Alkire Foster Methodology
Applications and Uses
Multidimensional Poverty Measurement: The Mexican Wave

Gonzalo Hernández Licona

June, 2013
What are the main features of the new methodology?

Current income per capita

Six Social Rights:
- Education
- Health
- Social Security
- Housing
- Basic services
- Feeding

Territorial

Social Rights

Deprivations

Population

Wellbeing

Income

Deprivations

Social Rights

0 1 2 3 4 5 6
Main features
(CONEVAL members, with the help of Sabina, James, D. Gordon and others 2007-9)

Income cut-off

Income

Poor

Without Deprivations

Deprivations

Social Rights

6 5 4 3 2 1 0
Poverty identification

- Not poor and not vulnerable
- Vulnerable people by income

Income

Deprivations
Social Rights

- Extreme poor
- Moderate poor
- Vulnerable people by social deprivations

Public policy
Total Population 2008

- **Moderate Poverty**: 33.7% (36.0 millions)
  - Deprivation average: 2.3

- **Extreme Poverty**: 10.5% (36.0 millions)
  - Deprivation average: 3.9

- **Vulnerable people by social deprivations**: 33.0% (35.2 millions)
  - Deprivation average: 2.0

- **Vulnerable people by income**: 18.3% (19.5 millions)
  - Average: 4.5% (4.8 millions)
Evolution of multidimensional poverty, 2008-2010

Deprivations

- Access to health services: -9.0
- Access to social security: -2.9
- Access to basic household services: -2.5
- Quality and spaces of the dwelling: -2.3
- Educational gap: -0.8

Population below the wellbeing line

- Access to food: 4.1 million
- Population below the minimum wellbeing line: 3.5 million
- Poverty: 3.2 million

Poverty

- 2008: 44.5 %, 48.8 million
- 2010: 46.2 %, 52.0 million

Source: estimates of the CONEVAL based on the MCS-ENIGH 2008 and 2010
Total population 2010 (112.6 millions)

Vulnerable people by social deprivation
32.3 million
28.7%
1.9 deprivations on average

Vulnerable people by income
6.5 million
5.8%

Not poor and not vulnerable
21.8 million
19.3%

Extremely poor
(11.7 million)
10.4%
3.7 deprivation on average

Moderate poor
(40.3 million)
35.8%
2.1 deprivations on average

Urban = $2,114  Rural = $1,329

Urban = $978  Rural = $684

Poverty
46.2%
52.0 millions
2.5 deprivations on average

Source: estimates by CONEVAL based on MCS-ENIGH 2010.
Using the multidimensional approach for policy purposes

- In 2013 the President and the Minister of Social Development established poverty strategies and goals for all Ministries.

- The new National Development Plan was launched in May 2013 with 14 indicators. 2 of them are taken from the multidimensional poverty methodology.

- State Governors are now concerned about reducing poverty. They keep asking how can they do it.

- Opposing political parties use and believe in the multidimensional poverty estimates since 2009 (as well as the media).
Final remarks

- Measuring social problems in a truthful way is an essential element of modern and democratic governments.
- Measuring poverty in a multidimensional way helps governments to do better in terms of policy.
- “Poverty is a multidimensional phenomenon and must be tackled and measured in a multidimensional way.”
NATIONAL CRUZADE AGAINST HUNGER

ENRIQUE GONZÁLEZ TIBURCIO

June 6th, 2013
Between 2008 and 2010 income poverty also increased

**Population under the wellbeing line 2008-2010**

- 2008: 53.7
- 2010: 58.5

Increase of the population under the wellbeing line: +4.8 million people

**Population under the minimal wellbeing line 2008-2010**

- 2008: 18.4
- 2010: 21.8

Increase of the population under the minimal wellbeing line: +3.4 million people

*Source: CONEVAL*
MOTIVATION

CONEVAL: from 2008 to 2010 five out of six social deprivations decreased, but one increased: access to food

Social Deprivations 2008-2010
(% of the total population)

Food access deprivation increased 4.2 millions

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>21.9</td>
<td>20.6</td>
</tr>
<tr>
<td>Health</td>
<td>40.8</td>
<td>31.8</td>
</tr>
<tr>
<td>Social Security</td>
<td>65.0</td>
<td>60.7</td>
</tr>
<tr>
<td>Dwelling spaces &amp; materials</td>
<td>17.7</td>
<td>15.2</td>
</tr>
<tr>
<td>Social Security</td>
<td>19.2</td>
<td>16.5</td>
</tr>
<tr>
<td>Food access</td>
<td>21.7</td>
<td>24.9</td>
</tr>
</tbody>
</table>
2. TARGET POPULATION

Target Population of the Crusade: **7.4 million people** in extreme poverty and food access deprivation

Aim 2013: 400 Strategic Municipalities
13 MEXICAN PRESIDENT’S PROPOSALS ENRIQUE PEÑA NIETO

