HDCA Summer School on Capability and Multidimensional Poverty

Oxford Poverty and Human Development Initiative (OPHI)
Oxford Department of International Development, University of Oxford
Jakarta, Indonesia ~ 23 August – 4 September 2012
Welcome!

Welcome to the HDCA Summer School on Capability and Multidimensional Poverty. We are very pleased to be able to share with you our interest in these important topics. We hope that you find your experience at the Summer School an interesting and valuable one. We are sure that we will learn a lot from you at the same time that you are learning from us. Please do not hesitate to ask questions or request clarifications on any matter at any point during the course. We will present the course content through lectures but there will also be exercises and working group sessions that will help you to incorporate the new content from the lectures through learning-by-doing. It is important that you take the time to work on these exercises since they will help you to understand the subject matters better.

Bon Voyage!
The Instructors

The capability approach formulated by Amartya Sen, and further developed by the philosopher Martha Nussbaum and others, provides a conceptual framework that grounds many multidimensional approaches to poverty and social protection. This includes the MDGs, PRSPs, rights-based development, integrated social policy, and other specific initiatives.

In the past few years, interest in multidimensional quantitative techniques of analysis has surged. New quantitative methodologies have been developed for measurement, comparison, and analysis. Many more are still under development. It is a fast-moving area.

The purpose of this intensive summer school is to provide a thorough conceptual and technical introduction to the techniques of measuring multidimensional poverty, drawing on the capability approach, with a strong emphasis on the Alkire-Foster method.
1. Instructors

**Alkire, Sabina (SA)**
Sabina Alkire directs the Oxford Poverty and Human Development Initiative (OPHI). In addition, she is a Research Associate at Harvard and Vice President of the Human Development & Capability Association (HDCA). Her research interests include multidimensional poverty measurement and analysis, welfare economics, the capability approach, the measurement of freedoms and human development. She holds a DPhil in Economics from Magdalen College, University of Oxford.

**Apablaza, Mauricio**
Mauricio Apablaza is a Researcher at OPHI since March 2010. He recently joined OPHI after he finished his Doctorate in Economics at the University of Nottingham, UK. He is a research fellow of the Center of Public Policies at the Universidad del Desarrollo, Chile. His research interest lies in poverty dynamics, entrepreneurship and trade economics.

**Ballón, Paola (PB)**
Paola Ballon is a Research Officer at OPHI. She holds a Ph.D in Econometrics from the University of Geneva, Switzerland. Her research interest includes structural equation modeling, applied microeconometrics, quantitative development economics, and labour economics. She has been a researcher at the International Labour Office (ILO), at the United Nations University (UNU-WIDER), and at the United Nations Research Institute for Social Development (UNRISD). She is a Member of the Editorial Board of the “Review of Income and Wealth”.

**Roche, José Manuel (JMR)**
José Manuel Roche is a Research Officer at OPHI. He is also Education Officer of the HDCA executive council (elected 2004-2006), coordinator of the Quantitative Research Thematic Group at the HDCA, and research fellow at CISOR,. José Manuel holds a DPhil in Sociology from the University of Sussex. Previous to OPHI, he worked in research projects at the University of Sussex, the Institute of Development Studies, UNDP, UNICEF, the Venezuelan National Institute of Statistics and the Venezuelan Ministry of Planning and Development. His research interest includes poverty measurement and analysis, social inequality, social indicators and the capability approach and human development.

**Robles, Gisela (GR)**
Gisela Robles collaborates assisting OPHI in research and administrative matters on a part-time basis. She is a DPhl student in Comparative Social Policy, and her research is focused in analysing the extent to which means-test targeting determine policy outcomes and poverty alleviation in Mexico. She has been working with OPHI since July 2009.

**Seth, Suman (SS)**
Suman Seth is a Research Officer at OPHI. He has a PhD in economics from Vanderbilt University, USA. He has also worked for the Regional Bureau of Latin America and the Caribbean, UNDP, and the Development Research Group at the World Bank. His primary interest lies in the area of Development Economics with special emphasis on measurement methodologies and policy-oriented applications of multidimensional welfare and poverty measures.
# 2. Programme

