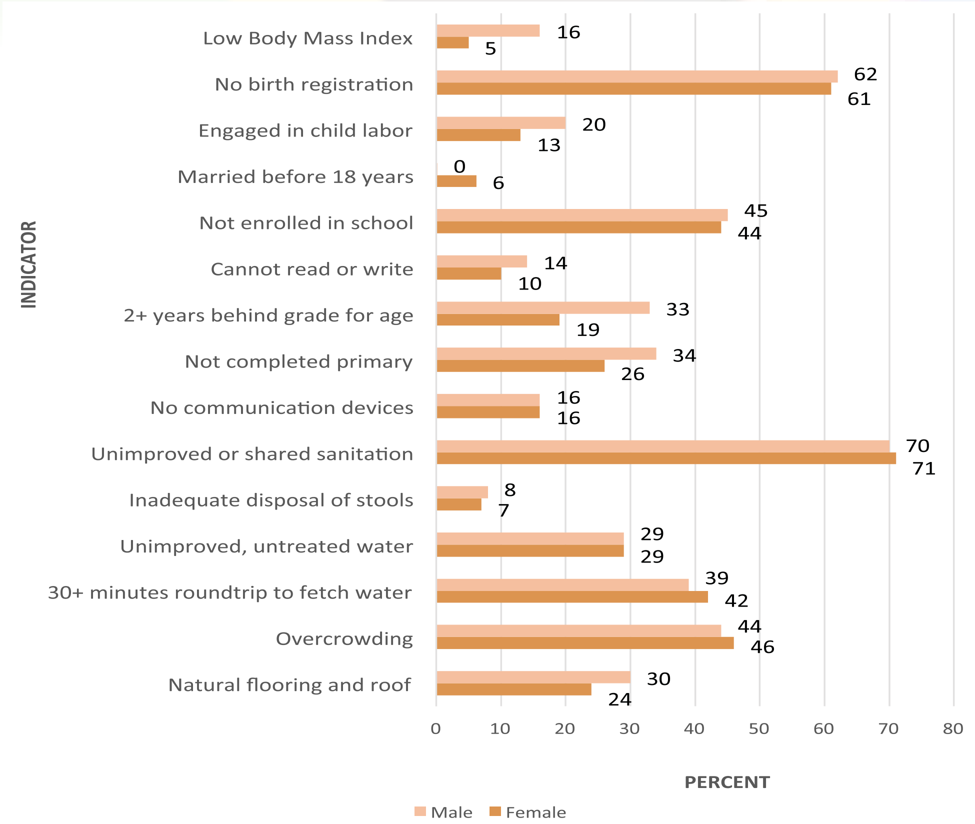


Figure 36 | Percent of 14-17 year old children deprived, by indicator and gender

higher rates of deprivation for boys in nutrition and education, whereas there are no significant differences in other dimensions. However, it should be stressed that there is some limitation on information on issues related especially to girls. For example, the rate of early marriage, while low, is almost entirely due to girls.

5.3. OVERLAP OF DEPRIVATIONS

Figures 37 and 38 show the percent overlap of specific deprivations with other deprivations for the two age groups. So few children have only one deprivation that this estimate is not shown on the graphs. Having only one deprivation is rare because of the high number and interconnectedness of all deprivations. For example, only 1 percent of the 42 percent of children who were deprived of nutrition are deprived of nutrition alone. About two in five 5-13 year old children who are

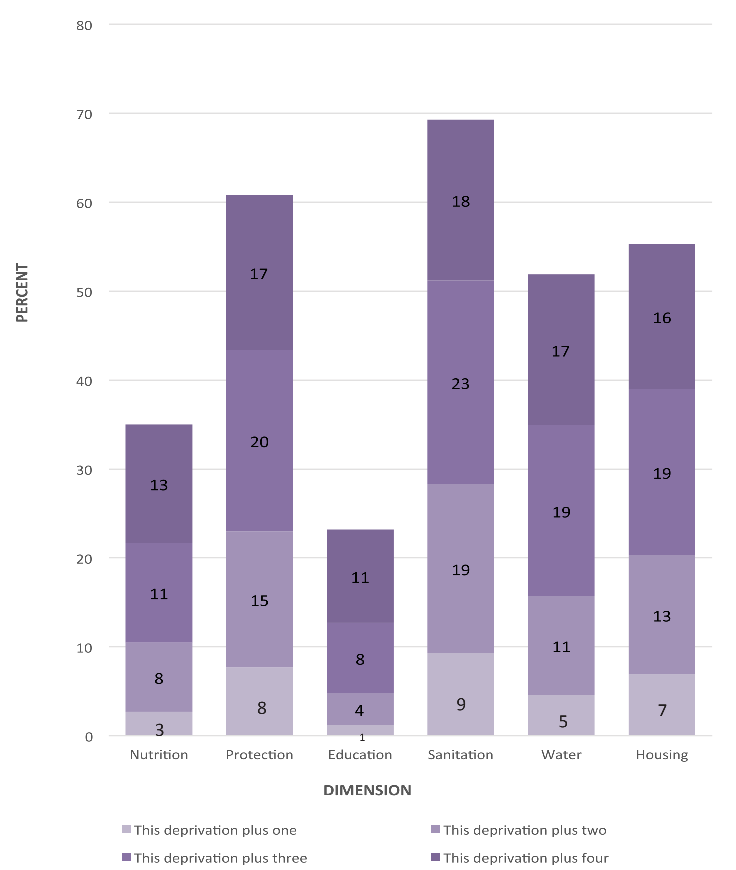


Figure 37 | Percent of overlap of specific deprivations with 1-4 other deprivations, for 5-13 year old children

deprived of protection, water, and housing are deprived in two or three other dimensions at the same time; this is also true for 14-17 years olds who are deprived of education, protection, and sanitation. However, no one is deprived in all dimensions measured for their age group, i.e., six for 5-13 year olds, and seven for 14-17 year olds.

Figures 39 and 40 show the three dimensions which have the highest degree of overlap for 5-13 and 14-17 year olds, respectively. One-third (31 percent) of 5-13 year old children are deprived of housing, water, and protection simultaneously, while only 8 percent are not deprived in any of those dimensions. For 14-17 year old children, the three dimensions that have the highest degree of overlap are protection, education, and water. One-third (36 percent) of these children are deprived in those three dimensions simultaneously, and an additional one-fifth (19 percent) are deprived in both education and protection.

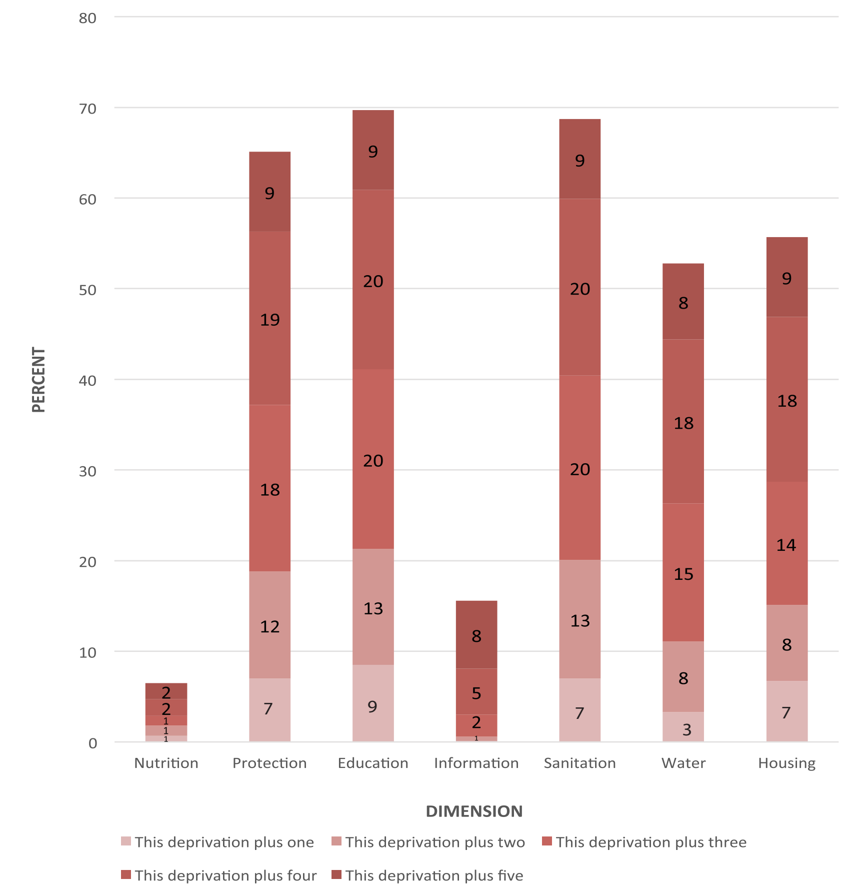


Figure 38 | Percent of overlap of specific deprivations with 1-5 other deprivations, for 14-17 year old children

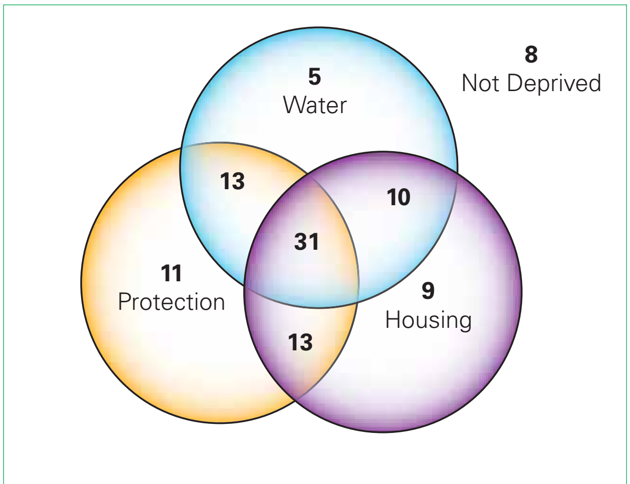


Figure 39 | Percent of overlap of deprivation in protection, water, and housing for 5-13 year old children

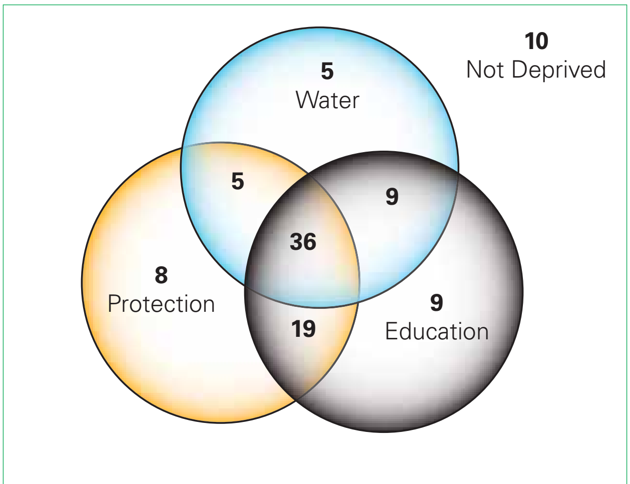


Figure 40 | Percent of overlap of deprivation in protection, education, and water for 14-17 year old children

5.4. MULTIPLE DEPRIVATION ANALYSIS

Figure 41 shows the percent of older children by the number of deprivations per child and age group. Only 4-6 percent of older children in Tanzania are not deprived in any dimension. Half of both age groups are deprived in three or four dimensions, i.e. 56 percent of 5-13 year olds and 49 percent of 14-17 year olds. No children experience all of the possible deprivations defined for their age group, and few 14-17 year old children (0.5 percent) experience six or seven deprivations simultaneously.

