

**Poverty Measurement in Iraq:
Findings from Poverty Measurement Technical Committee meeting, September 2011**

I. Introduction

Purpose of Paper

This paper summarizes and builds on the main findings of a half-day poverty event organized by UNDP and the IAU, which took place in Amman and Baghdad on September 19, 2010. Participants included the Central Office for Statistics (CSO) of the Government of Iraq (GOI), the Oxford Poverty and Human Development Initiative (OPHI), the World Bank, United Nations Country Team (UNCT) Agencies (IOM, WHO, WFP, UNFPA, UNICEF, UNDP) and the Inter-Agency Information & Analysis Unit (IAU).

This paper seeks to equip decision makers within CSO and UNCT with information on current poverty measurement tools.¹ Every method has its shortcomings and the goal of this paper is not to endorse one method or another or to fine pick limitations, but rather to provide basic information on the considerations needed to utilize poverty measures and better understand poverty in Iraq.

It is hoped that with this information, policy makers will be better able to use poverty measurement tools to identify who and how many are poor, where they are located, the intensity and nature of their deprivations with the end goal of designing interventions that can best aid the poor.

Overview of Poverty in Iraq and Ongoing Poverty Work

The GOI has made great headway in addressing the issue of poverty in Iraq. In 2007, it implemented the Iraq Household Socio-Economic Survey (IHSES). In 2009, it approved a poverty line and implemented a Poverty Reduction Strategy (PRS). The PRS feeds into Iraq's recently-approved National Development Plan 2010-2014. Within this framework, the policy to combat poverty in Iraq builds upon the results of an analysis of poverty based on the Per-Capita Expenditures approach. Iraq is also preparing for the second round of data collection with the IHSES in 2011. The GOI has also recently approved the results of a second round of Unsatisfied Basic Needs (UBN) analysis using data from the IHSES 2007. These results will soon be released.

It is recognized by the GOI, World Bank and UN alike that monetary measures alone do not capture poverty in Iraq. In monetary terms, there is very little variance across economic strata and the difference between the rich and poor is very shallow. Yet, in non-monetary measures, in health, in access to services, in many facets of living conditions, there are considerable disparities across districts, governorates and rural/urban areas in how Iraqis live.²

A further limitation of monetary measures in capturing deprivation is that they can hide violations to children's rights such as child labour: A non-poor household may be receiving the extra income to achieve the "just over the line" expenditure through the work of the child. In a poverty context like Iraq where most households are either just below or just above the line, points like this one may be important policy considerations.

¹ This paper mentions three poverty measures: the Per Capita Expenditure/Cost of Basic Needs, Unsatisfied Basic Needs and the Alkire-Foster methods. Many other poverty measures exist that have not been discussed in this report.

² Analysis using IHSES reveals little variance in the whole dataset across monetary and non-monetary indicators. A main finding is that there are significant geographical differences, for example, between KRG and the rest of Iraq.

Furthermore, a monetary approach has less explanatory power in contexts where there are market failures or where services are distributed freely albeit inefficiently. These points are relevant to the Iraqi context where the state provides large transfers to households and is responsible for service delivery, which is known to be inadequate, particularly in rural areas.

II. Methods (description of methods, understanding the main components and limitations)

Per-Capita Expenditure / Cost of Basic Needs (PCE/CBN)

Main Features: uni-dimensional, money-based, absolute, allows for comparison across countries

Basic Steps: Define a welfare indicator, set a poverty line using a cost of basic needs method, count how many individuals fall below the poverty line and examine their characteristics

Components:

Welfare indicator: Per-Capita Expenditure, which includes welfare-enhancing expenditures on goods and services. PCE is real and not nominal and includes the differences in the cost of living across the territory.

Food poverty line is set as the cost of acquiring 2,337 kcal/person/day. Poverty Line: is defined as the food poverty line plus the non-food allowance.

Measures:

Headcount Ratio: Incidence of Poverty

Poverty Gap Index: Depth of poverty

Squared Poverty Gap Index: Severity of poverty

Limitations/Issues:

Determining the cost of basic needs is not an entirely objective process. It takes into account the price of the minimum needed amount of calories but does not account for the price of a nutritionally-balanced amount of calorie. It assumes the rational choice of household and does not take into account choices households might take to their detriment i.e. purchasing tobacco at the expense of other essential needs.

