

**HDCA Summer School
on Capability and
Multidimensional Poverty**

24 August - 3 September 2011
Delft, The Netherlands

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 exercise 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 the exercises since they will help you to understand things better.

Bon Voyage!
The Instructors

1 Instructors

Alkire, Sabina (SA)

Sabina directs the Oxford Poverty & Human Development Initiative (OPHI) in the University of Oxford, and is a Research Associate at Global Equity Initiative, Harvard. Her research interests include multidimensional poverty measurement and analysis, human development, and Sen's capability approach.

Roche, José Manuel (JMR)

José Manuel is a Research Officer at the Oxford Poverty & Human Development Initiative (OPHI) in the University of Oxford. He has research and consultancy experience in human development, social inequality, poverty, and geographical inequalities. He has taught undergraduate and postgraduate courses on statistical methods, international development and inequality.

Seth, Suman (SS)

Suman is a Research Officer of the Oxford Poverty and Human Development Initiative at the Department of International Development, Oxford University. His current research interest is in the area of development economics – especially – multidimensional measurement and weighting of inequality, poverty, and well-being.

Yalonetzky, Gaston (GY)

Gaston Yalonetzky is a member of the Oxford Poverty and Human Development Initiative (OPHI) based at Queen Elizabeth House, University of Oxford. His current research interests include topics of intergenerational and intra-generational economic mobility with an emphasis on methodological aspects.

Zavaleta, Diego (DZ)

Diego Zavaleta is a Research Officer with the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford. He is involved in research pertaining aspects of shame, humiliation and isolation as missing dimensions of poverty data. His doctoral research focused on economic relations that prevent major ethnic conflict in Bolivia, as part of a global project within the Centre for Research on Inequality, Human Security and Ethnicity (CRISE) at the University of Oxford.

OPHI-HDCA Summer School 2011 Programme – Week One

24 August to 3 September 2011 - Delft, the Netherlands

<i>time</i>	<i>Wednesday 24 August</i>	<i>Thursday 25 August</i>	<i>Friday 26 August</i>	<i>Saturday 27 August</i>	<i>Sunday 28 August</i>
<i>9:00-10:30</i>	Introduction & Overview of the Summer School <i>lead by GY & SS</i>	Stata Features <i>lead by MA</i>	Alkire Foster (AF) MD Poverty Measure <i>lead by SA</i>	Working Groups on Normative Issues <i>lead by All</i>	OFF
<i>10:30-11:00</i> BREAK					
<i>11:00-12:30</i>	Unidimensional Poverty Measurement: Axioms, Measures, and Dominance <i>lead by SS</i>	Stata Exercises on Unidimensional Poverty & Dominance <i>lead by GY, SS & MA</i>	Case Studies - MPI, Mexico, Colombia <i>lead by SA</i>	Working Groups on AF Poverty Measure <i>lead by All</i>	
<i>12:30-13:30</i> LUNCH BREAK					
<i>13:30-15:00</i>	Unidimensional Poverty Measurement: Axioms, Measures, and Dominance <i>lead by SS</i>	Why Multidimensionl (MD) Poverty Measures? lead by GY	Paper Based Exercises on AF <i>lead by JMR</i>	Working Groups on AF Poverty Measure <i>lead by All</i>	
<i>15:00-15:30</i> BREAK					
<i>15:30-17:30</i>	Exercises on Unidimensional Poverty & Poverty Orderings <i>lead by SS & GY</i>	Properties of MD Poverty lead by SS	Normative Issues in MD Poverty Measurement <i>lead by SA</i>	Presentations of Working Group Results <i>lead by All</i>	

OPHI-HDCA Summer School 2011 Programme – Week One
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<i>time</i>	<i>Monday 29 August</i>	<i>Tuesday 30 August</i>	<i>Wednesday 31 August</i>	<i>Thursday 1 September</i>	<i>Friday 2 September</i>	<i>Saturday 3 September</i>
<i>9:00-10:30</i>	Multidimensional Dominance <i>led by GY</i>	AF Measure Analysis Issues II: trend analysis in M0, changes over time <i>led by GY</i>	Intro to the Capability Approach <i>led by SA</i>	Working Groups on Principal Components & Factor Analyses, and normative analysis <i>led by JMR</i>	Review of the Course <i>led by SA</i>	Presentations of Working Group Results <i>led by All</i>
<i>10:30-11:00</i> BREAK						
<i>11:00-12:30</i>	AF Measure Analysis Issues I: robustness tests of weights, k-value, z-cutoffs <i>led by GY & SS</i>	Exercise on Trend Analysis, Changes Over Time, & Standard Error <i>led by GY & MA</i>	Missing Dimensions of Household Surveys on Poverty <i>led by SA, JMR, & DZ</i>	AF Measure Analysis Issues V: Practical issues (sample drop, missing values, bias analysis, design) <i>lead by JMR & SS</i>	Working Groups on AF Poverty Measure <i>led by All</i>	Closure of the Summer School: diplomas
<i>12:30-13:30</i> LUNCH BREAK						CONCLUDED
<i>13:30-15:00</i>	Exercises on Dominance & Robustness Tests <i>led by GY & SS</i>	AF Measure Analysis Issues III: decompositions by dimension and regional and ethnic groups, and policy implications; <i>led by JMR & SS</i>	AF Measure Analysis Issues IV: redundancy, correlation, complementarity, subjective scales validation (uses of principal components & factor analyses) <i>led by JMR</i>	Ongoing Debates and Research Topics <i>led by SA</i>	Working Groups on AF Poverty Measure <i>led by All</i>	
<i>15:00-15:30</i> BREAK						
<i>15:30-17:30</i>	Standard Errors <i>led by GY</i>	Exercises on decompositions by dimension and sub-group <i>led by JMR & SS</i>	Working Groups on Principal Components & Factor Analyses <i>led by JMR</i>	The Politics of MD Poverty <i>led by SA & DZ</i>	Working Groups on AF Poverty Measure <i>led by All</i>	

