Population and Social Policy: Introduction to National Transfer Accounts (NTA)

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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!

Most significant efforts: National Transfer Accounts (NTA)

- Integrating population into economy (Constructed using population estimates, surveys, administrative records, macroeconomic data).

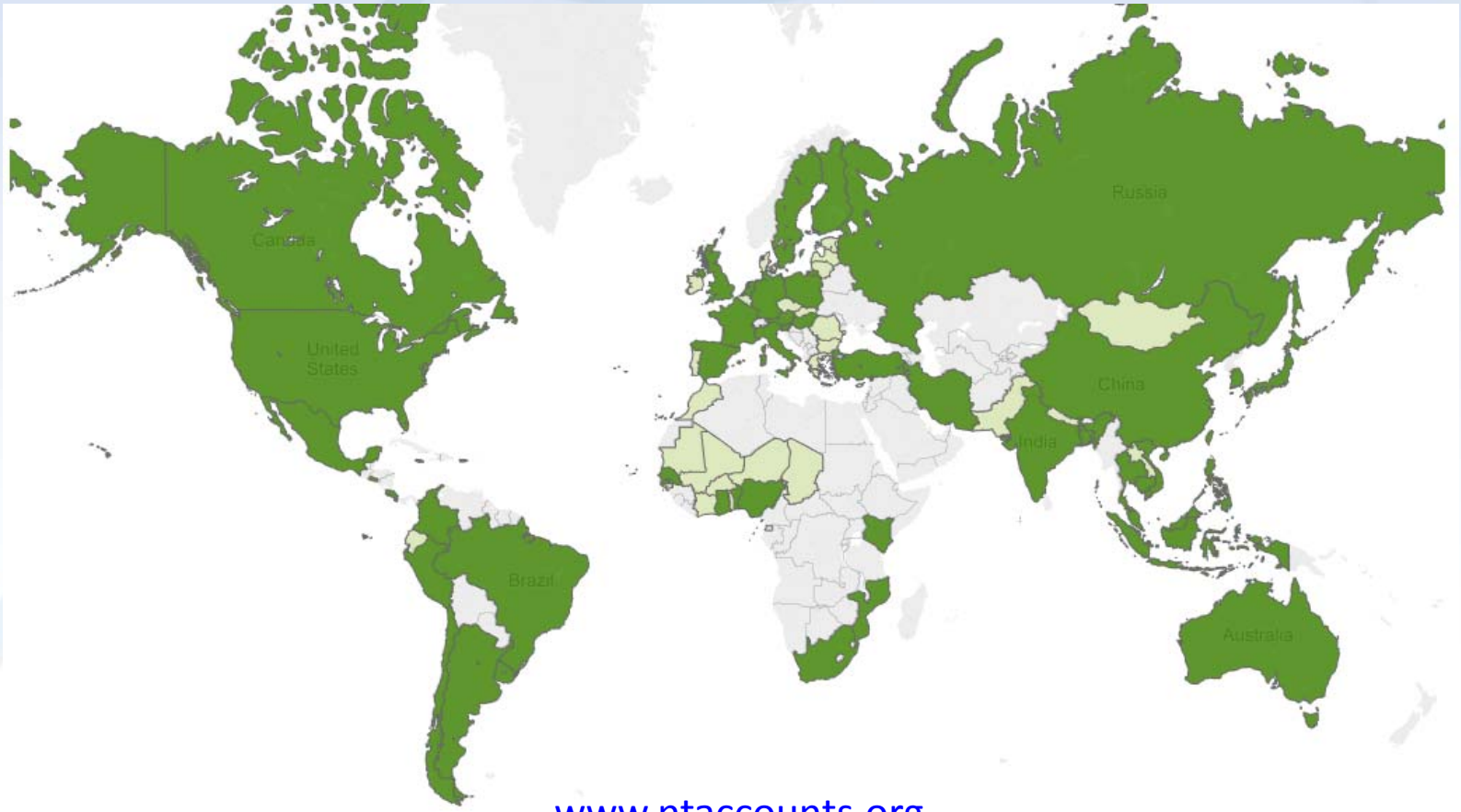
- Quantifies how each age groups acquires and uses economic resources (comprehensive output)

- Consistent with UN System of National Accounts (implication on macro-economy)

NTA and Policy Issues

1. 1st demographic dividend
2. Human capital investment (healthcare and education)
3. 2nd demographic dividend
4. Income security (support system) for the elderly
5. Retirement and pension issues
6. Fiscal sustainability
7. Intergenerational equity
8. Gender issue
9. Inequality
10. Population policy

70+ NTA Countries



www.ntaccounts.org

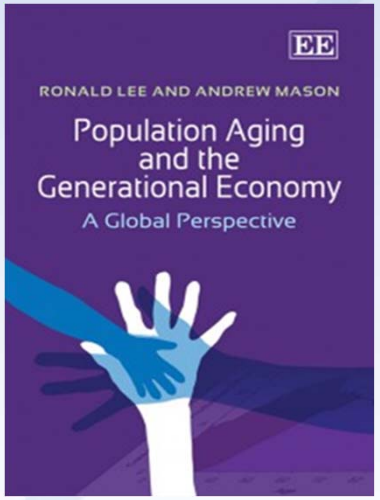
NTA is comparative: Regional Structure

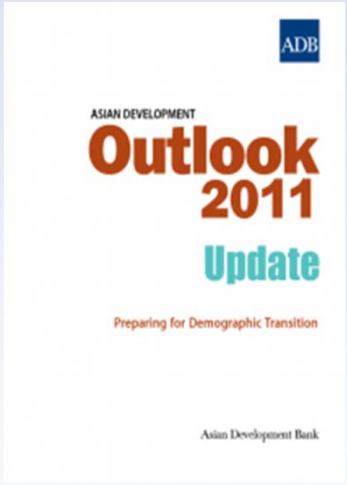
NTA Members			
Asia-Pacific	**Americas**	**Europe**	**Africa**
Australia	Argentina	Austria	Benin
Bangladesh	Brazil	Finland	Ghana
Cambodia	Canada	France	Kenya
China	Chile	Germany	Mozambique
India	Colombia	Hungary	Nigeria
Indonesia	Costa Rica	Italy	Senegal
Iran	El Salvador	Luxembourg	South Africa
Japan	Jamaica	Netherlands	
Malaysia	Mexico	Poland	
Philippines	Peru	Russia	
South Korea	United States	Slovenia	
Taiwan	Uruguay	Spain	
Thailand		Sweden	
Vietnam		Turkey	
(Laos, Pakistan, Nepal, Mongolia, Maldives, Timor-Leste, Singapore)		United Kingdom	

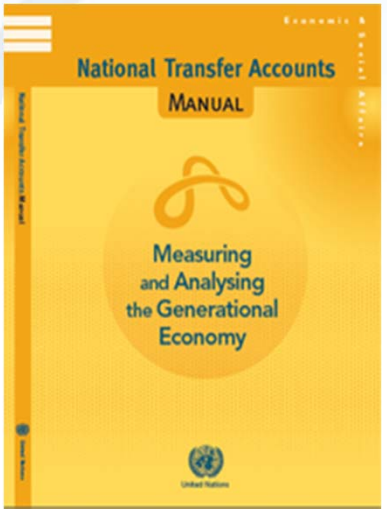
NTA project is

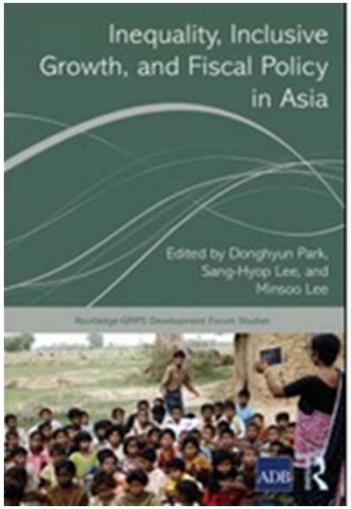
- Data improvement and research
- Capacity building
- Policy simulation and policy advocacy

