Oxford Poverty & Human Development Initiative (OPHI)
Oxford Department of International Development
Queen Elizabeth House (QEH), University of Oxford

OPHI

Research in Progress series 2010

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OPHI gratefully acknowledges support from the UK Economic and Social Research Council (ESRC)/(DFID) Joint Scheme, Robertson Foundation, Praus, UNICEF N'Djamena Chad Country Office, German Federal Ministry for Economic Cooperation and Development (GIZ), Georg-August-Universität Göttingen, International Food Policy Research Institute (IFPRI), John Fell Oxford University Press (OUP) Research Fund, United Nations Development Programme (UNDP) Human Development Report Office, national UNDP and UNICEF offices, and private benefactors. International Development Research Council (IDRC) of Canada, Canadian International Development Agency (CIDA), UK Department of International Development (DFID), and AusAID are also recognised for their past support.

The Multidimensionality of Child Poverty: an Empirical Investigation on Children of Afghanistan

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First version: Oct, 2009 - Updated version: Mar, 2010

Abstract

From the capability approach, child poverty is understood as the deprivation of basic capabilities and related achieved functionings. This paper examines multidimensional poverty among Afghan children using the Alkire and Foster method. The case of Afghanistan is particularly relevant as years of conflict aggravated by several severe droughts, political insecurity, bad governance and on going violence have significantly increased poverty in the country. The paper discusses the relevant dimensions when analysing child poverty and uses data from a survey carried out by Handicap International which contains information on dimensions of children's wellbeing that is typically missing in standard surveys. Ten dimensions are considered in this paper: health, material deprivation, food security, care and love, social inclusion, access to schooling, freedom from economic exploitation, autonomy and mobility. Our results show that younger children and those living in rural areas are the most deprived.

JEL classification: O53, I3, I32, J13

keywords: Multidimensional poverty measurement, Capability approach, Children

1 Background

Poverty is multidimensional; this is even more true for children. Several authors have underlined the need for children to be separated from their adult nexus and understood according to specificities of their situation (Feeny and Boyden, 2003). It is only then, that the true scale and character of their poverty can be determined (Mehrotra, 2006). In other words, it is essential to expand the definition and analyses of child poverty beyond traditional conceptualizations "...the child-specific requirements in terms of basic needs and the need for specific information for the formulation of child-ed policies are important reasons that call for the development of child poverty approaches." (Roelen and Gassmann 2008, p. 22). For instance, one of the main problems in the case of child poverty measurement is the "missing dimensions" that reduces the precision of indicators that attempt to capture the multiple realisability/deprivation (Biggeri and Mehrotra, forthcoming). This has considerable implications in terms of policy and targeting. "Policy choices are dictated by priorities. If poverty is defined solely in terms of income, then economic growth will appear to be the best poverty-reduction policy. But as soon as the policy objective is broadened to include, say, health and education, then social policy will assume a more important role" (White et. Al. 2009, p. 4).

In this paper we define child poverty as the deprivation of basic capabilities and related achieved functionings. According to Sen, "What the capability perspective does in poverty analysis is to enhance the understanding of the nature and causes of poverty and deprivation by shifting primary attention away from means to ends that people have reason to pursue, and, correspondingly, to the freedoms to be able to satisfy these ends" (Sen, 1999, p. 90). As a matter of fact, on one hand children's "entitlement" over household income and resources is extremely marginal, on the other hand, the measure of income per household does not consider intra household allocation e.g. from a child or a gender perspective[1]. Moreover, although the capability approach focuses primarily on capabilities deprivations, poverty is often analysed in terms of achieved functionings. In the case of children, especially in early childhood, the achieved functionings in basic domains are a prerequisite to survival (Biggeri and Mehrotra, forthcoming). Therefore, almost all the empirical applications to the measurement of deprivations in the capability approach are limited to achieved functionings. This is due to three main reasons. Firstly, achieved functionings are (at least indirectly)

[1]Discussions of child poverty usually focus on income throughout equivalence scale to take into consideration the number of the children i.e. the household composition.

observable, whereas a child's capability also includes all the opportunities this child had but did not choose - counterfactuals and therefore unobservable. Secondly, whereas the achieved functionings are a vector of beings and doings, the capability set contains potential beings and doings. Yet, it is not obvious how this set should be measured let alone be evaluated. Finally, the transition from achieved functionings to capabilities involves the choice-making which is a process in itself (Robeyns 2003b).

In this paper we examine child poverty applying the methodology developed by Alkire and Foster (2008) to Afghan children[2]. In particular, the case study in focus concerns the deprivation of Afghan children aged between 5 and 14 years. It is difficult to write about poverty in Afghanistan without considering children, which represent more than 60% of the population.

Years of conflict have increased the level of poverty in Afghanistan which has been aggravated by several severe droughts, political insecurity, bad governance, on going violence, and the building of a large illicit economy based on poppy cultivation and drug trafficking. Health indicators such as maternal mortality ratio, infant mortality rate (IMR: 165, UNICEF 2004)) and under five mortality rate (U5MR: 257, UNICEF 2004)are among the highest worldwide (Bartlett, Mawji, Whitehead, Crouse, Dalil, Ionete and Salama, 2005). The Human Development Index for Afghanistan in 2005 is presented as 0.312, which places it last on the list (UNDP, 2007). Poor access to health, education, safe drinking water and income generation was, and still is, endemic in rural and urban Afghanistan (Beall and Schutte, 2006). The condition of children and young adults is particularly preoccupying at different level. Firstly, the psychological consequences of the war and violence are primarily significant among them (Bhutta, 2002; Panter-Brick, Eggerman, Mojadidi and McDade, 2008). Secondly, their health and nutritional status is a major cause of concern (Johnecheck and Holland, 2007). Fourthly, child labour is quite well spread, and concerns mainly fieldwork and animal husbandry. More 76% of children under 14 would help in household chores (Trani, Bakhshi and Dubois, 2006). Finally, a large proportion of the under 15 population, especially girls and vulnerable children are not accessing school (Bakhshi and Trani, 2006). The existing literature has still to explore the field of multidimensional child poverty in so-called "conflict zone" in particular in Afghanistan.

Some observations are particularly relevant in the case of child's deprivations. The first, common to all countries, is that the relevance of different domains may change according to age. This is quite important in terms of

[2]For other applications of this methodology see for instance Alkire and Seth (2008) and Santos and Ura (2008).

indicators and proxies to be considered for analysis. Furthermore, in a low income country such as Afghanistan, the gender perspective needs to be considered alongside the distinction between children living in urban and rural areas.

The second is that usually a notable gap exists in relation to surveying children's wellbeing dimensions (Biggeri, 2004; White et al. 2009). From this point of view, the data from the Handicap International research have taken into consideration many dimensions of children's wellbeing, usually missing in standard surveys.

There are several questions that arise by considering the capabilities informational space for measuring a child's wellbeing and poverty and in selecting domains for Afghan children: what are children's basic capabilities? How do we identify these? How can we define the poverty line for each dimension (i.e. first cutoff) to identify poor children? Subsequently - following Alkire-Foster's counting method (2008) - how many and which deprived dimensions should be considered in order to classify the children as poor (i.e. second cutoff)? How can we aggregate them?

