HDCA Summer School on Capability and Multidimensional Poverty

24 August – 3 September 2012
University of Indonesia, Indonesia
Why Multidimensional (MD) Poverty Measures?

Sabina Alkire (OPHI)
Why such interest?

This session will briefly introduce some of the reasons that multidimensional measures of poverty (and well-being) are on the upswing.

In addition to the moral or ethical motivations already covered, they can be divided into three types:

1. Technical – we can
2. Policy – we realize the value-added
3. Political – there is a demand
Why the new emphasis on measurement?

*We can:*  
1) Data are increasing  
2) Methodologies are improving

*We need to:*  
3) Income poverty: important but insufficient.  
4) Growth insufficient  
5) Dashboards are complex  
6) Associations vary  
7) Joint Distribution (Marginal Measures)

*We are willing to:*  
8) 2010 HD measures sparked interest and debate  
9) Political critique of current metrics; exploration
1. Relevant Data are Increasing

• Since 1985, the multi-topic household survey data has increased in frequency and coverage.
• Even greater breathtaking increases have occurred with income and expenditure data.
• Technology exists to process these data.
1. Relevant Data are Increasing

Developing Country Surveys: DHS, MICS, LSMS, CWIQ

- Countries with national multidimensional survey data
- Countries with at least two multidimensional surveys
- Countries with at least three multidimensional surveys
- Countries with more than three multidimensional surveys


Values: 0, 20, 40, 60, 80, 100, 120, 140
2. Multidimensional Measures are exploding

• Bandura (2006) found that over 50% of composite (multidimensional) indices had been developed since 2001; now is greater.

• Examples: Doing Business Index, Governance, Global Peace Index, Quality of Life Indices, Multidimensional Poverty Indices, SIGI, CGD Index.
3. Why Multidimensional Poverty?

Income poverty is incomplete

<table>
<thead>
<tr>
<th>Mismatches between income poverty and deprivations in education and nutrition.</th>
<th>Education</th>
<th>Nutrition/health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Children</td>
<td>Adults</td>
</tr>
<tr>
<td>deprived in functionings but not income/expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>43%</td>
<td>60%</td>
</tr>
<tr>
<td>Perú</td>
<td>32%</td>
<td>37%</td>
</tr>
<tr>
<td>income/expenditure poor persons who are not deprived in functionings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>65%</td>
<td>38%</td>
</tr>
<tr>
<td>Perú</td>
<td>93%</td>
<td>73%</td>
</tr>
</tbody>
</table>

3. Why Multidimensional Poverty?

Income poverty is incomplete

<table>
<thead>
<tr>
<th>Country</th>
<th>Neither persistently income poor nor deprived</th>
<th>Persistently income poor only</th>
<th>Persistently deprived only</th>
<th>Persistently income poor only and deprived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>82.8</td>
<td>6.9</td>
<td>8.9</td>
<td>1.4</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>78.8</td>
<td>7.1</td>
<td>7.3</td>
<td>6.8</td>
</tr>
<tr>
<td>Belgium</td>
<td>73.0</td>
<td>9.3</td>
<td>8.8</td>
<td>8.9</td>
</tr>
<tr>
<td>France</td>
<td>70.8</td>
<td>11.6</td>
<td>8.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>64.8</td>
<td>11.4</td>
<td>9.7</td>
<td>14.0</td>
</tr>
<tr>
<td>Italy</td>
<td>68.8</td>
<td>9.2</td>
<td>11.3</td>
<td>10.7</td>
</tr>
<tr>
<td>Greece</td>
<td>68.8</td>
<td>11.2</td>
<td>9.9</td>
<td>10.1</td>
</tr>
<tr>
<td>Spain</td>
<td>72.7</td>
<td>9.2</td>
<td>8.7</td>
<td>9.4</td>
</tr>
<tr>
<td>Portugal</td>
<td>64.5</td>
<td>12.0</td>
<td>11.3</td>
<td>12.2</td>
</tr>
<tr>
<td>All</td>
<td>70.7</td>
<td><strong>10.4</strong></td>
<td><strong>9.2</strong></td>
<td><strong>9.7</strong></td>
</tr>
</tbody>
</table>

Source: Whelan Layte Maitre 2004 Understanding the Mismatch between Income Poverty & Deprivation
Europe 2020: Multidimensional Poverty

In Europe, while 20% of people are persistently income poor, and 20% are persistently materially deprived, ONLY 10% of people are BOTH persistently income poor and materially deprived.