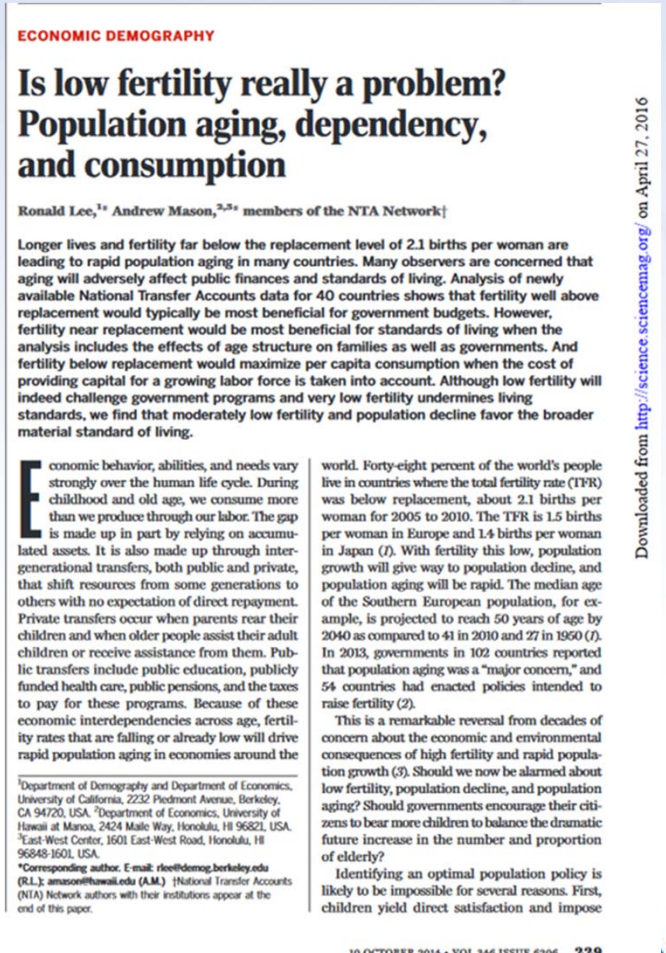
Recent publications, free downloads (see ntaccounts.org)











ECONOMIC DEMOGRAPHY

Is low fertility really a problem? Population aging, dependency, and consumption

Ronald Lee,[1]* Andrew Mason,[2,3]* members of the NTA Network†

Longer lives and fertility far below the replacement level of 2.1 births per woman are leading to rapid population aging in many countries. Many observers are concerned that aging will adversely affect public finances and standards of living. Analysis of newly available National Transfer Accounts data for 40 countries shows that fertility well above replacement would typically be most beneficial for government budgets. However, fertility near replacement would be most beneficial for standards of living when the analysis includes the effects of age structure on families as well as governments. And fertility below replacement would maximize per capita consumption when the cost of providing capital for a growing labor force is taken into account. Although low fertility will indeed challenge government programs and very low fertility undermines living standards, we find that moderately low fertility and population decline favor the broader material standard of living.

Economic behavior, abilities, and needs vary strongly over the human life cycle. During childhood and old age, we consume more than we produce through our labor. The gap is made up in part by relying on accumulated assets. It is also made up through intergenerational transfers, both public and private, that shift resources from some generations to others with no expectation of direct repayment. Private transfers occur when parents rear their children and when older people assist their adult children or receive assistance from them. Public transfers include public education, publicly funded health care, public pensions, and the taxes to pay for these programs. Because of these economic interdependencies across age, fertility rates that are falling or already low will drive rapid population aging in economies around the world. Forty-eight percent of the world's people live in countries where the total fertility rate (TFR) was below replacement, about 2.1 births per woman for 2005 to 2010. The TFR is 1.5 births per woman in Europe and 1.4 births per woman in Japan (*1*). With fertility this low, population growth will give way to population decline, and population aging will be rapid. The median age of the Southern European population, for example, is projected to reach 50 years of age by 2040 as compared to 41 in 2010 and 27 in 1950 (*1*). In 2013, governments in 102 countries reported that population aging was a "major concern," and 54 countries had enacted policies intended to raise fertility (*2*).

This is a remarkable reversal from decades of concern about the economic and environmental consequences of high fertility and rapid population growth (*3*). Should we now be alarmed about low fertility, population decline, and population aging? Should governments encourage their citizens to bear more children to balance the dramatic future increase in the number and proportion of elderly?

Identifying an optimal population policy is likely to be impossible for several reasons. First, children yield direct satisfaction and impose

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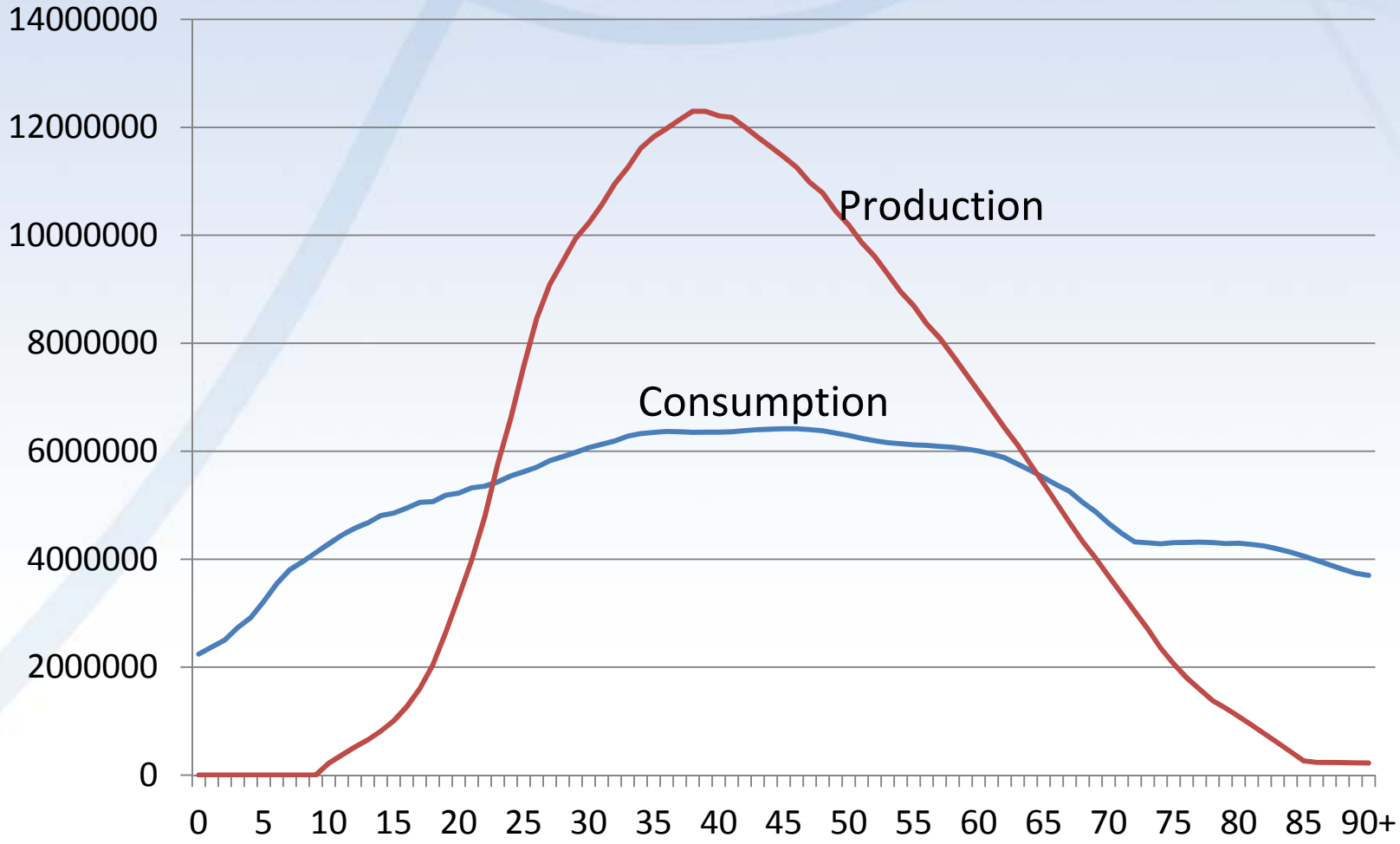
Per capita flows, Lao PDR 2011



