

# OPHI

OXFORD POVERTY & HUMAN DEVELOPMENT INITIATIVE

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## Ongoing Debates and Research Topics

Sabina Alkire, August 2011

Tabiri, Kenya



Rabiya, India



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# Ravallion's Critiques

- “...it is not credible to contend that any single index could capture all that matters in all settings” (Ravallion JEI 2011)
- Problem with this critique: “we contend no such thing” (Alkire Foster Santos 2011 JEI)

# Single Index Critique

- **Our position:** "multidimensional measures provide an alternative lens through which poverty may be viewed and understood" (AF JEI)
- **We go beyond a single measure in two ways:**
  - Inward
  - Outward

# Single Index Critique

- **The AF methodology:** a ‘high resolution’ lens
- **Going Inward:** We report a set of consistent subindices that unpack the AF index and supply powerful analyses.
  - Headcount ratio
  - Intensity of poverty [Gap, Squared Gap]
  - Censored headcount ratios
  - Contribution of each indicator to overall poverty
  - Analysis of intensity bands

# Single Index Critique

- **Going Outward: We use other indicators**
- Alkire & Santos explicitly state that the MPI aims to *complement* income poverty measures
- We contrast MPI with a variety of other relevant indicators including
  - **Rare events**
  - **Different units of analysis / dynamics (environ)**
  - **Different space**
  - **More detailed analyses of one dimension**

# Why aggregate if we break down again?

- **Ravallion's question misleads. KEY to grasp.**
- Our sub-indices rely on the joint distribution through the identification step (censored matrix). They do **NOT** rely on marginal measures, but on the joint distribution of deprivation.
- The censored headcounts are **NOT** the raw headcounts (marginal measures). They reflect identification and censoring of the non-poor.
  - All our consistent subindices use  $g_0(k)$  matrix – not  $g_0$ .

# *Does Identification Matter?*

Dimensions	Nutrition	Health Access	Education	Work	Empowerment	Safety	Count
Person 1 (or hh)	ND	D	ND	D	D	D	4
Person 2	ND	ND	D	ND	D	ND	2
Person 3	D	D	D	ND	ND	ND	3
Person 4	D	D	D	D	D	D	6

Dimensions	Nutrition	Health Access	Education	Work	Empowerment	Safety	Count
Person 1 (or hh)	ND	D	ND	D	D	D	4
Person 2							0
Person 3							0
Person 4	D	D	D	D	D	D	6

# *Does Identification Matter? **YES.***

Dimensions	Nutrition	Health Access	Education	Work	Empowerment	Safety	Count
Person 1 (or hh)	ND	D	ND	D	D	D	4
Person 2	ND	ND	D	ND	D	ND	2
Person 3	D	D	D	ND	ND	ND	3
Person 4	D	D	D	D	D	D	6

Dimensions	Nutrition	Health Access	Education	Work	Empowerment	Safety	Count
Person 1 (or hh)	ND	D	ND	D	D	D	4
Person 2							0
Person 3							0
Person 4	D	D	D	D	D	D	6

**Nut   H   Ed   W   Em   Safe**

Raw      50%   75%   **75%**   **50%**   75%   **50%**

Censored   25%   **50%**   **25%**   **50%**   **50%**   **50%**



*Does Identification Matter? **MPI 2010:**  
**Raw-Censored Headcount***

# Attainment vs Deprivation Space

- aggregation should be conducted in attainment rather than deprivation space, preferably using prices as weights.  
(Ravallion 2011)
- Our response:
  - Agree: use unidimensional wherever plausible
  - Disagree: in fundamentally multidimensional case where aggregation is not possible in attainment space.

# Attainment vs Deprivation Space

In the fundamentally multidimensional case:

- “Ravallion brings aggregation to a dead stop”  
[Dashboard of Marginal measures only option]
- “We move on to deprivation space ... and aggregate according to a concept of poverty as multiple deprivations, with explicit deprivation values and tradeoffs” [Joint distribution]

# Prices as weights

- Ravallion claims that we “reject prices as weights”.
- This misrepresents our position, in which prices are used when they are available and meaningful
- Meaningful prices may *not* be available across *all* dimensions of poverty. Ravallion agrees.
- Where we differ is:
  - *When* prices are meaningful
  - What to do if prices *aren't* used

# Prices as weights

- Example – Ferreira argues we should use weights to aggregate assets index in MPI. Fine! But...
  - DHS has no information on prices
  - DHS has no information on quality of asset
  - DHS has no information on age/functionality of asset
  - Options: PCA /FA/MCA or normative weights
  - Can't use PCA/FA/MCA because of comparability is lost
  - Use normative weights.

# Dashboard

Dashboards... suffer because of their heterogeneity, at least in the case of very large and eclectic ones, and most lack indications about... hierarchies amongst the indicators used. Further, as communications instruments, one frequent criticism is that they lack what has made GDP a success: the powerful attraction of a single headline figure allowing simple comparisons of socioeconomic performance...