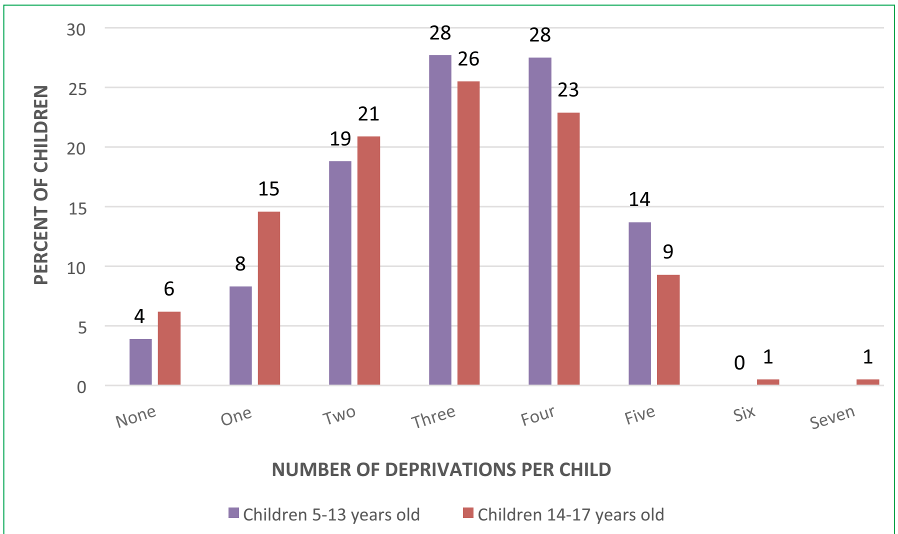


Figure 41 | Percent of older children, by number of deprivations per child and age group

Table 15 shows the deprivation headcounts and intensity for older children by age group. Children aged 14-17 years have an additional row, because their potential deprivation is assessed for a total of seven dimensions. As for the previous age groups, almost all 5-13 year old children (96 percent) are deprived in at least one dimension, and on average those children are deprived in 3.2 dimensions (i.e. 53 percent of six total dimensions). Two-thirds (69 percent) of 5-13 year old children are deprived in three or more dimensions, and they are deprived, on average, in 3.7 dimensions.

Overall, 5-13 year old children experience a slightly lower adjusted headcount ratio than seen for 0-23 and 24-59 month old children earlier (Table 11), suggesting slightly better welfare overall. However, 14-17 year old children have the highest quality of welfare according to these measures, as they consistently experience fewer deprivations and lower intensity of deprivations than the other three groups. Nonetheless, more than nine in ten (94 percent) 14-17 year old children are deprived in at least one dimension, and on average those children are deprived in 2.9 dimensions (i.e. 42 percent of seven total dimensions). Similarly, 58 percent of 14-17 year old children are deprived in three or more dimensions, and they are deprived, on average, in 2.7 dimensions (i.e. 53 percent of seven total dimensions).

Table 15. *Multidimensional deprivation measures for 5-13 and 14-17 year old children*

NUMBER OF DEPRIVATIONS / CHILD	HEADCOUNT (H) (Percent children at different thresholds)		INTENSITY (A) (Percent total deprivations)		ADJUSTED HEADCOUNT RATIO (M_0)	
	5-13 years old	14-17 years old	5-13 years old	14-17 years old	5-13 years old	14-17 years old
One or more	96	94	53	42	0.51	0.39
Two or more	88	79	57	47	0.50	0.37
Three or more	69	58	63	53	0.44	0.31
Four or more	41	33	72	62	0.30	0.20
Five or more	14	10	83	72	0.11	0.07
Six or more	-	1	-	86	-	0.00

Figure 42 shows the percent of 14-17 year old children, by number of deprivations per child and gender. There is no striking difference between boys and girls, but a higher proportion of boys (11 percent) than girls (7 percent) are deprived in six dimensions.

Figure 43 shows the change in the probability of a child being deprived in three or more dimensions, for both older age groups according to different background characteristics. As for younger children, living with a head of household with a relatively low education level increases the probability of being deprived. If the head of household is separated or divorced, children are 8 percentage points more likely to be deprived than if the head was never married. The activity of the head of household also is relevant for older children. Taking as reference point a head of household who does not work, if a head of household is instead a paid employee, this reduces a child's likelihood of being deprived by 5 percentage points. In contrast, living in a farmer's household increases the chance of being deprived by 7 percentage points. Children living in rural areas have a 13 percentage point higher likelihood of being deprived than children in urban areas.

Complete regression analyses for children aged 5-17 years, including the results for number of deprivations per child, are reported in Appendix Table A8.

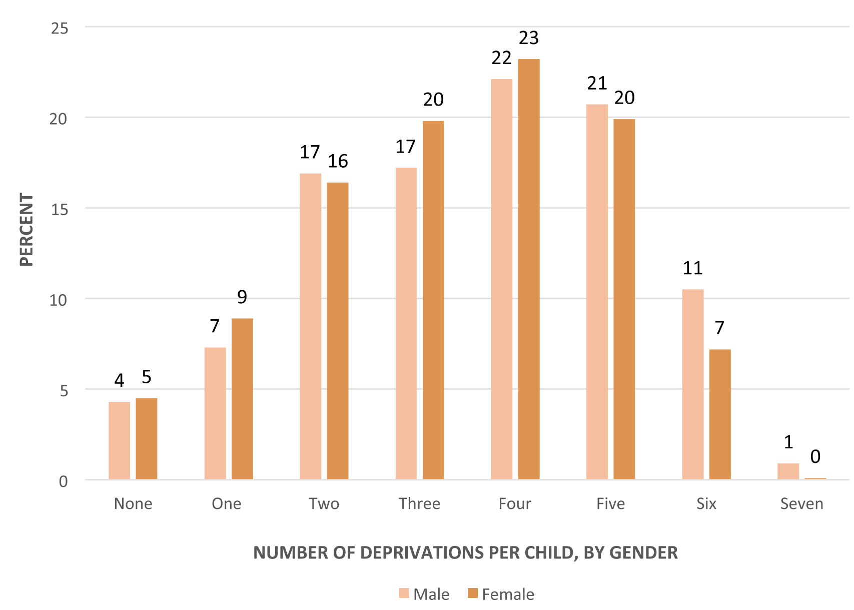
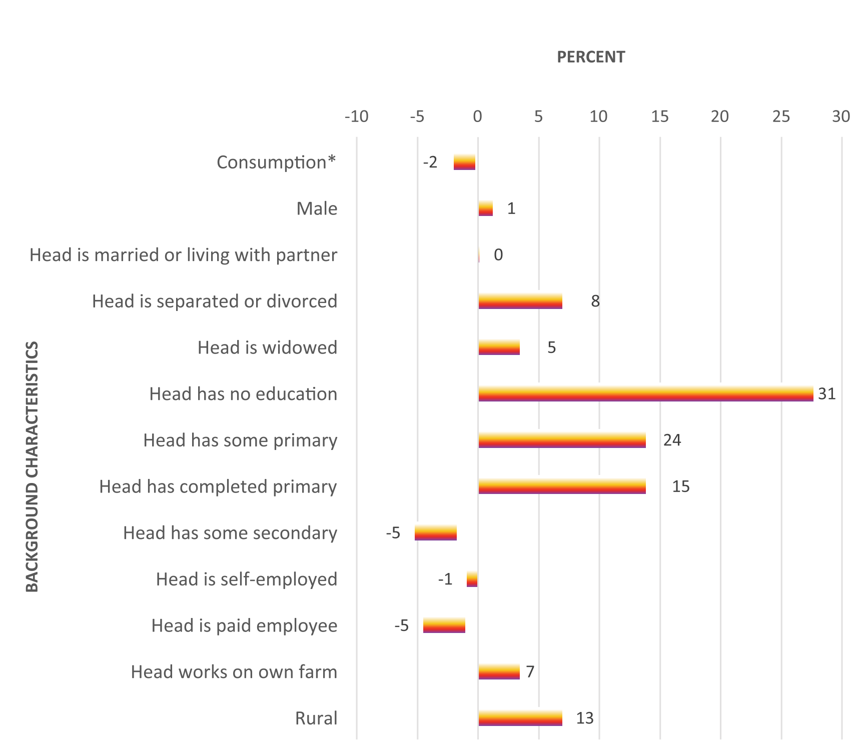


Figure 42 | Percent of 14-17 year old children, by number of deprivations per child and gender



*10,000 Tanzanian Shillings
per month per adult equivalent

Figure 43 | Change in probability of being deprived in three or more dimensions, for 5-17 year old children

5.5. MONETARY POVERTY AND DEPRIVATION

Figures 44 and 45 illustrate the difference in deprivation rates between poor and non-poor 5-17 year old children. Children living in households which are monetarily poor are consistently more deprived than non-poor children in all dimensions, similar to the earlier findings for younger children. The only notable contrast with the earlier results is in nutritional deprivation of poor (8 percent) and non-poor (7 percent) children aged 14-17 years, as their rates are not significantly different.

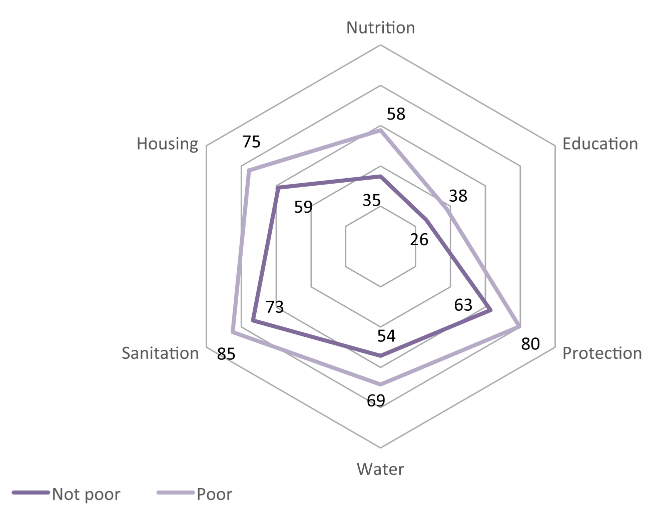


Figure 44 | Percent of 5-13 year old children deprived, by dimension and poverty status

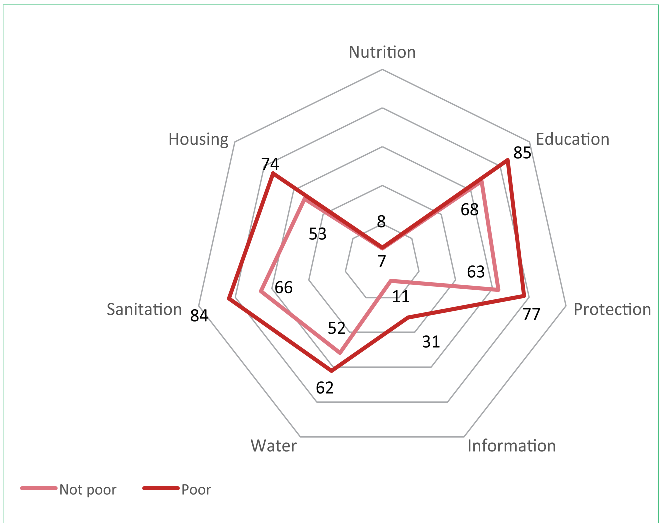


Figure 45 | Percent of 14-17 year old children deprived, by dimension and poverty status

Figures 46 and 47 trace the relationships between deprivation and consumption for the two older age groups. They are similar to the rates seen for the younger age groups. In both cases below, the graphs are steepest below the poverty line, especially for rural children, signaling a strong relationship between deprivation and consumption for poor children, particularly those in rural areas. The graphs become flatter above the poverty line, although they still remain fairly steep. For these age groups, the lines do not cross, meaning that children in rural areas are always more deprived than urban children, even if they have high consumption. However, the urban and rural lines become closer at the 200,000 or 250,000 Tanzanian Shilling marks for 5-13 and 14-17 year olds, respectively.