Reallocation System

- Familial transfers
- Public transfers
  - Social Security System
- Asset-based Reallocations (saving)
  - Interest, dividends, rent from personal assets
  - Home
  - Dis-saving

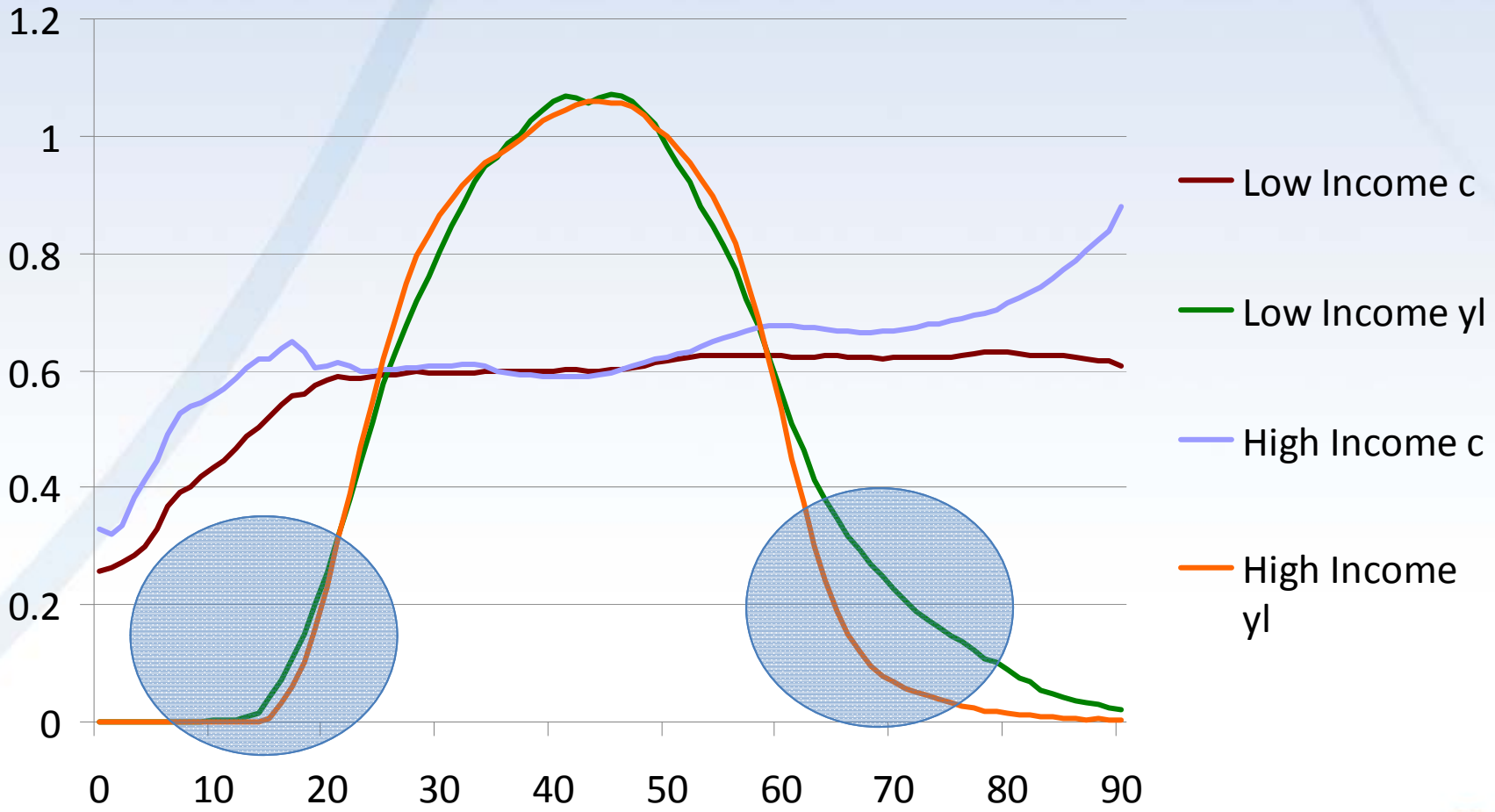
The Flow Account Identity

- Inflows
  - Labor Income
  - Asset Income
  - Transfer Received
- Outflows
  - Consumption
  - Saving
  - Transfers Paid

$$\underbrace{Y^l(a) + Y^a(a) + \tau^+(a)}_{\text{Inflows}} = \underbrace{C(a) + S(a) + \tau^-(a)}_{\text{Outflows}}$$

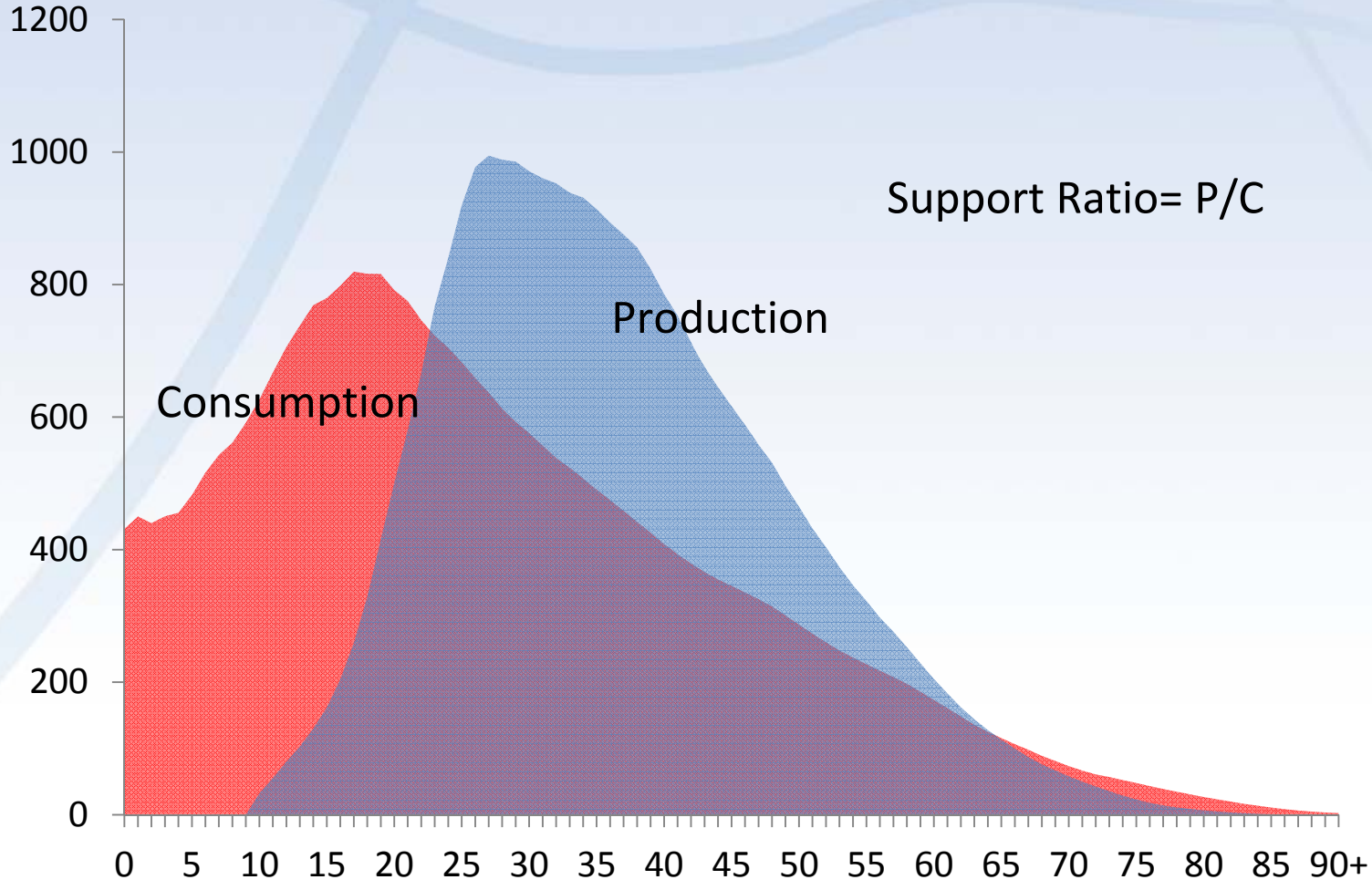
$$\underbrace{C(a) - Y^l(a)}_{\text{Lifecycle Deficit}} = \underbrace{\underbrace{Y^a(a) - S(a)}_{\text{Asset-based Reallocations}} + \underbrace{\tau^+(a) - \tau^-(a)}_{\text{Net Transfers}}}_{\text{Age Reallocations}}$$

