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OXFORD POVERTY & HUMAN DEVELOPMENT INITIATIVE
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UNIVERSITY OF OXFORD

Steps to Create a National MPI

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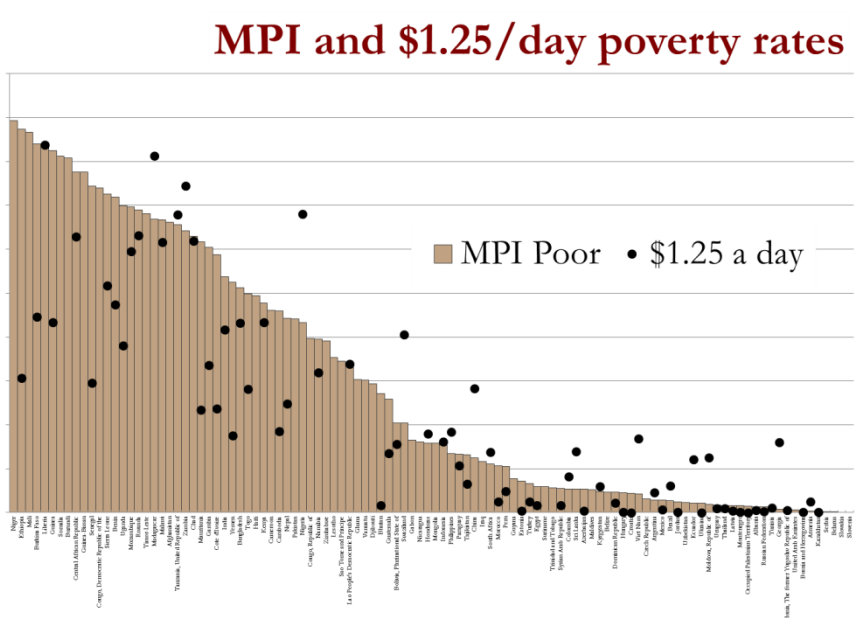
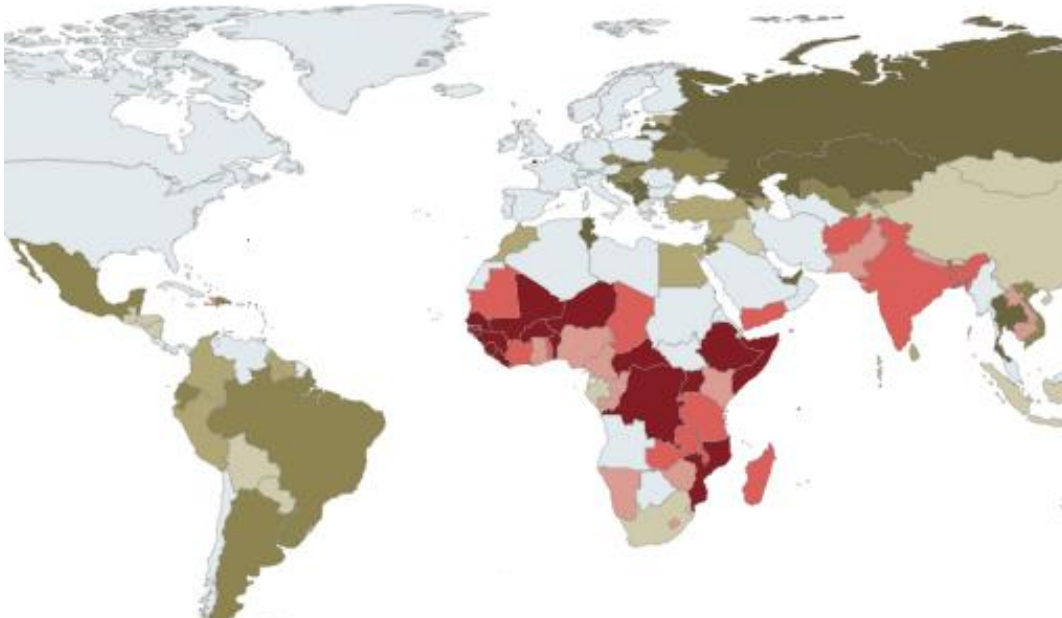
MPI: Two kinds ~ both useful