Facilitators: SA=Sabina Alkire, MA=Mauricio Apablaza, JMR=Jose Manuel Roche, SS=Suman Seth, GY=Gaston Yalonetzky, DZ=Diego Zavaleta

Programme subject to change

Syllabi

Topic: Unidimensional Poverty Measurement

Session: Wednesday 24 August, 11:00-12:30 & 13:30-15:00

Instructor: Suman Seth

Contents:

- The two steps in poverty measurement: identification and aggregation.
- Properties of unidimensional poverty measures.
- Unidimensional poverty measures and their properties.
- Poverty Orderings (dominance conditions and their connection to poverty measures)

Suggested basic readings on this topic:

ALKIRE, S. and M. E. SANTOS (2009), "Poverty and Inequality Measurement", in DENEULIN, S. and SHAHANI, L. *An Introduction to the Human Development and Capability Approach*, Chapter 6. London, Earthscan. http://www.idrc.ca/en/ev-146721-201-1-DO_TOPIC.html

FIELDS, G. (2001): *Distribution and Development*. New York: Russell Sage Foundation and Cambridge, MA: MIT. Chapter 4.

FOSTER, J. E. (2006): "Poverty Indices" in A. de Janvry and R. Kanbur (eds), *Poverty, Inequality and Development: Essays in Honor to Erik Thorbecke*. New York: Springer Science.

RAY, D. (1998): *Development Economics*. New Jersey: Princeton. Chapter 8.

A more advanced reading for this topic (which we will be covering during the lecture) are:

FOSTER, J. E. and A. Sen (1997): "On Economic Inequality: After a Quarter Century". Annex to the Expanded Edition of A. Sen. *On Economic Inequality*. Oxford: Clarendon Press. Section A.6.

ATKINSON, A. B. (1987): "On the Measurement of Poverty", *Econometrica*. 55: 749-764.

FOSTER, J. E. and A. SHORROCKS. (1988): "Poverty Orderings and Welfare Dominance", *Social Choice and Welfare*. 5: 179-198.

Further readings:

ATKINSON, A. B. (1987): "On the Measurement of Poverty", *Econometrica*. 55: 749-764.

BARRET, G. and S. DONALD, (2003), "Consistent Tests for Stochastic Dominance", *Econometrica*, 71(1): 71-104.

CLARK, S., HEMMING, R., and D. ULPH. (1981): "On Indices for the Measurement of Poverty", *Economic Journal*. 91: 515-26.

FOSTER, J. E. (1998) "Absolute versus Relative Poverty" *American Economic Review, Papers and Proceedings*. 88: 335-341.

FOSTER, J. E. and A. SHORROCKS. (1988): "Poverty Orderings and Welfare Dominance", *Social Choice and Welfare*. 5: 179-198.

- FOSTER, J. E. and A. SHORROCKS. (1991): "Subgroup Consistent Poverty Indices", *Econometrica*. 59: 687-709.
- FOSTER, J.E., GREER, J., and E. THORBECKE. (1984): "A Class of Decomposable Poverty Indices", *Econometrica*. 52: 761-6.
- RAVALLION, M. (1996): "Issues in Measuring and Modelling Poverty", *Economic Journal*. 106: 1328-1343.
- RAVALLION, M. (1992): "Poverty Comparisons, A Guide to Concepts and Methods", Living Standards Measurement Study, Working Paper 88, World Bank, Washington D.C.
- RAVALLION, M. and CHEN, S. (2009) "Weakly Relative Poverty" *Policy Research Working Paper* 4844, World Bank, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1348985
- SEN, A. (1976): "Poverty: An Ordinal Approach to Measurement", *Econometrica* 44: 219-231.

Suggestions on applied research on the topic:

There is a huge literature of empirical application of poverty measures to different countries and regions.

The World Bank has produced a lot of applied research on these topics. The most common measures such as the FGT Indices as well as the Gini Coefficient are periodically estimated and released through the World Development Indicators. There is also a big amount of World Bank Policy Research Working Papers done on specific countries. Two recent World Bank Development Reports are worth noting: the World Development Report 2000/2001, *Attacking Poverty: Opportunities, Empowerment and Security* and the World Development Report 2006: *Equity and Development*. For all these information please visit www.worldbank.org. These documents can be found either on 'Data and Research' or on 'Publications'.

Examples of applications of poverty measurement to specific cases include:

- ARIMAH, B. (2004): "Poverty Reduction and Human Development in Africa", *Journal of Human Development*. 5: 399-415.
- BOROOAH, V. K., GUSTAFSSON, B. and SHI, L. (2006): "China and India: Income Inequality and Poverty North and South of the Hymalayas", *Journal of Asian Economics*. 17: 797-817.
- DEATON, A. and DREZE, J. (2002): "Poverty and Inequality in India: A Re-Examination", *Economic and Political Weekly*. September 7, 2002. <http://www.hss.iitm.ac.in/people/faculty/courses/debashis/Poverty1.pdf>
- DERCON, S. and KRISHNAN, P. (1998): "Changes in Poverty in Rural Ethiopia 1989-1995: Measurement, Robustness Tests and Decomposition", Working Paper 98-7, Centre for the Study of African Economies, Institute of Economics and Statistics, University of Oxford. <http://www.csae.ox.ac.uk/workingpapers/pdfs/9807text.pdf>
- GASPARINI, L. CRUCES, G., TORNAROLLI, L. y MARCHIONI, M. (2009) "A Turning Point? Recent Developments on Inequality in Latin America and the Caribbean", Documento de Trabajo del CEDLAS Nro. 81.
- OZLER, B. (2007): "Not separate, Not Equal: Poverty and Inequality in Post-Apartheid South Africa", *Economic Development and Cultural Change*. 55: 487-529.
- SZEKELY, M. and HILGERT, M. (1999): "What's Behind the Inequality We Measure: An Investigation Using Latin American Data", Research Working Paper 409,