Per capita flows, high income vs. low income countries

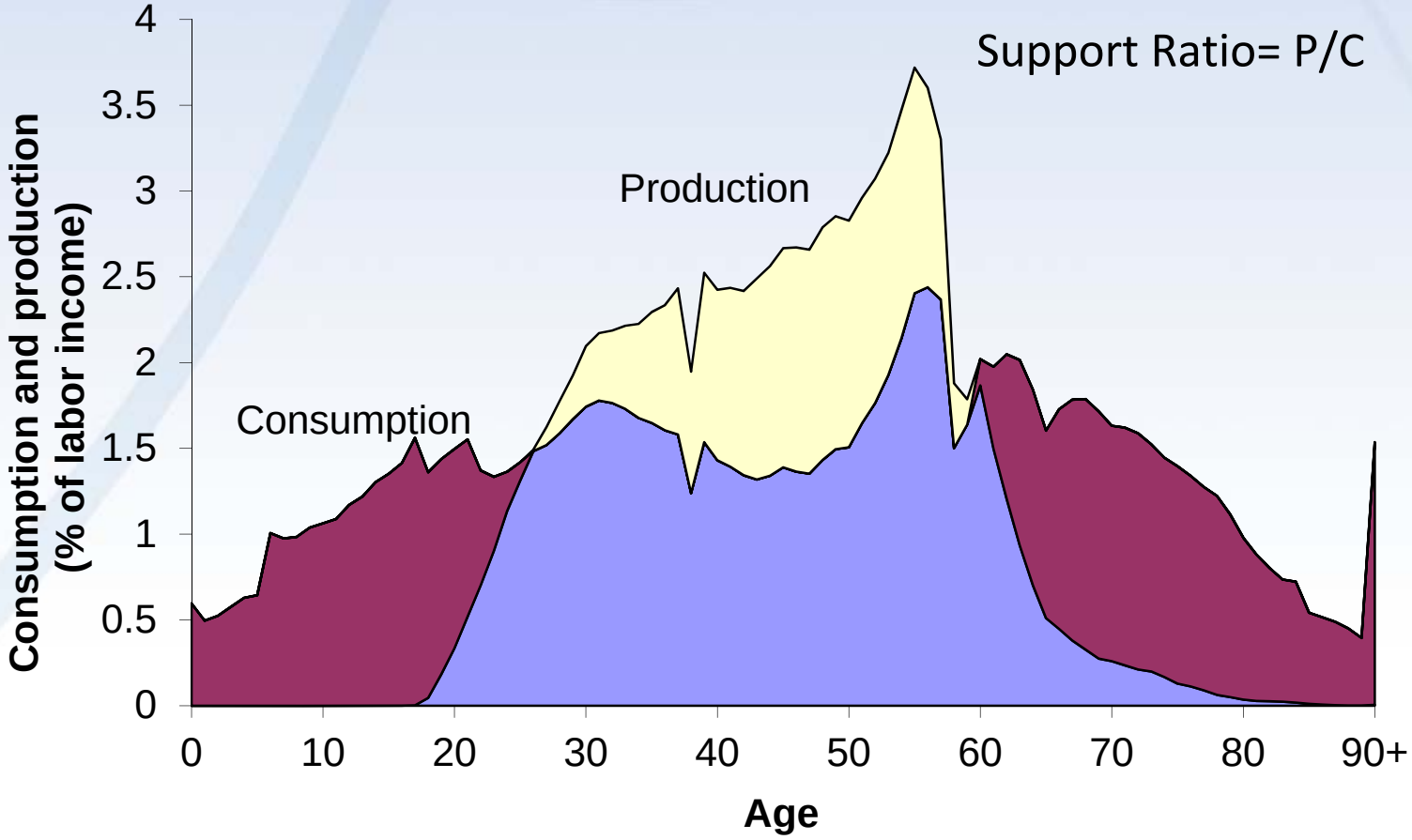


Source: National Transfer Accounts, www.ntaccounts.org.