Unsatisfied Basic Needs Approach (UBN)

Main Features: multi-dimensional, measures satisfaction as well as deprivation, subjective, flexible (country-specific or across countries depending on data availability and methodological choices)

Steps: Select dimensions or fields of basic needs, select indicators and weights for indicators in each field, set a threshold or cut-off lines for each deprivation, set the scores of the indicators 0 for worst deprivation and 2 indicating maximum satisfaction, calculate the index value for each field.

Measures:

1st stage: indicator scores for each household

2nd stage: field index is arithmetic mean of indicator scores for each household

3rd stage: level of living

Limitations/Issues:

A major limitation of the UBN is that it assigns cardinal measurements to ordinal data. In other words, it gives a numeric score, from 0 – 2 for non-numeric data—i.e. type of toilet in the household. If it is not known how much measurably better one type of toilet system is from another, then adding up scores from different indicators is problematic.

The UBN, by assigning scores for each degree of deprivation allows for compensation. In other words, it allows performance in one dimension to raise the aggregate score of deprivations. As an example, the deprivations of a household that suffers from poor access to services (water and sanitation) could be masked in the aggregate UBN index, if this household were to fare well in some other set of dimensions, nutrition for example. As a result of this limitation, the UBN is not suitable for capturing the quality of deprivations in households that experience both extremes of well-being and deprivation. It is also not suitable when examining changes over time.

Alkire-Foster Method (AF)

Main Features: multi-dimensional, measures deprivations, flexible (country-specific or across countries depending on data availability and methodological choices), reflects joint deprivations, can target the poorest; can be broken down to show the composition of poverty for different regions or ethnic groups.

Steps: select dimensions, select indicators for dimensions, select cut off and weights for indicators, select poverty cutoff (number of deprivations to be considered poor), calculate measures, decompose by groups and break down by indicators

Measures:

H: incidence of Poverty

A : intensity of Poverty

M0: multi-dimensional poverty index, $H * A$ (with cardinal data can also do the Poverty Gap Index and Squared Poverty Index.)

Limitations/Issues:

The AF methodologies are new, so conventions with respect to the selection of indicators, weights and cutoffs have yet to be developed. A big element of the debate surrounding the MPI is the issue of ascertaining weights that are attached to the different indicators that are combined into the index. These weights require consensus building as they signify embedded trade-offs between indicators. As with all measures, judgment is involved and this can be the outcome of political process, as was the case in Mexico.

Some tools for conducting robustness and sensitivity testing to examine the effect of these decisions are available. These analyses should be studied as part of any consideration about constructing an MPI index for Iraq.

In some ways, results from the AF are not as straight forward or as easily open for interpretation as the PCE/CBN results. Policy makers can easily interpret the poverty gap as the minimum investment needed to eradicate poverty in a country, while results from the AF, depending on the dimensions, make similar analysis more

complex. The first few countries to implement the AF methodology thus will need to be both rigorous and thoughtful.

Summary Table of Poverty Measurements

	Income-Poverty	Unsatisfied Basic Needs	Alkire-Foster
Unit of Analysis	Individual or Household; de facto Household; individual level data very difficult to collect	Individual or Household	Individual or Household
Identification of minimum information	Reference to external information: food (central element) and non food	Lists of dimensions (MDG related, though not necessarily) assumed to be objectively definable	Lists of dimensions (MDG related, though not necessarily) assumed to be objectively definable
Components Poverty Line	Establishing minimum food poverty & non-food poverty requirements	Normative decisions on essential dimensions and thresholds Assumptions regarding compensation and cardinality.	Normative decisions on essential dimensions, thresholds, weights and k-value
Data required	Detailed diary of household income-expenditures	Dependant on dimensions and indicators but focus on living conditions and services	Dependant on dimensions and indicators but focus on living conditions, services and capabilities
Major Weakness of Measurement	Does not reflect non-monetary living conditions	Aggregation process allows for compensation. It may obscure variability between indicators	Flexibility of measure can be wrongly applied if not formed without context and consensus
Interpretations by Policy Makers	Emphasis on economic growth and distribution of monetary income	Investments in basic needs	Investments in basic needs and capabilities Shows joint deprivations – identifies the poorest.