Inter American Development Bank (IADB).
<http://siteresources.worldbank.org/INTDECINEQ/Resources/szekely.pdf>
SZÉKELY, M., LUSTIG, N., MEJÍA, C., José, A. and M. CUMPA. (2000): “Do We Know How Much Poverty There Is?”, Research Working Paper No. 437, Inter American Development Bank (IADB). <http://ssrn.com/abstract=258949>

Topic: Stata Features

Session: Thursday 25 August, 9:00-10:30

Instructor: Mauricio Apablaza

Contents: This session will present an overview of the commands that will be required for the exercises session during the summer school. **Please note that it will not be an introduction on how to use Stata.** Students are supposed to have at least a basic knowledge on this. If you are not familiar enough with using Stata and specially with writing do-files we strongly recommend that you complete an on-line course prior to the summer school. Additionally, we recommend that you go through the notes named ‘Introduction to Stata’ that we provide prior to the Summer School and that you complete the exercises outlined at the end of those notes. Additionally, we would request that you install in your computer: a) the free-downloadable program DASP and b) a package of Stata commands for calculating poverty and inequality measures. Please see the instructions below to do this.

INSTRUCTIONS TO GET YOUR STATA READY

Install Stata 9.2 or higher in your computer.

Steps to install the *Inequal* adofiles in your Stata:

1. Open Stata. In the Stata command window, type the syntax:
findit inequal
2. Select gr0001_2 and click on ‘click here to install’.
Do the same with:
gr0001_1
sq115
sq117
sg30
ainequal from <http://fmwww.bc.edu/RePEc/bocode/a>
3. Analogously: Type: *findit sg108*, click on the link
<http://www.stata.com/stb/stb48>, and then click on ‘click here to install’.

Steps to follow to install DASP in your computer:

Before using modules of this package, users have to update the executable Stata file to Stata 9.2 or higher:

<http://www.stata.com/support/updates/stata9.html>

update the ado files:

<http://www.stata.com/support/updates/stata9/ado/>

Or by typing in the command window: *update query*, and then: *update al*).

Then:

1. Go to <http://dasp.ecn.ulaval.ca/>, create your account. You will receive an e-mail with your username and password.
2. Go again to the page and login.
3. Download DASP V2.0
4. Unzip the dasp.zip in the directory C:
5. Copy the folder dasp in the directory c:
6. Make sure that you have c:/dasp/dasp_p1.pkg, c:/dasp/dasp_p2.pkg, c:/dasp/dasp_p3.pkg and c:/dasp/stata.toc;
7. Open Stata. In the Stata command window, type the syntax:
net from c:/dasp
net install dasp_p1, force
net install dasp_p2, force
net install dasp_p3, force
8. To add DASP submenu to STATA main menu (so that when you select 'User' in your Stata window, at the bottom appears DASP), **it is possible that this is automatically done**, but in case it is not, check that the file **profile.do** (which is provided with the DASP package) is copied into the directory c:/ado/personal (create a new folder "personal" if this does not exist). To check if the file **profile.do** exists, type the command: *findfile profile.do*
9. Open again Stata and select from the mainmenu USER => DASP

For further explanations, please check the DASP Manual, which comes in the package you will download from the website.

If you are using a **Mac**, follow the same instructions above, with the following exception:

- With Stata 9, copy the "dasp" folder and the "profile.do" file in the folder /Users/your_name/data
- With Stata 10, copy them in the folder where the Stata executable file is, usually /Applications/Stata 10.

Suggested basic textbook on Stata:

STATA Press. *Getting Started with Stata for Windows*.

STATA Press. *User's Guide*.

Suggested resources Stata:

There are a lot of useful resources on 'how to use Stata' that you can access online. In general, in the website, <http://www.stata.com/links/resources.html> you can find links to other online websites where you will find tutorials on Stata. Moreover, Stata's Frequently Asked Questions (FAQs) section of the website <http://www.stata.com/support/faqs> and the email discussion group with contributions and answers from StataCorp staff available at <http://www.stata.com/support/statalist> can also be very useful.

In particular, very good online resources are:

The UCLA Academic Technology Services available at

<http://www.ats.ucla.edu/stat/stata>

Prof. Cameron's webpage at the University of Davis, available at

<http://cameron.econ.ucdavis.edu/stata/stata.html>

Topic: Why Multidimensional Poverty Measures?

Session: Thursday 25 August, 13:30-15:00

Instructor: Gaston Yalonetzky

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.