In this paper, although we introduce satisfactory responses to these queries, some reservations remain and will need further research. The paper is structured into five sections. In the second section a brief literature review is presented. In the third section, the methodology of composite measure (Alkire and Foster, 2008) is presented, and the methods on how to select "relevant dimensions" for children are briefly introduced. The data set of Afghanistan is then presented and the different cutoffs for each dimension are discussed. In the fourth section the data are analysed and the main results presented. In the fifth section the main conclusions, the limits and next steps of the research are outlined.

2 Child poverty measurement

The aim of this section is to present the state of the art of approaches to child deprivation. As a consequence, we focus our attention on the different domains/dimensions chosen through the operationalisation of different child poverty approaches. Although several definitions on child poverty can be found in the vast literature the common roots are clearly in the multidimensionality feature of the phenomenon. In State of the World's Children 2005 UNICEF , for instance, the following working definition is proposed: "Children living in poverty experience deprivation of the material, spiritual and emotional resources needed to survive, develop and thrive, leaving them unable to enjoy their rights, achieve their full potential or participate as full and

equal members of society". This definition suggests that the poverty children experience is interrelated. Material poverty - for example, starting the day without a nutritious meal or being forced to engage in hazardous labour - hinders cognitive capacity as well as physical growth. Living in an environment that provides little stimulation or emotional support on the other hand, can undermine the positive effect of growing up in a materially rich household. By discriminating against their participation in society and inhibiting their potential, poverty not only causes suffering - it also disempowers children. The United Nations Development Programme (2000, p. 36) defines human poverty as: "Illiteracy, malnutrition, abbreviated life span, poor maternal health, illness from preventable diseases. Indirect measures are lack of access to goods, services and infrastructure - energy, sanitation, education, communication, drinking water - necessary to sustain basic human capabilities." The World Bank (2005) characterizes poverty as follows: "Poverty is hunger. Poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not having access to school and not knowing how to read. Poverty is not having a job, is fear for the future, living one day at a time. Poverty is losing a child to illness brought about by unclean water. Poverty is powerlessness, lack of representation and freedom".

Although tackling poverty and disadvantage has been a central issue to most Governments' social and economic programs in the last decades, the specific focus on child poverty has been relatively recent. The possibility to continue on focusing attention on child poverty and its impact requires reliable tools for capturing and measuring children's needs. In the last decade many different approaches have been developed to measure this phenomenon. According to the literature[3] (for a review see for instance Mehrotra, 2006; Roelen and Gassmann 2008; White et al. 2009 and Camfield et al. 2009) the main approaches to child poverty include: the monetary approach, the basic needs approach, the rights based approach[4], the social exclusion approach[5],

[3]According to Ben-Arieh (2008) there has been an evolution in the approaches to child wellbeing and to conceptualising, defining and measuring child's deprivations. The research trends evidence a shift form survival to wellbeing, from negative to positive, from well-becoming to wellbeing, from traditional to new domains all moving towards a composite index of child wellbeing.

[4]OHCHR developed a common set of rights that apply to most countries: being adequately nourished; being able to avoid preventable morbidity and premature mortality; being adequately sheltered; having basic education; being able to appear in public without shame; being able to earn a livelihood; and taking part in the life of a community. Implicit in the definition of poverty based on the non fulfillment of rights is the assumption that governments have the legal responsibility to fulfill these rights, as the ultimate duty bearers (Minujin et al, 2006, p. 485). See also (Jonsson, 2003).

[5]The concept of social exclusion describes the processes of marginalization and depri-

the sustainable livelihoods[6] approach and the capability approach presented in the introduction. Within a scale from unidimensional to multidimensional measures, as described in Figure 1, three different type of measures can be identified: Child Poverty Count Measures (boxes in orange), Child Poverty Index Measures (in light green) and Holistic Child Poverty Measures (in light blue).

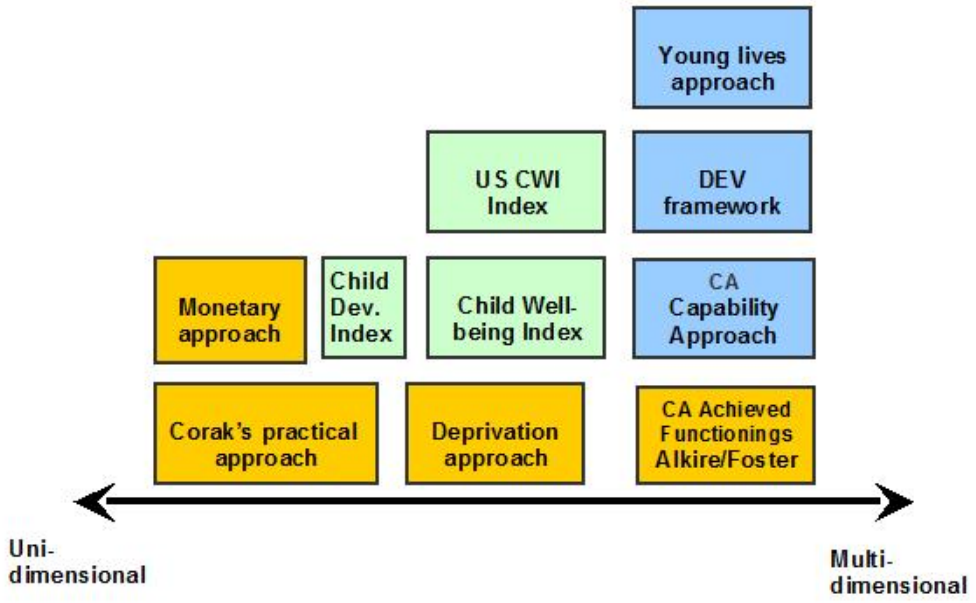

Figure 1: From unidimensional to multidimensional child poverty measures.

Source: Our elaboration on Roelen and Gassmann (2008)

As reflected in the literature the monetary poverty approach is the most commonly used measure for poverty. It basically identifies poor children as those living in low-income (or low-consumption) households. This approach relies on the assumption of a relevant link between the low household income/consumption and the wellbeing of the child and his/her opportunities for development. Although having a key advantage in the simplicity of the output (i.e. a well-defined amount of money), the unidimensional nature of

vation that can arise even in rich countries with comprehensive welfare provisions. It is a reminder of the multiple faces of deprivation. This approach focuses intrinsically on the processes and dynamics that allow deprivation to arise and persist, structural characteristics of society and the situation of marginalised groups (Roelen and Gassmann 2008).

[6]This approach addresses issues of vulnerability, risk and insecurity. The means to combat these hardships are the assets that individuals, households and communities have. Assets, called 'capital', include material and social resources of five types: Physical, Financial, Human, Social and Natural (Moser and Norton, 2001).

this approach seems inadequate in capturing all the aspects in which a child can be deprived.

Another interesting and recent approach is represented by Corak's approach (see UNICEF 2005b and Corak 2006). It recognizes that child poverty is a multi-faceted phenomenon, and bases the definition of poverty on the Convention on the Rights of the Children. However, Corak (2006) implies that the choice of indicators and consequent definition of poverty is partially guided by data availability and the avoidance of complexities[7]. On a practical example for OECD countries (UNICEF 2005a and UNICEF 2005b), explicitly emphasizing the practical and feasibility aspects of the approach, he transforms a multidimensional concept into a unidimensional one using a de facto income-based poverty line as the identification mechanism for child poverty (Roelen and Gassmann 2008, p. 12)[8]. In the Bristol deprivation approach (conducted by Gordon et al 2003 and reported in UNICEF 2004) the dimensions are justified by a mix of human right and basic needs approaches (Minujin and Delamonica, 2005). Five Different degree of deprivation are used (figure 2).

