UNFPA activities in Asia-Pacific on population ageing and National Transfer Accounts

Rintaro Mori MD PhD MSc FRCPCH

Regional Adviser for Population Ageing and Sustainable Development, Asia-Pacific Regional Office, UNFPA

(Professor in Health Policy for Children and Families, Kyoto University)

What we do in Asia-Pacific on population ageing

- Work with COs to support the member states on policies
    - Virtual technical team
    - Policy catalog
- Regional strategy development
    - Demographic intelligence
    - Life-cycle approach
- Regional training and advocacy
    - NTA and others (capacity building & policy briefs)
    - Human rights

NTA and APRO

2014 APRO and the East-West Center

Expand and update NTA analysis in Cambodia, China, Indonesia, Lao PDR, the Philippines, Thailand and Vietnam (Bangladesh and Malaysia joined later)

Table 1. Demographic and economic indicators for 12 economies in Asia, 2015.

| Country and base year	Total population, 2015 (millions)	Total fertility rate (TFR), 2010–2015[a]	Per capita gross domestic product (GDP), 2014 (current US$)	Annual growth of per capita gross domestic product (GDP), 2014 (%)	Effective workers (% of population), 2015	Effective consumers (% of population), 2015	Support ratio, 2015	Annual change in support ratio, 2005-2015 (%)	Estimated annual change in support ratio, 2015-2025 (%)
Bangladesh (BGD) 2010	160,996	2.2	1,093	4.8	51	88	0.58	0.84	0.56
Cambodia (KHM) 2009	15,578	2.7	1,090	5.3	58	84	0.69	0.71	−0.01
China (CHN) 2007	1,376,049	1.6	7,594	6.8	56	104	0.53	0.29	−0.89
India (IND) 2004	1,311,051	2.5	1,596	6.1	49	86	0.56	0.49	0.36
Indonesia (IDN) 2012	257,564	2.5	3,492	3.7	52	91	0.57	0.60	0.15
Japan (JPN) 2009	126,573	1.4	36,194	0.1	53	116	0.46	−0.74	−0.40
Republic of Korea (KOR) 2010	50,293	1.3	27,971	2.9	52	101	0.52	0.15	−0.58
Lao PDR (LAO) 2012	6,802	3.1	1,760	5.7	43	79	0.54	0.92	0.83
Philippines (PHL) 2011	100,699	3.0	2,871	4.4	48	87	0.55	0.45	0.20
Taiwan Province of China (TWN) 1998	23,461	1.2	22,635	5.4	54	98	0.55	0.10	−0.47
Thailand (THA) 2011	69,122	1.5	5,519	0.3	59	97	0.61	0.62	−0.27
Vietnam (VNM) 2012	93,448	2.0	2,052	4.8	57	90	0.63	0.62	−0.49

Source: Effective workers, effective consumers, support ratios, and annual changes in support ratios calculated from NTA data. Population and total fertility rate for 10 countries, United Nations 2014; for Taiwan Province of China, Republic of China 2015. GDP and annual growth of GDP for 10 countries, World Bank 2015; for Taiwan Province of China, Republic of China 2015.