Suggested basic readings on this topic:

- ALKIRE, S. and M. E. SANTOS (2009), "Poverty and Inequality Measurement", in DENEULIN, S. and SHAHANI, L. *An Introduction to the Human Development and Capability Approach*, Chapter 6. London, Earthscan.http://www.idrc.ca/en/ev-146721-201-1-DO_TOPIC.html
- SEN, A. K. (2009), *The Idea of Justice*, Chapter 12, London, Allen Lane.
- SEN, A. (1999), *Development as Freedom*, Oxford University Press. Chapter 4.
- DUCLOS, J.-Y. and ARAAR, A. 2006. 'Poverty and Equity Measurement, Policy, and Estimation with DAD', Springer and IDRC, Berlin and Ottawa.
- RUGGERI-LADERCHI, C., SAITH, R. and F. STEWART (2003), "Does it Matter that we do not agree on the definition of poverty? A Comparison of Four Approaches." *Oxford Journal of Development Studies*. 31:3 243-274.
- ALKIRE, S. and S. SETH (2008), "Multidimensional Poverty Measurement and BPL Methods in India: A Comparison of Methods". OPHI Working Paper No 15.
- SANTOS, M.E. and K. URA (2008), "Multidimensional Poverty in Bhutan: Estimates and Policy Implications". OPHI Working Paper No 13.
- ALKIRE, S. and M. E. SANTOS (2010), "Acute Multidimensional Poverty: A new Index for Developing Countries", OPHI WP 38.<http://www.ophi.org.uk/wp-content/uploads/ophi-wp38.pdf>
- United Nations (2003). *Indicators for Monitoring the Millennium Development Goals*, New York: United Nations.
- United Nations (2008). *The Millennium Development Goals Report 2008*. New York: United Nations.
- OPHI (2010), Bhutan's Gross National Happiness Index.
<http://www.ophi.org.uk/policy/national-policy/bhutan/>
- OPHI (2010), Mexico's National Poverty Measure.
<http://www.ophi.org.uk/policy/national-policy/mexico/>

**Topics: Properties of Multidimensional Poverty Measures/
Alkire-Foster Multidimensional Poverty Measure**

Sessions: Thursday 25 August, 15:30-17:30/Friday 26 August, 09:00-10:30

Instructors: Suman Seth/Sabina Alkire

Contents:

- Properties of multidimensional poverty measures that are natural extensions of the unidimensional framework.
- Properties specific to multidimensional measures.
- Multidimensional poverty measures: issues of identification and aggregation.
- Multidimensional Poverty Measures

Suggested basic readings on this topic:

- ALKIRE, S. and J. FOSTER. (2007): "Counting and Multidimensional Poverty Measurement", Working Paper No 7 and No 32 (revised), Oxford Poverty and Human Development Initiative, <http://www.ophi.org.uk/wp-content/uploads/OPHI-wp32.pdf>. Also note the version in Spanish: "Recuento y Medicion Multidimensional de la Pobreza", <http://www.ophi.org.uk/wp-content/uploads/ophi-wp7-es.pdf>
- BOURGUIGNON, F. and S. CHAKRAVARTY. (2003): "The Measurement of Multidimensional Poverty", *Journal of Economic Inequality*. 1: 25-19.
- DEUTSCH, J. and J. SILBER (2005), "Measuring Multidimensional Poverty: An Empirical Comparison of Various Approaches", *Review of Income and Wealth*. 51 (1): 145-174.

Further readings:

- ANAND, S., and A. SEN (1997): *Concepts of Human Development and Poverty: A Multidimensional Perspective*. New York: UNDP.
- ATKINSON, A. B. (2003): "Multidimensional Deprivation: Contrasting Social Welfare and Counting Approaches", *Journal of Economic Inequality*. 1: 51-65.
- BIBI, S. (2005): "Measuring Poverty in a Multidimensional Perspective: A Review of Literature", PMMA Working Paper 2005-07, http://www.pep-net.org/NEW-PEP/Group/working_papers/papers/PMMA-2005-07.pdf
- BRANDOLINI, A., and G. D'ALESSIO (1998). "Measuring Well-being in the Functioning Space". *Mimeo*. Rome. Banco d'Italia Research Department.
- CHAKRAVARTY, S.R., D'AMBROSIO, A., 2006, The Measurement of Social Exclusion. *Review of Income and Wealth*. 523, 377-398.
- DEUTSCH, J., and J. SILBER (2005): "Measuring Multidimensional Poverty: An Empirical Comparison of Various Approaches", *The Review of Income and Wealth*, 51, 145-174
- GORDON, D., S. NANDY, C. PANTAZIS, S. PEMBERTON, and P. TOWNSEND (2003): "The Distribution of Child Poverty in the Developing World", Bristol: Centre for International Poverty Research.
- KOLM, S. C. (1977): "Multidimensional Egalitarianism", *Quarterly Journal of Economics*, 91, 1-13.
- MAASOUMI, E., and M. A. LUGO (2008): "The Information Basis of Multivariate Poverty Assessments", in *Quantitative Approaches to Multidimensional Poverty Measurement*, ed. by N. Kakwani, and J. Silber. New York: Palgrave-MacMillan, 1-29.
- SEN, A. K. (1980): "Equality of What?", in *The Tanner Lectures on Human Values*, ed. by S. McMurrin. Salt Lake City: University of Utah Press.
- SEN, A. K. (1987): "The Standard of Living", in *The Standard of Living*, ed. by G. Hawthorn. Cambridge: Cambridge University Press, 1-38.
- THORBECKE, E. (2008): "Multidimensional Poverty: Conceptual and Measurement Issues", in *The Many Dimensions of Poverty* ed. by N. Kakwani, and J. Silber. New York: Palgrave MacMillan.

TSUI, K. (2002): “Multidimensional Poverty Indices”, *Social Choice and Welfare*. 19: 69-93.