This observation motivated the move in Europe to a multidimensional poverty measure. Income doesn’t tell the full story – even of material deprivation!
3. Why Multidimensional Poverty?
Income poverty is incomplete

Other considerations with income poverty:
• shows some changes with lag; others at once
• does not show how people are poor
• affected by different policies
• measurement error & data collection issues

So need both – income & other dim.
4. Growth? Claims are strong

2008 Growth Commission

“Growth is not an end in itself. But it makes it possible to achieve other important objectives of individuals and societies. It can spare people en masse from poverty and drudgery. Nothing else ever has.”
4. Growth Commission

The Growth Commission 2008 generated a nuanced set of observations on sustained economic growth based on case studies of countries that had 7% growth for over 25 years.

BUT after 25 years of growth:
- In Indonesia, 28% of children under five were still underweight and 42% were stunted
- In Botswana, 30% of the population were malnourished, and the HDI rank was 70 places below the GDP rank.
- In Oman, women earned less than 20% of male earnings.

Conclusion: Sustained growth needs to be pursued alongside multidimensional poverty reduction. All variables need to be on the table, in view, at the same time.
4. Growth? Claims are strong ...and debated

François Bourguignon, Agnès Bénassy-Quéré, Stefan Dercon, Antonio Estache, Jan Willem Gunning, Ravi Kanbur, Stephan Klasen, Simon Maxwell, Jean-Philippe Platteau, Amedeo Spadaro

‘The correlation between GDP per capita growth and non-income MDGs is practically zero...’
4. Growth? Claims are strong…and debated

François Bourguignon, Agnès Bénassy-Quéré, Stefan Dercon, Antonio Estache, Jan Willem Gunning, Ravi Kanbur, Stephan Klasen, Simon Maxwell, Jean-Philippe Platteau, Amedeo Spadaro

“The correlation between growth in GDP per capita and improvements in non-income MDGs is practically zero, . . . [thereby confirming] the lack of a relationship between those indicators and poverty reduction. Because it would be hard to believe that information on non-income MDGs is so badly affected by measurement error that it is pure noise, this lack of a relationship reflects some relative independence among policy instruments governing progress in the various MDGs. Furthermore, it highlights substantive differences in country policies and circumstances that may affect the relationship between these policies. This interesting finding suggests that economic growth is not sufficient per se to generate progress in non-income MDGs. Sectoral policies and other factors or circumstances presumably matter as much as growth.”

India: strong economic growth since 1980s.

1998-9 NHFS-2: 47% children under 3 were undernourished
2005-6 NHFS-3: 46% were undernourished (wt-age)

“Growth, of course, can be very helpful in achieving development, but this requires active public policies to ensure that the fruits of economic growth are widely shared, and also requires – and this is very important – making good use of the public revenue generated by fast economic growth for social services, especially for public healthcare and public education.”

Dreze and Sen ‘Putting Growth in its Place’ Outlook. November 2011
What does growth create? Higher GDP/capita. But this goes with inequality in MPI.
5. So let’s use a dashboard
- to complement income poverty
- to help design growth & policy
5. A 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...

A dashboard does not show people’s overlaps across dimensions.

It does not allow ‘freedom’ – voluntarily opting out.

It does not catalyse expert, political, or public scrutiny and debate on tradeoffs, nor encourage transparency about these.

Measurement conclusions will be vague:

“Government says Well-being is Higher, Lower, & Unchanged”
5. A Dashboard

Above please find the 72 indicators for the 12 MDGs.

If these were on your dashboard you might crash.

Perhaps make some overview indicators that have good properties so add rather than lose information?
5. Dashboard Multiplication?