III. Results

The results of the analysis below are from an exercise conducted by CSO and the IAU while attending a two-week training on multi-dimensional poverty measurement run by OPHI. There are many critical assumptions that go into constructing a multi-dimensional poverty measurement with the AF methodology therefore these results are not official but merely an example of the application of the AF method using Iraq data.

To ensure comparability, whenever possible, we followed the same rules (in terms of dimensions, indicators, thresholds) as the UBN. Five dimensions were selected: Services, Environment, Income Poverty, Education and Health, with each dimension weighted equally and indicators within these dimensions weighted equally.

Secondly, a poverty cut-off (K value) of 5 was selected to ensure a similar headcount of poverty as the UBN and PCE/CBN methods (see appendix for more information).

Similarities between methods

These measures have similar national headcount levels nationally and rank governorates relatively similarly (with the exception of Maysan). Income (PCE/CBN) was a dimension of both the UBN and the analysis using the AF method. The differences in results between the different methods would increase if income were to be taken out of the UBN and AF models.

There are some differences worth noting: the Alkre-Foster method identifies as poor a higher percentage of people in Erbil, Suleimaniya, Duhouk, Karkouk, Baghdad, Ninevah, Maysan, Diala, while in the remaining governorates the headcount is equal or lower than with the PCE and the UBN methods.

	Expenditures (PCE/CBN)	Unsatisfied Basic Needs (UBN)	Alkire-Foster (AF)
Muthanna	48.8	49.7	48.5
Babil	41.2	39.8	39.8
Salahuddin	39.9	35.5	40.9
Kerbala	36.9	33.1	30.5
Qadisiya	35	48.1	45.9
Wasit	34.8	37.7	37.9
Diala	33.1	37.8	27.9
Basrah	32.1	24.5	38.1
Thi-Qar	32	44.5	37.0
Maysan	25.3	56.1	52.5
Najaf	24.4	32.2	33.0
Nineveh	23	36.3	37.7
Anbar	20.9	10.9	15.3
Baghdad	12.8	17.7	14.2
Karkouk	9.8	22.4	16.3
Duhouk	9.3	30.0	14.5
Erbil	3.4	25.4	20.3
Suleimaniya	3.3	23.7	10.9
Iraq Total	22.9	29.7	27.8

Differences

A major of difference of the PCE/CBN and AF methods is the classification of who is poor. According to our analysis, there is disagreement over whether 12% of the population is poor or not (highlighted in red below).

		Income Poverty (2 \$ / day)	
		Non Poor	Poor
Alkire-Foster	Non Poor	68.41% 20,562,060	3.72% 1,116,783
	Poor	8.70% 2,614,135	19.18% 5,763,520

Maysan Governorate, using the Alkire-Foster methodology, is the most deprived governorate in Iraq. In this governorate, we see the discordance between the PCE/CBN and AF approaches. Nearly 27% are classified as poor with the Alkire-Foster methodology but not with the PCE/CB approach.

Diagnosis of Poverty in Maysan: Comparison Between Expenditure and Alkire-Foster Approaches

	Non Poor people according both AF and PCE/CBN	Poor only according to PCE/CBN	Poor only according to AF	Poor people according both AF and PCE/CBN
Maysan	47.39%	0.07%	27.29%	25.25%

IV. Policy Implications

The following policy questions were raised during the meeting:

1. Does Iraq need another poverty measure now?

The UBN in its current form has some flaws which limit the application and usability of this index. The Alkire-Foster method addresses some of these flaws. It also helps identify deprived populations that are not identified through a monetary approach and as such could help improve targeting. Depending on the choices made in constructing the measure, it need not contradict results from the PCE/CBN and UBN but could add complementary information.³

However, Iraq policy makers may feel overloaded by the availability of additional new approaches. It may be that the time is not right: addressing the feasibility of the AF now risks diverting the discussion from addressing important poverty policy issues and improving targeting.

Balancing these considerations, the GOI could choose to refine and modify the UBN based on some of the components of the Alkire-Foster method. The Government may also wish to start testing the usability of the AF

³ The World Bank and Alkire Foster both state that there is no ranking across measures. Rather they complement each other and should be understood and interpreted according to their axiomatic underpinnings.

method for later use—possibly when the Poverty Reduction Committee reflects on progress towards poverty reduction and plans further action.