Suggestions on applied research on the topic:

- ALKIRE and FOSTER (2008) contains an empirical illustration of the proposed measures to the US and Indonesia. Other applications of these measures to China, India, Bhutan, six African countries and eight Latin American countries are currently being developed at OPHI and will be posted as OPHI Working Papers soon.
- ALKIRE, S. and S. SETH (2008), “Multidimensional Poverty Measurement and BPL Methods in India: A Comparison of Methods”. OPHI Working Paper No 15.
- ALKIRE, S. and S. SETH (2008), “Determining BPL Status Some Methodological Improvements”, *Indian Journal of Human Development*, Vol. 2 (2), 407-424.
- BATANA, Y (2008), “Multidimensional Measurement of Poverty in Sub Saharan Africa”. OPHI Working Paper No 13.
- BATTISTON, D., CRUCES, G., LOPEZ-CALVA, L. F., LUGO, M. A. and M. E. SANTOS (2008), “Income and Beyond: Multidimensional Poverty in Six Latin American Countries”. OPHI Working Paper No 17.
- BOURGUIGNON and CHAKRAVARTY (2003) contains an empirical application of the proposed family of multidimensional poverty indices to the case of rural Brazil.
- SANTOS, M.E. and K. URA (2008), “Multidimensional Poverty in Bhutan: Estimates and Policy Implications”. OPHI Working Paper No 13.
- WAGLE, U. (2005). “Multidimensional Poverty Measurement with Economic Well-Being, Capability and Social Inclusion: A Case from Kathmandu, Nepal”, *Journal of Human Development*. 6, 3: 301-328.
- YU, J. (2008), “Multidimensional Poverty in China: Findings based on CHNS”. OPHI Working Paper No 16.

Suggested books on this topic:

- ATKINSON, A.B., B. CANTILLON, E. MARLIER, and B.NOLAN (2002), *Social Indicators: The EU and Social Inclusion*. Oxford: Oxford University Press.
- KAKWANI, N. and J. SILBER (2008), *The Many Dimensions of Poverty*. Basingstoke: Palgrave MacMillan.
- KAKWANI, N. and J. SILBER (2008), *Quantitative Approaches to Multidimensional Poverty Measurement*. Basingstoke: Palgrave Macmillan.
- MCGILLIVRAY, M. (ed.) (2006), *Human Well-being: Concept and Measurement*. Basingstoke and New York: Palgrave MacMillan.

Topic: Normative Issues in Multidimensional Poverty Measurement

Session: Friday 26 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

Suggested basic readings on this topic:

- ALKIRE, S. and M. E. SANTOS (2009), "Poverty and Inequality Measurement", in DENEULIN, S. and SHAHANI, L. *An Introduction to the Human Development and Capability Approach*, Chapter 6. London, Earthscan. http://www.idrc.ca/en/ev-146721-201-1-DO_TOPIC.html
- 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).
- ALKIRE, S. (2007), "Choosing Dimensions: The Capability Approach and Multidimensional Poverty." (This paper observes how researchers have, in practice, selected dimensions of poverty, and finds they generally use one of five methods).
- DECANCQ, K. and M. A. LUGO (2008), "Setting weights in multidimensional indices of well-being". <http://www.ophi.org.uk/pubs/W1.Decancq-Lugo.pdf.pdf> and the references therein.
- FOSTER, J. E. (1998) "Absolute versus Relative Poverty" *American Economic Review, Papers and Proceedings*. 88: 335-341.
- RAVALLION, M. and S. CHEN (2009), "Weakly Relative Poverty" *Policy Research Working Paper 4844*, World Bank, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1348985

Further readings:

On the choice of dimensions:

- GRUSKY, D. and R. KANBUR (eds) (2006). *Poverty and Inequality*. Stanford: Stanford University Press. "Introduction" (p 1-29). (Kanbur's introduction situates the rise of multidimensional poverty and inequality within economics from 1970 on, and identifies standing questions including how to choose dimensions. Grusky then introduces sociological approaches to multidimensional poverty, outlining their relation to previous research over the last 50 years).
- MCGILLIVRAY, M. (1991), "The Human Development Index: yet another redundant composite development Indicator?", *World Development*, 1461-68
- MCGILLIVRAY, M. (ed.) (2007), *Understanding Well-Being: Concept and Measurement*, Palgrave Macmillan, Basingstoke.
- 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).
- RANIS, G., F. STEWART, and E. SAMMAN (2006) Human Development: Beyond the Human Development Index. *Journal of Human Development*, Vol. 7, No. 3 (November).
- RUGGERI-LADERCHI C. (2008), "Do concepts matter? An empirical investigation of the differences between a capability and a monetary assessment of poverty", in

- COMIM, QIZILBAH and S. ALKIRE (eds), *The Capability Approach: Concepts, Measures and Application*, CUP, 2008.
- 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).
- SUDHIR, A. and A. SEN (1994) Human Development Index: Methodology and Measurement. *Human Development Report Office Occasional Paper No. 12*. UNDP, New York.

On the choice of weights:

- BRANDOLINI, A. (2007), “On synthetic indices of multidimensional well-being: health and income inequalities in France, Germany, Italy, and the United Kingdom”. Child Working Paper 07/2007.
- CHERCHYE L, E OOGHE, and T V PUYENBROECK. (2008), “Robust human development rankings”, *Journal of Economic Inequality*, Volume 6 (4), 287–320.
- CHOWDHURY, S. & SQUIRE, L. (2006). “Setting weights for aggregate indices: An application to the commitment to development index and human development index”, *Journal of Development Studies* 42(5): 761–771.
- DECANCQ, K., and E. OOGHE (2010): Has the world moved forward? A robust multidimensional evaluation, *Economic Letters* 107: 266-269..
- DIBBEN, C., ATHERTON, I., COX, M., WATSON, V., RYAN, M. and SUTTON, M. (2007), “Investigating the Impact of Changing the Weights that Underpin the Index of Multiple Deprivation 2004”, Department for Communities and Local Government Report, London. <http://www.ophi.org.uk/pubs/W8.Dibben.pdf>
- FOSTER, J. E., MC GILLIVRAY, M. and S. SETH (2008), “Rank Robustness of Composite Indices”, OPHI Working Paper No 26.
- WRIGHT, G., NOBLE, M. and WISEMAN, M. (2007), *Towards A Democratic Definition of Poverty: Socially Perceived Necessities in South Africa*, Published by the Human Science Research Council (HSRC) Press, Cape Town.