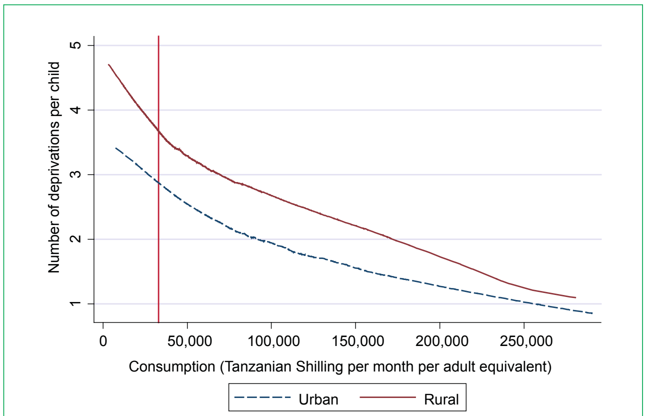


Figure 46 | Relationship between consumption and number of deprivations per child, for 5-13 year old children

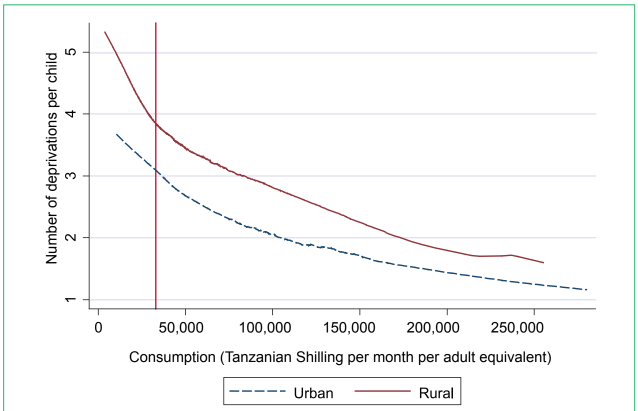
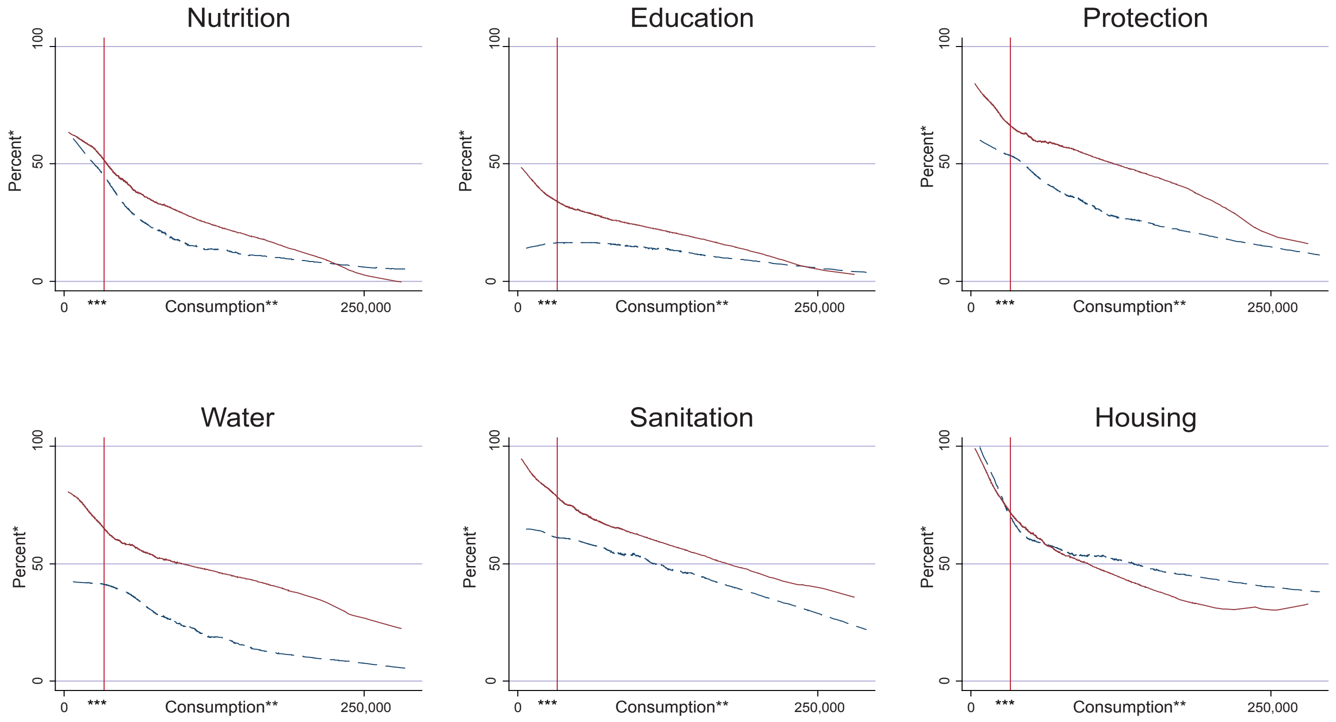


Figure 47 | Relationship between consumption and number of deprivations per child, for 14-17 year old children.

Figures 48 and 49 detail the relationship between consumption and each deprivation for older children. For both older age groups, the relationship between consumption and housing is quite strong, especially for poor children and children in rural areas. The water and sanitation graphs instead are steep below the poverty line, but become flatter as consumption increases. For 5-13 year old children, the curve for education is almost flat, meaning that educational deprivation only has a very weak relationship with monetary well-being. However, the curve is very steep for 14-17 year old children in rural areas, meaning that expenditure constraints play an important role in educational deprivation for those children.

For children aged 14-17 years, the curve for nutrition is almost flat, meaning that an increase in the household expenditure power will do very little to reduce deprivation in this dimension. This may partly reflect the low variance in BMI among this group; importantly, BMI is also related to non-income factors, such as diet diversity and exercise. Finally, the information curve is similar to those of water and sanitation: steeper below the poverty line, where there is a stronger relationship to consumption, and flatter afterwards.

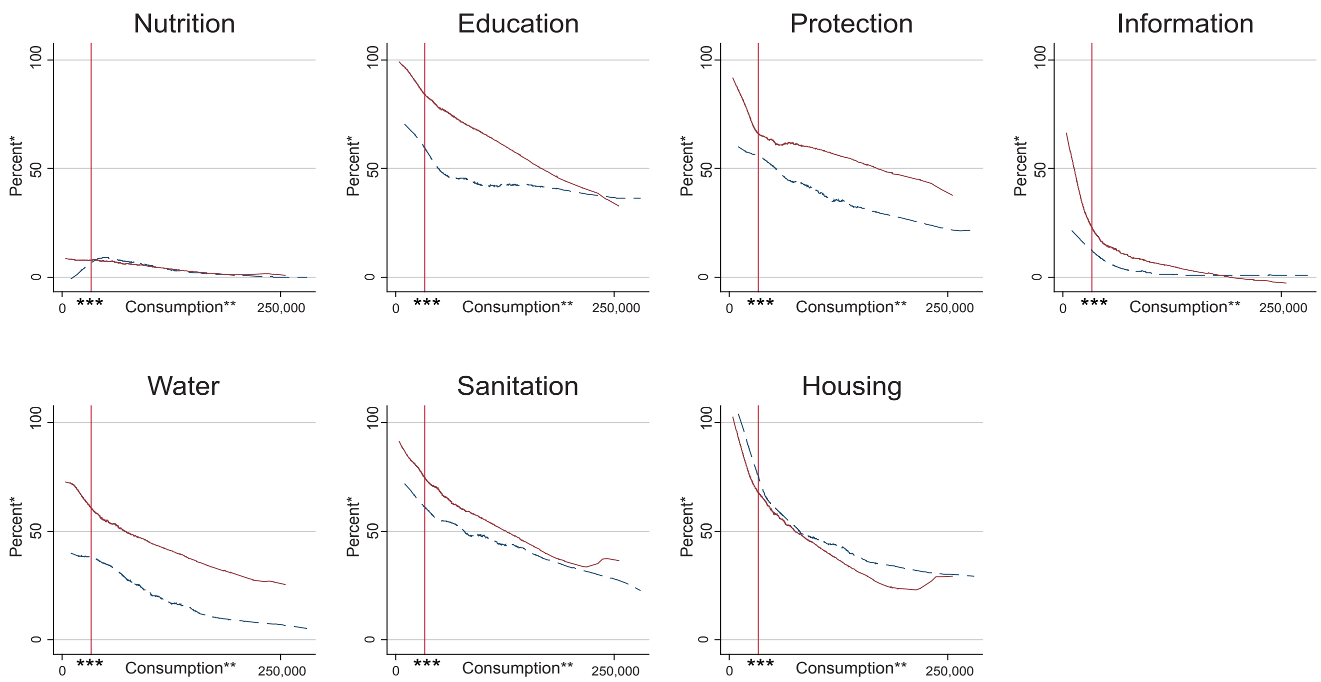
Generally, the findings for both age groups suggest that, while child deprivation in rural areas is higher than in urban areas, it also seems to be more responsive to an increase in spending.



*Percent of 5-13 year old children deprived
** Consumption (Tanzanian Shilling per month per adult equivalent) ***Poverty line

Urban Rural

Figure 48 | Relationship between consumption and dimensional deprivation, for 5-13 year old children



*Percent of 14 - 17 year old children deprived
** Consumption (Tanzanian Shilling per month per adult equivalent) ***Poverty line

Urban Rural

Figure 49 | Relationship between consumption and dimensional deprivation, for 14-17 year old children

Figures 50 and 51 show the overlap between monetary and deprivation poverty for 5-13 and 14-17 year old age groups, respectively. Similar to the younger age groups, there is moderate overlap between poverty and deprivation (25 and 21 percent). About two in five older children do not live in poor households but are deprived (44 and 38 percent), while about one in twenty are poor only (4 and 6 percent, respectively). One-fourth (27 percent) of 5-13 year olds are neither poor nor deprived, while this is the case for one-third (36 percent) of 14-17 year olds.

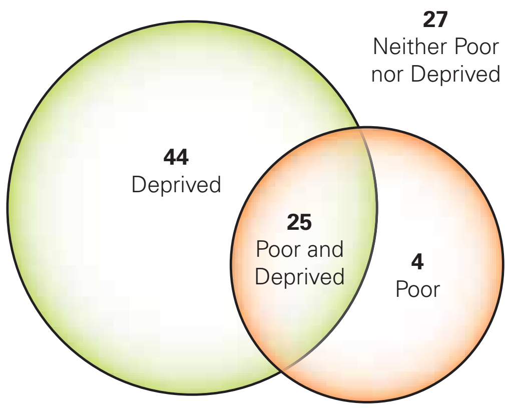


Figure 50 | Overlap between the percent of 5-13 year old children who are poor, and the percent who are deprived in three or more dimensions.