72 indicators (or even 10), broken down by **gender**
by **region**
by **ethnicity**
by **disability**
(or even just **region**)

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**OPHI**
Oxford Poverty & Human Development Initiative
6. Associations
So Dashboards may give TMI (too much information)

Can we just choose one indicator as a proxy of the main social deprivaitons?
Let’s look across indicators
Are they all associated?

India NFHS data 2005-6

Let’s start with an easy case:
*These refer to censored headcounts:*

- % of people who are MPI poor and are deprived in assets: **37.55%**
- % of people who are MPI poor and are deprived by cooking fuel: **51.11%**

Are they the same people? In this case, **Yes.**

- **36.78%** of people live in hh with both deprivations (Nearly 37.55%)
- **0.76%** of people are only deprived in assets (Very Low)
- **14.33%** of people are only deprived in cooking fuel (About 51%-37%)
- **48.12%** of people do not experience either deprivation
Why look *across* indicators?

India NFHS data 2005-6

Because it is not always that way!
*These refer to raw headcounts*:

Percentage of people living in hh where no member has 5 yrs schooling: **18.27%**
Percentage of people living in hh where a child is not attending school: **21.17%**

Are they the same people?  
*Far less than half the time.*

7.41% of people live in hh with both deprivations
10.86% of people have no member with 5 years of schooling only
13.76% of people have a child who is not attending school only.
67.97% of people do not experience either deprivation.

*With censored headcounts: it is 17.58% total for 5 yrs of schooling and 19.53% in children out of school; 7.41 both.*
Why look *across* indicators?

India NFHS data 2005-6

*Another example:*
*These refer to censored headcounts:*

How about **mortality** and **5 yrs schooling**? Surely they are highly correlated?
Percentage of people living in a hh where a child has died: **22.55%**
Percentage of people living in a hh where no one has 5 yrs schooling: **17.58%**

Are they mostly the same people? **Less than one-third of the time.**
- **5.75%** of people live in hh with both deprivations
- **11.83%** of people have no member with 5 years of schooling only
- **16.80%** of people live in a hh where a child has died only
- **65.63%** of people do not experience either deprivation.
Why look *across* indicators?

India NFHS data 2005-6

<table>
<thead>
<tr>
<th>Child mortality vs Safe Water</th>
<th>Drinking water with MDG standards + distance</th>
<th>Total</th>
<th>Hh has not had child mortality</th>
<th>Drinking water with MDG standards + distance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hh has not had child mortality</td>
<td>Non-depr</td>
<td>Deprived</td>
<td>63.21</td>
<td>11.07</td>
<td>74.28</td>
</tr>
<tr>
<td>Deprived</td>
<td>21.02</td>
<td>4.7</td>
<td>25.72</td>
<td>Deprived</td>
<td>18.02</td>
</tr>
<tr>
<td>Total</td>
<td>84.23</td>
<td>15.77</td>
<td>100</td>
<td>Total</td>
<td>88.11</td>
</tr>
</tbody>
</table>
Still a wee bit difficult with only 5 dimensions
7. Joint Distribution

So we are going to make a MD measure. What kind shall we make?

These can be divided broadly into two types:

*Marginal Measures*

*Measures that reflect Joint Distribution*
Marginal Measures:

- Apply a deprivation cutoff for each vector of achievements.
- Construct an aggregate
- Inadequate identification (if at all, union)
- Ignores joint distribution
- Examples:
  - HPI
Joint Distribution

- Apply a deprivation cutoff for each domain
- Summarize in a deprivation score
- Identify *who is poor* – e.g. with dual-cutoff
- Aggregate across poor people
- Examples:
  - MPI
  - Counting
  - Basic Needs
**Informal Note: order of operations**

<table>
<thead>
<tr>
<th>Step Description</th>
<th>Unidim.</th>
<th>Marginal</th>
<th>Joint D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Deprivations</td>
<td>n/a</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Aggregate Across Dimensions (‘count’)</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Identify Who is Poor</td>
<td>2</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>Aggregate across People</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Alkire MD Pov & Discontents
Why do Joint Distribution methods add value?