Note: The values for effective number of workers and effective number of consumers are based on population estimates for 2015 and lifecycle estimates for a base year that varies among countries.
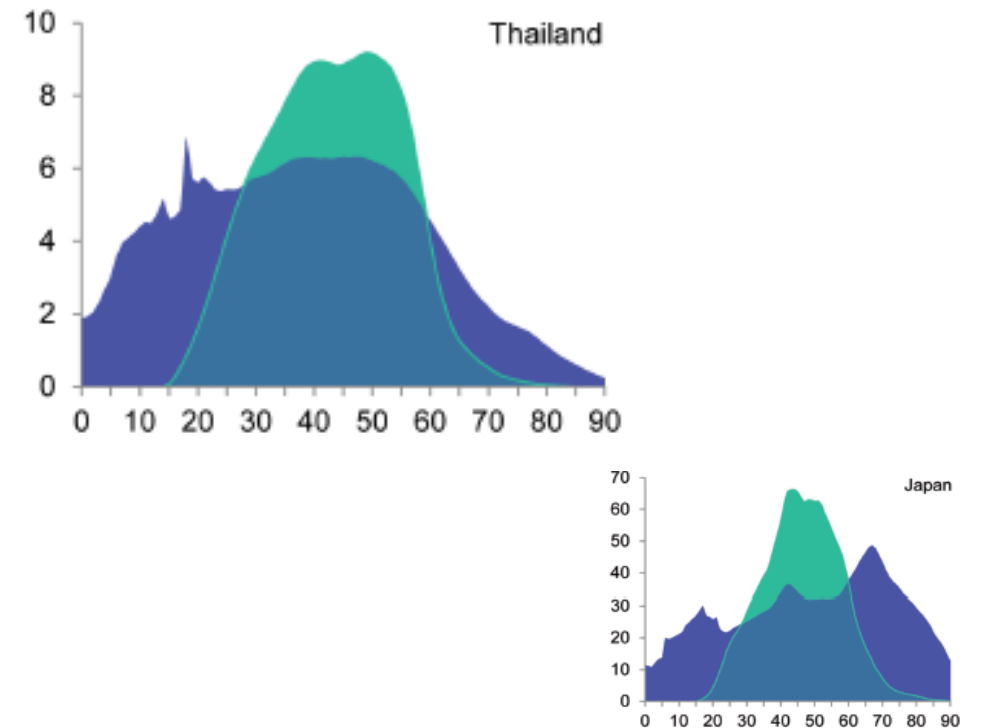
[a]The total fertility rate (TFR) for Taiwan Province of China is for 2014.

The economic lifecycle:

Per capita labour income and consumption at all ages
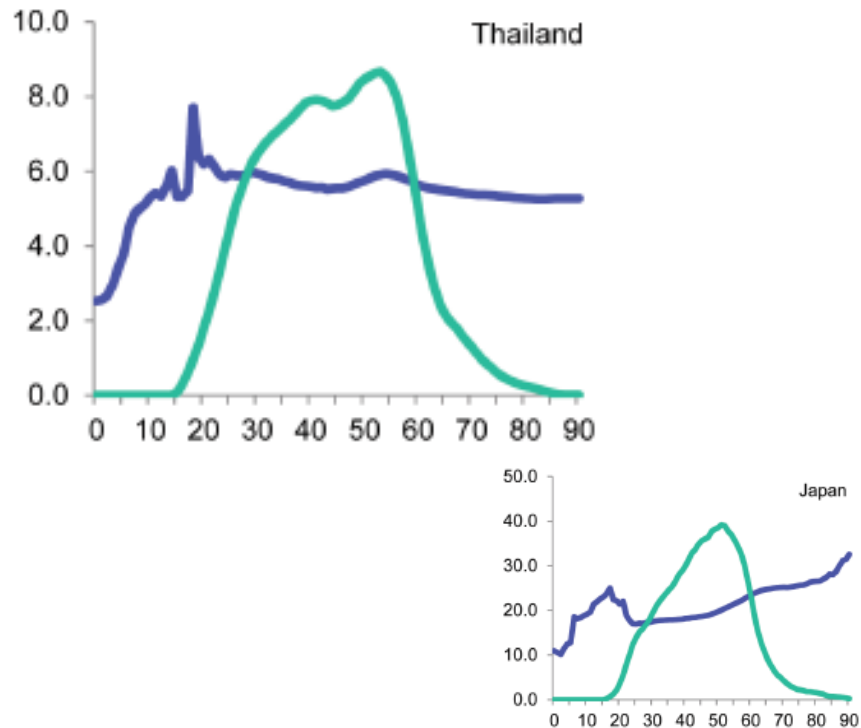
Aggregate labour income and consumption by one-year age groups