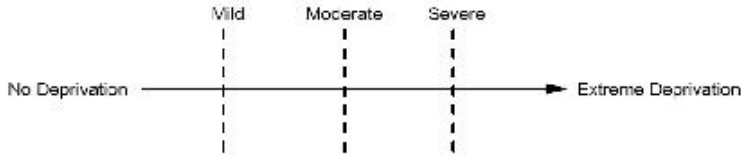

Figure 2: Continuum of deprivation.

Source: Gordon et al. (2003)

This was developed to provide a first conceptualization of multidimensional child poverty (negative aspects of children's situations) in developing countries, making international comparisons possible (figure 2)

Children were defined as being absolutely poor if they suffered from two or more different types of severe deprivations of basic human needs: malnu-

[7]1) Avoidance of unnecessary complexities; 2) Income measures alone do not capture all dimensions that poverty; 3) Poverty lines should be drawn taking social norms and societal context into account; 4) Indicators should be updated regularly to allow for consistent monitoring of poverty and capture periods of high or low economic growth; 5) Employ a fixed and moving poverty line as backstop and target; 6) Building of consensus public support for poverty reduction (Corak, 2006)

[8]Only in another report for OECD countries (UNICEF, 2007) the analysis is extended to six dimensions separately: material deprivation, health and safety, education, children's relationships, behaviour and lifestyles and subjective wellbeing. Although for some dimensions the link to CRC it is not clear (Roelen and Gassmann 2008).

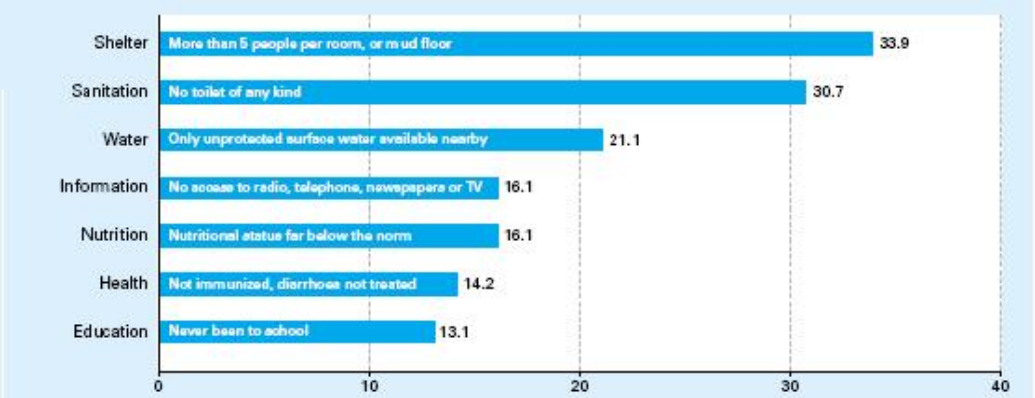

Figure 3: Severe deprivation of children in the developing world, by different deprivations.

Source: UNICEF 2004

trition (whose heights and weights for their age were more than 3 standard deviations below the median of the international reference population); children who only had access to surface water (e.g. rivers) for drinking or who lived in households where the nearest source of water was more than 15 minutes away; children who had no access to private or communal toilets; children who had not been immunized against any diseases or young children who had a recent illness involving diarrhoea and received no medical treatment; children in dwellings with more than five people per room or with no flooring material (e.g. a mud floor); children between 7 and 18 who had never been to school and were not currently attending school; and children between 3 and 18 with no access to radio/ TV/ telephone/ newspapers at home (Unicef, 2004).

Among various Child Poverty Index Measures, we report the Child Development Index, the EU Child Wellbeing Index, and the US Child and Youth Wellbeing Index (see also Cummins et al. 2003). Save the Children UK has recently introduced a representative and multidimensional tool to monitor and compare the wellbeing of children. We have used it in more than 140 developed and developing countries across the world. The Child Development Index is made up of three indicators reflecting three areas of child wellbeing. The indicators were chosen because they are easily available, commonly understood, and clearly indicative of child wellbeing.

The three indicators are health, the under-five mortality rate (the probability of dying between birth and five years of age, expressed as a percentage on a scale of 0 to 340 deaths per 1,000 live births), nutrition: the percentage of under fives who are moderately or severely underweight and education:

the percentage of primary school-age children who are not enrolled in school.

These three indicators are aggregated by simply calculating the average score between them for each period under review, meaning that they each have equal weighting in the index scores. It is important to stress that a low score is best as it represents a low level of child deprivation, whereas a high score represents a high level of child deprivation and poverty (see, Save the Children UK, 2008).

The EU Child Wellbeing Index (Bradshaw et al., 2006) was constructed to compare the 25 EU Member States. Based on the CRC and other studies on the multidimensional nature of poverty, they formulated eight different clusters in which child poverty is analyzed (Roelen and Gassmann 2008, pp. 15-16). The clusters are: 1) Material situation; 2) Housing; 3) Health; 4) Subjective wellbeing; 5) Education; 6) Children's relationships; 7) Civic participation; 8) Risk and safety. The US Child and Youth Wellbeing Index (CWI) was developed by Land et al. (2001) to determine how well children and youths are faring in America. The index is designed to consider changes in children's and youth's wellbeing over time for specific demographic and geographical groups. Although these domains were originally designed to represent quality of life areas for the entire population, they are considered to capture the majority of areas of wellbeing for children.

These dimensions include the : 1) Material wellbeing; 2) Health; 3) Safety; 4) Productive activity; 5) Place in community; 6) Intimacy; 7) Emotional wellbeing.

Finally, we report two relevant Holistic Child Poverty Measures. The first is the young lives approach. The classification of poor children is here based on a set of basic needs derived from the Convention on the Rights of the Children. The six outcomes taken into account are : 1) nutritional status; 2)physical morbidity; 3) mental morbidity; 4) life skills (literacy, numeracy, work skills etc.); 5) developmental stage for age; 6) Perceptions of wellbeing and life chances (Young Lives, 2001).

The choice of these outcomes was made with the notion that child poverty is different from adult poverty and needs a redirected focus (Camfield, 2006). The "perceptions of wellbeing and life chances" dimension underlines the significance of participatory methods in the poverty mapping process. This aspect is crucial to learn more about children's own opinion and their perception of their poverty. As emphasized in the Convention on the Rights of the Children, the child has then the right to be heard and recognise himself as a social agent (Boyden, 2006).

The Christian Children's Fund (CCF), in a comprehensive study in 2002 on experiences and impact of poverty on children (Feeny and Boyden, 2003), identify three dimensions: deprivation, exclusion and vulnerability (i.e. DEV

approach) to define child poverty in concrete terms that can guide policies to reduce child poverty. Deprivation is seen as a lack of material conditions and services generally held to be essential to the development of children's full potential. Exclusion is the result of unjust processes through which children's dignity, voice and rights are denied, or their existence threatened. Vulnerability is an inability of society to cope with existing or probable threats to children in their environment[9]. Another relevant approach for policy analysis and programming could be the Capability Approach with the aim of combining quantitative and qualitative analysis (see Biggeri and Anich, 2009) to understand the scale and causes of child's deprivation. In this paper, in particular, we apply the Alkire-Foster counting method (2008) in terms of achieved functionings.