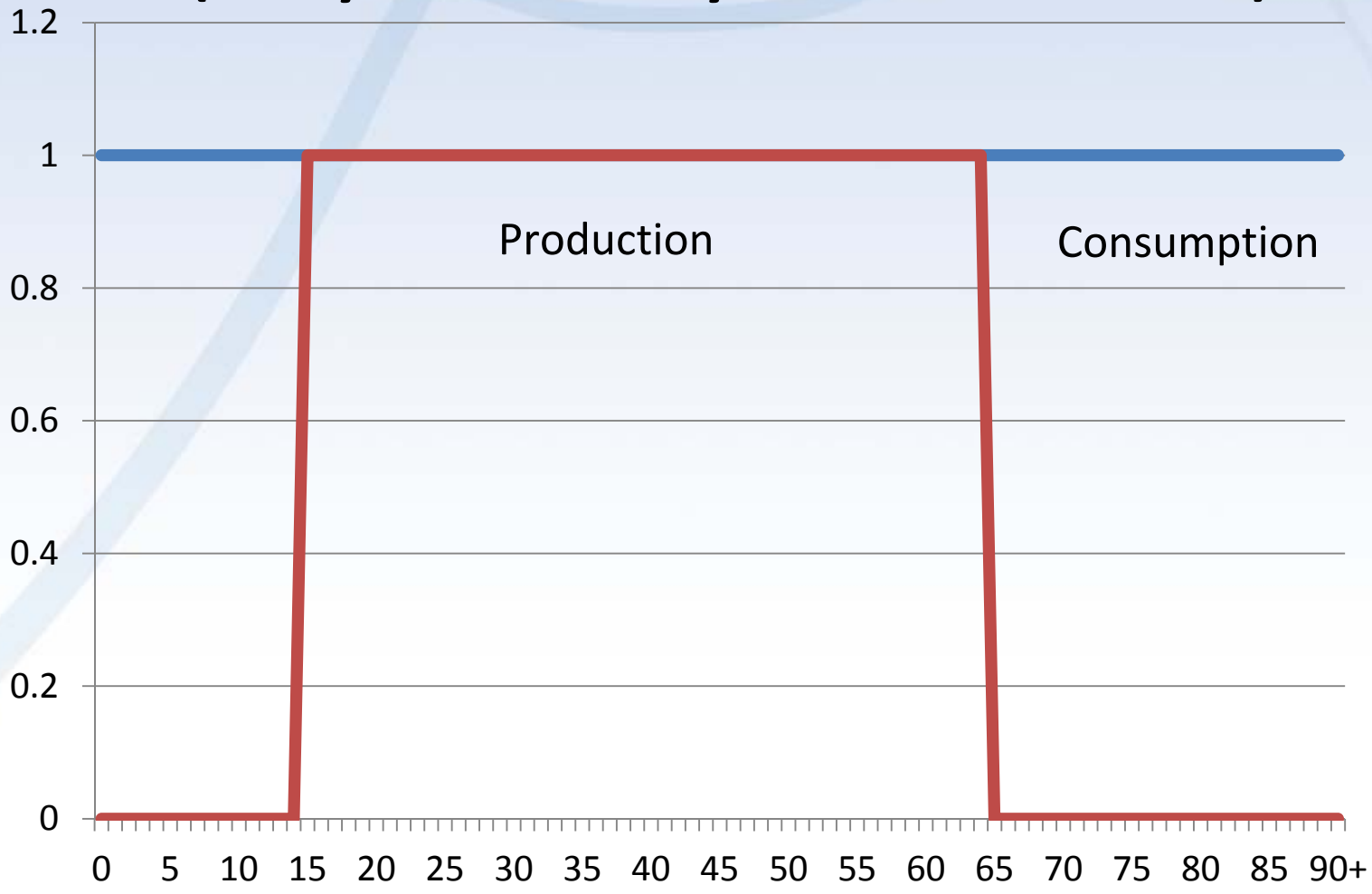
Aggregate flows, Lao PDR 2011



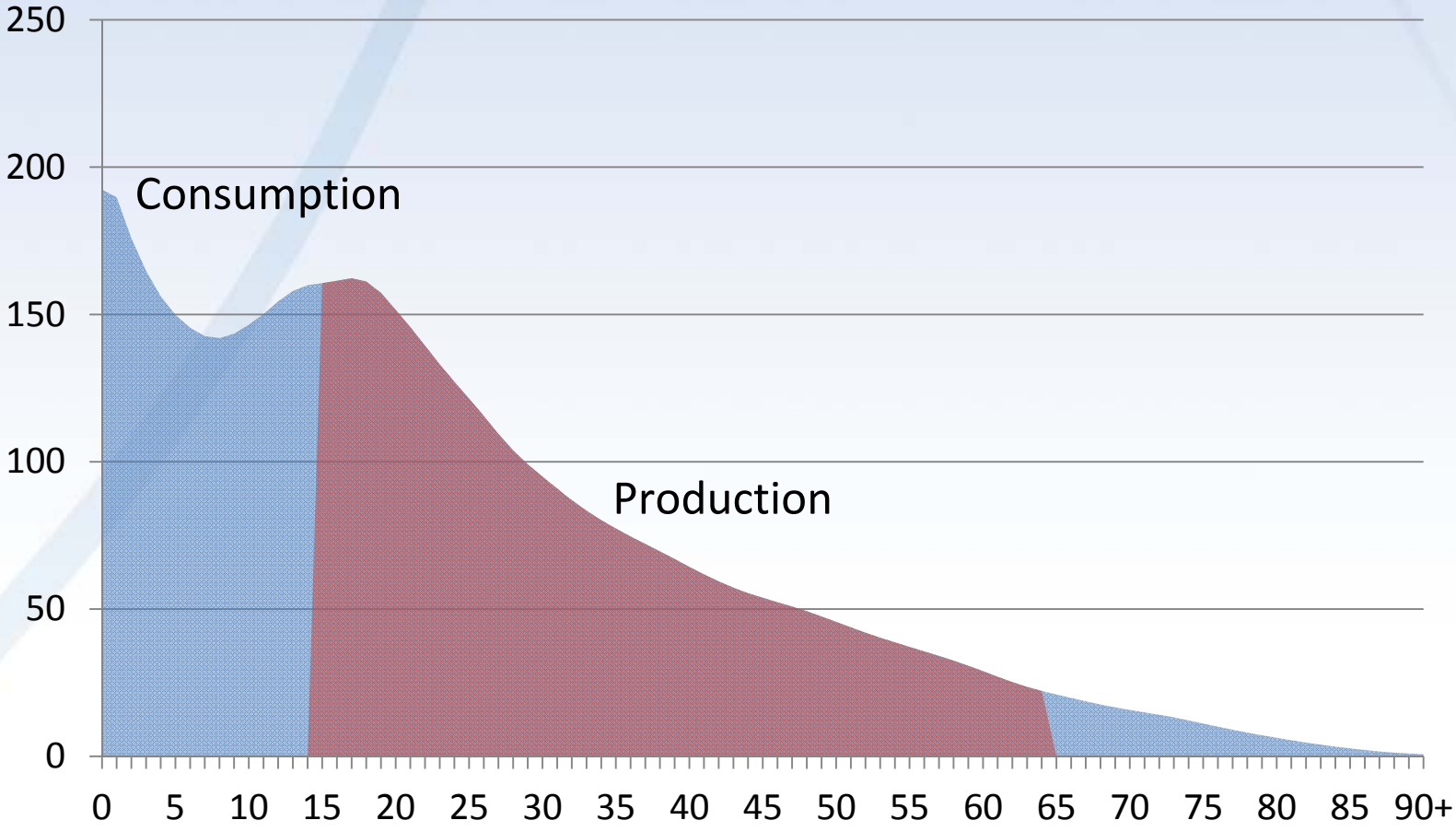
Aggregate flows: Japan



Per capita flows without NTA (Any Country before NTA)



Support Ratio without NTA (Lao PDR before NTA)



NT Flow Account, Aggregate. Taiwan, *1998 (NT$ billion), nominal*

		Age				
	Total	0-19	20-29	30-49	50-64	65+
Lifecycle Deficit	832	1,704	7	-1,329	25	424
Consumption	6,570	1,775	1,163	2,376	757	499
Private	5,290	1,244	951	2,040	640	414
Public	1,280	531	212	335	117	85
Less: Labor income	5,738	70	1,156	3,704	732	75

Lifecycle deficit is the difference between production and consumption over the lifecycle. All values are totals for the age group. Per capita values are also estimated.

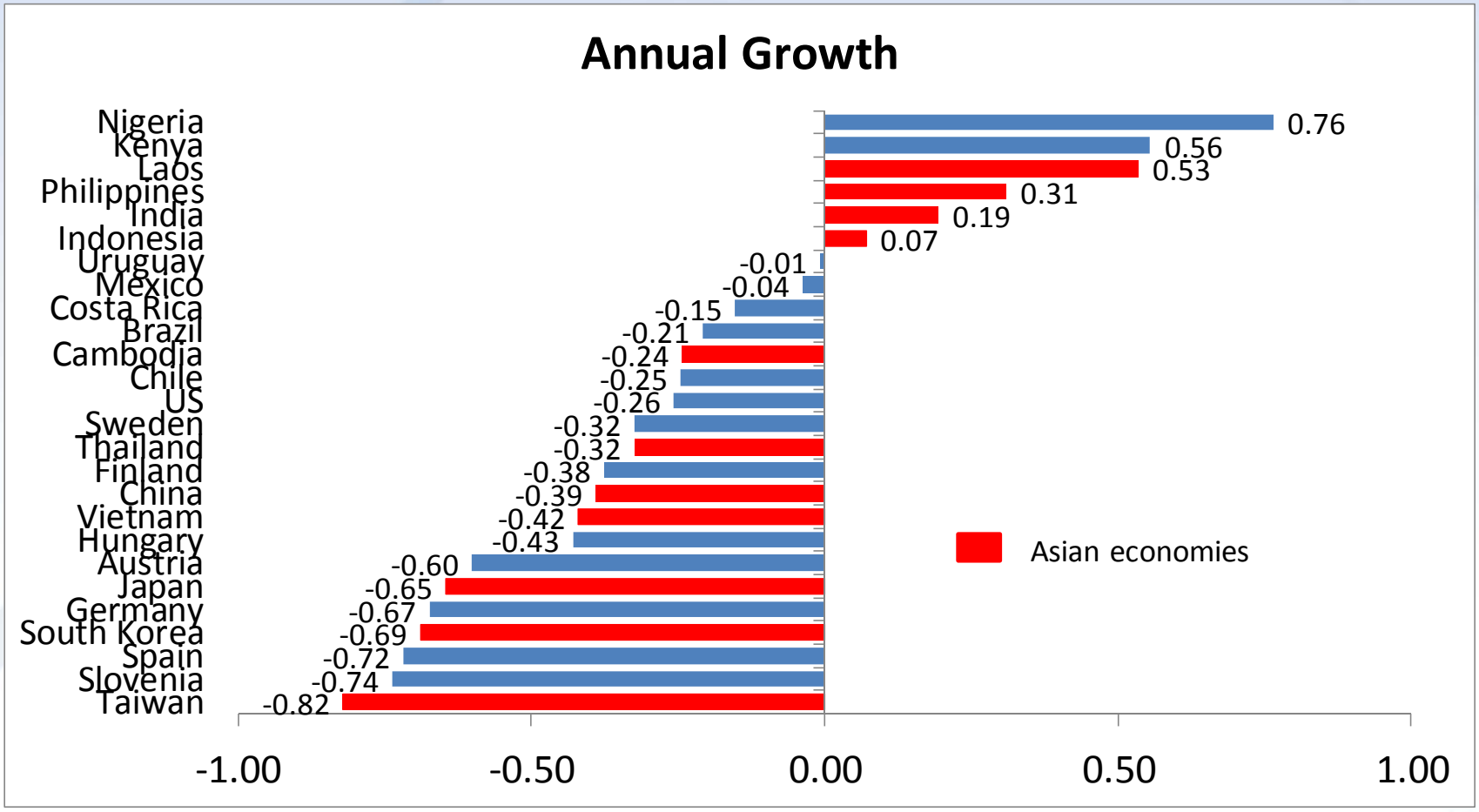
NT Flow Account, Aggregate. Taiwan, *1998 (NT$ billion), nominal*

