The Demography of the Labor Force in Sub-Saharan Africa

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Some numbers to begin with

• The world has added 4.6 billion people since hitting 3 billion in 1960
  – About 3 billion were added to the working-age population since 1960

• The world will add another 4 billion people this century, reaching 11 billion in 2011
  – 3 billion will be in Sub-Saharan Africa
  – 2 billion will be working-age, all in Africa
  – 2 billion will be over age 65
  – Africa will need 2 million jobs per month by 2040 to keep up with the growth of working-age population
Goals of this talk

• Understand what drives these big demographic changes
• Look at the difference between 21\textsuperscript{st} century population growth and 20\textsuperscript{th} century population growth
• Look at the dynamics of demographic change in Africa
• Focus on implications for the labor force, employment, and economic growth
World population

From 1960:
World population doubled in 39 years
The world added 4 billion people in 51 years

This never happened before and will almost surely never happen again

From 1950: UN World Population Prospects: 2015 revision
U.N. projections of world population to 2100

High, Medium, and Low Variants

Increase of over 4 billion projected between 2011 and 2100 (about 3.6 billion from 2017)

From 1950: UN World Population Prospects: 2015 revision
Annual growth rate of world population

Pre-1950 estimates
2015
1968
1.1%
2.1%

UN estimates and projections
UN Population Division Estimates - 2015 revision

1900 1950 2000 2050 2100
0.8%
0.2%
-0.7%
Demographic Transition
World, 1950-2015

- Crude Birth Rate
- Rate of Natural Increase
- Crude Death Rate

per 1000 population
Demographic Transition
Southeast Asia

Crude Birth Rate

Rate of Natural Increase

Crude Death Rate

per 1000 population
Demographic Transition
Sub-Saharan Africa

- Birth rate
- Rate of Natural Increase
- Death rate

Per 1000 population

Birth rate: 37.9
Rate of Natural Increase: 27.7
Death rate: 10.3
Total Fertility Rate
World

Decline of 82% relative to replacement fertility

Decline of 50% from 1950 to 2015

UN Population Division Estimates - 2015 revision
UN Population Division Estimates - 2015 revision
Total Fertility Rate

UN Population Division Estimates - 2015 revision

Côte d'Ivoire
Brazil
India
China
Nigeria
SSA’s fertility decline projected to be slower than other regions.
Overview of last 50 years

• World population grew faster than it has ever grown before or ever will grow again.

• Broadly similar patterns of population change across developing countries.
  – Key exception is slower fertility decline in Sub-Saharan Africa

• This period should be important in understanding links between population and development.
What happened to food availability and poverty during this period of unprecedented population growth?
World Food Production
1961-2014
(1961=100)

Food and Agriculture Organization - 2017
Percent in Poverty by Region, 1981-2012

<US$1.90 per day

World Bank estimates
Lessons of last 50 years

• Unprecedented population growth did not lead to increases in starvation or poverty or stagnation in education

• Reasons
  – Major technological advances
  – Market responses
  – Globalization
  – Declines in fertility, increases in education

• Many caveats:
  – Unequal outcomes across countries and within countries
  – Environmental problems, climate change
21\textsuperscript{st} Century Demographic Change

- Comparison to 20\textsuperscript{th} Century Demographic Change
- Demography of Working-Age Population
- Implications for Employment and Development
Components of Population Growth

• Most current population growth is inertial growth from the population growth of the 1960s and 1970s
• Many countries already have replacement fertility, but they continue to grow
• The dynamics of the Demographic Transition mean that the components of growth will be very different in the 21st century
Increase in world population 1960-2100 (Millions)

1960-2011:
- Elderly (65+): 394
- Older working (45-64): 877
- Middle working (25-44): 1,274
- Young working (15-24): 713
- Children (0-14): 752

2011-2100:
- Elderly (65+): 1,970
- Older working (45-64): 1,269
- Middle working (25-44): 672
- Young working (15-24): 133
- Children (0-14): 98
Implications for the Labor Market

- 20th century population growth was characterized by rapid growth in children and youth
- This put pressure on schools and the youth labor market
- The global labor market in the 1970s and 1980s saw rapid increases in the number or young unskilled workers in developing countries
- Labor market dynamics are very different in the 21st century
World working-age population, 1950-2100

- Young (15-24): 1.2 billion in 2011, rising to 1.4 billion in 2100
- Middle (25-44): 2.0 billion in 2011, rising to 2.7 billion in 2100
- Old (45-64): 1.4 billion in 2011, rising to 2.6 billion in 2100