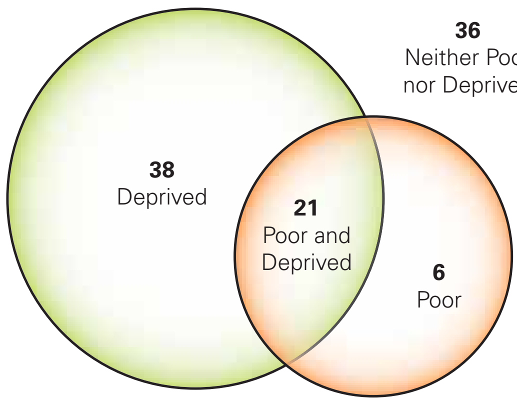
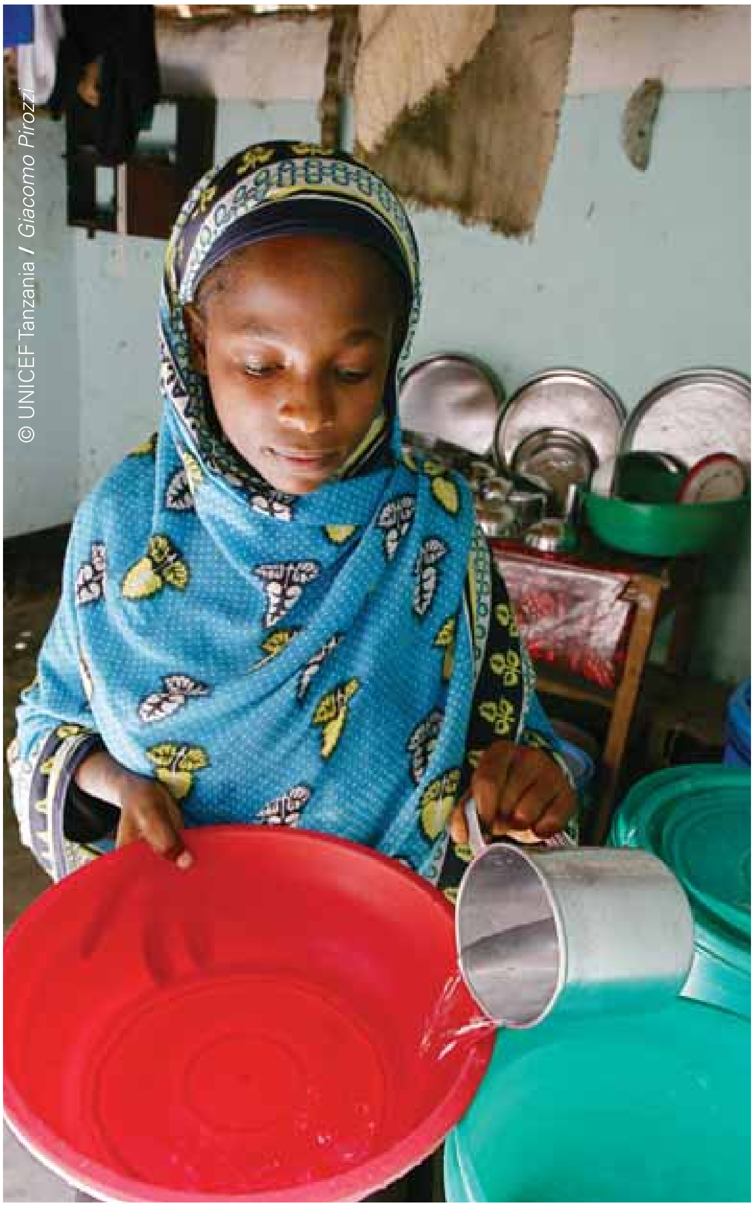


Figure 51 | Overlap between the percent of 14-17 year old children who are poor, and the percent who are deprived in three or more dimensions.

6. Dynamics of Child Poverty and Deprivation

This section exploits the longitudinal nature of the National Panel Survey series to assess the long-term dynamics of child poverty and deprivation. This analysis draws on the first (2008/09) and third (2012/13) NPS waves, to maximize the time between surveys and the chance of observing changes in indicators over time (NBS 2009; NBS 2014). First, broad indicator trends over time are examined. Second, data from individual children are linked and analyzed across survey rounds, to track individual changes in well-being, to assess the fluidity of poverty at the individual level, and to examine key factors which determine children's movement in and out of poverty.

Due to discrepancies between the first and the third round of the survey, a few of the indicators which were used in the earlier analysis of 2012/13 NPS data are not included in this longitudinal analysis. Specifically: missing breakfast is not included in the nutrition dimension; literacy is not included in the education dimension; and disposal of stools is not included in the sanitation dimension. In addition, birth registration is only included in the protection dimension for children under age 5 years. Finally, in the sanitation dimension, as the categories for sanitation type in 2008/09 do not distinguish between covered or open latrine, only not having access to sanitation is considered a deprivation.[4] The full list of indicators used to calculate each dimension is shown in Appendix Table A9.



Due to different definitions or loss of some indicators in the longitudinal analyses, some of the longitudinal (2008/9-2012/13) and cross-sectional (2012/13) results are not directly comparable. For example, the sanitation dimension here relates only to open defecation, making the rates much lower than in the main section. Since the main goal in this section is to understand if and how deprivation changes in time, the main concern is consistency between waves.

Table 16 shows single indicator deprivation rates for children aged 0-17 years by survey round. Many deprivations appear to have decreased over time, such as stunting (from 40 to 34 percent) and non-completion of primary school (from 50 to 32 percent).

4 This explains the large difference in the Sanitation deprivation rate used in the preceding chapters and those shown in this chapter. Our focus in this chapter is in changes in deprivation using a consistent measure over time.

However, a few deprivations seem to have increased, such as access to sanitation (11 to 18 percent) and unimproved, untreated water (13 to 34 percent).

Table 16. *Percent of all children deprived, by indicator and NPS round*

DIMENSION	INDICATOR	2008/09 NPS			2012/13 NPS		
		Number of children	Deprivation rate (percent)	Standard Deviation*	Number of children	Deprivation rate (percent)	Standard Deviation
NUTRITION	1. Stunted	2143	40	49	3145	34	47
	2. Less than three meals/day	2544	12	32	3653	11	31
	3. Low Body Mass Index	4660	8	27	5600	7	25
HEALTH	4. Inadequate antenatal care	784	5	23	2504	3	16
	5. Unskilled birth attendance	784	44	50	2504	43	50
PROTECTION	6. No birth registration	784	24	43	3653	58	49
	7. Engaged in child labor	5866	24	43	7958	19	39
	8. Married before 18 years	1691	3	17	2246	3	18
EDUCATION	9. Not enrolled in preschool	995	70	46	1324	65	48
	10. Not enrolled in school	4664	12	32	6507	18	38
	11. 2+ years behind grade for age	3088	24	42	3852	17	37
	12. Not completed primary	1408	50	50	1827	32	47
INFORMA-TION	13. No communication devices	1690	26	44	2246	17	37
SANITATION	14. Unimproved sanitation	8412	11	31	11597	18	39
WATER	15. Unimproved, untreated water	8412	13	33	11609	34	48
	16. 30+ minutes roundtrip to fetch water	8412	57	50	11611	44	50
HOUSING	17. Overcrowding	8412	47	50	11611	50	50
	18. Natural flooring and roof	8412	43	50	11611	34	48
Mean number of deprivations per child		8412	2.1	1.2	11611	1.2	1.1

*Standard deviation is measured in percentage points, not percent.

In Table 17, poverty rates are compared for different populations in the 2008/09 and 2012/13 NPS rounds, including poverty among 0-13 year old, 0-17 year old, and 4-17 year old populations. Analyses included cross-sectional, cohort, and panel comparisons. Note the poverty rates used in these analyses were calculated using poverty lines and consumption aggregates specific to each round.[5]

Table 17 suggests that the proportion of all people living below the poverty line increased from 13 to 22 percent in the four years between surveys. Child poverty follows the same trend, increasing from 15 to 29 percent during that period. The third row of Table 17 shows the poverty rate among children 0-17 years compared with those age 4-21 four years later—this is a cohort sample. Results indicate a change in child poverty similar to that of the cross section among this cohort of children. When data were linked and analyzed for the same individuals over time (i.e. children in 2008/09 for whom data were collected when they were 4-21 years old in 2012/13), the 2012/13 proportion in

5 While the 2008/09 estimates are taken directly from that survey's report, those from the 2012/13 report were modified for this study, as noted earlier (NBS 2009; NBS 2014).

poverty was slightly higher (26 percent). When a young sub-set of that group (0-13 year old children) were analyzed at the individual level, they showed the greatest increase in poverty rates, from 15 to 27 percent.

Table 17. *Poverty rates by NPS round*

TYPE OF ANALYSIS	INDI-VIDUALLY LINKED?	TYPE OF POPULATION	2008/09 NPS			2012/13 NPS		
			Number population	Mean percent poor	Standard Deviation*	Number population	Mean percent poor	Standard Deviation
Cross-sectional	No	All ages	16709	13	34	24767	22	41
Cross-sectional	No	All children (0-17 years)	8316	15	35	11683	29	44
Cohort	No	All children in 2008/09 and all 4-21 year old children in 2012/13	8316	15	35	11018	25	43
Panel	Yes	Only children in 2008/09 for whom have data in 2012/13	7322	15	36	7299	26	44
Panel	Yes	Only 0-13 year old children in 2008/09 for whom have data in 2012/13	5828	15	36	5812	27	45

*Standard deviation is measured in percentage points, not percent.

Table 18 repeats this analysis based on deprivation rather than monetary poverty. The proportion of all children who were deprived in three or more dimensions increased from 34 to 37 percent between the two NPS rounds. The bottom row of Table 18 shows the change in deprivation among the panel of children who were 0-13 years in 2008/09 (and thus 4-17 years in 2012/13 and shows a 4 point increase in deprivation, which is about one half of the general change in poverty when comparing children 0-13 years in 2008/09 with children 0-13 years in 2012/13 (8 percentage points—row 2). Hence the dynamics of deprivation appear to be a bit different when examining the panel of children versus the cross-section—we will explore this phenomenon in more detail below.

Table 18. *Deprivation rates dynamics between NPS round*

TYPE OF ANALYSIS	INDI-VIDUALLY LINKED?	TYPE OF POPULATION	2008/09 NPS			2012/13 NPS		
			Number children	Mean percent deprived*	Standard Deviation**	Number children	Mean percent deprived	Standard Deviation
Cross-sectional	No	All children (0-17 years)	8297	34	47	11597	37	48
Cross-sectional	No	All 0-13 year old children	6643	28	45	9365	36	48
Cohort	No	All 0-13 year old children in 2008/09 and all 4-17 year old children in 2012/13	6643	28	45	8655	33	47
Panel	Yes	Only 0-13 year old children in 2008/09 for whom have data in 2012/13	5820	28	45	5727	32	47

*Deprived of three or more dimensions simultaneously.
**Standard deviation is measured in percentage points, not percent.

To further examine the dynamics of child deprivation and poverty, Tables 19 and 20 focus on the panel of children who were 0-13 years old in 2008/09 and subsequently were 4-17 years old in 2012/13. Table 19 shows whether individual children were deprived in three or more dimensions in both, either, or neither of the survey rounds. The majority (54 percent) of children were neither deprived in 2008/09 nor in 2012/13. In contrast, 15 percent of 0-13 year old children were found to be deprived in both surveys. Notably, about one-third (32 percent) of children changed deprivation status by the second survey. Specifically, 19 percent were not deprived in 2008/09, but became so by the 2012/13 survey, while 13 percent experienced the opposite, i.e. they were deprived in 2008/09, but no longer were so in 2012/13.

Table 19. *Deprivation status for children who were 0-13 year old in 2008/09, by NPS round*

DEPRIVATION STATUS		2012/13 NPS		
		Not deprived*	Deprived	Total
2008/09 NPS	Not deprived	74 [54]	26 [19]	[73]
	Deprived	47 [13]	53 [15]	[27]
	Total	[67]	[33]	[100]

Notes: The first number in each cell is the row percentage and adds up to 100 across the row. The second number in brackets and italics gives the cell percentage; the sum of these numbers in all four cells is 100.
*Deprived of three or more basic needs simultaneously.

The transition matrix for monetary poverty shown in Table 20 indicates a similar level of transition (30 percent) over time as found for deprivation. Specifically, 23 percent of 0-13 year olds were not poor in 2008/09 but became so by the 2012/13 survey, while 7 percent were poor in 2008/09, but no longer were in 2012/13. During the same period, 60 percent of 0-13 year old children remained above the poverty line, while one in ten remained poor.