3 Methodology

3.1 Methodology of composite measure Alkire-Foster

The method used in this paper to identify a poor person is the so-called "dual cutoff" approach introduced by Alkire and Foster (2008). "Dual" because it involves two different forms of cutoffs: one pertaining to each single dimension (so that many cutoffs must be selected) and another relating to cross-cutting dimensions.

Considering the conventional database as a $n \times k$ matrix containing k different variables measured on a population of size n, all the cutoffs can be represented by a vector with $(k+1)$ elements. The first k element are cutoffs to be selected with respect to each of the variables V_j contained in the dataset. The last element is chosen with respect to the individuals included in the analysis. More specifically, let c_j $(j \leq k)$ be the generic element of the vector C containing the cutoffs chosen. c_j is a real number representing the

[9]Among a few other approaches we may recall that the Childhood Poverty Research and Policy Centre (CHIP) defines child poverty as growing up in the absence of any of the factors listed below which constitutes childhood poverty: an adequate livelihood - the financial and nutritional resources needed for survival and development (economic, physical and environmental resources); opportunities for human development - including access to quality education and life skills, health and water/sanitation (social, cultural and physical resources); family and community structures that nurture and protect them - parents/guardians with time (or ability/desire) to care for them; an extended family/community that can cope if parents and guardians are not able (or not there); or a community that cares for and protects its younger generation (social and cultural resources); and opportunities for voice - powerlessness and lack of voice (political resources) often underpin other aspects of poverty (this also applies to adults) (Minujin et al 2006, p. 487)

poverty line that divides deprived and non-deprived person on the dimension j described by the variable V_j. The last element of vector C, c_{k+1}, is a positive number representing the minimum number of dimensions on which a person must be deprived to be considered poor. The two forms of cutoffs presented are the crucial point of the so-called *identification step*, which is an embedded phase of any form of poverty measurement[10]. Successively, a class of poverty measures M_α derived from the Foster, Greer and Thorbecke (1984) measure is introduced to aggregate the data obtained into a unidimensional indicator.

This methodology satisfies a series of desirable properties[11] including "decomposability", that allows overall poverty to be calculated as a weighted average of subgroups poverty levels, and "dimensional monotonicity", which allows to capture the effect of a poor person who increases his set of deprivations experienced.

3.1.1 Identification

Let Y be the $n \times k$ matrix containing the data, with generic entry y_{ij} representing the value of variable j observed on individual i. Let C be the $(k+1)$-dimensional cutoff vector defined in the section above. The first k elements of C correspond to the poverty thresholds that must be specified in order to identify a deprived individual with respect to the columns of matrix Y. A new matrix G^0 is then defined as follows:

$g^0_{ij} = 1$ if $y_{ij} < c_j$
$g^0_{ij} = 0$ otherwise

The generic element g^0_{ij} represents an indicator for the status of deprivation of individual i on dimension j. More formally, $g_{ij} = \gamma(y_{ij}, c_j)$, where $\gamma : R \times R \to \{0, 1\}$ is an identification function for a single dimension which recognises if the individual i can be considered poor with respect of a specific variable V_j.

Given the matrix G^0, it then becomes straightforward to identify a poor individual using the second form of cutoffs across dimensions. Let

[10] An interesting approach is the Fuzzy set theory, where the identification step allows partial belonging to a set. See Chiappero Martinetti (2000) for an application concerned with Sen's functionings approach.

[11] For a complete list of the properties satisfied by the H and $M\alpha$ indexes introduced in this section see Alkire and Foster (2008).

$$d_i = \sum_{j=1}^{k} g_{ij}^0$$

be the generic entry of vector D representing the number of dimensions on which individual i is deprived.

An individual is then identified as "poor" if she is deprived in more than a certain number of dimensions (i.e. if $d_i \geq c_{k+1}$, where c_{k+1} is the cutoff chosen as the last element of vector C defined above).

This methodology allows to preserve the information at a single dimension level. Especially from the perspective of the capability approach, a drawback of viewing multidimensional poverty through a unidimensional lens is the loss of information on dimension-specific deficits. A method that aggregates dimensions before identifying the single deprivations converts dimensional achievements into one another without regard to dimension-specific cutoffs. If dimensions are independently assessed and dimensional deprivations are inherently undesirable, then there are good reasons to look beyond a unidimensional approach to identification methods that focus on dimensional shortfalls. Using an intermediate cutoff level for the number of deprivations that can assume values between the two extremes 1 and k is the natural generalisation of the common identification methods as the *union* and the *intersection* approach, that can be seen as special cases where $c_{k+1} = 1$ and $c_{k+1} = k$.

3.1.2 Aggregation

The identification step described in subsection 3.1.1 is then implemented into a class of multidimensional poverty measure. A first, intuitive, measure can be easily derived from the number of poor people recognised in the dataset. Let Q be a n-dimensional vector with generic entry

$q_i = 1$ if $d_i \geq c_{k+1}$
$q_i = 0$ otherwise

then, the quantity

$$H = \sum_{i=1}^{n} q_i / n$$

represents the proportion of poor people identified in the data. Although an easily understandable indicator, H does not satisfy an essential property,

the *dimensional monotonicity*: for a poor person i, H remains unchanged as d_i increases. To reflect this concern, a new matrix $G^{0*}(c_{k+1})$ is defined with generic entry[12]

$g_{ij}^{0*} = g_{ij}^{0}$ if $q_i = 1$
$g_{ij}^{0*} = 0$ otherwise

and a new indicator, the (dimension) *adjusted headcount ratio*

$$M_0 = \sum_{i=1}^{n} \sum_{j=1}^{k} g_{ij}^{0*}/nk$$

is introduced. Note that $M_0 \in [0, 1]$ can be seen as the number of all the dimensions on which poor people (and only these) are deprived, divided into its maximum possible value. This adjusted ratio satisfies the property of dimensional monotonicity mentioned above as it increases according to any increase in the number of deprived dimension of a poor person. It is also *poverty focused* as it is invariant to changes in the value of d_i for a non-poor person (who remains non-poor). In other words, if a non-poor individual becomes more (or less) deprived on some dimension but still remains identified as a non-poor, then the M_0 index does not change.

3.2 Selecting relevant capabilities for children

In any approach to poverty measurement the selection of domains is particularly relevant to analyse the "multi deprivation" of a human being[13]. As underlined by Alkire (2008), however, researchers often do not make explicit their criterion for choosing the domains. Biggeri and Mehrotra (forthcoming), propose a review of studies to select relevant domains/dimensions for children. Following Alkire (2008) they suggest five different modes: existing data or convention; list based on consensus (public 'consensus'); participatory processes (ongoing); assumptions; and empirical evidence regarding people's values (or expert analysis). Clearly, as Alkire underlines "there is no straightforward way to choose dimensions of human wellbeing. What is very clear, immediately, is that these processes overlap and are often used in tandem" (Alkire, 2008, section 6.6) and that generally the selection method depends

[12]The matrix is dependent on the vector Q, that is a function of the cutoff across dimensions. For simplicity of notation, in the rest of the paper the bracket (c_{k+1}) will be omitted for G^{0*} and all its generalisation.