Tradeoff between human capital spending and fertility
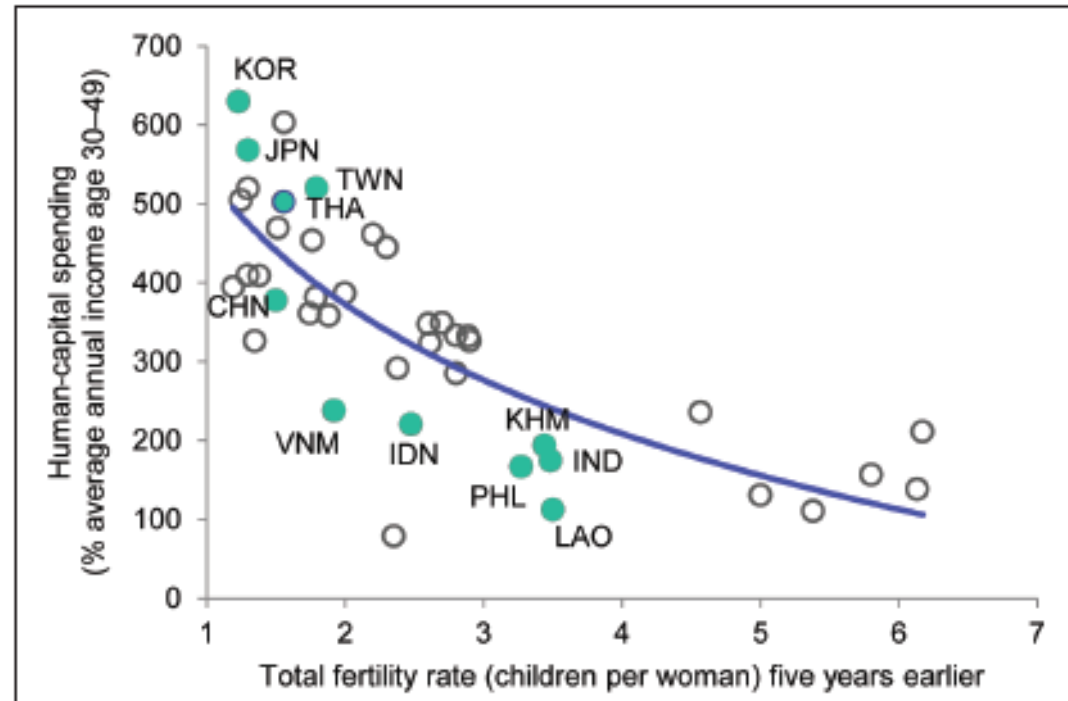
Figure 3. Tradeoff between human-capital spending and fertility.

Source: Calculated from NTA data.

Note: Lifetime human-capital spending per child is a synthetic cohort measure constructed by cumulating per capita health spending from ages 0–17 and per capita education spending from ages 3–26. To enable international comparisons, the values are expressed as a percentage of the average annual labor income of adults age 30–49 in each economy. See Table 1 for economy designations.

Asset income and support from families and governments:
Public transfers, family transfers and asset-based income as percentages of the lifecycle deficit
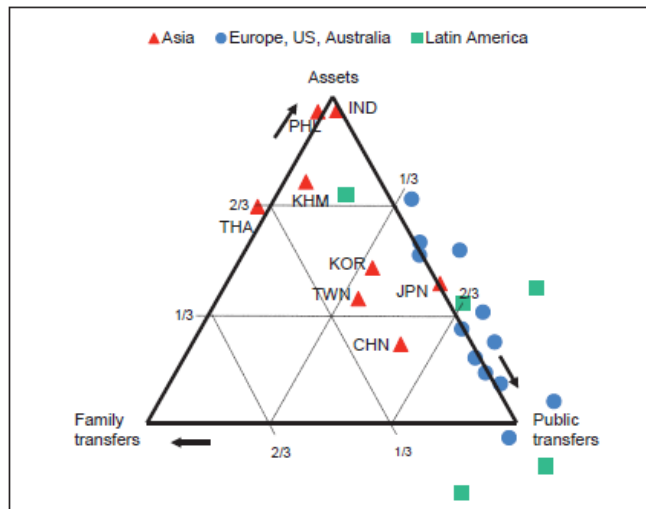
At age 65 and older

For one-year age groups from 65 to 84

▲ Asia   ● Europe, US, Australia   ■ Latin America

Assets

IND
PHL
1/3
2/3 ▲ KHM
THA
KOR
TWN   JPN   2/3
1/3
CHN

Family transfers ←   2/3   1/3   Public transfers

Figure 2. Public transfers, family transfers, and asset-based income as percentages of the lifecycle deficit (gap between consumption and labor income) at age 65 and older in 25 countries in a recent year.

Source: NTA data, 2016.

Note: Country designations are Cambodia (KHM), China (CHN), India (IND), Japan (JPN), Philippines (PHL), Republic of Korea (KOR), Taiwan Province of China (TWN), and Thailand (THA).