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<tr>
<td>11:00-12:30 Unidimensional Poverty Measurement: Axioms, Measures, and Dominance led by SS</td>
<td>Properties of MD Poverty led by SS</td>
<td>Case Studies: The International MPI led by JMR &amp; MA (10:00-11:00)</td>
<td>Working Groups on AF Poverty Measure: Analysis Issues III led by MA, PB, JMR &amp; SS</td>
<td>Working in Groups: Exploring the Dataset led by GR*, PB, JMR &amp; MA</td>
<td>Presentations of Working Group Results led by SA*, PB, JMR, GR &amp; MA</td>
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<td>15:30-17:30 Working Groups: AF Poverty Measure Analysis Issues V led by JMR &amp; MA (10:00-11:00)</td>
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**Notes:**
- **Day 7 (29-Aug):**
  - AF Measure Analysis Issues Ia: redundancy, correlation & complementarity led by PB* & SA (09:00-10:00)
  - Working Groups: AF Measure Analysis Issues IIa led by JMR & MA (10:00-11:00)

- **Day 8 (30-Aug):**
  - AF Measure Analysis Issues Ila: Subindex scales validation (principal components & factor analyses) led by JMR (11:30-13:00)
  - Working Groups: AF Measure Analysis Issues IIla led by JMR, PB & GR (14:00-16:00)

- **Day 9 (31-Aug):**
  - AF Measure Analysis Issues III led by JMR & MA (10:00-11:00)
  - Working Groups: AF Measure Analysis Issues III led by JMR & MA (10:00-11:00)

- **Day 10 (Saturday 01-Sep):**
  - Working Groups: AF Measure Analysis Issues IV led by JMR & MA (10:00-11:00)
  - Working Groups: AF Measure Analysis Issues IV led by JMR & MA (10:00-11:00)

- **Day 11 (02-Sep):**
  - Clarifying Concepts and Communicating your Results led by SA
  - Presentations of Working Group Results led by MA*, SA, PB, JMR, GR & SS.

- **Day 12 (03-Sep):**
  - Presentations of Working Group Results led by MA*, SA, PB, JMR, GR & SS.
  - Presentations of Working Group Results led by MA*, SA, PB, JMR, GR & SS.

**Additional:**
- **NON COMPULSORY EXAM (04-Sep):**
  - Extensions of AF: Chronicity, Transitions, Inequality led by SA/MA/SJ (t.b.c)
  - Presentations of Working Group Results led by MA*, SA, PB, JMR, GR & SS.

**Instructors:**
- SA: Sabina Alkire; PB: Paola Ballón; GR: Graciela Robles; JMR: José Manuel Roche; SS: Suman Seth; MA: Mauricio Apablaza
3. Syllabi

**Topic:** Introduction & Overview of the Summer School

**Session:** Thursday 23 August, 09:00-10:30

**Instructor:** Sabina Alkire

**Contents:**
- Presentation of the OPHI Team
- Presentation of the Participants
- Presentation of the Summer School, aims and goals.
- Presentation of the programme of the Summer School
- Logistic Information

**Pre-Summer School Reading List:**

**Topic:** Unidimensional Poverty Measurement: Axioms, Measures, and Dominance

**Session:** Thursday 23 August, 11:00-12:30 (theory) & 13:30-15:00 (exercise)

**Instructor:** Suman Seth

**Contents:**
- Steps in poverty measurement: identification and aggregation.
- Properties of unidimensional poverty measures.
- Unidimensional poverty measures.
- Poverty Orderings (Unidimensional stochastic dominance conditions and the links to poverty measures)

**Reading List:**
Choice and Welfare. 5: 179-198.


Further readings:


Further readings:

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Topic: Introduction to the Capability Approach

Session: Thursday 23 August, 15:30-17:30

Instructor: Sabina Alkire

Contents:

- History and Motivation
- Capabilities
- Functionings
- Agency
- Implications for economics
- Issues for measurement

Reading List:


Further readings:
5. NARAYAN, D, CHAMBERS, R., SHAH, M.K. and P. PETESCH (2000), Voices of the poor: Crying out for change. New York: Oxford University Press for the World Bank. – (This influential study tries to synthesise participatory poverty assessments in order to identify the dimensions of "ill-being" and of "well-being" that emerge across contexts).
6. ROBEYNS, I. (2003), “Sen’s capability approach and gender Inequality: Selecting Relevant Capabilities.” Feminist Economics. 9:61-92. (This more philosophical article argues that, to select capabilities (or dimensions), we need to observe four procedural criteria.)

**Topic: Why Multidimensional (MD) Poverty Measures?**

**Session:** Friday 24 August, 09:00-10:30  
**Instructor:** José Manuel Roche

**Contents:**
- Conceptual and Philosophical arguments for multidimensional poverty measures  
- Empirical evidence of Uni vs. Multi-Dimensional Poverty  
- Examples of interest in multidimensional poverty measures in government agencies of different countries.