Table 20. *Poverty status for children who were 0-13 year old in 2008/09, by NPS round*

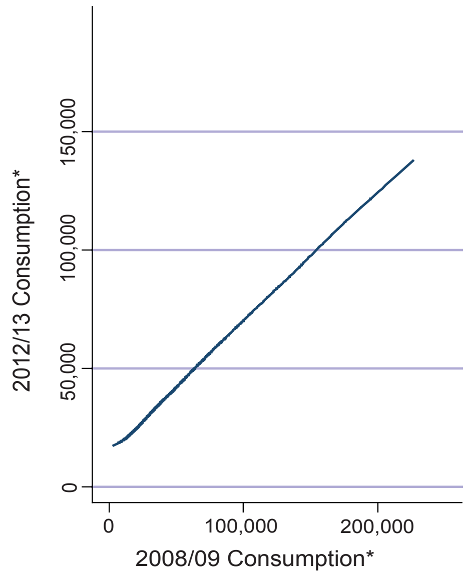
DEPRIVATION STATUS		2012/13 NPS		
		Not poor	Poor	Total
2008/09 NPS	Not poor	72 [60]	28 [23]	[83]
	Poor	40 [7]	61 [10]	[17]
	Total	[67]	[33]	[100]

Notes: The first number in each cell is the row percentage and adds up to 100 across the row. The second number in brackets and italics gives the cell percentage; the sum of these numbers in all four cells is 100.

The persistence of poverty is important to understand, because it sheds light on why and to what extent households move in and out of poverty, and what types of policy might be useful to reduce poverty. A society that maintains a 25 percent poverty rate over time, where the exact same 25 percent of the population is poor, is quite different from a society where the poverty rate is 25 percent but a very different set of households are poor from year to year. In the first society, poverty is a structural phenomenon, while in the second poverty is transitional and may be due to temporary changes in the household. The policy responses for these scenarios would need to be different to be effective.

How persistent is poverty in Tanzania? Table 20 indicates that approximately one-third of 0-13 year old children moved in or out of poverty over a four-year period, with three out of four of those children moving into poverty. Another way to assess persistence is to see how strong prior poverty status is in predicting future poverty status. Such an analysis is only possible with panel data. This is shown in Figures 52 and 53, which contrast a graph of 2008/09 and 2012/13 consumption with a graph of 2008/09 and 2012/13 deprivation (as measured by three deprivations per child). The slopes of these lines give an idea of the state dependency or persistence of the previous state of the same condition, with a steeper slope indicating higher dependence or persistence.

Among children in Tanzania, Figures 52 and 53 indicate that persistence is slightly stronger for consumption than for deprivations. This may partly be due to consumption being a household measure, while the level of deprivation is generated from a mix of household and individual level measures. Deprivation also have aspects which relate both to supply of services and social behaviour. In any case, these simple graphs suggest that it is somewhat easier for children to escape deprivation than monetary poverty.



*Tanzanian Shilling per month per adult equivalent

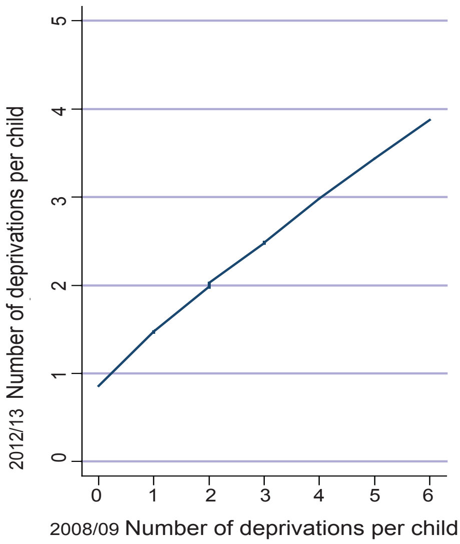


Figure 52 | Relationship between consumption in the 2008/9 and the 2012/13 National Panel Surveys

Figure 53 | Relationship between numbers of deprivations per child in the 2008/9 and the 2012/13 National Panel Surveys

Table 21 formalizes the graphs above through a set of regression analyses which use poverty or deprivation status in 2008/09, plus other control variables, to predict poverty or deprivation in 2012/13. The sample again is the panel of children who were 0-13 years old in 2008/09 and subsequently were 4-17 years old in 2012/13. The 'consumption' column uses per adult equivalent consumption as a continuous variable, and the results refer to increase in consumption. The 'poverty' column instead uses a binomial variable, with 0 equal to "not poor" and 1 equal to "poor"; its results refer to the probability of being poor. The column related to number of deprivations per child uses a continuous variable, so the results indicate increase in the number of deprivations per child. The last column is based on a binomial variable, for which 0 indicates children who are not deprived in three or more dimensions, while 1 indicates those who are thus deprived.

The key variable of interest in Table 21 is the dependent variable in the first row. If this variable has a coefficient estimate of 0, there is no relationship between prior well-being status and future well-being status, while if it is 1, there is a perfect relationship between the two. The closer the coefficient estimate is to 1, the stronger the persistence of that column's condition is over time. Table 21 is consistent with Figure 52 in suggesting that consumption poverty has very high persistence – in this case, the highest persistence of the four indicators examined in the table, i.e. a 48 percentage point change in probability. In contrast, experience of three or more deprivations is the least persistent condition. Children who are deprived in this way in 2008/09 are only 18 percentage points more likely to be deprived in 2012/13, if other factors in the regression model are held constant. This is surprisingly low.

Table 21. *Probability of future poverty or deprivation, for children who were 0-13 years old in the 2008/9 NPS, by background characteristic.*

BACKGROUND CHARACTERISTIC*	Consumption per capita**	Poverty	Number of deprivations per child	Deprivation status***
Dependent variable in 2008/09	**0.483**	**0.212**	**0.383**	**0.182**
	(40.89)	(15.81)	(28.20)	(15.77)
Age (2012/13)	-0.000	0.000	**0.023**	**0.006**
	(-0.17)	(0.29)	(6.39)	(4.32)
Male	0.003	-0.003	**0.055**	0.016
	(0.27)	(-0.29)	(1.96)	(1.48)
Rural	**-0.308**	**0.217**	**0.649**	**0.289**
	(-18.94)	(15.03)	(18.70)	(18.32)
Household size	**0.028**	**-0.023**	**-0.036**	-0.008
	(5.82)	(-5.47)	(-3.53)	(-1.94)
Household number of children	**-0.044**	**0.033**	**0.086**	**0.021**
	(-6.37)	(5.77)	(5.93)	(3.64)
Head of household female	0.008	0.015	**0.083**	**0.039**
	(0.46)	(1.04)	(2.17)	(2.68)
Head of household age	-0.001	-0.000	-0.002	-0.000
	(-1.13)	(-0.86)	(-1.94)	(-0.81)
Head of household completed primary education	**0.110**	**-0.078**	**-0.292**	**-0.098**
	(7.26)	(-6.77)	(-8.96)	(-8.29)
Living without parents	**0.060**	-0.025	**-0.147**	**-0.044**
	(2.79)	(-1.41)	(-3.18)	(-2.37)
Constant	**5.453**		**0.606**	
	(40.79)		(7.41)	
Observations (Population number)	5739	5739	5656	5656
R-squared	0.395		0.303	

Notes: Coefficients in bold indicate a significant difference at the 5 percent level. Coefficients multiplied by 100 are percentage point changes in the probability of the dependent variable, given a change in the variable listed in the first column.
*All background characteristics are from the 2008/09 NPS, unless otherwise indicated.
**Tanzanian Shilling per month per adult equivalent. Consumption in 2012/13 is in constant 2008/09 prices, deflated in accordance with the *National Panel Survey Wave 3, 2012-2013* report (NBS 2014).
***Deprived in three or more dimensions simultaneously.

What determines whether a child moves into or out of poverty or deprivation? Table 22 estimates these probabilities using similar regression models to those shown in Table 21. In the "entering poverty" column, chances of falling into poverty increase with the number of children in the household. They also increase with rural as opposed to urban residency. In contrast, the schooling of the head of household, and living *without* parents, are found to decrease chances of falling into poverty. This latter result is not intuitive and is worth examining further. It may partially be explained by a selection effect, as most of the children for whom this was the case were still related to the head of household (e.g. grandchildren). They might be living in households which are wealthier than those of their parents, or their parents may have migrated for higher paying work, enabling them to send money back to contribute to a relatively high household income.

None of the background characteristics are significant predictors of the movement out of poverty in the "leaving poverty" column. This may be due to the small sample size, and the relatively limited movement out of poverty during the four years between the 2008/09 NPS and the 2012/13 NPS. Notably, the NPS found that overall poverty increased in Tanzania during this period (NBS 2014). Finally, the probability of becoming deprived in three or more dimensions increases as a child gets older; this is in keeping with the earlier finding that the highest deprivation rates are among children aged 5-13 years. The probability also increases in female-headed households. In contrast, having a head of household who has completed primary education is protective in this case.

Table 22. *Probability of poverty or deprivation transition, for children who were 0-13 years old in the 2008/9 NPS, by background characteristic*

BACKGROUND CHARACTERISTIC*	PROBABILITY			
	Entering poverty	Leaving poverty	Becoming deprived**	Moving out of deprivation
Age (2012/13)	0.001	0.003	**0.005**	**-0.007**
	(0.82)	(0.68)	(3.51)	(-2.22)
Male	0.000	0.008	0.004	-0.049
	(0.01)	(0.22)	(0.36)	(-1.85)
Rural	**0.226**	-0.086	**0.258**	**-0.351**
	(14.92)	(-1.54)	(16.93)	(-6.37)
Household size	**-0.024**	0.010	-0.008	0.008
	(-5.53)	(0.71)	(-1.94)	(0.79)
Household number of children	**0.033**	-0.033	**0.021**	-0.022
	(5.46)	(-1.70)	(3.44)	(-1.59)
Head of household female	0.021	0.027	**0.036**	-0.047
	(1.43)	(0.55)	(2.30)	(-1.36)
Head of household age	-0.000	0.002	-0.001	-0.000
	(-0.65)	(1.08)	(-1.07)	(-0.20)
Head of household completed primary education	**-0.082**	0.011	**-0.102**	0.074
	(-6.95)	(0.27)	(-8.03)	(2.65)
Living without parents	**-0.041**	-0.099	**-0.059**	-0.049
	(-2.19)	(-1.55)	(-3.09)	(-0.93)
Observations (population number)	4,988	751	4,410	1,329

Notes: Coefficients in bold indicate a significant difference at the 5 percent level. Coefficients multiplied by 100 are percentage point changes in the probability of the dependent variable, given a change in the variable listed in the first column.
*All background characteristics are from the 2008/09 NPS, unless otherwise indicated.
**Deprived in three or more dimensions simultaneously.

Does income reduce the risk of deprivation among children? Figure 53 depicts the relationship between consumption and the number of deprivations per child, by urban/rural status over time. As shown earlier, the curve is quite steep at low levels of consumption. Among the poor, small increases in consumption thus have the potential to substantially reduce child deprivation. These curves quickly become flat, however, indicating that increases in consumption beyond the poverty line do not substantially reduce deprivation for children. Finally, the slopes of the curves are fairly similar across time. This relationship indicates stability, and supports the finding that an increase in income alone will not adequately resolve child deprivation.