[13]As in Alkire (2008), here "domain" and "dimension" are used interchangeably.

on research objectives and/or operational processes, practical constraints and has to be rooted in a solid knowledge of the context.

Typically, in child poverty research, the selection method is based on the use of existing secondary data and the dimensions are chosen by researchers according to pre-designed questions and data availability. As Biggeri and Mehrotra (forthcoming) point out "the main concern of the researcher is often the data availability, which has the effect of excluding important dimensions of child wellbeing, or paying little attention to what these proxies/variables actually represent in terms of values. This last implication, although less relevant, can bias on the results and policy implications in many circumstances." But even ignoring data limitations, choosing the relevant dimensions for children is still not straightforward. According to Sen, the selection of capabilities is the responsibility of a democratic process including processes of public scrutiny and debate[14] (Sen, 2004a, 2004b) and it has to be reconciled with a theory of justice (Sen, 2006a). Furthermore, capability dimensions can be selected on the basis of two criteria (Sen, 2004b). First, they must be of special importance (that is, they were judged to be basic capabilities). Second, they must be directly or indirectly socially influenceable. This opens space to consider neglected dimensions for children. As Biggeri and Mehrotra (forthcoming) argue "The main idea, therefore, is to understand child poverty through the capability approach, that is, to create the space for children in the conceptualisation of the wellbeing and the prioritisation of different dimensions. If these actions are difficult or even impossible to imagine for very young children, as their agency and autonomy increases - according to the age and maturity of the child - child participation becomes not only possible but central to the analysis of their wellbeing and deprivation." This is clearly in contrast to traditional/orthodox poverty analysis where children are seen only as passive actors dependent on others (Ben-Arieh, 2008 and 2005). On the other hand basic capabilities and achieved functionings (and corresponding fundamental human rights, see Sen, 2007) cannot be ignored (especially for young children). This implies that the dimension of material deprivation is a relevant aspect in child poverty. Moreover, as suggested by Sen (2007) and Ballet et al. (forthcoming) in the case of children, there are several freedoms that depend on the assistance and actions of others (parents and/or caregivers) and, of course, on the nature of social arrangements. This

[14]To our knowledge no lists of relevant capabilities for children were reported in literature before 2003. These were presented for the first time at the conference of the Human Development and Capability Association (HDCA) at Pavia by Biggeri (2003 and 2004 and Biggeri et al. 2006) and by Di Tommaso (2006) (see also Saito 2003). Di Tommaso (2006) uses Nussbaum's list of central capabilities and selects 7 out of 10 of them by considering children as subjects of capabilities.

means that material deprivation of the household is relevant as well.

Two procedures on the selection of capabilities have emerged in the literature, which can help researchers and practitioners intending to operationalise the capability approach. The first, suggested by Ingrid Robeyns, and the second, developed by the Thematic group on Children's Capabilities of the HDCA at Florence University.

The procedure suggested by Robeyns (2003a, 2003b) helps researchers in thinking and identifying domains and capabilities both theoretically and pragmatically. It is based on four criteria (Robeyns, 2006, p. 356): explicit formulation, methodological justification, different level of generalities, exhaustion and non-reduction. These criteria are a sort of "check and balance" for the fact that every policy maker or researcher is situated in a personal context and therefore needs to pay special attention to avoid biases that are introduced by their (personal and disciplinary) background (Robeyns, 2006, p. 356).

The second procedure is based on four main stages which constitute the core of the process of thinking, reflecting and participating, and should support stakeholders in their attempts to identify the dimensions of their wellbeing. Therefore, this process can potentially turn into an instrument of public reasoning and allow for a first ranking of dimensions for practical uses. "Technically, the core of the process is based on a progressive focalisation of the subject from his/her general opinions on values and wellbeing (conceptualisation), passing to his/her personal experience regarding specific domains/capabilities/achieved functionings, to a more general view on the value of a set of capabilities for the concerned community (or group of people), and finally back to a restricted set of capabilities which may be considered of the highest relevance for the wellbeing of the subject and his community." (Biggeri and Libanora, forthcoming). The four steps followed are as follows: (i) participatory conceptualisation of capability dimensions; (ii) identification of achieved functionings for each dimension; (iii) establish within the community a consensus on the relevance of each dimension; (iv) start prioritising the different dimensions chosen. The procedure is usually delivered through a questionnaire although participatory tools have been used as well. Different rules, e.g. in terms of sharing 'consensus', can be used to validate the identification and the relevance of each dimension for the children. In table 1 we report an example of this analysis carried out with the children delegates of the Global March Against Child Labour and for Education.

Table 1: Childrens selected dimensions

1	Life and physical health
2	Love and care
3	Mental wellbeing
4	Bodily integrity and safety
5	Social relations
6	Participation / information
7	Education
8	Freedom from economic and non-economic exploitation
9	Shelter and environment
10	Leisure activities
11	Respect
12	Religion and identity
13	Personal autonomy
14	Mobility

Source: Biggeri, et al. (2006)

3.3 Data base and data collection

The data utilised in the analysis is based on a national cross-sectional multistage cluster sampling survey that used the capability approach as a framework (Bakhshi, et al., 2006). The fieldwork was conducted between December 2004 and August 2005. Assuming a prevalence of disability of 8%, 10% precision and an estimated design effect of 2, a sample size of 3926 households was calculated as acceptable to be representative at the national level of the population, as well as the fraction of this population that is disabled. 175 clusters which would yield 5250 households were selected. All head of households, as well as 958 respondents identified with mobility limitation or sensory difficulty, mental illness or intellectual disability and 1738 non-disabled respondents were informed and invited to participate. They could decline participation and provided written or verbal consent in case of illiteracy. The rate of refusal was very low (0.1%). A few non-responses, mainly in urban areas, were due to non-availability of a respondent after several visits (0.3%).

Face-to-face interviews were carried out with all persons identified with disability over 4 years of age, or with a caretaker as a proxy respondent, as well as with a control group of non disabled people. Disability was assessed with an original screening questionnaire comprised of 27 questions referring to activity limitations, adapted to the cultural context, avoiding stigma and

negative stereotypes (Bakhshi, Trani and Rolland, 2006). This questionnaire was based on the International Classification of Functioning, Disability and Health (ICF) (WHO, 2001) as well as the Capability Approach (Sen, 1999). The head of household answered the household questionnaire and the screening questions on behalf of all the members of the household. Interviews with non-disabled respondents from the control group were undertaken to compare the living conditions and coping strategies of persons identified as having a physical or sensory disability, mental illness or intellectual disability with those of people without disabilities. All respondents, disabled and non-disabled, were asked about health conditions and accessibility to existing services, education, employment, income, livelihood conditions, self perception, and social participation using the same instrument. A shorter questionnaire was designed for children under age 15. For the purpose of this paper, we have considered only responses of children. [15]

3.4 Dimensions and cutoffs

We selected variables as proxies for ten dimensions of deprivation as summarised in table 2. The selection process was guided by the following principles. First, we identified a sufficient variety of dimensions to move away from unidimensional analysis of income deprivation and at the same time cover major basic capabilities starting from the list reported in table 1. Secondly, we were careful that the variables used in the analysis were significant in the Afghan context. Finally, we avoided any overlapping between dimensions to allow for equal weights. We did, however, explore several weighting structures to assess the robustness of our findings. For instance, regarding love and care, we compared the number of children deprived of love and care from both parents, only mother or father, as well as from other members of the household such as siblings or grandparents. In the case of deprivation of education, we tested the level of deprivation linked to illiteracy, drop out from primary school and access to secondary school. In some cases we de-