CREATION DECREE OF THE NCAH

INTEGRAL SOCIAL DEVELOPMENT AGREEMENTS WITH FEDERAL ENTITIES

“INTER-MINISTRY” COMMISSION

“INTER-MINISTRY” STATE COMMISSION

“INTER-MINISTRY” CITY COUNCILS COMMISION

NATIONAL COUNCIL

EXPERTS COUNCIL

COPLADE

CITY COUNCILS

COMMUNITY COMMITTEES
3. COMPONENTS

- **Programs and Actions Certificate**
  - Federals
  - States
  - Municipals

- **Infield Analysis & Classification**
  - Municipals
  - Locality
  - Polygonal

- **Poverty Measurement Certificate**
  - Municipals
  - Locality
  - Polygonal

- **Recruitment, Selection & Integration**
  - Municipals
  - Locality
  - Polygonal

- **Integration, follow up & evaluation**
  - Municipals
  - Locality
  - Polygonal

- **Programs & Actions**
  - Which ones?
  - How?
  - How much?
  - Where?
  - Whom for?

- **Territory**
  - 32 city councils
  - How many?
  - Which ones?
  - Where?

- **Population**
  - How many?
  - Whom?
  - What for?
  - When?

- **Community Promoters**
  - How many?
  - Whom?
  - How?

- **Community Committees**
  - What?
  - Where?
  - What with?
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
A complete strategy for the reduction of poverty

National Development Plan 2010-2014
“Prosperity for all”
Multidimensional Poverty Index (IMPI)

- Education
- Childhood & youth conditions
- Labor
- Health
- Public utilities & housing conditions
Dimensions (5) & variables (15)

Education
- Educational achievement
  - Literacy
    - School attendance
    - No school lag
    - Access to child care services
    - Absence of child employment
      - 0.05

Childhood & youth conditions
- Absence of long-term unemployment
  - Formal employment
    - 0.1

Labor
- Health insurance
  - Access to health care services when needed
    - 0.1

Health
- Public utilities & housing conditions
  - Access to improved drinking water
    - Adequate elimination of sewer waste
      - Adequate flooring
        - Adequate walls
          - No critical overcrowding
            - 0.04
We are on the right track
Sustained poverty reduction

Pobreza monetaria

Pobreza extrema monetaria

Pobreza Multidimensional

Fuente: DNP'SPSCV
From 2010 to 2012, 1.7 million persons overcame income poverty and 700 thousand extreme poverty.

On the other hand, 1.3 million persons were no longer multidimensionally poor.
MPI - Colombia

- 4 key aspects:

1. Reflects the objectives of social policy
2. Strategically designed for it to include all public policy sectors
3. Practical instrument for monitoring public policy
4. Useful alerts for decision-making at a short notice
Poverty committee
Coordinating and monitoring poverty reduction

- **Leaders**
  - Counselor for the Presidency
  - National Planning Department

- **Permanent members**
  - Ministry of Health
  - Ministry of Labor
  - Ministry of Housing
  - Ministry of Agriculture
  - Ministry of Education
  - Ministry of Finance

**MANDATORY PRESENCE**
The President of Colombia
<table>
<thead>
<tr>
<th><strong>Sectoral goals</strong></th>
<th>For accomplishing the strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pobreza</strong></td>
<td><strong>Línea Base PND 2008</strong></td>
</tr>
<tr>
<td><strong>MPI (Multidimensional Poverty)</strong></td>
<td>34.7%</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>Educational achievement (≥15 yrs)</td>
</tr>
<tr>
<td></td>
<td>Literacy (≥15 yrs)</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>School attendance (6-16)</td>
</tr>
<tr>
<td></td>
<td>No school lag (7-17)</td>
</tr>
<tr>
<td></td>
<td>Access to child care services (0-5)</td>
</tr>
<tr>
<td></td>
<td>Children not working (12-17)</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>Long-term unemployment</td>
</tr>
<tr>
<td></td>
<td>Formal employment</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>Health insurance</td>
</tr>
<tr>
<td></td>
<td>Access to health services</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>Access to water source</td>
</tr>
<tr>
<td></td>
<td>Adequate sewage system</td>
</tr>
<tr>
<td></td>
<td>Adequate floors</td>
</tr>
<tr>
<td></td>
<td>Adequate external walls</td>
</tr>
<tr>
<td></td>
<td>No critical overcrowding</td>
</tr>
</tbody>
</table>

*** Change 2011-2012 est. significant

**FUENTE: DANE**
If every ministry target beneficiaries accordingly and spends the committed resources, the official goal will be achieved.