Internationally comparable – Global MPI

- Like $1.90/day and $2.50/day poverty measures
- Can compare regions, subnational groups, over time
- Could track SDG-1: poverty in its many dimensions
- Could measure both acute and moderate poverty
- Useful for policy analysis, but limited national ownership

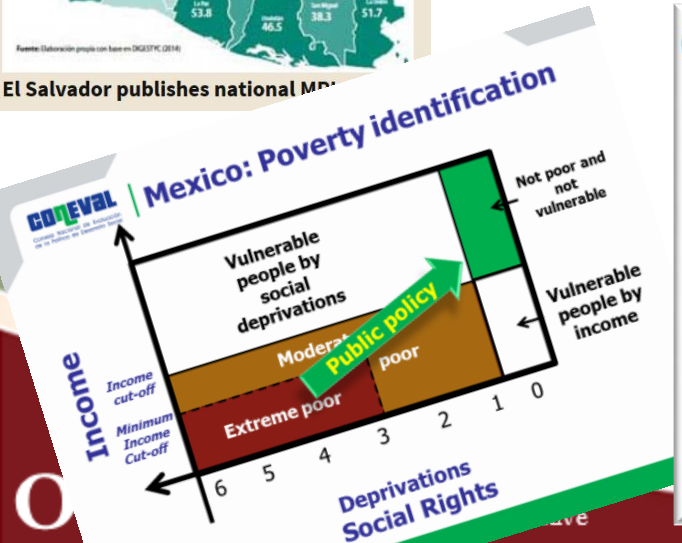


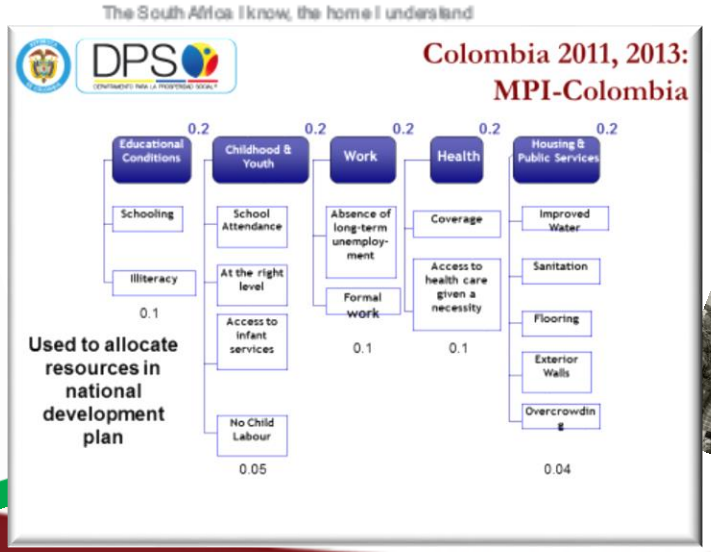


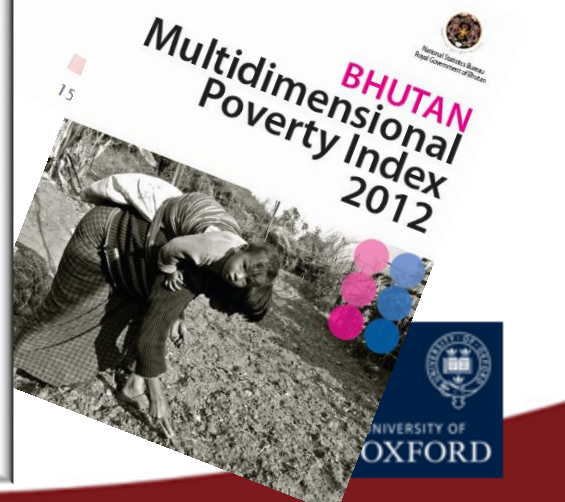
MPI: Two kinds ~ both useful

Context specific – National MPIs:

- Reflects national contexts and priorities
- They guide policies – like targeting and allocation, monitoring and coordination
- Useful for policy but can't be compared internationally







MPI in Action

Official National MPIs

Colombia	**Mexico**
Bhutan	**Chile**
El Salvador	**Costa Rica**
Ecuador	**Pakistan**
Honduras	**Mozambique**
Armenia	**HCMC (Vietnam)**
Panama	**Dominican Republic**