*Stiglitz-Sen-Fitoussi p.63*

# Dashboard

- A dashboard leaves the difficult questions about tradeoffs completely open.
- It does not catalyse expert, political, or public scrutiny and debate on these tradeoffs, nor encourage transparency and accountability.
- No one must justify how they make the tradeoffs.
- **“Government says Poverty is Higher, Lower, and Unchanged”**

# Dashboard

- Ravallion's dashboard is blind to joint deprivations.
- Ability to show joint deprivations: key advantage
  - Matches poor people's experience of poverty
  - Targets the multiply deprived
  - Allows analysis of interconnected domains, traps
  - Dimensional monotonicity



# Dashboard

A dashboard of marginal measures does not answer the fundamental questions of a poverty methodology:

- Who is poor overall?
- How many poor people are there?
- How poor are they?

In other words, it does not identify who is poor.

Multidimensional identification is **key** to understand, but often overlooked, as it is new

# Linked Data (same survey)

- Critique: Will a single data source have all variables? MPI's didn't. Will single or a few strong indicators adequately reflect a dimension?

# Linked Data

*Our most common question:*

**Why didn't you use \_\_\_\_\_?  
– a different indicator – in MPI.**

*Our most common answer:*

**The data are not present for 100+  
countries in our surveys.**

# Data issues

1. Sources vary (DHS, MICS, WHS)
2. Some existing data not used
3. Years vary 2000-2008
4. Indicators don't reflect quality
5. Indicators not uniformly accurate
6. Key dimensions are missing
7. Income/Consumption missing

# Response: Linked Data

- **All** of the MPI data limitations were explicitly mentioned in Alkire & Santos and by others.
- “Four of the twelve recommendations of the Stiglitz-Sen-Fitoussi Commission (2009) call for governments to collect data in the same survey on eight dimensions of quality of life, including income and consumption”
- Intrahousehold issues – data often missing
- But data are proliferating and technologies for data collection are being strengthened – change is possible.

# Politics: Consultation

Was there ‘enough’ consultation on the international MPI

- *With poor people*
- *With statistical offices*
- *With governments*
- *With civil society*

# Politics: Consultation

Was there 'enough' consultation?  
*Compared to what?*

- \$1/day poverty measure
- MDG Indicators
- Doing business
- Commitment to Development

# Politics: Consultation

1. Was there 'enough' consultation?  
*Compared to what?*

*How much is enough  
(international)?*

*How much is enough  
(national)?*



# Issues: Weights

**Need weights if not to be restricted to union & identification**

Identification Method	Average Headcount (H) <sup>1</sup>	Number of the 104 countries	
		with H > 90%	with H < 5%
Union	58%	32	0
Intersection	0%	0	103
MPI (k=3)	32%	2	30

# Research Issues: Data

2011 MPI: same indicators & method

Updated DHS and MICS, plus country

*Can we improve international data?*

*Should we 'call for' a survey having a specific set of dimensions and indicators? Which?*

# Some key issues: data

- **Data Constraints:** Most criticisms address these (*why don't you include \_\_\_\_\_?*). How to respond well?
- 'new' questionnaires on standard surveys
- 'new' dimensions
- individual level data, excluded populations
- combination of surveys, administrative data, mapping
- combination of data for different reference groups

# Some key issues: implementation

- **International MPI**

- Robustness (weights, bootstrapping, hh size, indicators)
- Aggregation within households - what biases exist?
- Households without eligible populations
- Comparisons across surveys – sample, respondents
- The Asset indicator
- Indicator scrutiny: Stunting; Quality of Education, etc
- Ideal indicators?
- MPI-2 for an overlapping set of middle-high HD countries
- Rural/Urban poverty? Should we adjust urban indicators?
  - Overlooked populations: elder poverty

# Some key issues: implementation

- **Empirical:** *some questions*
  - Statistical interrelationships among indicators – Systematic.
  - Income/consumption poverty and deprivations
  - Combining individual and hh level data
    - Intrahh inequalities, Household composition, predicting hh depriv
  - Weights (ordinal ranking)
  - Group-specific indicators (child, ethnic minority)
  - Multiple cutoffs with ordinal data (extreme poverty, poverty)
  - Develop multidimensional health indicators, quality of schooling, governance, child poverty, etc.
  - Use of biomedical data to set weights – nutrition measure

# Some key issues: research

- **Methodological**

- Time series, Panel data methodologies, Chronic Poverty
- Robustness tests (weights, cutoffs, indicators)
- Test statistics, measurement error, uncertainty, inference
- Appropriate validation ‘tests’ for national measures
- Algorithm for adjusting weights for ordinal data and  $M_1$   $M_2$
- Complementarity and Substitutability
- Chronic Multidimensional Poverty
- Axioms – for Chronic Multidimensional Poverty
- Characterisation of AF
  - Axiom – post-identification decomposability
  - Use of ordinal data - depth

# Some key issues: research

- **Policy Analysis**

- Natural experiments: Sequence of interventions
- How decompositions inform budget allocation
- How decompositions inform policy
- Panel data: poverty traps, sequence of interventions, etc
- Analysis & endogeneity
- Latent variable techniques; structural equation models
- MPI changes and levels across different policy environs
- Multidimensional Impact Evaluation