◆ Cambodia
● India
■ Indonesia
◆ Philippines
▲ Thailand
◇ China
○ Japan
+ Rep. Korea
△ Taiwan P.C.

Assets

2/3 ▲   1/3
1/3   2/3

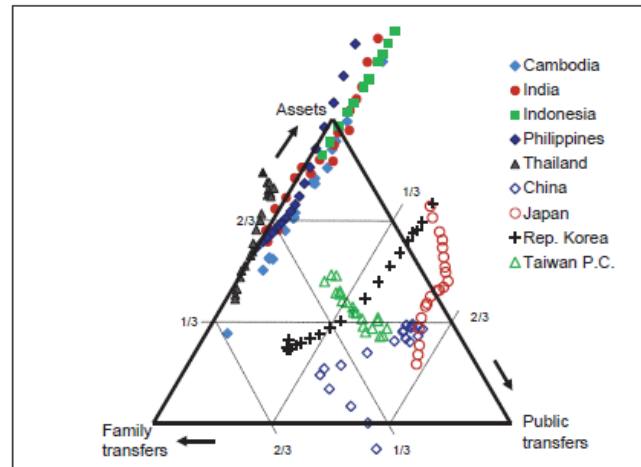Family transfers ←   2/3   ◇ 1/3   Public transfers

Figure 3. Public transfers, family transfers, and asset-based reallocation as a proportion of the lifecycle deficit (gap between consumption and labor income) for one-year age groups from 65 to 84 in nine Asian countries in a recent year.

Source: NTA data, 2016.

Table 1. Fiscal support ratios (projected tax revenues relative to public transfers as percent of values in 2015) in selected Asian economies and the United States, 2020–2050.

	2015	2020	2030	2050
Cambodia (KHM)	100	102	104	104
China (CHN)	100	97	88	78
India (IND)	100	101	102	101
Indonesia (IDN)	100	102	104	108
Japan (JPN)	100	97	91	79
Philippines (PHL)	100	102	105	111
South Korea (KOR)	100	98	89	80
Taiwan P.C. (TWN)	100	100	93	74
Thailand (THA)	100	102	102	96
Vietnam (VNM)	100	100	96	86
United States (USA)	100	98	92	88

Source: NTA data, 2016.

Note: Revenues and expenditures are projected assuming that per capita taxes and public expenditures by single year of age remain constant at base-year values.

Providing opportunities for young adults:
Per capita labour income of adolescents and young adults in three age groups

Countries and base year	% average annual labour income of a prime-age(30-49)		
	Age 15-19	Age 20-24	Age 25-29
Japan, 2009	3.1	27.6	54.9
Republic of Korea, 2010	3.5	30.3	68.5
Thailand, 2011	8.9	37.6	72.4
India, 2004	14.6	39.1	68.8
Lao PDR, 2012	15.0	42.0	77.1
Taiwan Province of China, 1998	7.6	46.0	86.3
Indonesia, 2012	15.3	48.3	74.6
Bangladesh, 2010	28.8	53.6	76.4
Vietnam, 2012	15.6	59.5	106.6
China 2007	16.7	60.3	105.4
Philippines, 2011	13.9	61.1	92.0
Cambodia, 2009	46.3	91.1	111.2

