



Morocco Experience in measuring Multidimensional Poverty

Launch of Multidimensional Poverty Peer Network

June 6th-7th 2013

Oxford University



Multidimensional poverty issues

(i) Identification of factors of deprivation

(ii) Weights of indicators

(iii) Deprivation thresholds

(iv) Household vs. individual



- **Since 2008, HCP has been developing multidimensional approaches of wellbeing, living standards and poverty, regarding statistical observation and measures:**
 - 1. New welfare composite index, based on Multiple Correspondence Analysis;**
 - 2. Development of a mix empirical methodology using non linear PCA and qualitative survey on household's perception on deprivation items;**
 - 3. Extending poverty measures from household to individuals;**
 - 4. Geographic disaggregation of MP for better targeting of public policies - MPI mapping at a local level using census data and survey**



1. New welfare composite index : Based on Multiple Correspondence Analysis

Dimensions:

1. Education,
2. Health,
3. Nutrition,
4. Housing conditions,
5. Employment,
6. Welfare (social scale position),
7. Access to communication means,
8. Gender parity.



- ✓ **Weights of indicators based on the variance covariance matrix**
- ✓ **Cut-off : 60% of the CWI median,**

Multidimensional poverty rate

| Residence area | Poverty rate | | |
|----------------|--------------|------|------|
| | 1991 | 2001 | 2007 |
| Urbain | 14.7 | 9.4 | 7.4 |
| Rural | 55.7 | 42.3 | 18.3 |
| National | 36.5 | 23.9 | 12.1 |



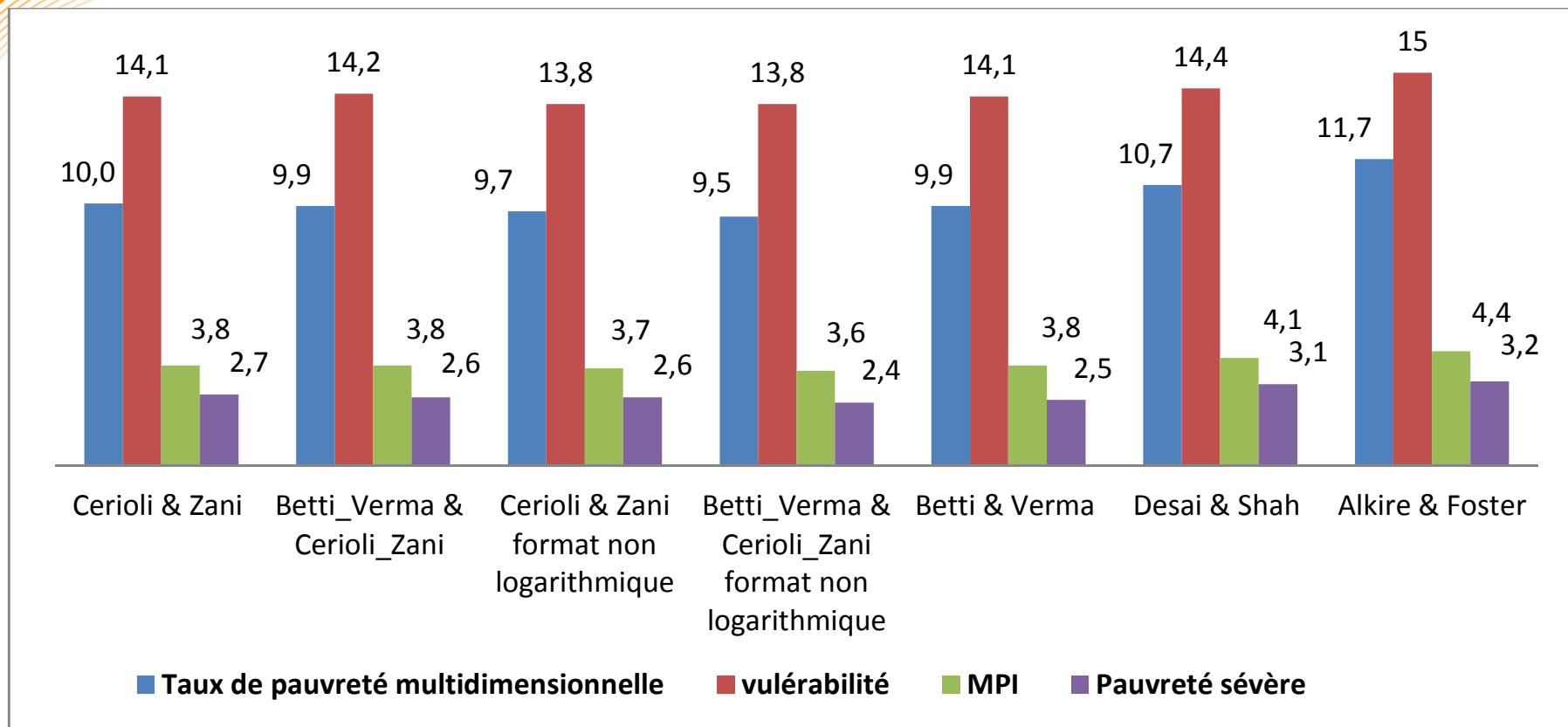
2. Development of a mix empirical methodology using non linear PCA and qualitative survey on household's perception on deprivation items.