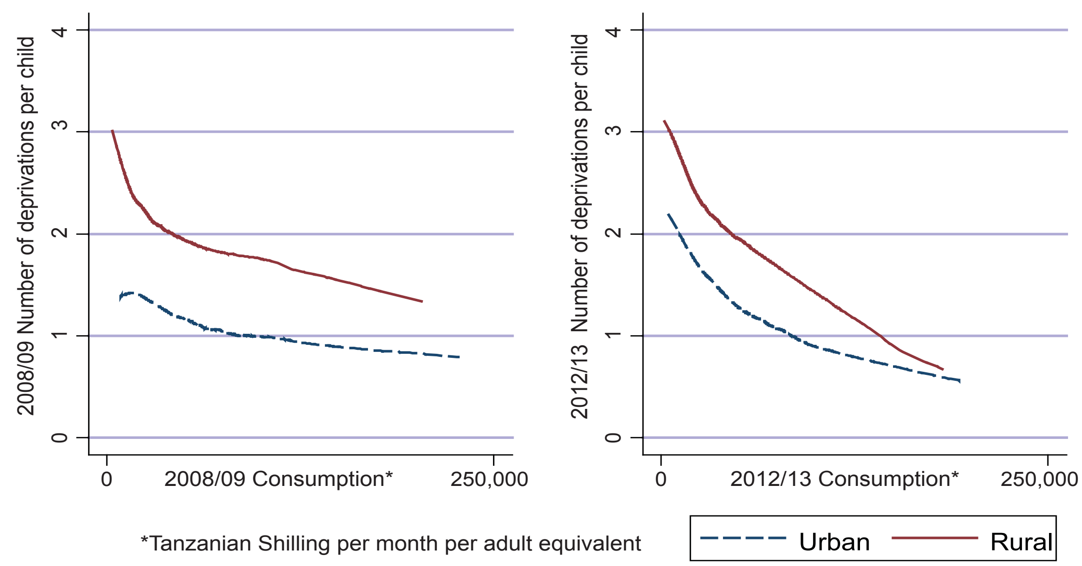


Figure 54 | Relationship between consumption and number of deprivations per child in both the 2008/9 and the 2012/13 National Panel Surveys

7. Conclusion and Recommendations

The United Nations (UN) General Assembly has identified the reduction of multidimensional poverty as a Sustainable Development Goal (SDG) (UN 2015). Specifically, SDG Goal 1.2 states: "By 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions" (UN 2015). Consequently, countries will be required to define and track multidimensional child poverty over the next 15 years. Towards that end, this study has constructed a Tanzania-specific indicator to assess the interrelatedness of monetary poverty and multiple deprivations, and has presented the first national estimates of child poverty and deprivation in Tanzania.

This report adapted the MODA methodology for the Tanzanian context. Potential deprivation in six or seven dimensions (i.e. nutrition, health, protection, education, information, sanitation, water, and housing) was assessed by analyzing NPS data for four age groups (0-23 months, 24-59 months, 5-13 years, and 14-17 years). The study found that 74 percent of all Tanzanian children live in deprivation poverty using a cut-off of three or more dimensions. The highest rates of deprivation occur among rural children and those aged 5-13 years. The highest child monetary poverty rates were found among children aged 5-13 years and 14-17 years.

A key finding is that about half (48 percent) of all Tanzanian children are deprived but do not live in monetarily poor households. This indicates that program targeting based on monetary poverty alone will miss a large number of children who are otherwise deprived. Further, one-quarter (26 percent) of Tanzanian children are both poor and deprived in three or more dimensions. These are the most vulnerable children in the country, and they should be prioritized for social programming in line with the SDG agenda's emphasis on leaving nobody behind.

The relationship between poverty and child deprivation was found to be strongest among the most income poor households, suggesting that income-support programs such as TASAF III / Productive Social Safety Net (PSSN) has a strong potential to reduce child deprivations among those households. However, the link between income and deprivations weakens considerably with increasing consumption, even for households just above the poverty line, and there are significant numbers of deprived children living in such households. This suggests that non-income interventions which directly address specific deprivations will be necessary to reduce them on a larger scale.

The causes of deprivations identified in this study are complex and multi-faceted. Deprivation could be due to inadequate access to services, limited knowledge on the part of the child's parent, or insufficient monetary resources in the household to fulfil a particular child right. For example, a child may not be registered because registration services are not provided in the child's community, because parents do not realize the importance of registration or because parents cannot afford or do not prioritize the cost related to registration (i.e. transport costs and opportunity costs connected to missing a day of work). In order to adequately address child non-monetary poverty it is therefore important to understand its direct and underlying causes.

The study found a large degree of overlap in deprivations, which suggests that integrated approaches are needed in order to adequately address child poverty and deprivation. For households living below the poverty line, who are eligible for a cash transfer, a model of social protection where cash transfer recipients are linked to basic services such as nutrition, health and birth registration via community extension workers and other local government structures, would provide significant added value. These linkages are referred to as 'social protection plus' or 'cash plus' and have proven to greatly amplify the impact of the cash, as demonstrated by extensive evidence in the Eastern and Southern African region and beyond.

In Tanzania the 'cash plus' model is being developed through strong linkages with health and education services within TASAF III / PSSN, including a forthcoming community engagement toolkit, where recipients on cash transfer days can participate in a community session on topics of importance to child wellbeing such as nutrition and child health. Cash recipients will also be linked to other available community interventions in their local environment, with an initial focus on nutrition. Further, a pilot will be developed to layer (and rigorously test) a 'bundled' intervention - comprising economic livelihoods, gender transformation, and HIV/sexual reproductive health information and services - targeting adolescents and youth living in a sub-set of TASAF beneficiary households, with the goal of facilitating safe transitions to adulthood.

Further, this study has found that while poverty to some extent is transitory, with a number of households moving in and out of poverty, the current level of poverty of a household is an important determinant of the future poverty level of the child. This finding serves to emphasize the importance of supporting families with both monetary and non-monetary interventions in order to ensure the conditions are met for children to grow and develop. The importance of alleviating poverty in childhood cannot be overstated, as it may have irreversible consequences in the life of a child and may prevent a child from developing to his or her full potential. Consequently, reducing child poverty in all its forms is essential for the development of a healthy and skilled work force for Tanzania, as a precondition for industrialization and economic transformation, in line with Tanzania Development Vision 2025.

The study found that one of the most important factors associated with the level of poverty and deprivation among children is the education level of particularly the mother and the head of household. In order to break the cycle of poverty, investing in education and removing barriers to education participation for children, such as having to engage in labour or getting married at an early age, will be essential.

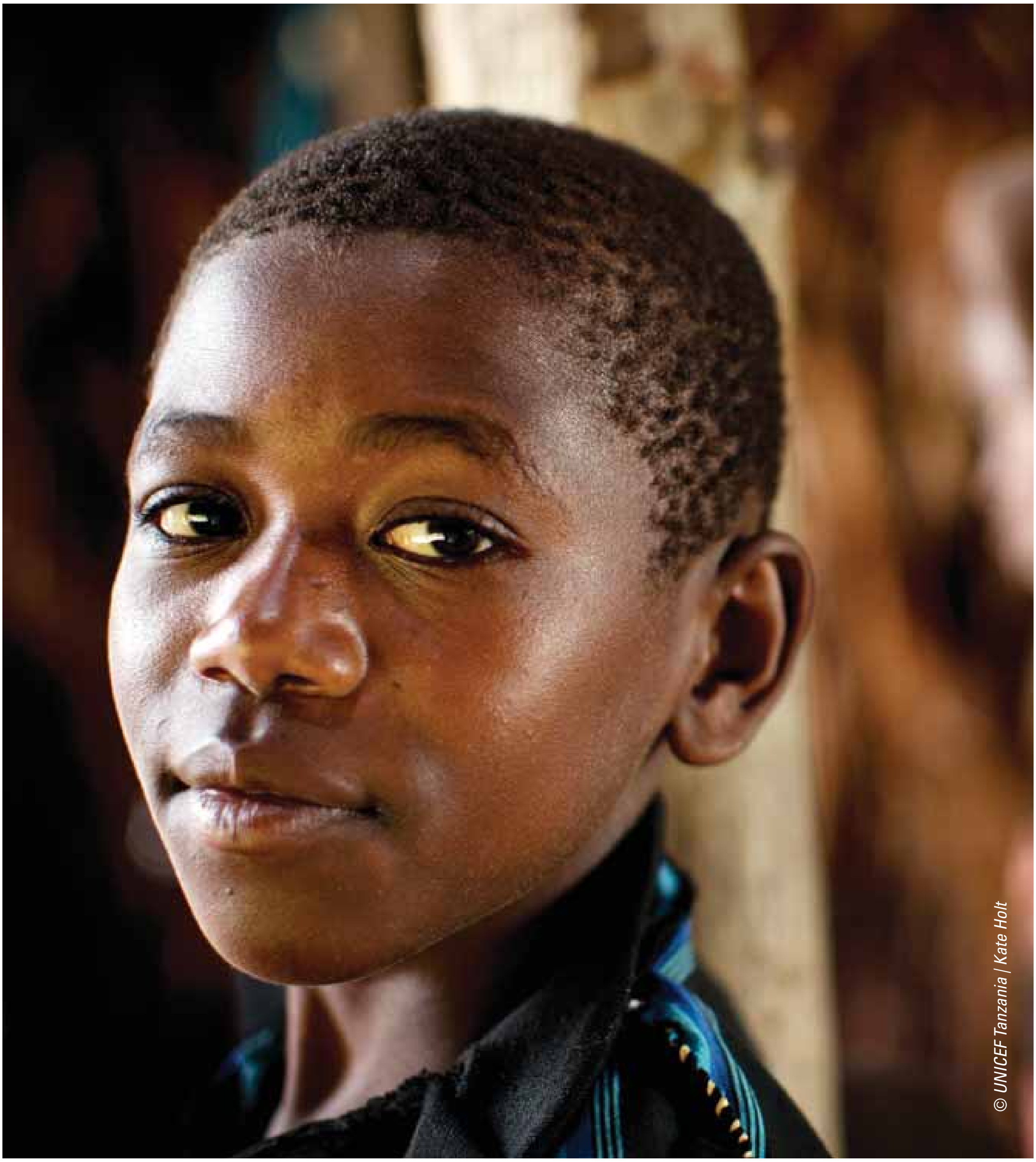
While this study has provided valuable insight on the current state of child poverty in Tanzania, there are also questions which warrant further research, foremost among them the situation of children affected by monetary and deprivation poverty in urban areas. Aggregate data presented in this report indicate that children in urban areas are overall better off than rural children on most indicators. One notable exception to this is the housing dimension, which shows that overcrowding is a larger problem in urban areas. However, because the aggregate data may hide pockets of deprivation, and the situation of poverty in urban areas is poorly understood, further research into deprivations particular to urban areas needs to be conducted. This is all the more important considering that the urban population is expected to rapidly increase over the next years.[6]

In the same way as further research is needed to map out the causes of deprivation in children as well as their consequences, a costing exercise should be undertaken to assess the level of investment needed to reverse the situation and highlight the cost of inaction. Addressing child poverty in all its forms requires adequate, efficient, effective and equitable public spending. In this light, a government-led mechanism to measure, track and report on child-focused budget provisions and expenditure is critical. Further, sub-national estimates of both monetary and deprivation poverty should be generated in order to demonstrate geographical disparities in child well-being, and inform national and local planning and budgeting processes.