Basic steps to create a MPI

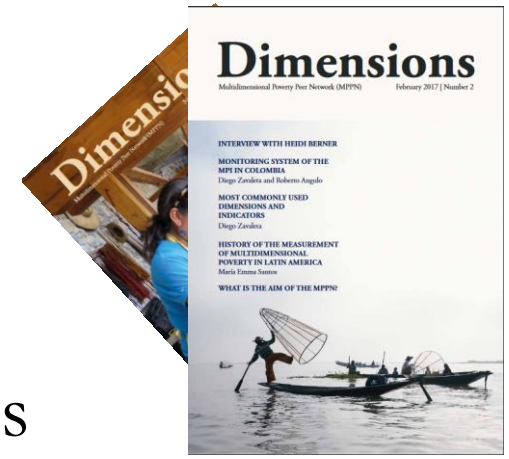
Creating a MPI

- Creation of MPI requires multiple steps and coordination of multiple actors
- 3 areas: **technical** correctness, **political** usefulness, **administrative** sustainability
- In general, technical team presents technically rigorous options for a MPI to a political committee
- First step:
  - Determine purpose and map engagement with institution and relevant actors
  - Identify normative resources to guide measurement design (participatory exercises, legislation, national plans, etc.)

Normative decisions behind every MPI

- Purpose
- Unit of Analysis
- Dimensions
- Indicators
- Deprivation Cutoffs
- Weights
- Poverty cutoff

Policy makers are using their national MPIs to:



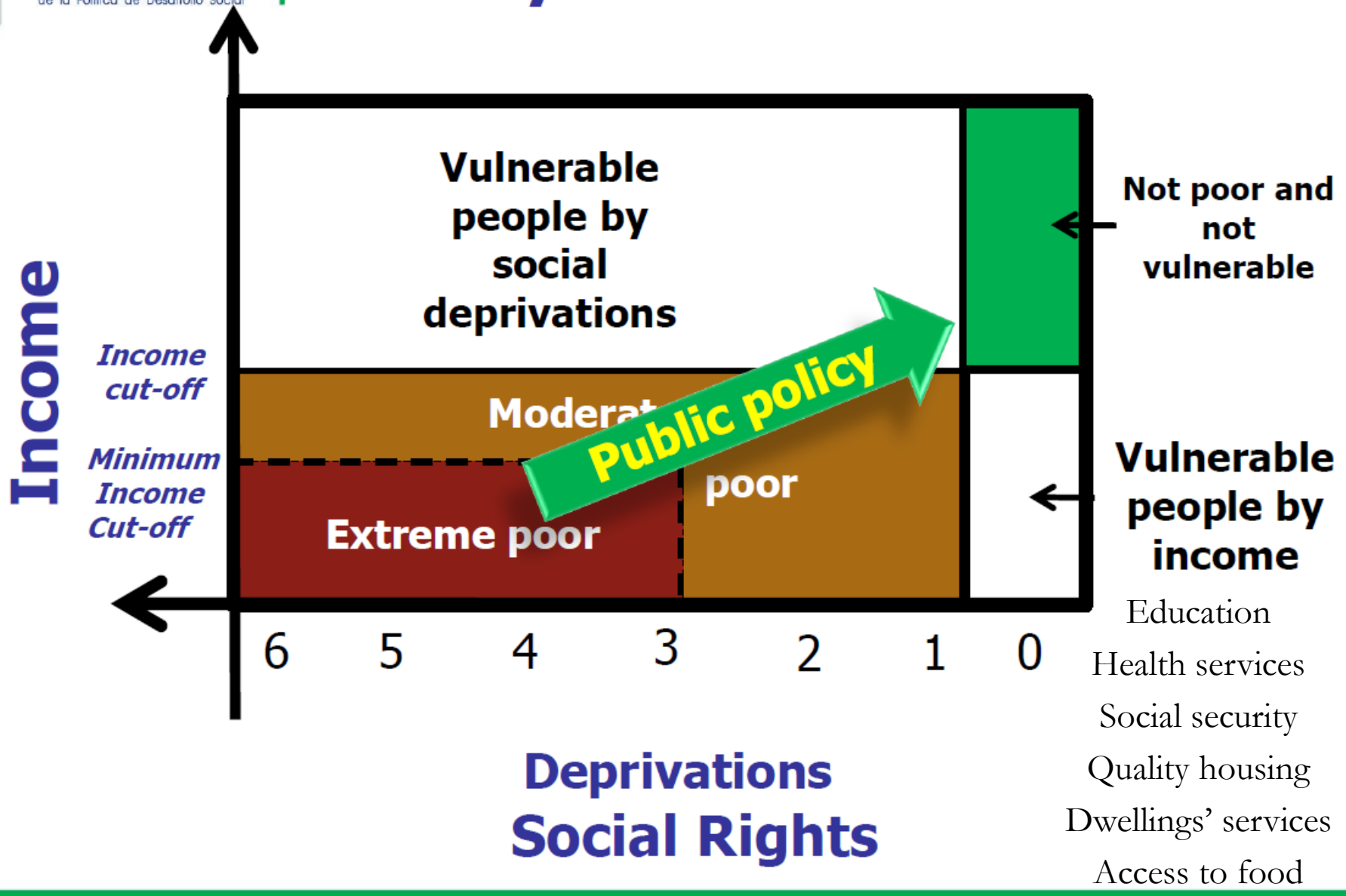
1. **Complement** monetary poverty statistics
2. **Track poverty** over time (official statistics)
3. **Allocate resources** by sector and by region
4. **Target** marginalized regions, groups, or households
5. **Coordinate** policy across sectors and subnational levels
6. **Adjust** policies by what works (measure to manage)
7. **Leave No One Behind** see the poorest & track trends
8. **Be Transparent** so all stakeholders engage – NGOs, private Sector etc, all parts of government.