		Age				
	Total	0-19	20-29	30-49	50-64	65+
Reallocations	832	1,704	7	-1,329	25	424
Asset-based reallocations	861	-5	-26	499	181	213
Income on Assets	2,456	4	175	1,539	528	211
Less: Saving	1,595	9	201	1,040	347	-2
Transfers	-29	1,710	33	-1,828	-155	211
Public	2	611	51	-673	-103	116
Private	-31	1,099	-18	-1,155	-52	95

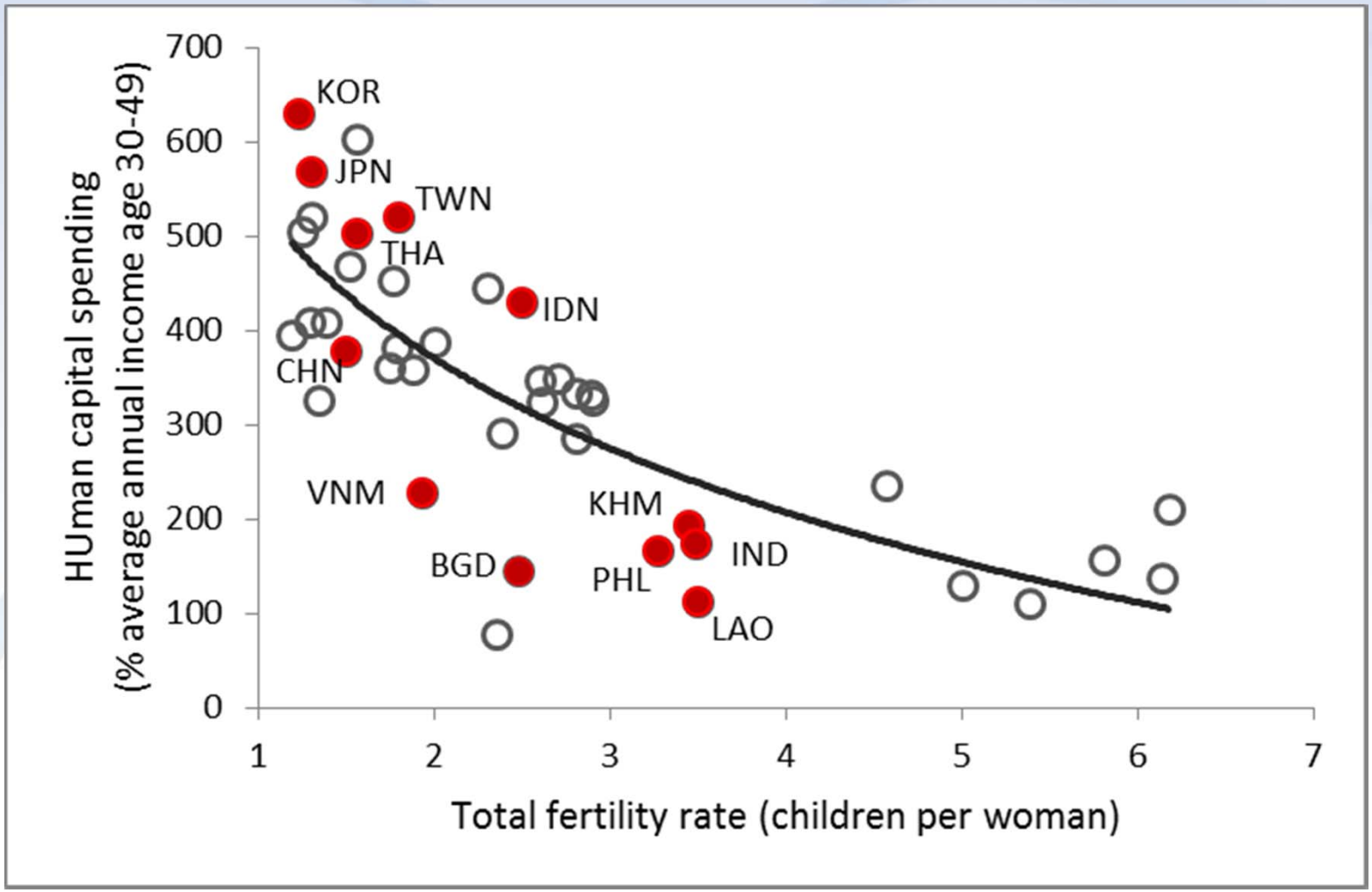
Note. Some columns do not total because of rounding.

Lower panel measures the reallocation systems employed to satisfy the lifecycle deficits and surpluses at each age.

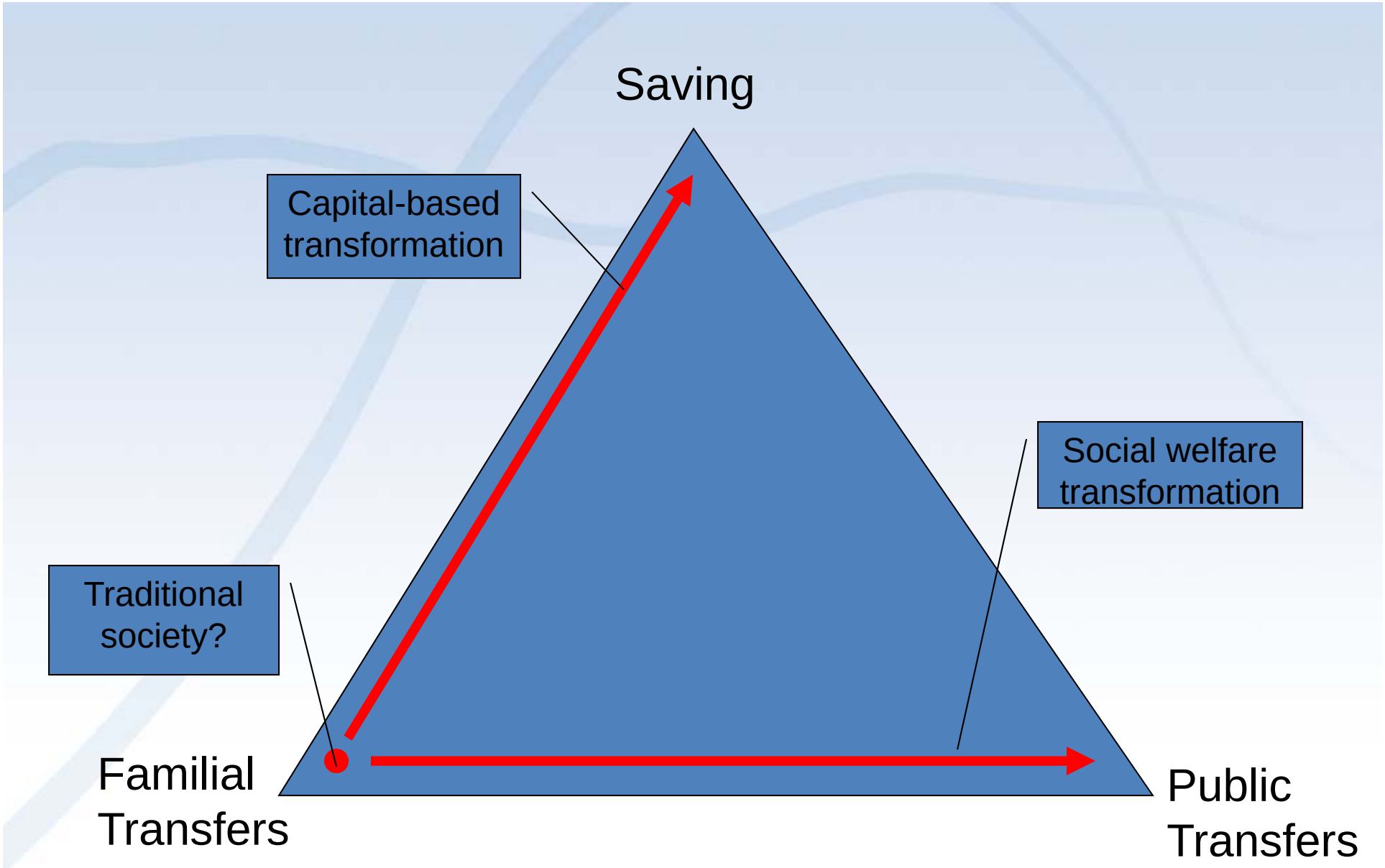
Support Ratio, Annual Growth NTA Economies, 2010-2050