On discussions of these issues all-together:

- CAHILL M. B. (2005), “Is the human development index redundant?” *Eastern Economic Journal* 31(1), 1-5
- KLASEN, S (2006) UNDP’s Gender-related Measures: Some Conceptual Problems and Possible Solutions *Journal of Human Development*, Vol. 7, No. 3 (November).
- MCGILLIVRAY, M. (2007) Measuring Human Well-being: Key Findings and Policy Lessons, *UNU Policy Brief*, November 3.
- MCGILLIVRAY, M. and F. NOORBAKSH (2004) Composite Indices of Human Well-being: Past, Present, and Future, *WIDER Research Paper No. 2004/63*
- NOORBAKSH, F. (1998), The human development index: Some technical issues and Alternative indices, *Journal of International Development*, Vol 10, 589-605
- RAWORTH, K and D. STEWART (2002) Critiques of the Human Development Index: a review in S. FUKUDA-PARR and A.K. SHIVA-KUMAR (eds) *Readings in Human Development*. New Delhi. Oxford University Press.
- SAISANA, M., SALTELLI, A., TARANTOLA, S., (2005), “Uncertainty and sensitivity analysis as tools for the quality assessment of composite indicators” *Journal of the Royal Statistical Society*, Ser. A **168**, 1–17

SCHULER, D. (2006) The Uses and Misuses of the Gender-related Development Index and Gender Empowerment Measure: a Review of the Literature *Journal of Human Development*, Vol. 7, No. 3 (November).

Topic: Multidimensional Dominance

Session: Monday 29 August, 09:00-10:30

Instructor: Gaston Yalonetzky

Contents:

- Unidimensional versus multidimensional stochastic dominance.
- Multidimensional dominance criteria: Atkinson and Bourguignon (1982) generalized by Crawford (2005) and Yalonetzky (2009); and Duclos *et. al.* (2006).
- Statistical inference techniques: Duclos *et. al.* (2006).
- Some discussion of discrete variables (if there is time).

Suggested basic readings on this topic:

ATKINSON, A.B and F. BOURGUIGNON (1982), "The comparison of multidimensioned distributions of economic status", *Review of Economic Studies*, 49(2): 183-201.

DUCLOS, J-Y., SAHN, D and S. YOUNGER (2006), "Robust Multidimensional Poverty Comparisons", *The Economic Journal*. 116(514): 943-68.

YALONETZKY, Gaston (2009), "Testing for stochastic dominance among additive, multivariate welfare functions", manuscript.

Further readings:

ANDERSON, G. (1996), 'Nonparametric tests of stochastic dominance in income distributions', *Econometrica*, 64(5): 1183-1193.

ANDERSON, G. (2008), "The empirical assessment of multidimensional welfare, inequality and poverty: Sample weighted multivariate generalizations of the Kolmogorov-Smirnov two sample test for stochastic dominance", *Journal of Economic Inequality*, 6(1): 73-87.

DAVIDSON, R. and J. DUCLOS (2000), "Statistical inference for stochastic dominance and for the measurement of poverty and inequality", *Econometrica*, 68(6): 1435-65.

DUCLOS, J-Y., SAHN, D and S. YOUNGER (2006), "Robust Multidimensional Poverty Comparisons with Discrete Indicators of Well-being", CIRPEE Working Paper, 06-28.

Topic: Issues in the Analysis of Alkire-Foster Measure I-V

Session: Monday 29 August, 11:00-12:30/Tuesday 30 August, 09:00-10:30/Tuesday 30 August, 13:30-15:00/Wednesday 31 August, 13:30-15:00/Thursday 1 September, 11:00-12:30

Instructor: Gaston Yalonetzky & Suman Seth/Gaston Yalonetzky/José Manuel Roche & Suman Seth/José Manuel Roche/José Manuel Roche & Suman Seth

Contents:

- Analysis of Trends in AF Measure
- Decompositions by population subgroups
- Breaks-down by dimension
- Policy Implications
- Robustness in weights, k-cutoffs and z-cutoffs

Suggested basic readings on this topic:

- ALKIRE, S. and S. SETH (2008), “Multidimensional Poverty Measurement and BPL Methods in India: A Comparison of Methods”. OPHI Working Paper No 15.
- BATANA, Y. (2008), “Multidimensional Measurement of Poverty in Sub-Saharan Africa”, OPHI WP. N0 13.
- BENNETT, C. and S. SINGH, (2010), “Multidimensional poverty: Measurement, Estimation and Inference”, manuscript.
- SANTOS, M.E, LUGO, M. A., LOPEZ-CALVA, L. F., CRUCES, G., BATTISTON, D. (2010), “Refining the Basic Needs Approach: A Multidimensional Analysis of Poverty in Latin America”, *Research on Economic Inequality*, Chapter 1, Vol. 18, *forthcoming*.
- SANTOS, M. E. and URA, K. (2008), “Multidimensional Poverty in Bhutan: Estimates and Policy Implications”, OPHI WP. 14
- APABLAZA, M., OCAMPO, J.P., & YALONETZKY, G. (2010). ‘Decomposing Changes in Multidimensional Poverty in 10 Countries’, *mimeo*, Oxford Poverty and Human Development Initiative, Oxford Department of International Development, University of Oxford.
- ALKIRE, S. and M. E. SANTOS (2010), “Acute Multidimensional Poverty: A new Index for Developing Countries”, OPHI WP 38. <http://www.ophi.org.uk/wp-content/uploads/ophi-wp38.pdf>

Further readings:

- DUCLOS, J.Y. and R. DAVIDSON (2010), “Testing for Restricted Stochastic Dominance”, *forthcoming Econometric Reviews*.