Mexico: Normative decisions

- Purpose: To implement the 2004 General Law for Social Development → 2009 first multidimensional estimations.
- Dimensions and indicators established in the 2004 General Law.
- Individual as unit of analysis.
- Old survey (ENIGH) adapted with new module for indicators.
- Launched: December 2009

CONEVAL
Consejo Nacional de Evaluación de la Política de Desarrollo Social

Poverty identification



Education
Health services
Social security
Quality housing
Dwellings' services
Access to food

MPI-Colombia

Our starting point: Improving the instruments and methodologies of poverty measurement

Motivation: Designing a strategy for the reduction of poverty and inequality based on a complete approach using income and multidimensional measures

How do we calculate our MPI?

Education (0.2)

Low educational achievement*

Illiteracy

Childhood and youth (0.2)

School absenteeism*

School underachievement*

Lack of access to early childhood care services*

Child labour

Employment (0.2)

Long – term unemployment

Informal employment*

Health (0.2)

Lack of health insurance*

Lack of access to healthcare service

Acccess to public services and household conditions (0.2)

Lack of access to improved water sources*

Inadequate sanitation*

Inadequate floor materials*

Inadequate wall materials*

Critical overcrowding*

PROSPERIDAD SOCIAL

TODOS POR UN NUEVO PAÍS
PAZ EQUIDAD EDUCACIÓN

* Variables related to Prosperidad Social interventions

DPS Departamento para la Prosperidad Social

TODOS POR UN NUEVO PAÍS
PAZ EQUIDAD EDUCACIÓN

Poverty Cutoff – Colombia.

The number of MPI deprivations experienced by those who were income poor, and those who perceived themselves to be poor, was compared with the number of deprivations among the non-income and non-subjective poor.

Median and Average number of deprivations 2008

	Median	Average
People who perceive themselves to be poor	5.0	5.0
Income poor people	5.1	5.2
Income poor people who perceive self as poor	5.4	5.6
Those who don't perceive themselves as poor	3.0	3.2
Those who are not income poor	3.0	3.2
All people	3.8	4.1

Fuente: Cálculos DNP-SPSCV, con datos de la ECV2008

A non-poor person on average has 3 deprivations, which suggests that a low value of k would capture deprivations that were not related to or sufficient to identify poverty.