- Dimensions:

- 1. Education,**
- 2. Maternal health and child nutrition,**
- 3. Income,**
- 4. Food consumption**
- 5. Employment**
- 6. Living conditions**

- Robustness test of PM indices to different weights : Desai & Shah (1988), Cerioli & Zani (1990); Betti & Verma (1998, 2007); et Alkire et Foster (2007).

Sensitivity analysis of MPI to different weights



Stochastic dominance of poverty curves showed that AF weighting provides the highest poverty rates.

When dimensions are removed all poverty rates increase.

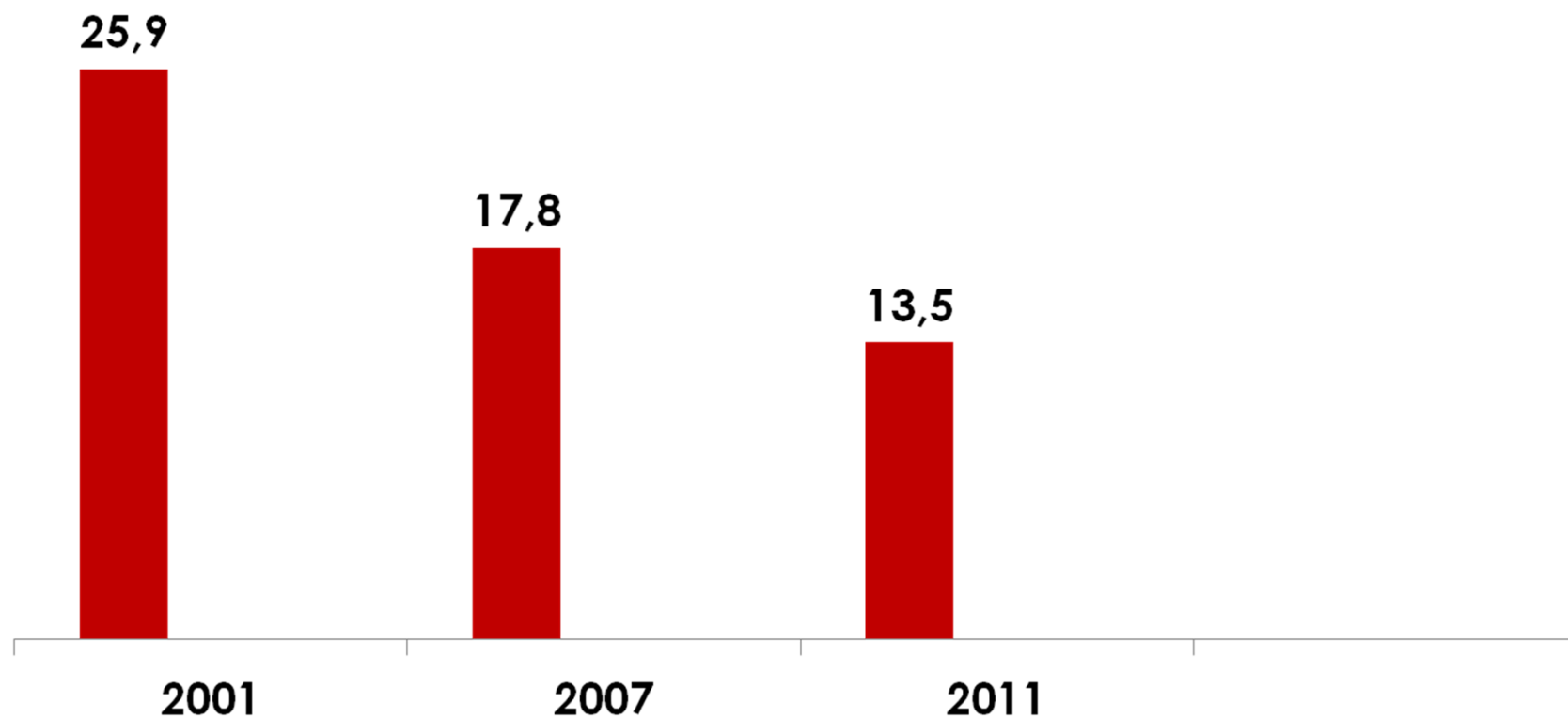


3. Extending poverty measures from household to individuals

- **Household's approach assumes equal poverty rate for all individuals (children, young, women, the elderly).**
- **Case study of children: experimenting two approaches, with reference to dimensions recommended by the General Assembly of the UN on the 10th of January 2007:**
 - ▶ **Fuzzy set approach and**
 - ▶ **MODA approach (Multiple Overlapping Deprivation Analysis),**