Recognizing the full economic contribution of women:
Per capital labour income of women and men in Lao PDR, 2012
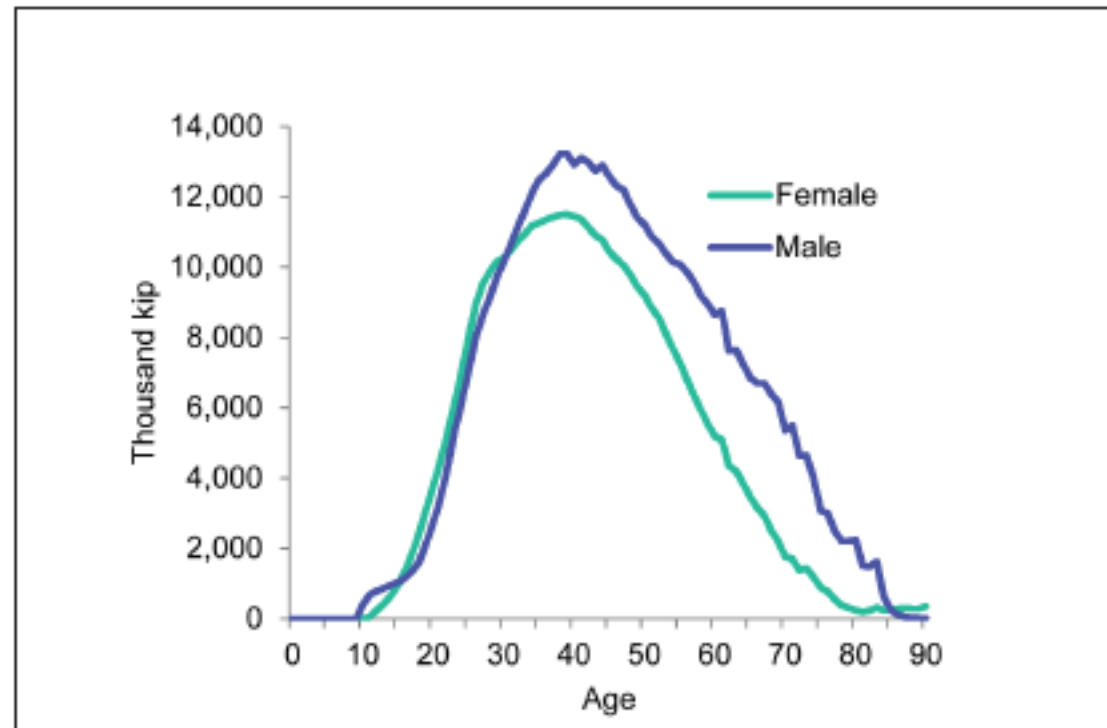
Figure 4. Per capita labor income of women and men in Lao PDR, 2012.
Source: Calculated from NTA data.

Support ratios

Demographic dividend – has it gone already?

Table 1. Support ratio in 2015, estimated annual change (%) in the support ratio for 2015–2035 and 2035–2055, and human-capital spending in various base years for 15 countries in Asia.

Country and base year for NTA data	Support ratio, 2015 (number of effective producers per 100 effective consumers)[a]	Estimated annual change in support ratio (%)		Human-capital spending (% of average annual labor income of a prime age (30–49) adult)[b]
		2015–2035	2035–2055	
Bangladesh (BGD) 2010	58	0.38	−0.25	145
Cambodia (KHM) 2009	69	−0.02	−0.28	194
China (CHN) 2007	53	−0.93	−0.65	378
India (IND) 2004	56	0.29	−0.11	175
Indonesia (IDN) 2012	57	0.13	0.01	431
Iran, Islamic Republic of (IRN) 2011	54	0.46	−0.53	321
Lao People's Democratic Republic (LAO) 2012	53	0.67	0.14	154
Malaysia (MYS) 2009	55	0.33	−0.33	316
Maldives (MDV) 2010	55	0.1	−1.23	183
Mongolia (MNG) 2014	56	−0.38	0.11	349
Nepal (NPL) 2011	45	0.98	−0.24	146
Philippines (PHL) 2011	55	0.13	−0.02	167
Thailand (THA) 2011	61	−0.46	−0.49	503
Timor-Leste (TLS) 2015	34	0.53	0.95	231
Vietnam (VNM) 2012	64	−0.58	−0.44	229

Source: Calculated from NTA data.

[a]The effective number of producers sums the population in each one-year age group, weighted to incorporate age differences in employment and productivity estimated for the base year. The effective number of consumers sums the population in each one-year age group, weighted to incorporate age differences in consumption estimated for the base year. Weights of consumption and labor income are kept constant.

[b]Lifetime human-capital spending per child is a synthetic cohort measure constructed by cumulating per capita health spending from ages 0–17 and per capita education spending from ages 3–26.