UN Medium variant projections
Africa’s growth comes later
460 million in 2011, rising to
2.6 billion in 2100

UN Medium variant projections
Components of Growth in the Working-Age Population

• Consider a simple accounting of the 15-64 age group
• New entrants in a year are those who turn age 15
• People age out if they turn age 65
• Some 15-64 year-olds also die, another source of exit
• These components determine the growth of the working-age population
Growth of working-age population, World

Net entrants peaked in 2005 at 84 million per year. Now falling rapidly; negative after 2100.
Growth of working-age population, Asia

Net growth of 48 million per year (4 million per month) in 2005, now about 32 million and falling rapidly; negative in 2050
Growth of working-age population, Latin America

- Aging in
- Aging out
- Net entrants
- Deaths

Millions

-12
-10
-8
-6
-4
-2
0
2
4
6
8
10
12


Net entrants
Growth of working-age population, Sub-Saharan Africa

Net growth of 14 million per year in 2015, rising to 24 million (2 million per month) in 2040.

Continues rising until 2060
Still positive in 2100
Number aging into working-age population, by region

- World
- Asia
- SSA
- Rest of World
- Latin America
SSA will be responsible for most of the growth of the world’s working-age population by 2050, offsetting declines in Asia and Latin America.
Increase in working-age population (15-64) over 15 year periods

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<td>11%</td>
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<td>51%</td>
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Size of working-age population (Age 15-64, 1960=1)

- Brazil
- India
- Ghana
- Mali
- Nigeria
- Côte d'Ivoire

Annual growth rate of working-age population (Age 15-64)

- Brazil
- India
- Ghana
- Mali
- Nigeria
- Côte d'Ivoire

-3.0%
-2.0%
-1.0%
0.0%
1.0%
2.0%
3.0%
4.0%
5.0%

Working-age 15-64 – Annual growth rate

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<td>Liberia</td>
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<tr>
<td>Côte d'Ivoire</td>
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<td>China</td>
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</tbody>
</table>

-3.0% -2.0% -1.0% 0.0% 1.0% 2.0% 3.0% 4.0% 5.0%
Growth of working-age population

• The world’s working-age population will increase by 670 million (14%) between 2015 and 2030
  – We will need about 45 million jobs per year to maintain current employment rates
  – Sub-Saharan Africa will need 1.7 million new jobs per month by 2030

• This is a challenge, but:
  – Working-age population increased by 960 million between 2000 and 2015, an increase of 25%
  – Africa’s working-age population growth of 53% in next 15 years is similar to growth in Latin America and Asia from 1970-85.
  – Africa will be the only major region in the world with a growing working-age population by 2050
Age structure and the youth bulge

• Countries going through demographic transition go through a regular pattern of changes in age structure.
  – They get young
  – They get less young
  – They get old

• Along the way there is a period with a high fraction in labor force (demographic dividend)

• The path to the demographic dividend must go through the “youth bulge”
  – Potential impacts on youth unemployment and social unrest (Arab Spring, etc.)
Growth of working-age population, 2015-2030
Dependency Ratio (DR)

- Key component of Demographic Dividend
- Changes to the working-age cohort must be seen relative to dependent-age population

- Youth DR = Age 0-14 / Age 15-64
- Elderly DR = Age 65+ / Age 15-64
- Total DR = (Age 0-14 + Age 65+) / Age 15-64
Youth Dependency Ratio = Age 0-14 / Age 15-64
Elderly Dependency Ratio = Age 65+ / Age 15-64
In 2057, SSA is projected to have a lower dependency ratio than Asia, Latin America, and the World, for the first time in nearly 100 years.
Growth of youth labor force

• Many African countries have growth rates of over 3% per year in youth labor force – this implies a doubling in less than 25 years

• These growth rates are not unprecedented, however. Similar growth rates were experienced by other developing countries in 1970s and 1980s

• Growth rates declined in other countries, however, but will remain high in Africa for several decades.
Major points

• Africa’s demographic transition follows that of other regions, but fertility decline has been later and slower
• Youth populations have stopped growing in other regions, but continue to grow in Africa
• Africa will be the only region in the world with a growing working-age population and a falling dependency ratio by mid-century
• Africa will need 2 million jobs per month to keep up the growth of the working-age population by 2040
• This is big challenge, but is similar to the challenges met in other regions in previous decades