MPI Pakistan: Background

- MPI as baseline for National Development Plan, *Vision 2025*, and tracking of SDGs

- Actors:

1. National Planning Commission
2. UNDP Pakistan
3. Technical assistance from OPHI
4. Public consultations to validate indicators

Measurement Design

Dimension	Indicator	Deprivation Cutoff	Weights
Education	Years of schooling	Deprived if no man OR no woman in the household above 10 years of age has completed 5 years of schooling.	1/6 = 16.66%
	Child school attendance	Deprived if any school-aged child is not attending school (ages between 6-11).	1/8 = 12.5%
	Educational quality	Deprived if any child not going to school because of quality issues (not enough teachers, far away, too costly, no male/female teacher, substandard school), or is attending but dissatisfied with service.	1/24 = 4.17%
Health	Access to clinic/BHU	Deprived if not using health facility at all, or only once in awhile, because of access constraints (too far, too costly, does not suit, lack of tools/staff, not enough facility).	1/6 = 16.67%
	Immunization	Deprived if any child under 5 is not fully immunized according to vaccinations calendar (households with no children under 5 are considered non-deprived).	1/18 = 5.56%
	Ante-natal care	Deprived if any woman that has given birth in the household in the last 3 years did not received ante-natal check-ups (households with no woman that has given birth are considered non-deprived).	1/18 = 5.56%
	Assisted delivery	Deprived if any woman has given birth in the household in the last 3 years with untrained personnel (family member, friend, tba, etc.) or in inappropriate facility (home, other) - households with no woman that has given birth are considered non-deprived.	1/18 = 5.56%

Measurement Design

Standard of Living	Water	Deprived if household has no access to improved source of water according to MDGs standards, considering distance (less than 30 minutes for return trip): tap water, hand pump, motor pump, protected well, mineral water.	1/21 = 4.76%
	Sanitation	Deprived if household has no access to adequate sanitation according to MDGs standards: flush system (sewerage, septic tank, drain), privy seat.	1/21 = 4.76%
	Wall	Deprived if household has unimproved walls (mud, uncooked/mud bricks, wood/bamboo, other).	1/42 = 2.38%
	Overcrowding	Deprived if household is overcrowded (4 or more people per room).	1/42 = 2.38%
	Electricity	Deprived if household has no access to electricity.	1/21 = 4.76%
	Cooking fuel	Deprived if household uses solid cooking fuels for cooking (wood, dung cakes, crop residue, coal/charcoal, other).	1/21 = 4.76%
	Assets	A household is categorized as deprived if it doesn't have more than two small assets (radio, TV, iron, telephone, fan, sewing machine, VCP, chair, watch, air cooler, bicycle) OR no large asset (refrigerator, air conditioner, tractor, computer, motorcycle), *AND* has no car.	1/21 = 4.76%
	Land and livestock (only for rural areas)	Deprived if hh is deprived in land *AND* deprived in livestock, meaning: a) Deprived in land: hh has less than 2.25 acres of non-irrigated land *AND* less than 1.125 acres of irrigated land b) Deprived in livestock: hh has less than 2 cattle, fewer than 3 sheep/goat, fewer than 5 chickens *AND* no animal for transportation. [Urban households assumed non-deprived]	1/21 = 4.76%

Creating a MPI

- 3 main actions, once the normative decisions have been made:
  - Explore potential indicators
  - Create trial measures
  - Analyze trial measures

Often these are iterative: given a purpose/dataset(s), indicators and trial measures are created and presented; this leads to normative refinements.

1. Explore potential indicators

- Objective: emphasis in components of the measure, specifically the indicators of each dimension.
  - Understand which information is being added to the index and how it will be possible to disaggregate the information on the MPI.
  - There are different ways to choose/construct indicators, even when the normative decisions are very clear.
- Steps:
  - **Create universe of indicators**: consider large set of available indicators (binary 0/1). For each available indicator on the database, create different specifications (e.g. read, write, read & write, read or write)

1. Explore potential indicators

- Examples
  - When individual info is aggregated to create indicator at hh level
    - No member, every member, members aged a-b, x% of hh, every woman in the hh, etc.
  - Implement different deprivation cut-offs and save the results in an organized way.