Matrix 1

\[
g^0 = \begin{bmatrix}
0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 \\
1 & 1 & 1 & 1 \\
\end{bmatrix}
\cdots
\begin{bmatrix}
0 \\
0 \\
0 \\
4 \\
\end{bmatrix}
\]

Matrix 2

\[
g^0 = \begin{bmatrix}
1 & 0 & 0 & 0 & 0 \\
0 & 1 & 0 & 0 & 0 \\
0 & 0 & 1 & 0 & 0 \\
0 & 0 & 0 & 1 & 0 \\
\end{bmatrix}
\cdots
\begin{bmatrix}
1 \\
1 \\
1 \\
1 \\
\end{bmatrix}
\]

\[
g^0 = \begin{bmatrix}
.25 & .25 & .25 & .25 \\
.25 & .25 & .25 & .25 \\
\end{bmatrix}
\cdots
\begin{bmatrix}
.25 & .25 & .25 & .25 \\
.25 & .25 & .25 & .25 \\
\end{bmatrix}
\]
Why do Joint Distribution methods add value?

Matrix 1

\[ g^0 = \begin{bmatrix} 1 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & \cdots & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & \cdots & 0 \end{bmatrix} \]

Marginal Measures ONLY use this vector to create their measures. So according to ANY marginal measure, the poverty of Matrix 1 = the poverty of Matrix 2.

\[ \begin{bmatrix} .25 & .25 & .25 & .25 \end{bmatrix} \]

\[ \begin{bmatrix} .25 & .25 & .25 & .25 \end{bmatrix} \]
$M_0$ if $k=1$: $0.25$

$H=.25$; $A=1$

$H=1$; $A=.25$

Matrix 1

$$
g^0 = \begin{bmatrix} 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 \\ .25 & .25 & .25 & .25 & .25 \end{bmatrix} \cdots \begin{bmatrix} 0 \\ 0 \\ 0 \\ 4 \\ \end{bmatrix}
$$

Matrix 2

$$
g^0 = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ .25 & .25 & .25 & .25 & .25 \end{bmatrix} \cdots \begin{bmatrix} 1 \\ 1 \\ 1 \\ 1 \\ \end{bmatrix}
$$
\( \mathbf{M}_0 \) if \( k=1 \): 0.25
\( \mathbf{M}_0 \) if \( k=2 \): 0.25

Matrix 1

\[
g^0 = \begin{bmatrix}
0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 \\
1 & 1 & 1 & 1 \\
\end{bmatrix} \ldots \begin{bmatrix}
0 \\
0 \\
0 \\
4 \\
\end{bmatrix}
\]

Matrix 2

\[
g^0 = \begin{bmatrix}
1 & 0 & 0 & 0 \\
0 & 1 & 0 & 0 \\
0 & 0 & 1 & 0 \\
0 & 0 & 0 & 1 \\
\end{bmatrix} \ldots \begin{bmatrix}
1 \\
1 \\
1 \\
1 \\
\end{bmatrix}
\]
The joint distribution tells a different story

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health (1)</td>
<td>43.5</td>
<td>39.8</td>
<td>26.7</td>
<td>19.9</td>
</tr>
<tr>
<td>Nutrition (2)</td>
<td>74.3</td>
<td>62.2</td>
<td>61.4</td>
<td>58.3</td>
</tr>
<tr>
<td>Improved Sanitation (3)</td>
<td>72.5</td>
<td>68.4</td>
<td>79.1</td>
<td>58.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deprived in at least one dimension (union)</td>
<td>93.3</td>
<td>88.6</td>
<td>91</td>
<td>82.9</td>
</tr>
<tr>
<td>Deprived in all three dimensions (intersectn)</td>
<td>26.6</td>
<td>21.1</td>
<td>16.3</td>
<td>8.6</td>
</tr>
</tbody>
</table>

Source: Roche (2012) based on Bangladesh Demographic Health Survey data. The example follows a similar illustration from Atkinson and Lugo (2010) reproduced in Ferreira and Lugo (2012).