In conclusion, the dynamics of child deprivation and poverty are complex. Simple counts of children living in poor households miss a significant number of children who suffer from deprivation poverty, and therefore do not provide a full picture of quality of life and a human being's opportunities and experience in life. Analysis of the specific deprivations experienced by children, and the background

6 The current rate of urban growth is 5.2% per year. (NBS 2015)

characteristics associated with those deprivations, including relationship with income, can provide valuable information to guide policies and programs to address child poverty as a critical rights issue and constraint for the development of the country. In light of these findings, and the inclusion of child poverty in the Sustainable Development Goals (SDGs), **it is recommended that child deprivation poverty counts based on nationally available data be routinely calculated and reported along with the number of children living in monetarily poor households to inform Tanzania's future reporting on Goal 1.2 of the SDGs as well as to monitor efforts to address child poverty in Tanzania within the Five-Year Development Plan II in Mainland and MKUZA II's Successor Strategy in Zanzibar.**



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9. Appendix

Table A1. *Dimensions, indicators, and threshold values, by four age groups*

DIMENSION AND INDICATORS	THRESHOLD VALUES	AGE GROUP			
		0-23 months	24-59 months	5-13 years	14-17 years
NUTRITION					
Stunted	Height for age is lower than two standard deviations from WHO reference	√	√		
Meal frequency	Less than 3 meals per day[1]	√[2]	√	√	
Breakfast	No breakfast[3]			√	
Low BMI	BMI is lower than two standard deviations from WHO reference			√	√
HEALTH					
Mother's assisted delivery	Traditional birth attendant, friend or relative, none, other	√	√		
Antenatal care	No regular visit to clinic when mother pregnant[4]	√	√		
PROTECTION					
Birth registration	No birth registration	√	√	√	√
Child labor	UNICEF definition and hazardous act[5]			√	√
Early marriage	Married before 18 years[6]				√
EDUCATION					
Preschool enrollment	Not enrolled in preschool[7]			√	
School enrollment	Not enrolled in school			√	√
Literacy	Cannot read or write[8]			√	√
Grade for age	2+ years behind grade for age[9]			√	√
Completed primary	Not completed primary				√
INFORMATION					
No communication devices	No computer/radio/TV/mobile phone				√
SANITATION					
Unimproved sanitation	Unimproved sanitation or shared toilet	√	√	√	√
Disposal of stools	Buried, left in the open, other[10]	√	√	√	√
WATER					
Source in rainy season	Unimproved source without treatment of water	√	√	√	√
Time in dry season	30+ minutes roundtrip to fetch water	√	√	√	√
HOUSING					
Over-crowding	People per room more than national median (1.84 people per room)[11]	√	√	√	√
Floor, roof	Natural flooring and roof	√	√	√	√

Notes:

"√" signifies that the indicator is assessed for this age group.

1. The NPS collects information on meals per day for the whole household, and also specifically for children aged 0-5 years within the household.
2. For children aged 6-59 months.
3. The NPS collects information on breakfast on the day before the survey for children up to age 13 years.
4. For children aged 24-59 months these indicators are imputed based on the observation of younger children of the same mother or household.
5. For children aged 5-11 years: more than one hour of economic activities or more than 28 hours of chores (e.g. fetching firewood or water) per week. For children aged 12-14 years: more than 14 hours of economic activities, or more than 28 hours of chores, per week. For children aged 15-17 years: more than 43 hours of total activities per week. Hazardous activities: House girls/boys; miners, blasters, stone cutters, mineral processors & mining plant operators and the like; metal molders, welders and the like; metal processors and metal plant operators; chemical processors and chemical plant operators; and construction laborers and the like.
6. For both boys and girls.
7. For children aged 5 and 6 years.
8. For children aged 10 years or more.
9. For children aged 9 years or more.
10. The question relates to the youngest child in the household. Half of the households have children under age 2 years, and 75 percent have a child under age 5 years.
11. For overcrowding, household members are counted as following: children 0-5 years count as 0.5, while members 5 years and older count as 1. The number of rooms excludes kitchens, bathrooms, and storage rooms.

Table A2. *Average age of child and head of household, and average number of people in household, by age group*

AGE AND NUMBER OF PEOPLE IN HOUSEHOLD	AVERAGE NUMBER				
	0-23 months old	24-59 months old	5-13 years old	14-17 years old	0-17 years old
AGE:					
Child age (months for 0-59 month olds; years for 5 years old and above)	8.9	40.9	11.9	15.5	10.5
Head of household age (years)	46.7	42.5	40.4	46.8	50.2
NUMBER OF PEOPLE IN HOUSEHOLD:					
0-4 year old children	1.1	1.9	1.9	1.1	0.8
5-13 year old children	2.6	1.8	1.6	2.3	1.9
14-17 year old children	0.7	0.5	0.5	0.9	1.5
18-25 year old adults	0.8	0.8	1.0	0.9	1.0
25-35 year old adults	0.7	0.9	0.9	0.6	0.4
36-50 year old adults	0.9	0.7	0.6	0.8	1.0
51-60 year old adults	0.3	0.2	0.2	0.3	0.4
61 year old and older adults	0.2	0.2	0.2	0.3	0.3
Total population	1519	2233	5808	2283	11843

Table A3. *Percent of children with different background characteristics, by age group*

BACKGROUND CHARACTERISTIC	PERCENT OF CHILDREN				
	0-23 months old	24-59 months old	5-13 years old	14-17 years old	0-17 years old
Male	49	50	50	49	49
Rural	78	80	77	77	76
Zanzibar	3	2	3	3	3
HEAD OF HOUSEHOLD:					
Female	23	18	16	23	27
Never married	11	7	6	11	14
Divorced/separated	8	5	5	8	8
Widowed	2	2	2	2	3
Married	79	85	87	79	76
No formal education	21	21	22	21	21
Some primary education	68	69	64	68	66
Completed primary education	1	1	2	1	2
Completed secondary education	6	5	8	6	7
Does not work or unpaid	21	22	21	21	22
Self employed	14	15	17	15	15
Earns a wage	14	16	17	15	14
Works on own farm	50	48	44	49	49
PARENTS:					
Living without parents	12	6	1	11	13
Both parents deceased	1	0	0	1	3
Mother has no formal education	25	25	26	26	28
Mother has some primary education	68	66	61	66	65
Mother has completed primary education	5	7	11	6	6
Mother has secondary education	2	2	2	2	2
Total population	1519	2233	5808	2283	11843

Table A4. *Distribution of monetarily poor and deprived children in Zanzibar and Mainland Tanzania*

WELL-BEING STATUS	PERCENT OF CHILDREN		
	Mainland	Zanzibar	Total
Neither poor nor deprived*	22	57	23
Poor only	3	14	3
Deprived only	49	16	48
Poor and deprived	27	13	26
Total deprived	76	29	74
Total poor	30	27	29

*Deprived of three or more basic needs simultaneously.

Table A5. *Marginal effects on dimensional deprivation, for 0-59 month old children*

COVARIATES	NUTRITION	HEALTH	PROTECTION	SANITATION	WATER	HOUSING
Consumption*	**-0.018** (-8.07)	**-0.014** (-6.10)	**-0.012** (-5.41)	**-0.007** (-4.20)	**-0.014** (-6.53)	**-0.014** (-6.95)
Age	**0.222** (11.87)	**-0.047** (-2.96)	-0.001 (-0.06)	-0.000 (-0.01)	0.004 (0.19)	**-0.039** (-2.02)
Male	**0.040** (2.63)	-0.005 (-0.40)	-0.003 (-0.20)	0.012 (0.86)	0.011 (0.70)	-0.006 (-0.36)
Rural	0.021 (0.99)	**0.172** (7.87)	**0.090** (4.05)	**0.047** (2.59)	**0.202** (10.01)	**-0.051** (-2.37)
HEAD OF HOUSEHOLD:						
Age	**-0.007** (-1.97)	0.006 (1.72)	-0.003 (-0.74)	**-0.012** (-3.59)	**-0.014** (-3.57)	-0.003 (-0.68)
Female	-0.006 (-0.20)	0.016 (0.63)	-0.003 (-0.09)	**-0.065** (-2.22)	**-0.118** (-3.72)	-0.013 (-0.38)
Divorced/separated	0.045 (1.04)	0.043 (1.34)	-0.007 (-0.16)	0.004 (0.13)	**0.088** (2.14)	0.070 (1.56)
Widowed	0.057 (0.84)	-0.047 (-1.02)	**0.193** (2.85)	0.075 (1.57)	0.020 (0.31)	0.098 (1.44)
Married or living with partner	0.016 (0.40)	**0.095** (3.28)	0.045 (1.06)	-0.054 (-1.55)	-0.013 (-0.32)	0.076 (1.71)
No formal education	**0.155** (3.04)	**0.183** (3.03)	**0.166** (3.40)	**0.271** (7.48)	**0.221** (4.69)	**0.351** (7.83)
Some primary education	**0.147** (3.06)	**0.164** (2.79)	**0.155** (3.41)	**0.235** (7.27)	**0.170** (3.87)	**0.234** (5.69)
Completed primary education	**0.187** (2.32)	0.123 (1.41)	**0.154** (1.98)	0.089 (1.53)	0.075 (0.99)	0.077 (1.02)
Some secondary education	**0.143** (2.83)	0.115 (1.88)	**-0.103** (-2.06)	-0.009 (-0.25)	**-0.097** (-2.03)	**0.110** (2.49)
Self-employed	-0.035 (-1.34)	**-0.058** (-2.55)	**-0.152** (-5.50)	-0.038 (-1.54)	**-0.093** (-3.41)	-0.028 (-1.04)
Earns a wage	0.040 (1.51)	0.010 (0.43)	**-0.080** (-2.86)	-0.042 (-1.75)	-0.036 (-1.35)	-0.022 (-0.85)
Works on own farm	**0.065** (3.23)	0.005 (0.27)	**-0.058** (-2.74)	0.017 (0.95)	0.016 (0.79)	**-0.053** (-2.55)
NUMBER OF PEOPLE IN HOUSEHOLD:						
0-4 year old children	-0.003 (-0.41)	**0.064** (10.12)	0.015 (1.88)	**0.014** (2.19)	0.015 (1.94)	-0.001 (-0.10)
5-13 year old children	0.008 (1.42)	**0.016** (3.23)	**0.019** (3.20)	-0.007 (-1.28)	0.007 (1.17)	**0.046** (7.60)

14-17 year old children	-0.011 (-1.06)	**-0.035** (-3.75)	-0.015 (-1.37)	**-0.031** (-3.41)	-0.002 (-0.18)	0.005 (0.44)
18-25 year old adults	**-0.015** (-2.11)	**-0.017** (-2.77)	0.003 (0.40)	-0.010 (-1.64)	0.011 (1.48)	**0.023** (3.01)
25-35 year old adults	**-0.026** (-2.41)	**-0.055** (-6.03)	-0.007 (-0.71)	**-0.033** (-3.89)	**-0.033** (-3.24)	-0.010 (-0.91)
36-50 year old adults	-0.007 (-0.50)	**-0.071** (-5.35)	-0.008 (-0.56)	**-0.036** (-2.87)	0.017 (1.13)	0.001 (0.08)
51-60 year old adults	0.013 (0.57)	**-0.086** (-4.42)	-0.037 (-1.62)	-0.001 (-0.05)	**0.050** (2.24)	0.020 (0.84)
61 year old and older adults	0.003 (0.16)	-0.013 (-0.70)	0.043 (1.94)	0.013 (0.68)	0.008 (0.36)	-0.006 (-0.24)
Total population	3611	3611	3611	3611	3611	3611

Note: Numbers are marginal probabilities derived from probit estimation, and when multiplied by 100, are in percentage point units. Bold indicates significance level p<.05.

*10,000 Tanzanian Shillings per month per adult equivalent.