**Reading List:**

**Topic:** Properties of Multidimensional (MD) Poverty

**Session:** Friday 24 August, 11:00-12:30

**Instructor:** Suman Seth

**Contents:**
- Properties of multidimensional poverty measures that are natural extensions of the unidimensional framework.
- Properties specific to multidimensional measures.
- Multidimensional Poverty Measures

**Reading List:**

**Further readings:**

**Topic: Alkire Foster (AF) Methodology and MD Poverty Measure**

**Session:** Friday 24 August, 13:30-15:30 (theory) 15:30-17:30 (Paper exercise) – Saturday 25 09:00-10:30 (Revision)

**Instructor:** Sabina Alkire/Paola Ballón/Graciela Robles

**Contents:**
- Key literature on multidimensional poverty measures
- The steps of identification and aggregation in Alkire Foster method
- The importance of a joint distribution vs. a marginal distribution

**Reading List:**

Topic: Case Studies
Session: Saturday 25 August, 11:00-12:30 (International MPI) 13:30-15:00 (Mexico & Colombia)
Instructor: José Manuel Roche / Sabina Alkire

Contents:
- An introduction to the choices and limitations behind the international comparable MPI and the many types of possible analyses.
- An overview of two national A&F measures in Mexico and Colombia.

Reading List:

Topic: Normative Issues in Multidimensional Poverty Measurement
Session: Saturday 25 August, 15:30-17:30
Instructor: Sabina Alkire

Contents:
- Choice of the unit of analysis
- Order of aggregation
- Choice of dimensions
- Choice of variables/indicators for dimensions
- Choice of poverty lines
- Choice of weights
- Choice of identification criterion & aggregate measures
Reading List:


2. ALKIRE, S. (2002), “Dimensions of Human Development” World Development 30: 181-205. (This article surveys the 'lists' of dimensions of human development that have been proposed – on the basis of participatory planning or research, philosophy, synthesis of existing literature, cross-cultural psychology, psychology of human development, and so on).


Further readings:

On the choice of dimensions:


4. RANIS, G., F. STEWART, and E SAMMAN. (2006). "Human Development: Beyond the Human Development Index." Journal of Human Development 7(3): 323-358. (This paper draws on various approaches to well-being, proposes eleven categories of human development, and identifies and examines certain indicators).


7. SEN, A. K. (1992), Inequality Reexamined. Chapter 7: “Poverty and Affluence”. (This Chapter lays out the case for considering multiple dimensions of well-being or poverty – in Sen’s cases, through measures of capability – rather than focusing on income or utility).


On the choice of weights:


On discussions of these issues all-together:

Topic: Exam

Session: Monday 27 August, 08:00-10:30
Instructor: Suman Seth

Contents:
- The Alkire and Foster methodology and MD Poverty Measure
- Normative Issues in MD Poverty Measurement
Topic: Stata Lab & Descriptive Stats
Session: Monday 27 August, 13:30-15:00
Instructor: Mauricio Apablaza

Contents:
- Review of STATA
- Descriptive Statistics (categorical and continuous variables)
- Generating variables using loops
- Starting a new do file

Reading List:
2. STATA Press. Getting Started with Stata for Windows.

Useful resource:
1. General help can be found at http://www.stata.com/links/resources-for-learning-stata.
2. UCLA Academic Technology Services available at www.ats.ucla.edu/stat/stata
3. Prof. Cameron's webpage at the University of Davis, available at cameron.econ.ucdavis.edu/stata/stata.html

Topic: AF Measure Analysis Issues I: dimensions/indicator, survey design, bias analysis, missing values, sample drop
Session: Tuesday 28 August, 09:00-10:30
Instructor: José Manuel Roche

Contents:
- An overview of common data issues related to the use of Household Surveys for multidimensional poverty measurement

Reading List:

Further readings:
4. LEPKOWSKI, J. “Non-observation error in household surveys in developing countries”, in Household Sample Surveys in Developing and Transition Countries, New York: United Nation Publication.
Topic: AF Measure Analysis Issues IIa: Associations & Introduction to redundancy (principles of EFA)

Session: Wednesday 29 August, 09:00-10:00 (theory) 10:00-11:00 (Exercise)
Instructor: Paola Ballón

Contents:
- Measuring association in contingency tables: local, and global odds ratios
- Non-model based analysis of ordinal association: concordance and discordance measures of association, gamma, Kendall-tau.
- Introduction to redundancy: Principles of EFA

Reading List:

Further readings:

Topic: AF Measure Analysis Issues IIb: Uses of CFA and Sub index scales validation (PCA and CFA & factor analyses)

Session: Wednesday 29 August, 11:30-12:30 (theory) 13:30-15:00 (Exercise)
Instructor: José Manuel Roche