[15] instruments were all translated into Farsi and Pashto with iterative back-translation methods and tested with a pilot survey carried out between November 19th and November 30th, 2004. The training of the 15 trainers and monitors, the 24 supervisors as well as the 112 interviewers took place in 6 major cities. Trainers and monitors were medical doctors from the Ministry of Public Health with previous experience of large-scale surveys. Interviewers, who were recruited locally for security purposes, were educated at high school level and were trained on survey concepts and goals, disability issues and awareness, interview techniques, mine risk awareness, and security information followed by review, test and debriefing. The study received ethical approval from the Committee on Human Research of the Johns Hopkins Bloomberg School of Public Health and from the Ministry of Public Health of Afghanistan.

cided to unify in the same domain some of the dimensions reported in table 1. In the case of religion we decided not to insert it since in Afghanistan all the children are Muslim.

The first dimension is health and we used access to clean water as a proxy. As argued in previous papers (Trani, Bakhshi and Dubois, 2006), shortage of clean water is a major issue in Afghanistan where children are often tasked with getting water for the family. This task can easily take twenty minutes every day on a regular basis but up to a day of walk for a return trip during the dry season. The use of water in hygiene is essential as contaminated water remains a major cause of diarrhea and related ailments such as cholera and dysentery that can be life threatening, especially in very young children who get dehydrated quickly. Open well or kariz, rivers, ponds, still water and tankers are often unsafe sources of water. Access to drinking water has also been used by other authors as a proxy of a dimension of poverty (Alkire and Seth, 2009; Santos and Ura, 2008).

Care and love is considered through the existence of caretakers for the child. This is an essential aspect of emotions, one of the ten central capabilities according to Nussbaum's (2000) list. The level of care is defined by the type of link between the child and the adult. We argue that being deprived of the mother's love and care is critical for children's emotional balance as women are expected to provide love and care to children as their main responsibility within the Afghan society (Rostami-Povey, 2007). Due to the war, many children have been displaced (Bhutta, 2002), made orphans, or have been victims of violence, experiencing (5.9% of interviewed children have been direct victims of mistreatment according to the NDSA survey) and witnessing loss and mistreatment as well as lack of security.

The third dimension regards material deprivation and is constituted of possession of assets by the family. High levels of material possession is a relative indicator of well being of the household. Durable goods such as a house, a car, a tractor or a TV can be considered as assets for the household since they can be used to increase capability and therefore, reduce vulnerability. Access to different assets has been used by Alkire and Seth (2009) in their study of multidimensional poverty in India. Deprivation level is set at 6 assets as most households possess the five basic assets: oven, heater, radio, lamp or cooker. Yet, it is more uncommon to own a bicycle, a refrigerator or a television set, especially considering that most villages have no access to electricity. Ownership of a car or a tractor is so unusual that only wealthy households can afford one (the list of considered assets is contained in the Appendix).

Food security is measured through the quantity and quality of the daily food intake of the child. We assume that frequent or permanent deprivation

Table 2: Dimensions of children's deprivation

Dimensions	Questions	Deprived if...	Dimensions from table 1
1) Health	What are the main sources of drinking water for your household?	piped into residence/compound/plot; public tap; hand pump in residence/coumpound/ plot; public handpump; well in residence/compound/ plot; covered well; open well and kariz; spring; river/ stream; pond / lake; still water; rain water; tanker/ truck; other (specify)	1
2) Care	Who takes care of your child besides yourself?	lacks mother care	2
3) Family assets: material deprivation of the family	Does any member of your household own any of the following? *(see list in appendix)*	$\leq$ Less than 6 assets	-
4) Food security: material deprivation of the children	How often does your household get enough to eat?	Often not enough food	1
5) Social inclusion	Based on 3 questions *(see appendix for details)*	Answer "yes" on at least one of the questions	4,5,6,11
6) Education	Has the person received some education?	Never attended school	7
7) Freedom from economic and non-economic exploitation and leisure activities	How many hours per day does your child spend on household tasks/fieldwork/work outside the house?	More than two hours of work	8,10
8) Shelter and environment	How many people per room are there in your household?	More than three people per room	9
9) Personal autonomy	Based on 5 questions *(see appendix for details)*	Moderate difficulty	13

of food is a good proxy for insufficient food intake used by other authors (Alkire and Seth, 2009). The overall lack of food and widespread access to poor quality nutrition are major concerns in Afghanistan (Johnecheck and Holland, 2007). In fact, the main coping strategy identified in case of shock was a reduction in diet quality or quantity (Trani, et al., 2006; WFP and MRRD, 2004). Afghans also took out loans to cope with shortage of food.

Social inclusion is understood as the presence of respect, social participation as well as absence of violence and mistreatment. Social acceptance is paramount in determining the quality of life of individuals, especially children. This is very much the case in a traditional society such as Afghanistan where family and community are closely knit. The consideration given by family and community to the children directly influences other dimensions of wellbeing, such as their self-esteem, and the more likely caregivers will give attention to other areas of wellbeing such as child education and child health (Trani and Bakhshi, 2006). Therefore we assume that a child is deprived on this dimension if s/he is mistreated and her/his integrity threatened (Nussbaum, 2000), cannot participate to ceremonies such as Eid or wedding (which are major social events), or if the child is forced into early engagement or marriage. Very frequently, young girls are forced to marry elder men against money (Trani and Bakhshi, 2007).

Having accessed school is the proxy for the sixth dimension - education - and no attendance to school is the cutoff for this dimension. We restrict the measurement of poverty on this dimension to children over 7 years old. Education for all is based on the strong belief that having access to school is a major component of fighting poverty and inequality in the long term (Robeyns, 2006). Access to education in Afghanistan is a lot higher for the new generation of children of school age (Bakhshi and Trani, 2006). This may be explained by the considerable effort been made by the Government since 2002 to increase primary school enrolment. However, the increase in enrolment has not been the same accross different groups, being significantly lower among girls, for children with disabilities and those who have to work to contribute to the family income.

The freedom from economic and non-economic exploitation (article 32 of the CRC), measured as the intensity of work represents the seventh dimension of deprivation and has been used previously by Alkire and Seth (2009). Child work is widespread in Afghanistan, even among children going to school. Many children help in household chores. They help in the farm or take care of animals in rural areas where more than two third of the population lives. We fixed the cutoff at two and a half hours of work a day, as above this limit child labour is likely to jeopardise her/his right to good health, education and time for play. This is in line with the International Labour Office convention

No. 138 that allows light work after 12 years old. The incidence of child labour in Afghanistan is thus above the Asia and the Pacific 29 countries average of 18.8% (Trani, et al., 2006, p.28). The lack of an able male worker in the household is an important determinant of child labour in Afghanistan and for poor households, parents often have to choose which children will go to school and which will have to work or do both (Hunte, 2009).

To stand for shelter and environment, we chose the number of people per room. The cutoff is set at three people per room. The NDSA results show that on average, households have more than 2 people living per room (Trani, Bakhshi and Dubois, 2006). This variable is a good proxy of material wealth as increasing the size, building or acquiring a new house constitutes a significant expense for a household.