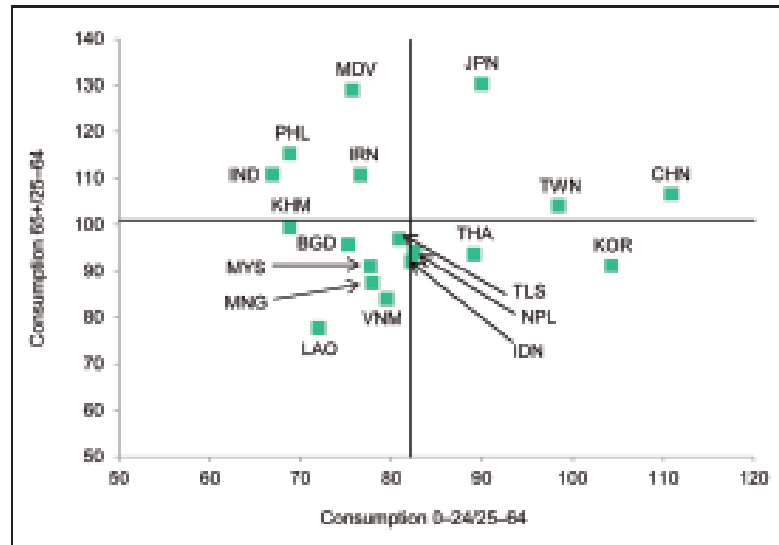# Are the children and the older persons benefitting from economic growth?

Figure 1. Per capita consumption by children (age 0–24) and the elderly (age 65+) expressed as a percent of per capita consumption by adults age 25–64. The simple average values for consumption by children and the elderly in all 18 countries divide the figure into four quadrants. Data points to the left of the vertical line indicate lower than average consumption by children. Data points below the horizontal line indicate lower than average consumption by the elderly. See Table 1 and text for economy designations and base years.

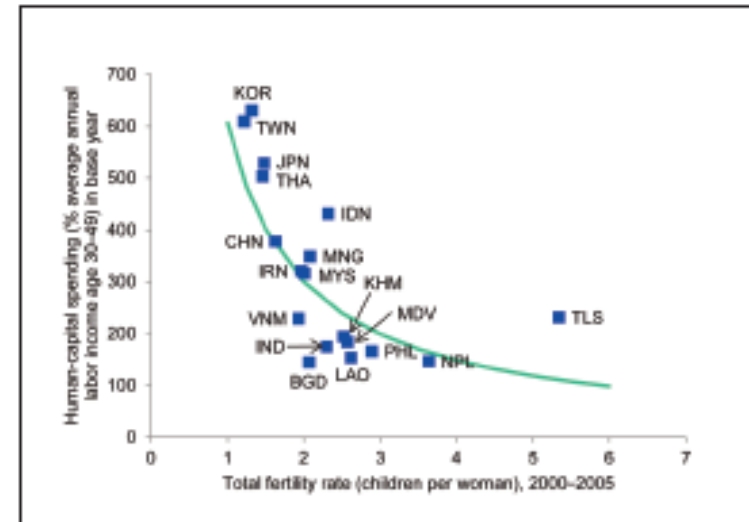Source: Calculated from NTA data.

Figure 2. Tradeoff between human-capital spending and fertility. Lifetime human-capital spending per child is a synthetic cohort measure constructed by cumulating per capita health spending from ages 0–17 and per capita education spending from ages 3–26. To enable international comparisons, the values are expressed as a percentage of the average annual labor income of adults age 30–49 in each economy. See Table 1 and text for economy designations and base years.

Source: Human-capital spending calculated from NTA data; total fertility rate from United Nations, Department of Economic and Social Affairs, Population Division (2017). World population prospects: The 2017 revision. https://esa.un.org/unpd/wpp/DataQuery/. Accessed 26 October 2017.

Life-cycle approach for ageing?

Towards happy and healthy ageing

Determinants for Health Ageing (Systematic Review)

Categories	Negatives	Positives
Demographic	Age	
Biological	High BMI, Low ABI, Abnormal BP, ADL/IADLs Limitation, Weight changes, Subclinical vascular markers, Diabetes, Comorbidity, Respiratory diseases, Heart conditions, Hearing impairment, Cancer, Bone conditions, History of medication	Better grip strength, High self-rated health, General health status
Behavioral	Smoking	Physical activity, Healthy diet
Psychological	Depression, Negative life events	Better cognitive status, Psychological resources, Life satisfaction, Good general mental health status
Social		Education level, Income and economic status, Higher household SES

Healthy behaviours lead to health ageing

(reproduced from ATHLOS consortium 2018)

Golden windows for behavioural changes

Pregnancy & child, life-long development → Biological / Behavioural Mechanism → Happy and Healthy Ageing