Note: (1) No immunized or did not received medical treatment when sick; (2) Either underweight, stunting, or wasting; (3) MDGs indicator standards.

The joint distribution provides an indication of the intensity of deprivations that batter the poor at the same time.
Example: **Vanuatu vs Gabon:** If we average the 10 weighted MPI ‘raw headcounts’ Vanuatu and Gabon have about the same average—25%.

What happens if we now ‘identify’ as poor only those people who experience deprivations in one-third or more of the weighted indicators?
Vanuatu: MPI = 0.129; H = 30%; A = 43%
Gabon: MPI = 0.161; H = 35%; A = 46%

Their multidimensional poverty is very different!

30% of people in Vanuatu are poor vs 35% in Gabon.
And each poor person has a higher intensity in Gabon
Example: Swaziland vs Nicaragua: If we average the 10 weighted ‘raw headcounts,’ Swaziland and Nicaragua both have averages around 28%.

What happens if we now ‘identify’ as poor only those people who experience deprivations in one-third or more of the weighted indicators?
Swaziland: MPI = 0.184; H = 41.4%; A = 44.5%
Nicaragua: MPI = 0.211; H = 40.7%; A = 51.9%

41% of people are poor in Swaziland and in Nicaragua…

But the avg intensity in Swaziland is only 45%; in Swaziland it is 52%
8. 2010 HDR sparked debate

• HDI: Blogs and *Lets Talk HD*

• MPI: Blogs and papers

• Governments: what data? Our voice?
60+ countries - including:

- The New York Times (US)
- TIME Magazine (US)
- Xinhua (China)
- Al Jazeera (Qatar)
- The Hindu (India)
- Dawn (Pakistan)
- BBC (UK)
- The Daily Nation (Kenya)
- Agence France Presse (France)
- The Wall Street Journal (US)
- The Economist (UK)
- The Cape Times (South Africa)
- The Australian (Australia)
- The Guardian (UK)
- The Financial Times (UK)
- Radio Netherlands

MPI Media Coverage
9. Political space is opening; demand increases

- Sarkozy Commission: Stiglitz Sen Fitoussi
- National Demands for MD Pov
- National interest in Well-being & Progress
“those attempting to guide the economy and our societies are like pilots trying to steering a course without a reliable compass. …

“We are almost blind when the metrics on which action is based are ill-designed or when they are not well understood. For many purposes, we need better metrics.”
Changed environment.

By 2009

• European Commission’s Communication on “GDP and Beyond: Measuring Progress in a Changing World –

• OECD Roadmap & Framework to measure progress

• Sen Stiglitz Fitoussi Commission on the Measurement of Economic Performance and Social Progress

• III OECD World Forum in Busan

• National Initiatives for multidimensional measures
  – **WB**: Bhutan, UK & Ireland, German, Italy, Spain, Korea, Japan
  – **Poverty**: Mexico, Colombia, Chile, Bhutan, Malaysia, Egypt etc.

Demand has increased. Challenge : to deliver
Italy – Measure of Progress.

Objectives (2010-2012) of ISTAT-CNEL:

- develop a shared definition of progress for Italy by identifying the most relevant domains;
- select a set of high-quality indicators to represent the different domains;
- communicate the results of the process; the set of indicators to be defined by this consultation is in fact intended for a broad public audience as well as for policy users.

Canadian Index of Wellbeing (CIW)

Uses 64 separate headline indicators to characterise eight interconnected domains central to the lives of Canadians: Community Vitality, Democratic Engagement, Education, Environment, Healthy Populations, Leisure and Culture, Living Standards, and Time Use.
Bhutan
Gross National Happiness
Nine Domains

- Ecological Diversity and Resilience
- Community Vitality
- Good Governance
- Cultural Diversity and Resilience
- Psychological well-being
- Time - Use
- Health
- Education
- Living Standard
ONS UK Measuring National Well-being (Nov 2010 launched)

In his speech at the launch of the programme the UK Prime Minister, David Cameron, outlined his ambitions for the UK to "start measuring our progress as a country, not just by how our economy is growing, but by how our lives are improving; not just by our standard of living, but by our quality of life."
European Commission’s Communication on “GDP and Beyond: Measuring Progress in a Changing World