Contents:
- Heuristic power of Exploratory Factor Analysis (on making informed choices when clustering indicators and defining weights)
- Subjective Scale validation techniques and uses for multidimensional poverty analysis
- Reviewing examples and empirical applications in the literature

Reading List:
Further readings Factor Analysis:

1. COSTELLO, A. and J. OSBORNE (2005) “Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis”. Pracrical Assessment, Research & Evaluation, 10 (7)

Online sources:
3. Annotated SPSS Output FA: http://www.ats.ucla.edu/stat/spss/output/factor1.htm

Topic: AF Measure Analysis Issues III: Aggregated Results, Decomposition by Subgroup, Dimensional Breakdown & Time Series Trends

Session: Thursday 30 August, 09:00-10:30
**Instructor:** José Manuel Roche / Suman Seth

**Contents:**
- Decompositions by population subgroups
- Breaks-down by dimension
- Analysis of Trends in AF Measure
- Decompositions of changes in poverty level

**Reading List:**

**Further readings:**

**Topic:** AF Measure Analysis Issues IV: Dominance, robustness tests of weights, poverty cut-off, deprivation cut-offs & Standard Errors

**Session:** Friday 31 August, 09:00-10:30

**Instructor:** Suman Seth / Paola Ballón
Contents:

- Unidimensional versus multidimensional dominance.
- Application of Stochastic Dominance in Alkire-Foster context
- Computation of standard errors of point estimates.
- Rank robustness; Spearman, and Good & Kruskal’s correlation coefficients and Rank concordance.
- Robustness of point estimates with respect to the selection of weights, poverty cut-off and deprivation cut-offs: Wilcoxon and Friedman tests.

Reading List:

Further readings:

Topic: AF Measure Analysis Issues V: Regression Analysis

Session: Friday 31 August, 13:30-15:00
Instructor: Paola Ballón

Contents:

- Introduction to Generalised linear models.
- Regression models for Indicators of deprivation: Poisson models for count data.
- Regression models for MPI by district: Linear regression
• Introduction to Structural Equation Modelling: MIMIC models for Female empowerment.

Reading List:

Further readings:

Topic: Clarifying Concepts and Communicating your Results
Session: Sunday 2 September, 09:00-10:30
Instructor: Sabina Alkire

Topic: Missing Dimensions of Household Surveys on Poverty
Session: Sunday 2 September, 11:00-12:30
Instructor: Sabina Alkire

Contents:
• Informational Analysis of moral principles
• Review – the choice of dimensions
• The problem of ‘missing data’
• Four survey instruments producing most MDG-type data
• Various search engines and initiatives to improve data
• Characteristics of internationally comparable data
• OPHI’s Missing Dimensions: Employment, Empowerment, Safety from Violence, Ability to go about without Shame, Psychological and Subjective well-being

Reading List:

Further readings:


**Topic: Extensions of AF: Chronicity, Transitions and Inequality**

**Session:** Sunday 1 September, 13:30-15:00

**Instructor:** Sabina Alkire/Mauricio Apablaza/Suman Seth

**Contents:**
- Time decompositions for panel datasets introducing transitional probabilities.
- Empirical examples in both cross section and panel data.
- Remarks on time comparability in cross section data

**Reading List:**

**Further readings:**
6. BOUILLON, C. and P. YANEZ-PAGANS (2011). Dynamic Consistency of Multidimensional and

**Topic: The Politics of MD Poverty**

**Session:** Sunday 1 September, 15:30-17:30  
**Instructor:** Sabina Alkire

**Contents:**
- Practical and policy considerations in implementing multidimensional poverty measures  
- Political purposes – users and incentives created  
- Process of developing a measure – how it will be used? Who will have interest in using it?  
- How measures will be updated? What institutions will be involved?

**Topic: Review of the Course & Closure**

**Session:** Sunday 2 September, 15:30-17:30  
**Instructor:** Sabina Alkire

**Contents:**
- Recapping key lessons and topics covered during the course  
- Communicating your multidimensional poverty measure.  
- OPHI’s experience in communicating the global MPI.  
- General communication advice.

**Topic: Non-compulsory exam**

**Session:** Sunday 1 September, 09:00-10:30

Participants willing to become a regular OPHI consultant, national specialist or research assistant are strongly encouraged to attend the non-compulsory exam. No additional certificate is linked to this exam. Candidates must be able to show a solid understanding of the Alkire and Foster methodology, the context in which the measure emerges and its normative implications. Additionally, candidates should be able to show conceptual and practical (STATA) comprehension of the steps in the methodology and key statistics. Finally, they should be able to explain, analyse and draw conclusions from their results.