Reproductive cycle /"Family" - The golden window for investment
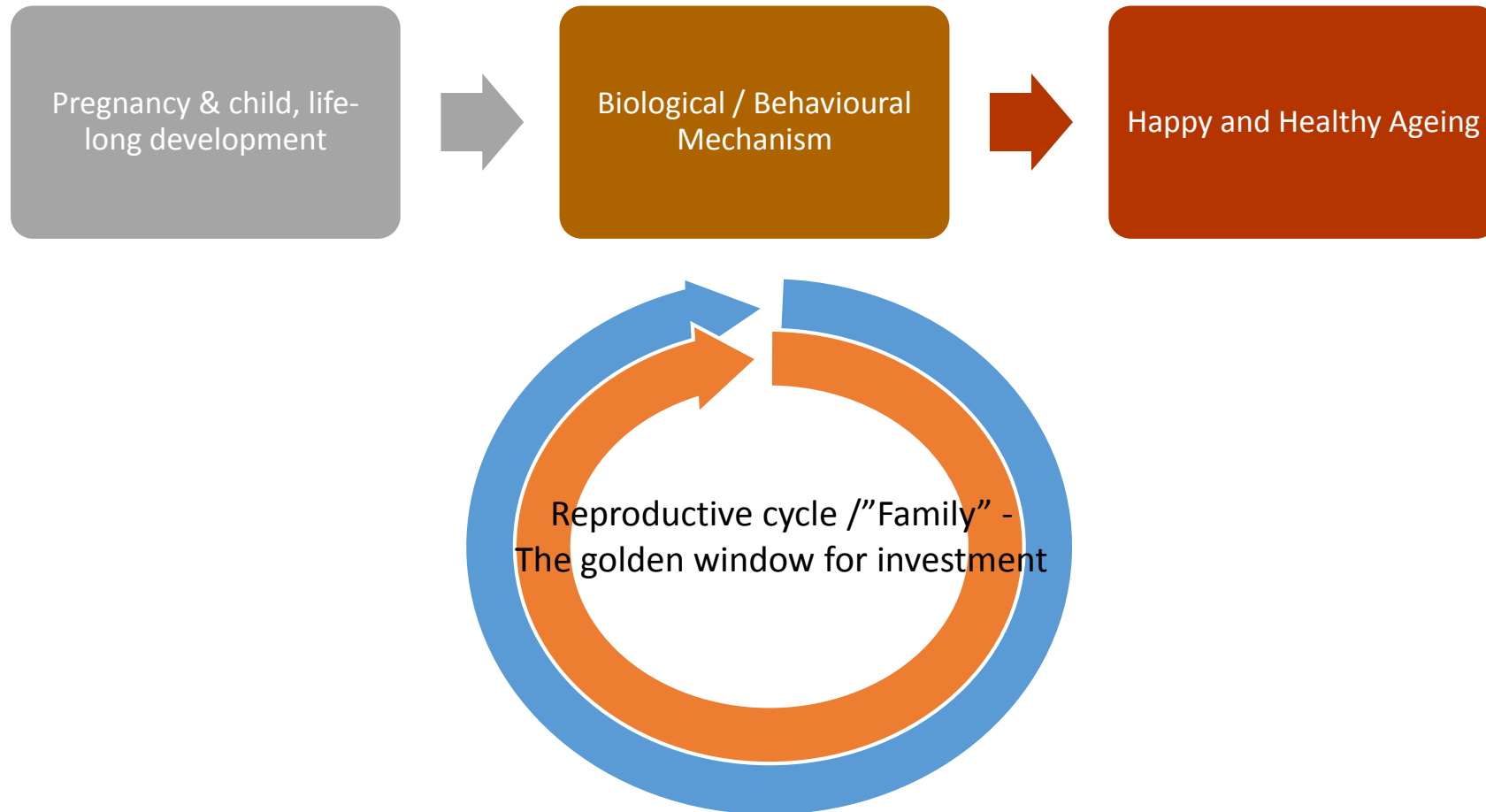
Policies targeting older people and ageing, where the policy measures are specific to older people

Adopted from Nordio S. 1978. Needs in Child and Maternal Care. Rational Utilization and Social-Medical Resources. Rivists Italiana di Pediatria 4:3-20.

A new wider definition of a family?
"Family" defined by relationship, not by blood bond, sexual relationship, or physical distance