

Econ 184. Economic Development in Africa  
Instructor: Jorge Agüero  
Spring 2009

## Problem set 1. Economic Growth: What does the data say?

The homework is **due April 23** before 3:45pm. Please submit a hard copy of your answers before class. The total number of pages cannot exceed 5 (double spaced).

**Question 1** Download the file `world.xls` from the course website <http://faculty.ucr.edu/~jorgea/econ184>. It contains 7 variables for a sample of countries obtained from the World Bank's *World Development Indicators*.

Variable	Description	Units
ssa	1=Sub-Saharan African country	binary
country	Country name	character
code	Country code	character
gdppc75	GDP per capita in 1975	constant dollars
gdppc85	GDP per capita in 1985	constant dollars
gdppc95	GDP per capita in 1995	constant dollars
gdppc05	GDP per capita in 2005	constant dollars

Using this file, compute the *annual* growth rate between 2005 and 1975 (name it `gr7505`) and between 1995 and 1975 (`gr7595`). Then answer the following questions (use graphs and transform the data using logarithms).

- Did poor countries (as defined by their GDP per capita in 1975) grow at faster rates than richer countries between 1975 and 2005? Is the same true for the 1975-1995 period?
- Did poor countries in SSA (as defined by their GDP per capita in 1975) grow faster than rich SSA countries between 1975-2005?
- Repeat (b) using non-SSA countries.

**Question 2** Now download the file `ssa.xls` which contains the GDP per capita (in constant dollars) for a selection of SSA countries from 1975 to 2005. Using this file answer the following questions (please use graphs)

- a For each year compute the ratio between the GDP per capita of the richest and the poorest country in the sample (they might not be the same for all years). How did the ratio change in the last 30 years?
- b For each year compute the standard deviation (SD) of all the countries included. How did this measure change since 1975?
- c Construct the coefficient of variability (CV) for each year. The CV is the ratio between the SD and the average GDP per capita ( $\times 100$ ). How did this measure evolve compared to SD?
- d Based on these three measures, what can you say about the dispersion of GDP among SSA countries since 1975? Is there convergence?

**Question 3** Use Cooper (2002, p. 91-118) and chapter 2 of Kevane (2004) to answer the following questions (both chapters are available through e-reserve. Password:econ184.)

- a How do the authors describe the economic performance of Sub-Saharan African countries since 1950? Was the process homogenous for all countries? Explain.
- b What are the main explanations suggested by the authors? What evidence is presented to sustain their claims?
- c How is their description related to Collier, P. and J. W. Gunning. (1999) "Why has Africa Grown Slowly?" *Journal of Economic Perspectives*, (13):3-22 (see syllabus for link to the paper)?

Make sure you clearly state the views of these authors. A table with the common and opposite views will be helpful.