Population growth and policy options in the developing world

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Vice President and Distinguished Scholar
Outline

• Population trends

• Evolving policy interest

• Policy options
  o Family planning programs
  o Beyond family planning
Population projections 2010–2100

- World (+3.2 billion)
- Asia (+0.4 billion)
- Africa (+2.5 billion)

Population growth rates 2005-2010
## Adverse effects of rapid population growth and high fertility

### Environmental
- Depletion of natural resources, climate change, pollution

### Economic
- Low wages, unemployment, poverty, inequality

### Governmental
- Inadequate investment in education, health services, and infrastructure

### Health
- High birth rate raises maternal and child mortality

### Political
- Social and political unrest
International donor expenditures for family planning
Recent return of interest in population and family planning

- Sub-Saharan Africa expected to add 1 billion by 2050 despite AIDS epidemic
- Environmental concerns return: global warming, spikes in food and energy prices
- Economists discover the “demographic dividend”
Demographic dividend
Fertility trend Ethiopia

Births/woman

1950 1975 2000 2025 2050
Population by age, 1950 and 2010

ETHIOPIA

2010 (50% < age 18)

1950
Population by age, 2010 and 2050

ETHIOPIA
Percent of population of working age

ETHIOPIA

Demographic dividend
Conclusions

- Rapid fertility decline results in large changes in population age structure
- Rising proportion of workers leads to a “Demographic dividend” for a few decades
- Size of demographic dividend depends on speed of fertility decline and on ability of economy to productively employ workers
Population policy options

- Family planning programs
- Beyond family planning
Objectives of voluntary family planning programs

- Provide access to and information about contraception
- Reduce “unmet need” for contraception
- Reduce unplanned pregnancies and their adverse consequences
Contraceptive use and unmet need, Ethiopia

<table>
<thead>
<tr>
<th>Year</th>
<th>Contraceptive use</th>
<th>Unmet need</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td></td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>30%</td>
<td>30%</td>
<td>60%</td>
</tr>
</tbody>
</table>

% of married women
Planning status of all pregnancies, East Africa 2008

<table>
<thead>
<tr>
<th>Planning status</th>
<th>Pregnancy outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unintended</td>
<td>Abortion</td>
</tr>
<tr>
<td>Intended</td>
<td>Intended birth</td>
</tr>
</tbody>
</table>

Percent of all pregnancies

- Unintended
- Intended
Successful family planning experiment in Matlab, Bangladesh

Contraceptive use (%)
Fertility: Pakistan vs. Bangladesh

Births per woman


Pakistan

Bangladesh
Fertility impact of family planning programs

- Burundi (Weak program)
- Rwanda (High quality program)
- Uganda
- Kenya
- Pakistan
- Bangladesh
- Jordan
- Iran
- Philippines
- Indonesia

Births per woman

0 2 4 6
Providing family planning to all women with an unmet need would prevent:

- 23 million unplanned births
- 22 million abortions
- 7 million miscarriages
- 1.4 million infant deaths
- 142,000 pregnancy-related deaths (53,000 from unsafe abortion)
- 505,000 children from losing their mothers

Source: Guttmacher Institute 2008.
Beyond family planning
Components of population growth, Ethiopia

UN Projection

Population increase 2010–2050
Components of population growth, Ethiopia

Effect of:
- High fertility
- Momentum

UN Projection
### Causes of growth

<table>
<thead>
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<th>Causes of growth</th>
<th>Policy options</th>
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<tbody>
<tr>
<td>Unwanted fertility</td>
<td>• Strengthen family planning programs</td>
</tr>
<tr>
<td>High wanted fertility</td>
<td>• Invest in human capital (e.g. girls’ education)</td>
</tr>
<tr>
<td>Momentum due to young age structure</td>
<td>• Delay first birth and space births</td>
</tr>
<tr>
<td></td>
<td>• Address the needs of adolescents</td>
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</tbody>
</table>
Wanted and unwanted fertility by level of education

Births per woman

- No education
  - Unwanted fertility: 2
  - Wanted fertility: 5

- Primary
  - Unwanted fertility: 3
  - Wanted fertility: 3

- Secondary
  - Unwanted fertility: 1
  - Wanted fertility: 1
Median age at first marriage, Ethiopia (women aged 25–49)
Impact of 5-year delay in age at childbearing

The graph shows the impact of a 5-year delay in age at childbearing. The blue line represents the scenario without the delay, while the orange line shows the increased impact with the delay. By 2075, the difference in the number of millions of individuals is approximately 32 million (174 million vs. 142 million) due to the 5-year delay.
Small fertility changes have large future population impact

Sub-Saharan Africa

- 0.86 billion in 2010
- Constant fertility
- +0.5 birth
- Medium
- -0.5 birth

Billions

0 1 2 3 4 5 6 7 8

1950 2000 2050 2100 2150
Conclusions

• Population size of poorest countries is expected to double between 2010 and 2050

• Substantial adverse health, socioeconomic, environmental, and political consequences

• Policy options:
  o strengthen family planning/RH programs
  o invest in human capital (girls education)
  o delay childbearing, address needs of adolescents

• Potentially large demographic dividend