

Econ 184. Economic Development in Africa  
Instructor: Jorge Agüero  
Spring 2008

## Problem set 2

### Poverty and Inequality in Africa

The homework is **due May 27**. Please submit a hard copy of your answers before class. The total number of pages cannot exceed 5 (double spaced).

**Question 1** In class we introduced four criteria that any measure of inequality should satisfy. In this question you will explore whether some measures satisfy the Dalton principle: transfers from a “poorer” agent to a “richer” one must increase inequality.

- a Does the Lorenz curve satisfy the Dalton principle? Explain.
- b Does the coefficient of variation satisfy the Dalton principle? Explain.

**Question 2** According to Easterly’s article Millennium Development Goals and Africa (see the course website), why are the MDG unfair to Africa? Explain your answers.

**Question 3** Download the file `za.xls` from the course website <http://faculty.ucr.edu/~jorgea/econ184>. It contains 4 variables from a sample of households in South Africa. The KwaZulu-Natal Income Dynamics Study interviewed households three times: 1993, 1998 and 2004.

Variable	Description	Units
hhid	Household id	counter
exppc93	Total household expenditure per capita in 1993	constant rands
exppc98	Total household expenditure per capita in 1998	constant rands
exppc04	Total household expenditure per capita in 2004	constant rands

Using this file you will compute some measures of inequality and fill out the following table.

Inequality Measure	Years		
	1993	1998	2004
Coefficient of Variation			
The range			
Kuznets ratio: top 10% over bottom 40%			

Based on this table, how did inequality change in South Africa between 1993 and 2004?

**Bonus question:** Compute the Gini coefficient for each year.

**Question 4** Use the South African file again to answer questions about changes in poverty between 1993 and 2004. The poverty line for these years is 322 rands. A household is poor if its total expenditure lies below the poverty line. Use this information to complete the following table

Poverty measure	Years		
	1993	1998	2004
Headcount (PHC)			
Income gap (IG)			
$P_2$			

Based on this table, how did poverty change in South Africa between 1993 and 2004?

**Bonus question:** What is the percentage of households that were poor in 1993 and 2004?

**Question 5** Compare the policy recommendations for agriculture from the article by Biswanger and Townsend (discussed in class) and this NYT report suggesting to end famine, simply by ignoring the experts (see website for links.)