- The Communication outlines an EU roadmap with five key actions to improve our indicators of progress in ways that meet citizens’ concerns and make the most of new technical and political developments.
- The Beyond GDP initiative is about developing indicators that are as clear and appealing as GDP, but more inclusive of environmental and social aspects of progress.
- June 2011: Beyond GDP Resolution adopted by European Parliament
- [www.beyond-gdp.eu](http://www.beyond-gdp.eu)
The Global Project on “Measuring the Progress of Societies” at the OECD

- Three main streams of work:
  - What to measure?
  - How to measure?
  - Ensure that measures are used

- Build a partnership with international national and local organisations, foundations, etc.

- Partners: WB, UNDP, UNICEF, IADB, AfDB, EC, INTOSAI, ESCWA, ESCAP

- Associates: national and international organisations, NGOs, universities, etc.

*Slide from Enrico Giovannini*
And Occupy?

‘People are right to be angry’. The Economist (21 Oct 2011) noted that “There are legitimate deep-seated grievances” – youth unemployment being prime among them. Plus, “The middle-aged face falling real wages...And the elderly are seeing inflation eat away the value of their savings; in Britain prices are rising by 5.2% but bank deposits yield less than 1%. In the meantime, bankers are back to huge bonuses”
OECD ‘How’s Life?’

http://oecdbetterlifeindex.org
Post 2015 discussions:

Johnson Sirleaf and Yudhoyono join Cameron on development goals panel
Liberia's Ellen Johnson Sirleaf and Indonesia's Susilo Bambang Yudhoyono have tricky task of creating new development goals
An Australian National Development Index (ANDI)

General background paper

2010
10. Interest in MD Poverty

Ethical: “Human lives are battered and diminished in all kinds of different ways.” Amartya Sen

Efficiency: “Acceleration in one goal often speeds up progress in others;” to meet MDGs strategically we need to see them together. Roadmap towards the Implementation of the MDGs

“Achieving the MDGs will require increased attention to those most vulnerable.” UNDP MDG Report 2010

National MD Poverty measures: being designed in many countries to monitor change, to target, and to supplement income data.
10. Interest in AF Poverty measure

1. **Birds-eye view** - can be unpacked
   - a. by region, ethnicity, rural/urban, etc
   - b. by indicator, to show composition
   - c. by ‘intensity’ to show inequality among poor

2. **Adds Value:**
   - a. focuses on the multiply deprived
   - b. shows joint distribution of deprivation.

3. **Incentives** to reach the poorest of the poor

4. **Flexible**: you choose indicators/cutoffs/values

5. **Robust** to wide range of weights and cutoffs
In sum: why the new emphasis on measurement?

We can:  

1) Data are increasing  
2) Methodologies are improving

We need to:  

3) Income poverty: important but insufficient.  
4) Growth insufficient  
5) Dashboards are complex  
6) Associations vary  
7) Joint Distribution (Marginal Measures)

We are willing to:  

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9) Political critique of current metrics; exploration  
10) Interest in Multidimensional Poverty
4. Why Multidimensional Poverty?
Income poverty is incomplete

<table>
<thead>
<tr>
<th>Quintiles</th>
<th>Severely thin</th>
<th>Thin</th>
<th>Normal</th>
<th>Overwt</th>
<th>Obese</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Quintiles</td>
<td>BMI &lt; 17</td>
<td>&lt; 18.5</td>
<td>25&gt;x&gt;30</td>
<td>&gt;30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quintile 1 (poorest)</td>
<td>22.8</td>
<td>25.7</td>
<td>49.3</td>
<td>2.0</td>
<td>0.3</td>
<td>100</td>
</tr>
<tr>
<td>Quintile 5 (richest)</td>
<td>17.0</td>
<td>19.0</td>
<td>55.7</td>
<td>7.0</td>
<td>1.3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>18.5</td>
<td>22.6</td>
<td>53.6</td>
<td>4.3</td>
<td>1.1</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: RECOUP Data, CORD India. 2009