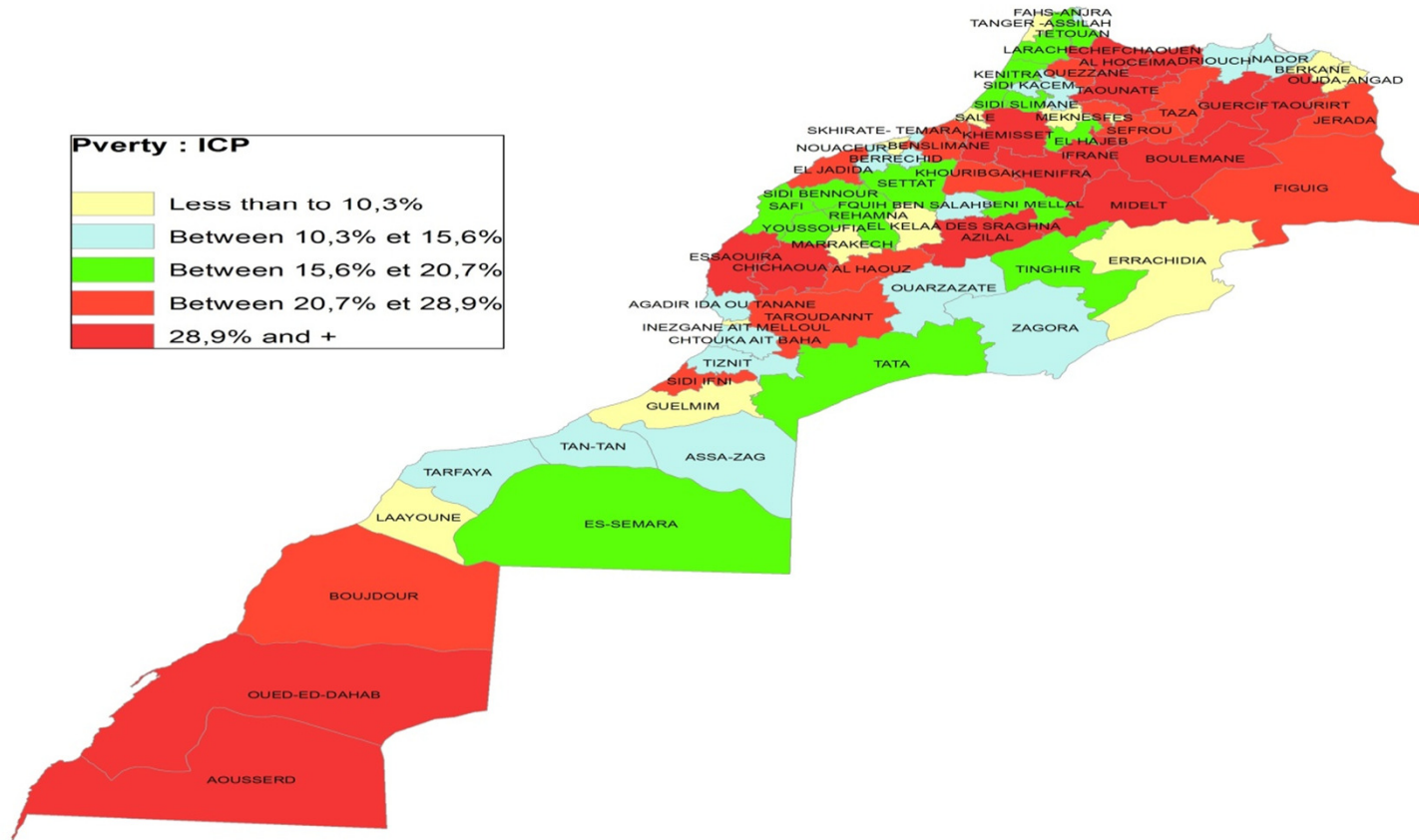
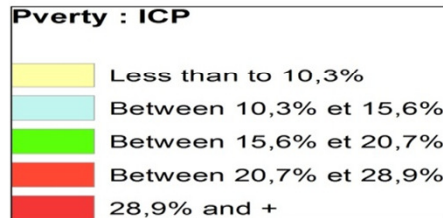


Child poverty rate according to fuzzy set approach





4. Geographic disaggregation of MP for better targeting of public policies - MPI mapping at a local level using census data and survey





Perspectives

- ✓ Dynamic analysis of MP using the National Labor Force Survey (panel and transversal analysis),

Preliminary panel results from NLFS

| Period/Area of residence | National | Urban | Rural |
|---|----------|-------|-------|
| 1- Probability of household's MP exit | | | |
| 2008-2009 | 0.35 | 0.41 | 0.33 |
| 2009-2010 | 0.36 | 0.40 | 0.34 |
| 2010-2011 | 0.37 | 0.42 | 0.36 |
| 2- Probability of household's MP entry | | | |
| 2008-2009 | 0.024 | 0.01 | 0.060 |
| 2009-2010 | 0.022 | 0.01 | 0.050 |
| 2010-2011 | 0.021 | 0.01 | 0.049 |



Perspectives

- **Quarterly monitoring of MP using NLFS.**
- **Extend MPI measures from household to individuals (young, women, the elderly).**
- **MP measurement and analysis based on quality of life and population perceptions.**
- **Policy analysis : Linking MP to CGE model (microsimulations)**



Thank you for your attention