The ninth dimension is autonomy and it is assessed for children over 7 years old. It is measured by the basic ability to take care of oneself on a day-to-day basis. It is related to the feeling of autonomy and self-reliance as well as mental capabilities: bath or performing ablution, get dressed, prepare meals for herself/himself, go to the toilet, eat and drink and move around. These are everyday life activities that an individual must be able to carry out to be autonomous and are widely used in disability assessment to evaluate levels of activity limitations (Trani, 2009). There are three possible answers: yes, I can do it; yes, but with difficulty; no,I cannot do it. A score indicator is created, increasing in the level of difficulty to perform these activities. A child is considered deprived in this dimension if her/his score is higher than what we consider a "'mild difficulty'" level. The appendix provides details on the construction of the score indicator.

The last dimension is mobility and it is assessed for children over 7 years old through the level of capacity to move around and out of the house without the assistance of someone. This is a major issue as this dimension relates to the chores that children are expected to carry out outside the house and sometimes in the fields to help their family. This dimension is based on the combination of several queries in the survey: capacity to climb stairs (or an incline path), to go to the bazaar/shop on one's own, to carry heavy things (like water), to work in the field and to ride a bicycle/animal. It is a major issue for women as girls movement, especially after puberty, is limited to the private sphere (Rostami-Povey, 2007). As with autonomy, a score indicator is created, increasing in the level of difficulty. As before, a child is considered deprived in this dimension if her/his score is higher than what we consider a "'mild difficulty'" level (see Appendix).

4 Results

We calculated the percentage of children deprived in each dimension, the multidimensional headcount ratio (H), the adjusted headcount ratio M_0 and average deprivation among the poor (A) using equal weights for all the range of cut-offs. In Afghanistan, poverty appears as a "great leveller" and this is most probably the outcome of more than 3 decades of war.

In Table 3 we present the fraction of deprived children in each dimension. Lack of access to drinkable water, shortage of assets, constraint to work or exclusion from school affect between 40% and 75% of all Afghans children. Older children are more deprived on the dimension of daily work. There is no significant difference according to the age group for dimensions of deprivation that affect the whole household in a similar way such as access to water and number of assets.

In Table 4 we present the multidimensional headcount ratio (H), the adjusted headcount ratio (M_0) and the average deprivation share accross the poor (A) for the different cutoffs across dimensions. By definition, the level of deprivation measured by H diminishes as the cutoff accross dimensions increases. In the table, it can be seen that virtually all Afghan children are deprived in at least one dimension, and as indicated by A, they are deprived - on average - in 3.8 dimensions. Even when we take into consideration two dimensions, the level of poverty is still very high. If the poverty cutoff is four out of ten dimensions, still 54% of the child population are poor and on average they are deprived in almost 5 indicators. However, virtually no child is deprived in 8 or more dimensions simultaneously.

In table 5, we present results by age group with the caveat that education, autonomy and mobility are not applicable for children below 8. We found that children aged 5-7 are globally less deprived than older ones, but that children aged 8-11 are globally more deprived than children aged 12-14. The difference in the poverty level as measured by M_0 between these two groups is bigger than the difference in the poverty level as measured by H, suggesting that not only a higher fraction among children aged 8-11 are poor than among older ones, but that they also experience a higher average number of deprivations. It is important to note that almost all children, whatever the age group, are deprived in at least one dimension. On the other hand, no children in all groups are deprived in 8 or more dimensions.

In table 6, we explore levels of deprivation between urban and rural areas of Afghanistan. We found that no children are deprived on all dimensions, whether they live in villages or towns. As expected, levels of deprivation are higher in rural areas where 71.6% of the Afghan population live. People living in town have some advantages: better access to water and to services,

Table 3: Fraction of children deprived in each dimension

Dimensions	Single depriv. all ages	Single depriv. age 5-7	Single depriv. age 8-11	Single depriv. age 12-14
1) Health	.752	.729	.755	.760
2) Care	.364	.318	.352	.402
3) Family assets: material deprivation of the family	.726	.725	.725	.729
4) Food security: material deprivation of the children	.374	.381	.389	.353
5) Social inclusion	.165	.199	.148	.165
6) Education	.494	N/A	.413	.435
7) Freedom from economic and non-economic exploitation and leisure activities	.408	.093	.399	.593
8) Shelter and environment	.240	.212	.243	.252
9) Personal autonomy	.104	N/A	.081	.068
10) Mobility	.464	N/A	.425	.320

Table 4: Level and breadth of poverty for age 8-14

Cutoff (c_{k+1})	H	A	$M_0 = A \times H$
1	.994	.38	.373
2	.942	.39	.367
3	.784	.43	.336
4	.544	.49	.264
5	.284	.56	.160
6	.129	.64	.082
7	.041	.71	.029
8	.008	.75	.006
9	.000	N/A	.000
10	.000	N/A	.000

Table 5: Level and breadth of poverty according to age group

Cutoff (c_{k+1})	Age 5-7		Age 8-11		Age 12-14	
	H	M_0	H	M_0	H	M_0
1	.949	.362	.994	.376	.993	.369
2	.752	.333	.946	.371	.937	.364
3	.493	.259	.789	.339	.779	.332
4	.222	.143	.546	.266	.541	.261
5	.091	.069	.291	.164	.276	.155
6	.025	.022	.136	.087	.121	.077
7	.000	.000	.044	.032	.037	.027
8	-	-	.007	.006	.008	.006
9	-	-	.001	.001	.000	.000
10	-	-	.000	.000	.000	.000

main power, flush, diet diversity, more goods and equipment, larger size of houses (Trani et al., 2006). Afghan children have often to walk long distances to access school or a health care facility. In rural areas, Afghan boys often help in the field or tend to animals, while girls are in charge of household chores. Tables 7 and 8 present age specific poverty estimates for urban and rural areas correspondingly. In line with the results of 5,for most dimension cutoffs, show that children aged 5-7 are globally less deprived than older ones and that children aged 8-11 are more deprived than children aged 12-14. There are a few exceptions: in urban areas, for $c_{k+1} > 3$, children aged 12-14 are poorer than children aged 8-11. In rural areas, for $c_{k+1} = 1$, children aged 12-14 are also poorer than children aged 8-11. However, it seems that in general terms, children aged 5-7 are globally less deprived than older ones but the trend is reversed after 8 and that vulnerability increases with age.

Although important efforts have been made towards universal coverage of health care facilities (Trani, Bakhshi, Noor, Mashkoor and Lopez, 2010) and universal access to school, it seems that on going programmes and policies in Afghanistan still fail to include the poorest and most vulnerable groups such as the children (Donini, 2007; Trani and Bakhshi, 2009). Assessing the complex situation of child poverty provides useful information for policy makers to better define priority for action.

