Population Aging and the Generational Economy: A Global Perspective

Andrew Mason
University of Hawaii at Manoa and
East-West Center

Ageing in Development Panel by the Canadian Development Economics Study Group (CDESG)
Canadian Economics Association
June 9, 2012
Population Aging and the Generational Economy: A Global Perspective

• Book is a large collaborative effort
  – Directed by Ron Lee and Andy Mason
  – Part of a larger project composed of research teams in 37 countries
  – Book has over 50 contributors from 23 countries
  – Work began seven years ago

• Canadian team is led by Marcel Merette
The geographic coverage of NTA and current members

<table>
<thead>
<tr>
<th>NTA Members</th>
<th>Asia-Pacific</th>
<th>Americas</th>
<th>Europe</th>
<th>Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australia</td>
<td>Argentina</td>
<td>Austria</td>
<td>Kenya</td>
</tr>
<tr>
<td>China</td>
<td>China</td>
<td>Brazil</td>
<td>Finland</td>
<td>Mozambique</td>
</tr>
<tr>
<td>India</td>
<td>India</td>
<td>Canada</td>
<td>France</td>
<td>Nigeria</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Indonesia</td>
<td>Chile</td>
<td>Germany</td>
<td>Senegal</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan</td>
<td>Colombia</td>
<td>Hungary</td>
<td>South Africa</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippines</td>
<td>Costa Rica</td>
<td>Italy</td>
<td></td>
</tr>
<tr>
<td>South Korea</td>
<td>South Korea</td>
<td>Jamaica</td>
<td>Slovenia</td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan</td>
<td>Mexico</td>
<td>Spain</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>Thailand</td>
<td>Peru</td>
<td>Sweden</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>Vietnam</td>
<td>United States</td>
<td>Turkey</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After more than a hundred articles by project members, the first book from the project is out.

Available from the NTA website: [www.ntaccounts.org](http://www.ntaccounts.org)

Electronic version available for free thanks to IDRC. Link is on NTA website.

Andrew Mason  June 9, 2012
This continuing effort has been supported by many funders

- International Development Research Center (IDRC), Canada
- National Institute on Aging (NIA)
- UN Fund for Population Activities (UNFPA)
- UN Population Division
- East-West Center, Hawaii
- Center for the Economics and Demography of Aging, UC Berkeley
- Japan: MEXT.ACADEMIC FRONTIER
- MacArthur Foundation
- European Union
- In-country support from governments and other funders in many countries.
National Transfer Accounts (NTA)

- NTA describes the age patterns of economic activity and the economic relations between the generations.
- Comprehensive set of public and private economic flows including consumption, income from labor and assets, transfers, and saving.
- Illuminates the economic impacts of population change during the demographic transition and throughout the process of population aging.
Children are a heavy economic burden in many developing countries

- High fertility in developing countries has led to very young populations.
- A large portion of what adults are producing is going to meet the material needs of their children.
- Most is going to meet basic needs like food, clothing, and housing.
- Little remains for health and education for children.
Economic lifecycle flows for Nigeria, per capita values

Per capita flows (Naira 000s)

- Consumption
- Labor income

Andrew Mason  June 9, 2012
Aggregate flows, Nigeria

- Net cost of children (<25) is 87% of the total labor income of adults 25+.
- Net cost of elderly is very small.

Net cost of children (<25) is 87% of the total labor income of adults 25+.

Net cost of elderly is very small.
Fertility and the Cost of Children

Selected NTA countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Total fertility rate</th>
<th>Net cost of children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>5.8</td>
<td>87%</td>
</tr>
<tr>
<td>Kenya</td>
<td>5.1</td>
<td>62%</td>
</tr>
<tr>
<td>Philippines</td>
<td>3.9</td>
<td>70%</td>
</tr>
<tr>
<td>India</td>
<td>3.2</td>
<td>50%</td>
</tr>
<tr>
<td>Canada</td>
<td>1.6</td>
<td>30%</td>
</tr>
<tr>
<td>United States</td>
<td>2.1</td>
<td>30%</td>
</tr>
<tr>
<td>China</td>
<td>1.7</td>
<td>19%</td>
</tr>
<tr>
<td>Germany</td>
<td>1.3</td>
<td>44%</td>
</tr>
<tr>
<td>Japan</td>
<td>1.3</td>
<td>25%</td>
</tr>
</tbody>
</table>

Note: Net cost of children is consumption less labor income of those under age 25 as a percentage of the labor income of those 25 and older.

Andrew Mason  June 9, 2012
Only 20% of spending on children goes to human capital (health and education).
Note: Human capital spending is years of labor income required for health and education to raise one child.
In countries with lower fertility . . .

- Children claim a much smaller share of the nation’s production.
- More can be devoted to raising human capital spending per child.
- More can be used to raise standards of living and to reduce poverty.
- More can be saved and invested in the future.
- But low fertility eventually leads to populations with high rates of old-age dependency.
The US Economic Lifecycle, Aggregate Flows

Andrew Mason  June 9, 2012
Old-age Funding System, US

Funding of old-age consumption
- Labor income: 16.4%
- Assets: 58.3%
- Transfers: 25.2%
- Public: 31.9%
- Private: -6.6%

Andrew Mason  June 9, 2012
Old-age Support System
NTA Countries

Key tradeoff: transfers versus assets.

Heaviest reliance on transfers is in Europe.

US relies heavily on assets.

Latin America and East Asia are similar in their reliance on transfers, but public dominates in LA and private important in EA.

Andrew Mason  June 9, 2012
Concluding Remarks

• High fertility and young age structure lead to a heavy economic burden which undermines human capital spending.

• Transition to low fertility is leading to populations with a high percentage of elderly.

• Social and economic structures determine whether the elderly are an economic burden.

• Elderly can be relatively self-reliant.

• In doing so, their financial wealth and continued labor can raise standards of living for all.