Table A6. *Marginal effects on dimensional deprivation, for 5-17 year old children*

COVARIATES	NUTRITION	PROTECTION	EDUCATION	INFORMATION	SANITATION	WATER	HOUSING
Consumption*	**-0.025** (-15.84)	**-0.008** (-5.62)	**-0.009** (-5.95)	**-0.026** (-9.30)	**-0.010** (-7.36)	**-0.013** (-8.13)	**-0.018** (-12.91)
Age	**0.124** (13.86)	**0.027** (2.89)	**-0.228** (-30.23)	0.209 (1.05)	-0.008 (-0.90)	-0.004 (-0.45)	-0.008 (-0.89)
Male	0.013 (1.37)	0.003 (0.29)	**0.054** (5.70)	0.003 (0.24)	-0.005 (-0.56)	-0.010 (-0.97)	0.004 (0.35)
Rural	**0.088** (6.68)	**0.098** (7.33)	**0.115** (8.83)	**0.073** (3.36)	**0.048** (3.87)	**0.159** (11.87)	-0.026 (-1.89)
HEAD OF HOUSEHOLD:							
Age	-0.001 (-0.45)	**-0.011** (-4.10)	**-0.006** (-2.20)	-0.001 (-0.50)	**-0.016** (-6.14)	**-0.012** (-4.22)	0.002 (0.56)
Female	**-0.040** (-2.14)	0.013 (0.65)	-0.001 (-0.07)	**0.047** (2.11)	0.007 (0.35)	-0.003 (-0.12)	0.015 (0.75)
Divorced / separated	0.025 (1.06)	-0.005 (-0.19)	0.029 (1.28)	0.029 (1.10)	**0.052** (2.27)	**0.048** (1.98)	**0.145** (5.91)
Widowed	0.066 (1.41)	0.059 (1.32)	0.052 (1.20)	**0.113** (1.97)	**0.160** (4.39)	-0.076 (-1.63)	0.091 (1.99)
Married or living with partner	-0.035 (-1.53)	-0.001 (-0.02)	0.017 (0.75)	0.014 (0.56)	0.002 (0.07)	0.032 (1.32)	**0.060** (2.36)
No formal education	0.031 (0.95)	**0.181** (6.07)	**0.233** (7.64)	**0.664** (0.05)	**0.274** (10.24)	**0.186** (5.80)	**0.275** (9.18)
Some primary education	0.033 (1.07)	**0.192** (7.00)	**0.153** (5.33)	0.583 (0.04)	**0.247** (10.13)	**0.161** (5.37)	**0.118** (4.31)
Completed primary education	**0.106** (1.98)	-0.070 (-1.24)	0.081 (1.55)	0.632 (0.05)	**0.195** (4.29)	0.090 (1.65)	-0.037 (-0.68)
Some secondary education	0.035 (1.09)	**-0.137** (-4.46)	0.034 (1.11)	0.492 (0.04)	-0.048 (-1.76)	**-0.111** (-3.34)	**0.076** (2.59)
Self-employed	**-0.037** (-2.15)	**-0.075** (-3.96)	-0.029 (-1.72)	**-0.069** (-3.09)	**-0.061** (-3.36)	**-0.061** (-3.21)	0.002 (0.13)
Earns a wage	**-0.056** (-3.28)	-0.029 (-1.52)	**-0.033** (-1.97)	-0.027 (-1.07)	-0.014 (-0.78)	**-0.056** (-2.93)	**0.050** (2.82)
Works on own farm	**-0.031** (-2.44)	**0.062** (4.46)	0.019 (1.53)	0.007 (0.40)	**0.064** (4.87)	**0.068** (4.82)	**-0.038** (-2.74)

NUMBER OF PEOPLE IN HOUSEHOLD:							
0-4 year old children	**-0.021**	**0.042**	**0.030**	0.006	**0.025**	**0.025**	**0.027**
	(-4.39)	(7.92)	(6.56)	(0.75)	(5.54)	(4.97)	(4.85)
5-13 year old children	0.001	**0.012**	0.001	-0.004	0.002	**0.017**	**0.039**
	(0.23)	(2.72)	(0.34)	(-0.74)	(0.62)	(4.07)	(8.92)
14-17 year old children	**-0.016**	-0.005	0.000	**-0.039**	**-0.023**	-0.005	**0.020**
	(-2.62)	(-0.82)	(0.05)	(-3.97)	(-3.86)	(-0.81)	(3.02)
18-25 year old adults	-0.001	0.002	-0.007	**-0.053**	**-0.021**	0.005	**0.014**
	(-0.15)	(0.40)	(-1.72)	(-7.68)	(-4.75)	(1.01)	(3.00)
25-35 year old adults	0.004	**-0.023**	**-0.027**	**-0.075**	**-0.039**	**-0.041**	0.002
	(0.62)	(-3.06)	(-3.98)	(-5.58)	(-5.86)	(-5.19)	(0.30)
36-50 year old adults	0.004	**-0.029**	-0.001	**-0.052**	**-0.049**	0.005	0.006
	(0.50)	(-3.23)	(-0.17)	(-3.93)	(-6.07)	(0.48)	(0.65)
51-60 year old adults	0.003	0.013	**0.030**	-0.024	0.019	**0.030**	**0.037**
	(0.22)	(0.97)	(2.54)	(-1.39)	(1.54)	(2.26)	(2.62)
61 year old and older adults	-0.003	-0.012	0.006	0.015	**-0.031**	-0.023	0.003
	(-0.27)	(-0.90)	(0.47)	(0.94)	(-2.58)	(-1.79)	(0.18)
Total population	7883	7883	7883	2221	7883	7883	7883

Note: Numbers are marginal probabilities derived from probit estimation, and when multiplied by 100, are in percentage point units. Bold indicates significance level p<.05.

*10,000 Tanzanian Shillings per month per adult equivalent.

Table A7. *Marginal effects on the number of deprivations per child, and the probability of being deprived, for 0-59 month old children*

COVARIATES	NUMBER OF DEPRIVATIONS PER CHILD	DEPRIVED*
Consumption**	**-0.069** (-12.24)	**-0.018** (-9.07)
Age	**0.122** (2.35)	0.033 (1.86)
Male	0.049 (1.18)	0.012 (0.83)
Rural	**0.453** (7.76)	**0.115** (6.15)
HEAD OF HOUSEHOLD:		
Age	**-0.030** (-2.92)	**-0.013** (-3.58)
Female	**-0.189** (-2.12)	-0.039 (-1.27)
Divorced / separated	**0.254** (2.13)	0.033 (0.84)
Widowed	**0.448** (2.45)	0.109 (1.85)
Married or living with partner	0.184 (1.58)	0.021 (0.52)
No formal education	**1.239** (10.19)	**0.296** (6.71)
Some primary education	**0.990** (8.90)	**0.238** (5.76)
Completed primary education	**0.545** (2.72)	**0.160** (2.26)
Some secondary education	-0.008 (-0.07)	0.019 (0.43)
Self-employed	**-0.404** (-5.54)	**-0.137** (-5.16)
Earns a wage	**-0.167** (-2.33)	**-0.090** (-3.45)
Works on own farm	**0.010** (0.19)	0.024 (1.22)
NUMBER OF PEOPLE IN HOUSEHOLD:		
0-4 year old children	**0.101** (4.85)	**0.029** (4.08)
5-13 year old children	**0.095** (5.87)	**0.027** (4.93)
14-17 year old children	**-0.096** (-3.22)	**-0.031** (-3.13)
18-25 year old adults	-0.013 (-0.67)	-0.013 (-1.94)
25-35 year old adults	**-0.161** (-5.80)	**-0.043** (-4.59)
36-50 year old adults	**-0.105** (-2.59)	-0.012 (-0.88)
51-60 year old adults	-0.061 (-0.99)	0.014 (0.66)
61 year old and older adults	0.045 (0.75)	0.036 (1.73)
Total population	3611	3611

Note: Numbers are marginal probabilities derived from probit estimation, and when multiplied by 100, are in percentage point units. Bold indicates significance level $p<.05$.
*Deprived in three or more dimensions simultaneously.
**10,000 Tanzanian Shillings per month per adult equivalent.

Table A8. *Marginal effects on the number of deprivations per child, and the probability of being deprived, for 5-17 year old children*

COVARIATES	NUMBER OF DEPRIVATIONS PER CHILD	DEPRIVED*
Consumption**	**-0.078** (-19.06)	**-0.020** (-14.98)
Age	**-0.181** (-6.81)	**-0.037** (-4.46)
Male	0.051 (1.74)	0.012 (1.27)
Rural	**0.524** (13.30)	**0.133** (11.64)
HEAD OF HOUSEHOLD:		
Age	**-0.044** (-5.43)	**-0.013** (-5.21)
Female	0.009 (0.16)	-0.023 (-1.25)
Divorced / separated	**0.308** (4.39)	**0.081** (3.88)
Widowed	**0.382** (2.93)	0.045 (1.12)
Married or living with partner	0.079 (1.15)	0.001 (0.03)
No formal education	**1.221** (14.37)	**0.306** (10.93)
Some primary education	**0.905** (11.63)	**0.243** (9.34)
Completed primary education	**0.328** (2.20)	**0.148** (3.15)
Some secondary education	**-0.208** (-2.48)	-0.046 (-1.60)
Self-employed	**-0.288** (-5.54)	**-0.045** (-2.59)
Earns a wage	**-0.146** (-2.80)	-0.009 (-0.53)
Works on own farm	**0.168** (4.28)	**0.072** (5.62)
NUMBER OF PEOPLE IN HOUSEHOLD:		
0-4 year old children	**0.120** (8.42)	**0.040** (8.39)
5-13 year old children	**0.064** (5.31)	**0.018** (4.74)
14-17 year old children	-0.036 (-1.94)	**-0.017** (-3.06)
18-25 year old adults	-0.025 (-1.88)	-0.004 (-0.99)
25-35 year old adults	**-0.145** (-6.86)	**-0.036** (-5.54)
36-50 year old adults	**-0.075** (-2.92)	**-0.020** (-2.42)
51-60 year old adults	**0.115** (3.07)	**0.024** (2.02)
61 year old and older adults	-0.063 (-1.66)	-0.003 (-0.21)
Total population	7883	7883

Note: Numbers are marginal probabilities derived from probit estimation, and when multiplied by 100, are in percentage point units. Bold indicates significance level p<.05.
*Deprived in three or more dimensions simultaneously.
**10,000 Tanzanian Shillings per month per adult equivalent.

Table A9. *Dimensions, indicators, and threshold values for dynamic analysis of 2008/9 and 2012/13 National Panel Survey data, by younger and older age groups*

DIMENSION AND INDICATORS	THRESHOLD VALUES	AGE GROUP	
		0-59 months	5-17 years
NUTRITION			
Stunted	Height for age is lower than two standard deviations from WHO reference	√	
Meal frequency	Less than 3 meals per day[1]	√	
Low BMI	BMI is lower than two standard deviations from WHO reference		√
HEALTH[2]			
Mother's assisted delivery	Traditional birth attendant, friend or relative, none, other	√	
Mother's antenatal care	No regular visit to clinic when mother pregnant	√	
PROTECTION			
Birth registration	No birth registration	√	
Child labor	UNICEF definition and hazardous act[3]		√
Early marriage	Married before 18 years		√
EDUCATION			
Preschool enrollment	Not enrolled in preschool[4]		√
School enrollment	Not enrolled in school		√
Grade for age	2+ years behind grade for age[5]		√
Completed primary	Not completed primary[6]		√
INFORMATION			
No communication devices	No computer/radio/TV/mobile phone		√
SANITATION			
Unimproved sanitation	No access to sanitation	√	√
WATER			
Source in rainy season	Unimproved source without treatment of water	√	√
Time in dry season	30+ minutes roundtrip to fetch water	√	√
HOUSING			
Over-crowding	People per room more than national median (1.84 people per room)	√	√
Floor, roof	Natural flooring and roof	√	√

Notes:

"√" signifies that the indicator is assessed for this age group.

1. For children aged 6-59 months.
2. For children aged 24-59 months these indicators are imputed based on the observation of younger children of the same mother or household.
3. For children aged 5-11 years: more than one hour of economic activities or more than 28 hours of chores (e.g. fetching firewood or water) per week. For children aged 12-14 years: more than 14 hours of economic activities, or more than 28 hours of chores, per week. For children aged 15-17 years: more than 43 hours of total activities per week. Hazardous activities: House girls/boys; miners, blasters, stone cutters, mineral processors & mining plant operators and the like; metal molders, welders and the like; metal processors and metal plant operators; chemical processors and chemical plant operators; and construction laborers and the like.
4. For children aged 5 and 6 years.
5. For children aged 10 years or more.
6. For children aged 14 years or more.