Topic: Introduction to the Capability Approach

Session: Wednesday 31 August, 09:00-10:30

Instructor: Sabina Alkire

Contents:

- History and Motivation
- Capabilities
- Functionings
- Agency

- Implications for economics
- Issues for measurement

Suggested basic readings on this topic:

- ALKIRE, S. (2005) Capabilities and Functionings: Definition and Justification. http://hd-ca.org/pubs/HDCA_Briefing_Concepts.pdf
- ALKIRE, S. and S. DENEULIN (2009), "The Human Development and Capability Approach" in DENEULIN, S. and L. SHAHANI (eds) *An Introduction to Human Development and Capability Approach, draft chapters*. Chapter 2. http://www.idrc.ca/en/ev-146685-201-1-DO_TOPIC.html
- SEN, A. (1999), *Development as Freedom*, Oxford University Press. Chapters 1-3.
- SEN, A. (1989), "Development as Capability Expansion" In S. FUKUDA-PARR and A.K. SHIVA KUMAR, *Readings in Human Development*, Oxford University Press (2003).

Further readings:

- ALKIRE, S. (2005), "Why the Capability Approach?" *Journal of Human Development* 6:115-133.
- ALKIRE, S. (2007), "Measuring freedoms alongside well-being", in GOUGH, I. and J. A. MCGREGOR (eds.) *Well-being in developing countries: new approaches and research strategies*. Cambridge: Cambridge University Press.
- ATKINSON, A.B. (2003), "Multidimensional Deprivation: Contrasting Social Welfare and Counting Approaches." *Journal of Economic Inequality*. 1:1 from p 51. (This article identifies the problem of aggregating multiple attributes, and some of the methods in use to address them).
- 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).
- 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.)
- ROBEYNS, I. (2005), "The Capability Approach: a theoretical survey." *Journal of Human Development* 6:93-114.
- RUGGERI-LADERCHI, C., SAITH, R. and F. STEWART (2003), "Does it Matter that we do not agree on the definition of poverty? A Comparison of Four Approaches." *Oxford Journal of Development Studies*. 31:3 243-274. (This paper compares monetary poverty, capability, social exclusion, and participatory measures of poverty).
- SEN, A. (1985), 'Well-Being Agency and Freedom: The Dewey Lectures 1984', *Journal of Philosophy* 82(4): 169–221.
- SEN, A. (1992), *Inequality Re-Examined*, Oxford: Clarendon Press
- SEN, A. (1993), 'Capability and Well-being' in A. SEN and M. NUSSBAUM, *The Quality of Life*, Clarendon Press.
- SEN, A. K. (2004), 'Capabilities, Lists, and Public Reason: Continuing the Conversation', *Feminist Economics*, 10:3. (In this rather thunderous short piece, Sen defends his decision not to adopt 'one' list of capabilities).
- SEN, A. K. (2009), *The Idea of Justice*, Chapter 11, London, Allen Lane.

- THORBECKE, E. (2008), "Multidimensional Poverty: Conceptual and Measurement Issues." in edited by KAKWANI, N. and J. SILBER (eds.), *The Many Dimensions of Poverty*. New York: Palgrave MacMillan.
- KUKLYS, W. (2005): *Amartya Sen's Capability Approach: Theoretical Insights and Empirical Applications*. Berlin: Springer.

Topic: Principal components Analysis and Factor Analysis

Session: Wednesday 31 August, 15:30-17:30

Instructor: José Manuel Roche

Contents:

- Data reduction with Principal Component Analysis
- Exploratory Factor Analysis, measurement error and scale construction
- Hypothesis testing with Confirmatory Factor Analysis
- Introduction to other related techniques: Multiple Correspondence Analysis, Cluster Analysis and Structure Equation Modeling
- Reviewing the strengths and weaknesses

Suggested basic readings on this topic:

- BROWN, T. A. (2006) *Confirmatory factor analysis for applied research*, New York, NY ; London, New York, NY ; London : Guilford Press. (*Chapter 2: The common Factor Model and Exploratory Factor Analysis*)
- CHIAPPERO-MARTINETTI, E. and J. M. ROCHE (2009) "Operationalization of the capability approach, from theory to practice: a review of techniques and empirical applications" in CHIAPPERO-MARTINETTI, E. (Ed.) *Debating Global Society: Reach and Limits of the Capability Approach*. Milan, Fondazione Feltrinelli.
- HAMILTON, L. C. (2009) *Statistics with Stata : updated for version 10*, Belmont, CA, Brooks/Cole. (*Chapter 12: Principal Components, Factor, and Cluster Analysis*)
- HEATH, A. and J. MARTIN (1997) 'Chapter 3: Why Are There so Few Formal Measuring Instruments in Social and Political Research?' IN LYBERG, L. (Ed.) *Survey measurement and process quality*. New York ; Chichester, Wiley.
- ROCHE, J. M. (2008) 'Monitoring Inequality among Social Groups: A Methodology Combining Fuzzy Set Theory and Principal Component Analysis'. *Journal of Human Development and Capabilities*, 9 (3), 427 - 452.
- TREIMAN, D. J., D. D. JOHNSTON and T. J. GRITES (2009) *Quantitative data analysis : doing social research to test ideas*, 1st ed., San Francisco, Calif., Jossey-Bass ; Chichester : John Wiley [distributor]. (*Chapter 11 Scale Construction*)

Further readings:

- BALESTRINO, A. and N. SCICLONE (2000) "Should we use functioning instead of income to measure wellbeing?". *Rivista internazionale di scienze sociali*, 53 (1), 3-22.