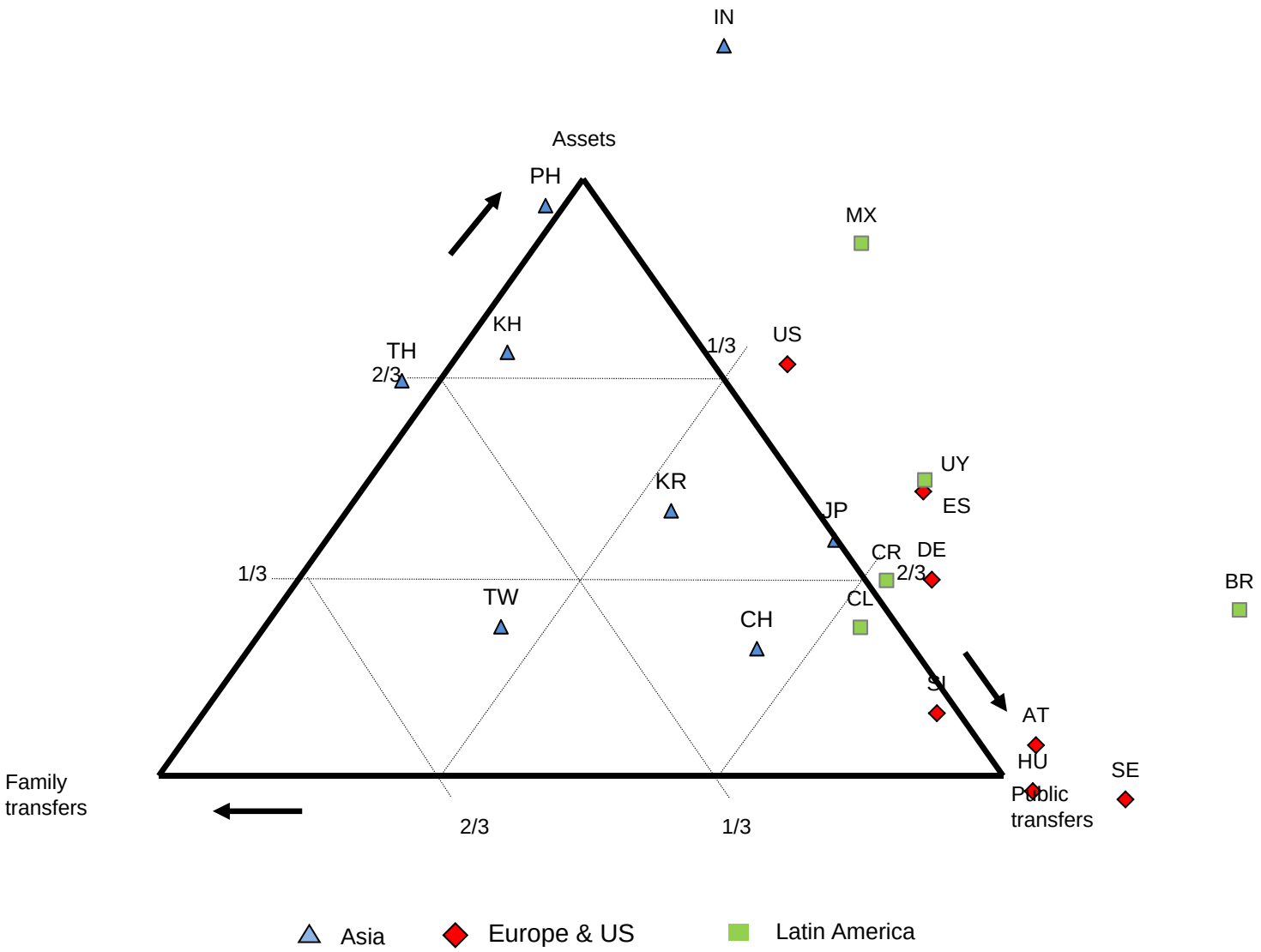
Fertility/human capital tradeoff



Updated from NTA database www.ntaccounts.org



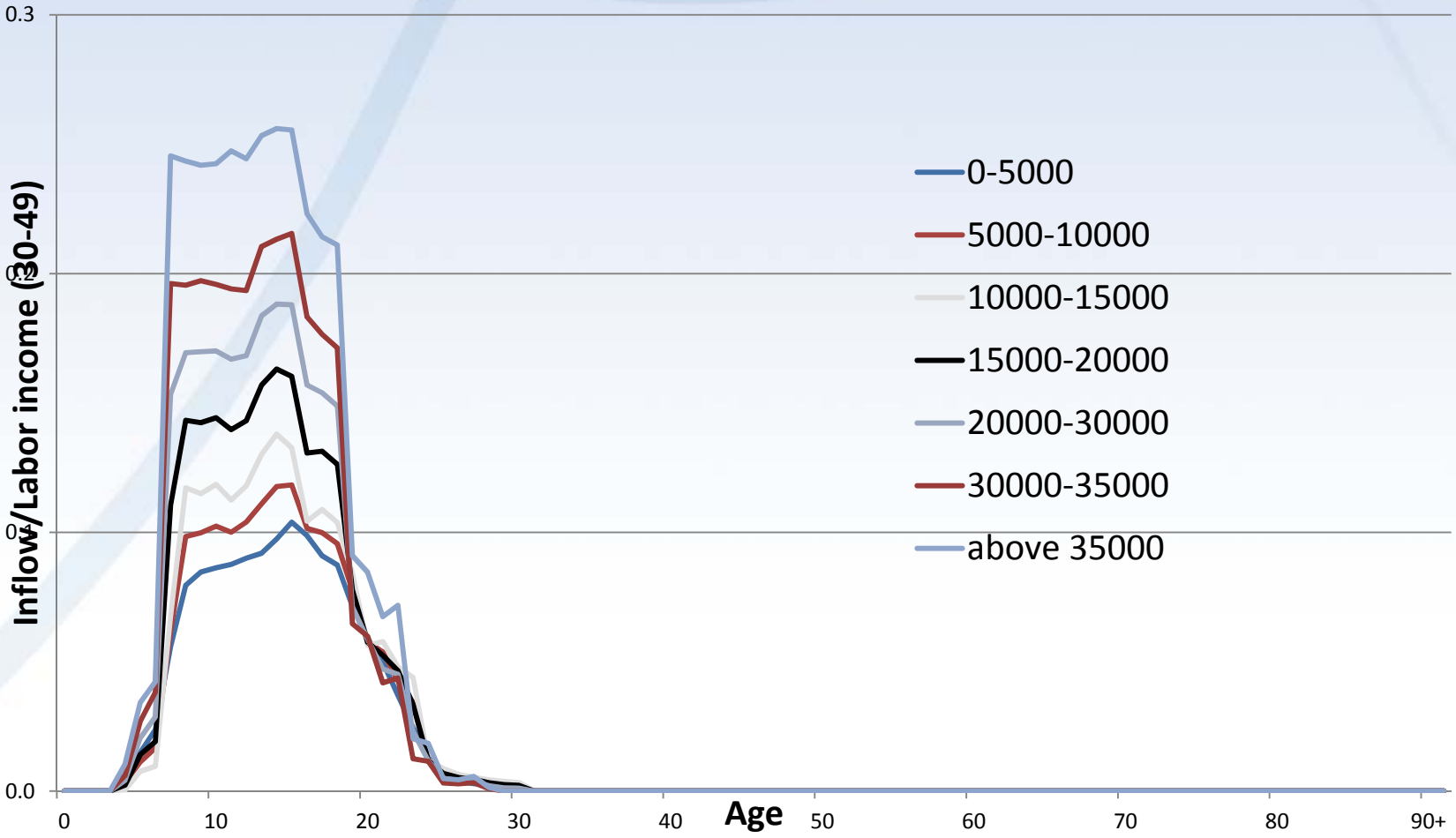
Evolution of Old-Age Support System


IN
Assets
PH
MX
KH
TH
2/3
1/3
US
UY
ES
KR
JP
CR
DE
2/3
1/3
TW
CL
BR
CH
SI
AT
HU
SE
Family
transfers
2/3
1/3
Public
transfers
Asia
Europe & US
Latin America