2. *Is policy better guided by monitoring all the different non-income dimensions separately or combining them in a single index?*

The recognition by all that poverty is multi-dimensional has led to lively debate about how to best capture the many different aspects to poverty.

On the one hand, the World Bank uses a monetary based measure to estimate poverty. It builds a poverty profile around this monetary threshold, accounting for different dimensions of poverty. The approach takes the conscious decision not to collapse all components into one index. A thorough analysis is undertaken of the individual indicators that reveal lack of progress. As Martin Ravallion from the World Bank has stated: it is a dashboard of all important components rather than a composite index. From this perspective, the CBN headcount measure is a benchmark against which all attributes that are salient to understand poverty are considered.

On the other hand, the AF composite index of poverty captures all its important features. It can include or exclude a monetary indicator. As a complement to PCE/CBN tools, it offers the ability to understand “compounded” deprivations of the dimensions selected, i.e. which households/individuals are facing how many (and how much of each) different dimensional deprivations *at once*.

The World Bank has argued that correlation is not causation and each component should be evaluated independently rather than lumped together. The Alkire-Foster method allows transparency in that overall poverty can be decomposed by indicator to show precisely how poverty varies across Governorates or by social or other group.

With limited resources and complex variations in the nature of poverty in Iraq, there is a need to identify who are the worst off and deliver services to them. A multidimensional analysis could potentially describe the concentration and intensity of compounded deprivations and then move to understanding it (determining factors at geographic, household or individual levels) and locating these households/individuals. Focusing on these groups and ensuring they are not left behind, particularly in efforts towards MDG achievement, is defined as an “equity-based” approach, to reduce inequities which are concentrated in these groups. A recently published UNICEF study (“Narrowing the Gaps to Meet the Goals” Sep 2010) shows that an equity-focused approach to child survival and development is the most practical and cost-effective way of meeting the health MDGs for children.

V. Recommendations

1. Should the GOI decide to modify the UBN and correct limitations, it may decide to examine the Alkire-Foster method. Additionally, the Government may wish to explore the Alkire-Foster method to complement the other measures in the future. In either case, there are possibilities for collaborative work on this with the GOI, OPHI, the World Bank and the UNCT. In this regard, there is a proposal for a joint workshop in spring to take this work forward.
2. The GOI may also wish to learn from other countries that have incorporated multi-dimensional poverty measurements into their poverty reduction strategies. The Government, for example, may wish to meet with their Mexican counterpart’s National Council for Evaluation of Social Development Policy

(CONEVAL), to learn from their decisions and reflections in implementing a multi-dimensional measure.⁴

3. The upcoming IHSES 2 could include improvements in data collection (such as questions related to capabilities and freedoms) that aid in the construction of multi-dimensional measures. A key component of the Alkire-Foster method is the inclusion of freedom and capability related information in constructing an index. OPHI refers to this information as “missing dimensions.” With collaboration, the IHSES could potentially include question and indicators such as safety from violence, empowerment, and social connectedness which would enrich understanding on multi-dimensional poverty.
4. UN agencies may wish to construct measures and indexes of well-being that focus on special thematic issues such as a child’s well-being or protection. These specific indexes could help direct projects to areas with the compounded or interlocking needs. If UNCT agencies wish to develop a multi-dimensional measure based on the Alkire-Foster methodology, a policy conversation could begin within the GOI and UN on how to move forward.

⁴ Note that Mexico decided to include income poverty in their multidimensional poverty measure as a dimension, giving it a higher weight.

Appendix:**Choices of Dimensions, Indicators and Weights for IAU/CSO analysis**

DIMENSION WEIGHTS	DIMENSIONS	INDICATORS	INDICATORS WEIGHTS
0.2	Services	Sanitation	0.6
		Waste	0.6
		Water supply	0.6
		Electricity supply	0.6
0.2	Environment	Annoyance	0.8
		Housing materials	0.8
		Overcrowding	0.8
0.2	Income poverty	PCE	2.4
0.2	Education	Attainment	1.2
		Enrollment	1.2
0.2	Health	Vaccination	1.2
		Birth delivery assistance	1.2

Changes in H, A, and M0 based on various K-values