- Result: set of available indicators on the data, to be contrasted against normative decisions
  - *Product: table with different indicators and proportion of people deprived in each of them.*

27 Candidate indicators with data
Plus alternative cutoffs = 45 options

Years of schooling (>5, 10)
Years of schooling (>5, 10) - Male
Years of schooling (>5, 10) - Female
School Attendance (5-16) or (6-11)
School Attendance by gender (as above)
Educational quality
Can either read/write OR 5 years if educ
Access to health facility
Full immunization (<5), age appropriate
Sick and consulted doctor (<5)
Prenatal care (women 15-49, birth within 3 years)
Institutional delivery (women 15-49, birth 3 years)
Health index (combining 5 indicators above)

Improved roof
Improved walls
Improved roof and walls
Improved roof or walls
Overcrowding (4 or more people per room/3)
Electricity
Sanitation
Water
Cooking Fuel
Assets (small & large groupings)
Assets 2 (connectivity & appliances)
Landless or low land holdings
Lacking livestock
Combined Assets + Land + Livestock

1. Explore potential indicators

- Additional considerations:
  - Understand which is the applicable population (e.g. nutritional info & vaccinations only available for children under 5)
  - Compute missing values among applicable population for each indicator (limit of 15%, for instance)
    - Attention when coding: only consider applicable population (e.g. school attendance only for school-aged children)
  - *Product: Include in the table column indicating applicable population and missing values*
  - Note: applicable population and missing values important to determine weights, so not to overestimate the incidence of a particular deprivation (e.g. vaccinations for children 0-2: applicable population is small % of total population, lower weight??)

1. Explore potential indicators

- Additional considerations:
  - Understand association/redundancy among indicators
  - Results must be consider jointly with the normative decisions, the timing in which each deprivation happens and policy priorities
    - Generally, empirical tests are used as source of information but the decision of dropping an indicators is not directly derived from them

2. Create trial measures

- Objective: assign pre-selected indicators to each dimension, set weights and compute several MPIs, in order to find a final MPI that works and is robust.

  - Assign indicators to dimensions
    - Political considerations: based on legislation, national plan, participatory process, etc. (e.g. water can be a health indicator or a living standard indicator)
    - Technical considerations (weights): for example, if weights are pre-set normatively

2. Create trial measures

- Compute trial measures: several adjustments are possible
  - Take individual info to hh level
  - Test different deprivations cut-offs for each indicator
  - Test different weighting structures
  - Test different poverty lines (k). In general, countries report estimations for at least two values of k
- *Product: select trial measures which are robust for relevant range of k and weights; show transparently any concerns about redundancy & your response or options.*

3. Analyze trial measures

- Objective: compute H, A and MPI for each trial measure, rates (censured and uncensored) and contribution of each indicator.
  - When comparing measures is important to remember the purpose of the MPI
  - Disaggregate by regions, ethnic groups, gender, age groups, etc. Compare *trends* with monetary income results
  - Don't let the *level* of H, A and MPI determine the decision of which measure to use
  - *Product: table with H, A, MPI, rate, contributions for each trial measure, and break-downs. Also, associated figures.*

3. Analyze trial measures

- This first set of trial measure gives place to debate and discussion by different relevant actors (experts, political committee, etc.)
  - Next step is adjust measures based on their suggestions and feedback and recompute (sequential process)
  - Prepare non-technical document explaining measure (and each step that led to it)
  - This can be done relatively fast – in turn political process can take significant amount of time

Alongside measurement design:

1. **Process** of developing measure
   a. Public Consultations?
   b. Expert Groups – National Statistics, Academics, Technical experts by Sector, etc.
   c. International/Regional Experts?
2. Legal/institutional **basis** (to endure)
3. Who has **authority** to update
4. When/how to **update survey/parameters**
5. What **incentives** it provides (Ministries)

Communication of the MPI throughout the process

Communication of the MPI throughout the process

- It is crucial to communicate and be transparent during the whole process of creating a MPI
  - After creating universe of indicators with deprivation rates and missing values, communication is useful to guide team in which ones to keep and which to drop
  - After creating trial measures, communication is essential to check and legitimize


Tabita, Kenya
Rabiya, India
Stephanie, Madagascar
Agatha, Madagascar
Dalmia, Kenya
Ann-Sophia, Kenya
Valérie, Madagascar

Thanks!