- BERENGER, V. and A. VERDIER-CHOUCHANE (2007) "Multidimensional Measures of Well-Being: Standard of Living and Quality of Life Across Countries". *World Development*, 35 (7), 1259-1276.
- BROWN, T. A. (2006) *Confirmatory factor analysis for applied research*, New York, NY ; London, New York, NY ; London : Guilford Press.
- COSTELLO, A. and J. OSBORNE (2005) "Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis". *Practical Assessment, Research & Evaluation*, 10 (7)
- DI TOMMASO, M. L. (2007) "Children capabilities: A structural equation model for India". *The Journal of Socio-Economics*, 36, 436-450.
- EVERITT, B. (2001) *Cluster analysis*, London: New York, London: Arnold; New York: Oxford University Press.
- GRIMM, L. G. and P. R. YARNOLD (2000) *Reading and understanding more multivariate statistics*, Washington, DC ; London, American Psychological Association. (Chapter 7 Structural Equation Modeling)
- HARRINGTON, D. (2009) *Confirmatory factor analysis*, Oxford, Oxford University Press.
- KLASEN, S. (2000) "Measuring Poverty and Deprivation in South Africa". *Review of Income and Wealth*, 46, 33-58.
- KLINE, R. B. (2005) *Principles and practice of structural equation modeling*, 2nd ed., New York ; London, Guilford. (Chapter 1-4)
- KRISHNAKUMAR, J. and A. NAGAR (2007) 'On Exact Statistical Properties of Multidimensional Indices Based on Principal Components, Factor Analysis, MIMIC and Structural Equation Models'. *Social Indicators Research*, 86 (3), 481-496.
- KRISHNAKUMAR, J. (2007) "Going Beyond Functioning to Capabilities: An Economic Model to Explain and Estimate Capabilities". *Journal of Human Development*, 8 (1), 39-63.
- KUKLYS, W. (2005) *Amartya Sen's Capability Approach: Theoretical Insights and Empirical Applications*, Berlin, Springer.
- LE ROUX, B. and H. ROUANET (2010) *Multiple correspondence analysis*, Los Angeles, Calif. ; London, Los Angeles, Calif. ; London : SAGE.
- LELLI, S. (2001) "Factor Analysis vs. Fuzzy Sets Theory: Assessing the Influence of Different Techniques on Sen's Functioning Approach". *Centre of Economic Studies Discussion Paper, KU Leuven*,
- MCGILLIVRAY, M. (2005) "Measuring Non-economic Well-being Achievement". *Review of Income and Wealth*, 51 (2), 337-364.
- NEFF, D. F. (2007) "Subjective Well-Being, Poverty and Ethnicity in South Africa: Insights from an Exploratory Analysis". *Social Indicators Research*, 80, 313-341.
- SCHOKKAERT, E. and L. VAN OOTEGEM (1990) "Sen's Concept of the Living Standard Applied to the Belgian Unemployment". *Research Economiques de Louvain*, 56, 429-450.
- VELICER, W. F. and D. N. JACKSON (1990) "Component Analysis Versus Common Factor-Analysis - Some Issues in Selecting an Appropriate Procedure". *Multivariate Behavioral Research*, 25 (1), 1-28.
- WIDAMAN, K. F. (1993) "Common Factor Analysis Versus Principal Component Analysis: Differential Bias in Representing Model Parameters?". *Multivariate Behavioral Research*, 28 (3), 263.

Online sources:

Multivariate data analysis in STATA: <http://www.stata.com/capabilities/mv.html>
Annotated STATAOutput FA:
http://www.ats.ucla.edu/stat/stata/output/fa_output.htm
Annotated SPSS Output FA: <http://www.ats.ucla.edu/stat/spss/output/factor1.htm>

Topic: Missing Dimensions of Household Surveys on Poverty

Session: Wednesday 31 August, 11:00-12:30

Instructor: Sabina Alkire, Jose Manuel Roche, & Diego Zavaleta

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

Suggested basic readings on this topic:

ALKIRE, S. (2007), "The Missing Dimensions of Poverty Data: Introduction to the Special Issue." *Oxford Development Studies* 35:347-359.
ALKIRE, S. (2009) The MDGs: Multidimensionality and Interconnection. *Background paper for DFID White Paper*. <http://ophi.org.uk/pubs/RP-Alkire%20OPHI-DFID%20Background%20Paper.pdf> Please see section 2.

Further readings:

DIPROSE, R. (2007), "Physical Safety and Security: A Proposal for Internationally Comparable Indicators of Violence." *Oxford Development Studies* 35:431-458.
GROVES, R. M., F. J. FOWLER, M. P. COUPER, J. M. LEPKOWSKI, E. SINGTER and R. TOURANGEAU (2004) *Survey methodology*, Hoboken, NJ, J. Wiley.
(Chapter Eight: Evaluating Survey Questions)
IBRAHIM, S., and S. ALKIRE (2007), "Agency and Empowerment: A Proposal for Internationally Comparable Indicators." *Oxford Development Studies* 35:379-403.
LUGO, M. A.(2007), "Employment: A Proposal for Internationally Comparable Indicators." *Oxford Development Studies* 35:361-378.
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
RANIS, G., F. STEWART, and E SAMMAN. (2006). "Human Development: Beyond the Human Development Index." *Journal of Human Development* 7(3): 323-358.
SAMMAN, E. (2007), "Psychological and Subjective Well-being: A Proposal for Internationally Comparable Indicators." *Oxford Development Studies* 35:459-486.

ZAVALETA, D. (2007), "The ability to go about without shame: a proposal for international comparable indicators on shame and humiliation." *Oxford Development Studies*.