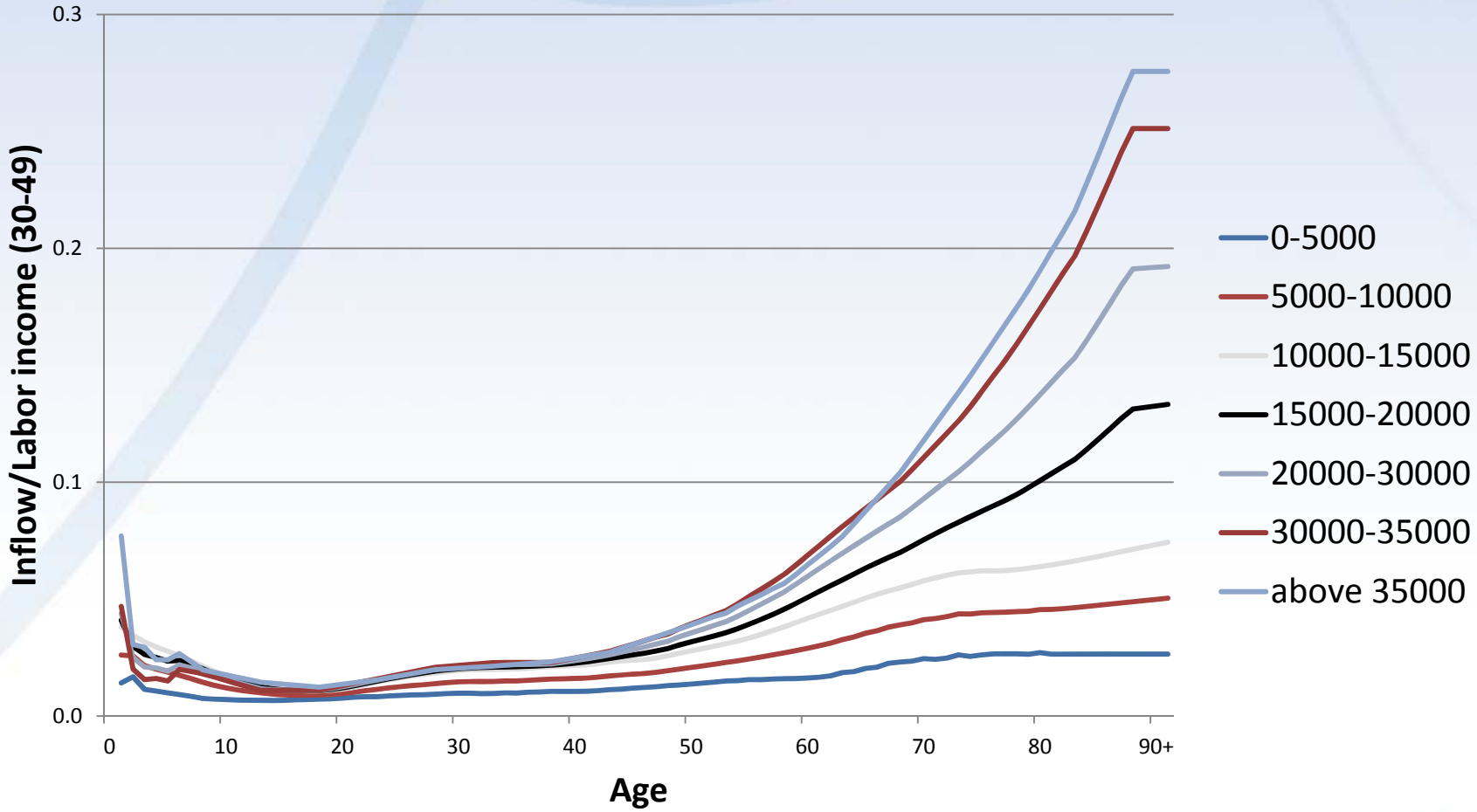
Can we project public support? (An example)

Income range (per capita GDP in US$ 2005 prices)	Model profiles
Under $5000	Asian low income countries for education and health (India 2004, Indonesia 2005, Philippines 1999, PRC 2002, Thailand 2004, and Vietnam 2008). For social protection, PRC 2002, Philippines 1999, and Thailand 2004.
$5,000 to 10,000	Interpolated
$10,000 to 15,000	Korea 2000 and Taipei, China 1998
$15,000 to 20,000	Interpolated
$20,000 to 30,000	Interpolated
$30,000 to 35,000	Japan 1994
$35,000 or more	Japan 1999

Age profiles of per capita public education transfer (NTA)



Per capita health transfers (NTA)



Decomposition (Pubic health)

% of GDP	Value in 2010	Percentage point change, 2010-50			As a % of 2010 value	
		Total change	Due to age structure	Due to age-specific level	Due to age structure	Due to age-specific level
Central and West Asia	2.0	0.9	0.3	0.6	16.3	31.3
East Asia (excl. Japan)	3.4	5.1	2.0	3.2	55.6	98.0
South Asia	2.2	2.3	0.6	1.8	24.3	65.4
Southeast Asia	1.7	1.6	0.6	1.0	31.2	42.3
Japan	7.4	3.1	3.1	0.0	41.6	0.0

Decomposition (Social protection)

		Percentage point change, 2010-50			As a percent of 2010 value	
	Value in 2010	Total change	Due to age structure	Due to age-specific level	Due to age structure	Due to age-specific level
Central and West Asia	**5.0**	**3.1**	**2.9**	**0.1**	**63.1**	**5.1**
East Asia (excl. Japan)	**5.1**	**7.5**	**4.4**	**3.2**	**78.0**	**79.1**
South Asia	**1.3**	**1.7**	**1.3**	**0.4**	**97.3**	**24.0**
Southeast Asia	**1.0**	**1.1**	**0.8**	**0.3**	**83.3**	**27.9**
Japan	**17.0**	**4.0**	**4.0**	**0.0**	**23.6**	**0.0**

Decomposition (Combined)

% of GDP		Percentage point change, 2010-50			As a percent of 2010 value		
	Value in 2010	Total change	Due to age structure	Due to age-specific level	Total	Due to age structure	Due to age-specific level
Central and West Asia	**10.8**	**2.8**	**2.3**	**0.4**	**28.5**	**22.3**	**6.3**
East Asia (excl. Japan)	**12.7**	**12.3**	**8.7**	**6.0**	**96.7**	**67.8**	**48.4**
South Asia	**7.3**	**2.8**	**0.3**	**2.5**	**29.9**	**3.2**	**26.7**
Southeast Asia	**5.7**	**2.2**	**0.4**	**1.8**	**32.8**	**8.7**	**24.0**
Japan	**27.5**	**6.8**	**6.8**	**0.0**	**24.8**	**24.8**	**0.0**

Concluding remarks

- Good social policies
  - that do not undermine work and saving incentives, and that promote growth
  - that are financially sustainable
  - that are consistent with poverty reduction goals
  - that achieve intergenerational equity
- Research provide policy tools (NTA!)
- The negative effect of population change can be offset by
  - An increase in productivity (via effective education and training)
  - Utilizing female, youth, and elderly labor force
  - Encouraging saving and investment to create employment
  - Avoiding excess reliance on transfers to support consumption.
  - Population policy (immigration)

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Thank you

धन्यवाद