Population Dynamics and Social Policy: National Transfer Accounts (NTA) Approach

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Key Issues

• How population change influence society and economy (current and future)

• What policies can be pursued to influence the outcome—research provides policy tools!
Population and Policy Issues

- Demographic dividend (economic growth and saving)
- Income security (support system) for the elderly
- Fiscal sustainability
- Intergenerational equity
- Retirement and pension issues
- Responsibility of private vs. public sector
- Human resources (healthcare and education)
- Implication on gender issue and inequality
Most significant efforts: National Transfer Accounts (NTA)

• Integrating population into economy (marriage)
• Quantifies how each age groups acquires and uses economic resources.
• Constructed using existing data (population estimates, surveys, administrative records, macroeconomic data).
• Consistent with UN System of National Accounts.
Two Directors
## NTA Members

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Global Meetings

11th Dakar, Senegal, May/June 2016 (TBA)
10th Beijing, China, Nov 10-14, 2014
9th Barcelona, June 2013
8th Rio, Brazil, December 2011
7th Honolulu, June 11-12, 2010
6th Berkeley, January 9-10, 2009
5th Seoul, Korea, November 5-6, 2007
4th Berkeley, January 19-20, 2007
3rd Honolulu, January 20-22, 2006
2nd Berkeley, January 2005
1st Berkeley, January 2004

Website http://www.ntaccounts.org
The continuing effort has been supported by many funders

- UN Population Fund (UNFPA)
- National Institute on Aging (NIA)
- Bill and Melinda Gates Foundation
- International Development Research Center (IDRC), Canada
- UN Population Division
- East-West Center, Hawaii
- Center for the Economics and Demography of Aging, UC Berkeley
- Asian Development Bank
- Japan: MEXT.ACADEMIC FRONTIER
- MacArthur Foundation
- European Union
- In-country support from governments and other funders in many countries.
Hundreds of articles, books, and UN manual.
Asian Development Outlook 2011, 2014
The Economic Lifecycle

Large deficits at young and old ages.
Aggregate flows, the Philippines

Net cost of children (<25) is 89% of the total labor income of adults 25+. Most of them are for basic needs, hence little left for human capital spending.

Net cost of elderly is very small.
The Support Ratio

• Measures the number of workers relative to the number of consumers.

• Given worker productivity, a 1% increase in the support ratio leads to a 1% increase in per capita income (Demographic Dividend)

• Use NTA profiles as base years estimates of:
  – Age-specific variation in labor productivity
  – Age-specific variation in consumption
Support Ratio, China

Net swing of 1.2% per year in per capita growth due to population age structure.

Plus 0.8% per year

Minus 0.4% per year
Support Ratio, Annual Growth
NTA Economies, 2010-2050

Annual Growth

-1.00  -0.50   0.00   0.50   1.00

Nigeria  Kenya  Laos  Philippines  India  Indonesia  Uruguay  Mexico  Costa Rica  Brazil  Cambodia  Chile  US  Sweden  Thailand  Finland  China  Vietnam  Hungary  Austria  Japan  Germany  South Korea  Spain  Slovenia  Taiwan

Asian economies
Fertility/human capital tradeoff

Updated from NTA database [www.ntaccounts.org](http://www.ntaccounts.org)
Aggregate flows: Japan

Consumption and production (% of labor income)

Age
Sources of consumption for elderly (support system)

• Familial transfers

• Public transfers
  – Social Security System

• Asset-based Reallocations (saving)
  – Interest, dividends, rent from personal assets
  – Home
  – Dis-saving
Evolution of Old-Age Support System

Capital-based transformation

Familial Transfers

Social welfare transformation

Public Transfers

Evolution of Old-Age Support System
Assets

Family transfers

Public transfers

△ Asia    □ Europe & US    ▪ Latin America

TH 2/3
KH
TH
1/3
PH
US
2/3
1/3
TH

ASIA
EUROPE & US
LATIN AMERICA
Per capita consumption by sector (Korea)
Per capita consumption by sector (Sweden)

![Graph showing per capita consumption by sector (Sweden)](image-url)

- **Public Education**
- **Private Education**
- **Public Other**
- **Private Other**
- **Public Health**
- **Private Health**

*Notes:*
- The graph illustrates the per capita consumption by sector for Sweden.
- The x-axis represents age groups ranging from 0 to 90+.
- The y-axis represents Swedish Krona (SEK) ranging from 0 to 500,000.
- The data is visualized using different colored lines for each sector.
Revisit: Future Support Systems in Asia?

• Work more?
• Increase familial transfers?
• Increase public transfers?
  – Maybe inevitable.
  – Projections based on the “current system” suggest that public transfer system will not be terribly onerous.
• More reliance on capital accumulation?
  – Human capital & asset/savings
  – Implication on growth (demographic dividend)
  – Need to develop a system to facilitate
Other policy implications from NTA research

• NTA by socio-economic status
  – NTA by gender (Time Use Survey)
  – NTA by formal vs. informal sector
  – NTA by urban and rural
  – NTA by income level

• Policy simulation
  – Example: effect of pension reform
Per capita tax burden by age, Japan NTA
Per capita benefit by age, Japan NTA
In summary, NTA project is

• Data improvement and research
• Capacity building
• Policy simulation and policy awareness
Conclusion

• Our economic systems are being tested by unprecedented changes in population age structure.
• Stakes are very large: economic growth, generational equity, economic security for children and elderly, and sustainability of support systems.
• Complex systems are involved: governments, labor markets, families, financial markets, education systems, and health care systems.
• Essential that policy be informed by the best possible data linking population and the economy.
Thank you
Terima Kasih