Issues in African Economic Development

Economics 172

Professor Ted Miguel

University of California, Berkeley

Department of Economics

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Lecture 2 – January 18, 2007
Lecture 2: Introduction to Economics 172

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  Office hours: Mondays 9-11:30am, Evans 647
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• GSIs:
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• Enrollment issues: Jenny Cornet, Undergraduate Advisor (jenny@econ.berkeley.edu), Evans 543
• Prerequisites: At least one term of intermediate economics and some prior coursework in statistics

• Grading: Three problem sets – 30%
  Midterm exam – 30%
  Final exam – 40%

• Course structure:
  Part I: Economic Theories and Methods
  Part II: History, Politics, and Institutions

• Reading packets should be at Bancroft Copy Central by week’s end
Of the world's four major less developed regions, Sub-Saharan Africa has had by far the worst economic performance since 1975. The first goal of this lecture is characterize African development patterns over a broader period.
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<td>9,762.2 T</td>
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Cooper (2002) on African development

• Cooper (2002) is an overview of many of the themes that we will focus on in this course

• What has African economic development performance looked like since 1950? (the post World War II period)
Figure 1a. GNP per capita and GNP per capita growth in Sub-Saharan Africa, 1960–1998.
Figure 1a GNP per capita and GNP per capita growth in Sub-Saharan Africa, 1960–1998.
Figure 1a GNP per capita and GNP per capita growth in Sub-Saharan Africa, 1960–1998.
Long-term economic development patterns

• Per capita GDP growth in Sub-Saharan Africa was positive and reasonably high from 1950-1975, at an average of 2.4% per year – similar to South Asian countries during 1975-2003
  – There was considerable variation across countries

• The manufacturing sector grew rapidly during this period: from 1960-1980, at approximately 7% per year overall – mainly in mining, food processing, textiles
Long-term economic development patterns

• Per capita GDP growth in Sub-Saharan Africa was positive and reasonably high from 1950-1975, at an average of 2.4% per year – similar to South Asian countries during 1975-2003
  – There was considerable variation across countries

• The manufacturing sector grew rapidly during this period: from 1960-1980, at approximately 7% per year overall – mainly in mining, food processing, textiles
  – Necessary investments in physical infrastructure often lagged behind or were not maintained (e.g., Sierra Leone railroad)
Long-term economic development patterns

- But overall per capita GDP growth in Sub-Saharan Africa became negative after around 1975, and has remained negative ever since (until the past five years or so)
Figure 1a GNP per capita and GNP per capita growth in Sub-Saharan Africa, 1960–1998.
Long-term economic development patterns

- But overall per capita GDP growth in Sub-Saharan Africa became negative after around 1975, and has remained negative ever since (until the past five years or so)

- Why did African economic performance deteriorate so sharply in the 1970s?
Long-term economic development patterns

• But overall per capita GDP growth in Sub-Saharan Africa became negative after around 1975, and has remained negative ever since (until the past five years or so)

• Why did African economic performance deteriorate so sharply in the 1970s? Many candidate explanations
  – The oil price shocks of the 1970s
  – Widespread drought in the late 1970s, early 1980s
  – Massive debt accumulation, which could not be paid off once growth fell sharply
  – Other factors? Stay tuned…
Human resource development patterns

• Education was a top priority of many independence leaders and populations

• Most African countries have shown strong increases in schooling and literacy since independence in the early 1960s: primary school enrollment in 1960 was 43%, rising to 77% in 1997
  – Secondary enrollment has also grown massively
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<td>87</td>
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\(^{a}\)All are 1962 except Senegal 1961, South Africa 1960, Zambia 1963.

Human resource development patterns

• Education was a top priority of many independence leaders and populations

• Most African countries have shown strong increases in schooling and literacy since independence in the early 1960s: primary school enrollment in 1960 was 43%, rising to 77% in 1997
  – Secondary enrollment has also grown massively

• Unfortunately class sizes remain very large, teacher absenteeism is a widespread problem, and school supplies are scarce for most students
Human resource development patterns

• Some health measures have shown dramatic improvements since the 1950s, especially infant mortality rates (IMR) for children under age 1 year
Figure 5a. Life expectancy at birth and infant mortality rate in Sub-Saharan Africa, 1950-2000.
Figure 5a Life expectancy at birth and infant mortality rate in Sub-Saharan Africa, 1950–2000
Human resource development patterns

• Some health measures have shown dramatic improvements since the 1950s, especially infant mortality rates (IMR) for children under age 1 year

• However, many of these health gains are being undone by the HIV/AIDS epidemic, particularly in East and Southern African countries

• In general public health systems remain terribly underfunded, given the health burdens they need to deal with – HIV/AIDS, malaria, TB, cholera, worms, etc. …
Figure 5b Life expectancy at birth in selected African countries, 1950-2000

Life expectancy at birth (in years)
Figure 5b Life expectancy at birth in selected African countries, 1950-2000.
Explanations for African economic performance

• Why was African economic performance strong in the 1960s and early 1970s?

• Why did African economic performance deteriorate so sharply in the 1970s?

• To answer these questions, we turn to the neoclassical economic growth model for a framework for thinking about the issues.
A model of economic production

- The goal is to explain income per capita, y
A model of economic production

• The goal is to explain income per capita, $y$
• The “inputs” into economic production are:
  – The “capital” stock per capita, $k$

  This should be broadly interpreted to include both physical capital stocks (factories, machinery, tractors, and infrastructure) and human capital stocks (education, skills, health)
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• The “inputs” into economic production are:
  – The “capital” stock per capita, $k$
    This should be broadly interpreted to include both physical capital stocks (factories, machinery, tractors, and infrastructure) and human capital stocks (education, skills, health)
  – The “technology” of production, $A$
    This should also be broadly interpreted to include production processes, the organization of society, government institutions, geography, and social characteristics that affect productivity
A model of economic production

- Economic production is often modeled using the following functional form:
  \[ y = f(A, k) = Ak^\alpha, \text{ where } 0 < \alpha < 1 \]

- Production is increasing in both capital per person \((k)\) and in technology \(A\)
A model of economic production

• Economic production is often modeled using the following functional form:

\[ y = f(A, k) = Ak^\alpha, \text{ where } 0 < \alpha < 1 \]

• Production is increasing in both capital per person \((k)\) and in technology \(A\)

• There are decreasing marginal returns to \(k\). Thus returns to capital investment should be highest in poorer countries, everything else equal (ceteris paribus)
Uncovering the causes of slow economic growth

• Low $A, k \rightarrow$ Poverty

• This course explores the underlying causes of both slow capital accumulation and of low productivity in Africa:

  Other factors $\rightarrow$ Low $A, k \rightarrow$ Poverty
Uncovering the causes of slow economic growth

• Low $A, k \rightarrow$ Poverty

• This course explores the underlying causes of both slow capital accumulation and of low productivity in Africa

Other factors $\rightarrow$ Low $A, k \rightarrow$ Poverty

• FOR NEXT TIME: Read Jones (2002) on the neoclassical economic growth model