Table 6: Level and breadth of poverty for urban and rural children 8-14

Cutoff (c_{k+1})	Urban		Rural	
	H	M_0	H	M_0
1	.990	.347	.995	.382
2	.914	.339	.952	.377
3	.778	.312	.787	.344
4	.492	.226	.562	.277
5	.213	.115	.309	.176
6	.069	.042	.150	.096
7	.011	.008	.051	.037
8	.000	.000	.010	.008
9	.000	.000	.001	.000
10	.000	.000	.000	.000

Table 7: Level and breadth of poverty according to age groups for urban children

Cutoff (c_{k+1})	Age 5-7		Age 8-11		Age 12-14	
	H	M_0	H	M_0	H	M_0
1	.933	.334	1.000	.335	.980	.359
2	.678	.297	.915	.326	.913	.352
3	.457	.234	.737	.291	.819	.333
4	.131	.094	.419	.195	.566	.257
5	.107	.080	.207	.110	.219	.119
6	.029	.025	.067	.040	.071	.045
7	.000	.000	.001	.001	.021	.015
8	-	-	.000	.000	.000	.000
9	-	-	.000	.000	.000	.000
10	-	-	.000	.000	.000	.000

Table 8: Level and breadth of poverty according to age groups for rural children

Cutoff (c_{k+1})	Age 5-7		Age 8-11		Age 12-14	
	H	M_0	H	M_0	H	M_0
1	.957	.377	.992	.389	.998	.373
2	.792	.353	.957	.386	.946	.368
3	.512	.273	.806	.355	.764	.332
4	.271	.170	.588	.290	.532	.262
5	.082	.062	.319	.182	.297	.168
6	.023	.020	.159	.102	.140	.089
7	.000	.000	.058	.042	.043	.031
8	-	-	.010	.008	.011	.009
9	-	-	.001	.001	.000	.000
10	-	-	.000	.000	.000	.000

5 Concluding remarks and implications for public policies

In this paper we have argued the importance of adopting a multidimensional perspective specifically tailored for children, for poverty evaluation in this group. We have revised the child poverty indices available in the literature and argued that the capability approach can be helpful for framing and understanding child poverty. Within this approach, we have used a list of ten dimensions which is in line from the results of the participatory study done among the children delegates of the Global March Against Child Labor and for Education,and estimated multidimensional poverty using the Alkire and Foster's methodology.

As expected we found poverty levels in Afghanistan to be strinkingly high, with virtually all children (both in urban and rural areas, girls and boys, disabled and non disabled children and of all age groups) being deprived in at least one of the ten dimensions. Among children, we find the younger ones (5-7 years) to be less poor but the trend is reversed after 8.

More research is needed to explore differences in deprivation according to gender and disability status. Further research is also needed to investigate the weighting system that should be defined depending on how a society and/or children prioritise different capabilities' domains. Another field of research to be developed regards the determination of the cutoffs and how they influence the level of poverty.

Appendix

Following is a description of dimensions of wellbeing used for the purpose of this paper. The choices made to determine the cutoff on each dimension are based on the literature as well as on observations made by one of the author during the fieldwork. Obviously, the subjectivity of these choices indicating the level of poverty can be questioned. More research is needed to ensure a more objective method of selection of the cutoffs.

1) Health
What are the main sources of drinking water for your household?
1 = piped into residence/compound/plot
2 = public tap
3 = hand pump in residence/coumpound/ plot
4 = public hand-pump
5 = well in residence/compound/ plot
6 = covered well
7 = open well and kariz
8 = spring
9 = river/ stream
10 = pond / lake
11 = still water
12 = rain water
13 = tanker/ truck
14 = other (specify)
The child is deprived on this dimension if the answer is 7, 9, 10, 11, 12 13 or 14.

2) Care
Who takes care of your child besides yourself?
1 = mother
2 = father
3 = sister/brother
4 = he/she herself or himself
5 = other children
6 = other member of the family
7 = mullah
8 = other leader of the community
9 = other member of the community
10 = no one
11 = other (specify)

The child is deprived on this dimension if the mother is not taking care of him/her

3) Family assets
Does any member of your household own any of the following?
I = radio, tape recorder
II = television
III = pressure cooker
IV = oven, hotplate
V = refrigerator
VI = traditional stove/bukhari
VII = bicycle
VIII = motorbike
IX = car
X = tractor
XI = generator
XII = kerosene lamp
XIII = sewing machine
The child is deprived on this dimension if the family has less than six assets. If the family owns a tractor or a car the child is automatically set as non-deprived

4) Food Security: Material deprivation of the children
How often does your household get enough to eat?
1 = always enough
2 = sometimes not enough
3 = frequently not enough
4 = always not enough
5 = enough but with poor quality
The child is deprived on this dimension if the answer is 3 or 4

5) Social inclusion
Has anyone ever ill-treated your child?
Did you and your child take part in any ceremony during the past year?
Is your child engaged or married?
The child is deprived on this dimension if the answer is yes on at least one of the questions

6) Education
Has the person received some education?
The child is deprived on this dimension if he has received no education

7) Freedom from economic and non-economic exploitation and Leisure activities

How many hours per day does your child spend on household tasks?

How many hours per day does your child spend on fieldwork during the season of work?

How many hours per day does your child spend on work outside the house?

The child is deprived on this dimension if he/she works more than two and a half hour per day

8) Shelter and environment

How many people per room are there in your household?

The child is deprived on this dimension if he/she lives in a house with three or more people per room

Dimensions 9 and 10 consist of a set of items that help establish a score on the given dimension. These dimensions are respectively constituted of 6 and 5 items to which the respondents had the choice between three possibilities. Each of these answers was given a certain score: 0 for "yes I can do it", 1 for "yes, I can do it but with difficulty", and 2 for "no, I cannot do it". As a result, the higher the score on each dimension, the higher the level of difficulties the child face on the given dimension.

A score indicator is constructed adding up the answers. A score between 1 and 3 is considered as "'Mild Difficulty"', a score between 4 and 6 is considered as "'Moderate Difficulty"'.a score between 7 and 9 is considered as "'Severe Difficulty"' and finally, a score between 10 and 12 is considered as "'Very Severe Difficulty"'.

9) Personal autonomy

Is your child able to do the following?

I = bathing/ablutions

II = getting dressed

III = preparing meals for yourself

IV = going to the toilet

V = eating/drinking

VI = moving around

The child is deprived on this dimension if he/she has at least moderate difficulty (which corresponds to a score between 3 and 5).

10) Mobility

What is he/she able to do outside the house/compound? (N.B.: Ask this question if the child is over 8)

I = climbing stairs
II = going to the bazar/shop
III = carrying water
IV = working in the field
V = riding a bicycle/or animal

The child is deprived on this dimension if he/she has at least moderate difficulty (which corresponds to a score between 3 and 5).

Acknowledgments

The authors acknowledge the European Commission, UNOPS/UNDP UNMAS (Volunteer Trust Fund), Ambassade de France en Afghanistan, Swiss Agency for Development and Cooperation and Handicap International for funding the National Disability Survey in Afghanistan research project.

They benefited hugely from the comments of the participants to the OPHI Workshop on Multidimensional Measures in Six Contexts (Oxford, 1-2 June 2009), IX ISQOLS Conference (Florence, 19-23 July 2009) and HDCA Annual Conference (Lima, 10-12 September 2009). In particular they are grateful for the comments of Sabina Alkire, Masood Awan, Conchita D'Ambrosio, James Foster, Rozana Himaz, Filomena Maggino, Jose Manuel Roche, Maria Emma Santos and Sarah Valenti .

They are also grateful to Parul Bakhshi and Ellie Cole for useful comments on drafts of this paper.

They also want to warmly thank the $5,130$ families of Afghanistan who kindly received interviewers and answered their questions.

They retain responsibility for the opinions expressed in the paper.

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