The MPI will decrease (12 p.p) from 34.6% in 2008 to 22% 2014 (more than 3 million people out of poverty)
A useful tool for public policy implementation

Applications
Geographical Targeting
(Municipal Poverty Maps)
Municipal MPI Colombia
Headcount ratio, urban-rural areas, 2005

MPI (H) Headcount ratio
Urban areas

MPI proxy based on Census Data 2005
www.dps.gov.co
An example of geographical targeting using MPI

Conditional Cash Transfer Program

“Más Familias en Acción”

2.7 million families
Re targeting program’s beneficiaries: approximating to municipal MPI

Initial distribution of beneficiaries

National - MPI
Re targeting program’s beneficiaries: approximating to municipal MPI

New distribution of beneficiaries

National - MPI
Differentiating transfer amounts according to municipal MPI

Higher amounts on the poorer and rural areas

One example

<table>
<thead>
<tr>
<th>MPI Municipal Head Count Ratio</th>
<th>Low</th>
<th>Middle</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombian pesos</td>
<td>$2,752</td>
<td>$14,508</td>
<td>$20,341</td>
<td>$34,272</td>
</tr>
</tbody>
</table>
Targeting beneficiaries according to specific dimension deprivations
Targeting beneficiaries identifying:

Where?
What?
To whom?

Using MPI
Different types of social programs depending on multidimensional poverty incidence

Geographic incidence
Multidimensional poverty index
Methodology for measuring “graduation” from extreme poverty using MPI

Safety Net Program
A family is “graduated” from "unidos" if:

Sufficient condition:

Not in extreme poverty

Not multidimensionally poor
Adjusted - MPI for indigenous groups
• Revising the MPI (missing dimensions, cutoffs or weights) in order to adapt the index to the conditions of indigenous population of Colombia

• The objective is to have a pertinent MPI useful for the design of public policy targeting this population
Public policy effects micro-simulations
The method of micro data imputation may be used in the construction of counterfactual scenarios to evaluate the effect of public policy on the MPI behavior.
BRASIL
Minas Gerais

<table>
<thead>
<tr>
<th>Population</th>
<th>Growth Rate</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,597,330</td>
<td>0,91</td>
<td>16,715,216 (85,29%)</td>
<td>2,882,114 (14,71%)</td>
</tr>
</tbody>
</table>

- Population > Chile (17,067,369, 2011)
- GDP = (U$ 154 billion) < Hungary (U$ 156,7 billion, 2011)
- Territory = 586,528 km² > France (547,030 km²)
- Extreme poverty < Argentina (3,7%, 2010)
## Minas Gerais

<table>
<thead>
<tr>
<th>Population</th>
<th>Growth Rate</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,597,330</td>
<td>0,91</td>
<td>16,715,216 (85,29%)</td>
<td>2,882,114 (14,71%)</td>
</tr>
</tbody>
</table>

Source: Word Bank, 2010 (U$ 1.25 per day)
Travesia

Escolha de municípios

Porta a Porta

Mapa de Privações

Plano Travessia

Travessia social

Travessia Educação

Com licença eu vou à luta

Inclusão Social e Produtiva

Travessia saúde

Banco travessia

Travessia Renda

Escolha de municípios
At the Community Level
The Bhutan Gross National Happiness Index

© The Centre for Bhutan Studies
2011
Bhutan

Gross National Happiness

Nine Domains
GNH

Bienestar psicológico
- Satisfacción con la vida
- Emociones positivas
- Emociones negativas
- Espiritualidad

Salud
- Salud mental
- Autoevaluación de la salud
- Días con buen estado de salud
- Discapacidad

Uso de tiempo
- Para trabajar
- Para dormir

Educación
- Alfabetismo
- Nivel de educación
- Conocimiento
- Valores

Diversidad cultural y resistencia
- Hablar el idioma nativo
- Participación cultural
- Habilidades artísticas
- Driglam Namzha

Vitalidad comunitaria
- Donaciones (tiempo y dinero)
- Relación con la comunidad
- Relación familiar
- Seguridad

Diversidad ecológica y resistencia
- Problemática ecológica
- Responsabilidad ambiental
- Daño a la vida silvestre (Rural)
- Problemática urbana

Estándares de vida
- Posesiones
- Vivienda
- Ingreso per cápita del hogar

Buen gobierno
- Desempeño de gobierno
- Derechos fundamentales
- Servicios públicos
- Participación política
Piloting and Development of the Women’s Empowerment in Agriculture Index
What is new about the WEAI?

• An aggregate index in two parts:
  – **Five domains of empowerment (5DE)**: assesses whether women are empowered in the 5 domains of empowerment in agriculture
  – **Gender Parity Index (GPI)**: reflects the percentage of women who are as empowered as the men in their households

• It is a **survey-based** index, not based on aggregate statistics or secondary data, constructed using interviews of the primary male and primary female adults in the same household
Five Domains of Women’s Empowerment in Agriculture

- **Production 1/5**
  - Ten Indicators
    - Input in productive decisions 1/10
    - Autonomy in production 1/10
    - Ownership of assets 1/15
    - Purchase, sale, or transfer of assets 1/15
    - Access to and decisions on credit 1/15

- **Resources 1/5**
  - Control over use of income 1/5

- **Income 1/5**
  - Group Member 1/10
  - Speaking in Public 1/10
  - Leisure 1/10
  - Workload 1/10

- **Leadership 1/5**

- **Time 1/5**
Seema, Bangladesh

Empowerment Score
= 64%

• She has not achieved parity with her husband

• On average, disempowered women in the Bangladesh pilot have empowerment scores of 61%