Generational Economy and Demographic Diversity in Asia-Pacific: Evidence from Demographic Dividends

Wassana Im-em

Regional Technical Specialist

UNFPA Asia and the Pacific Region

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Rapid Aging and Demographic Diversity in Asia-Pacific, % of 65+ population in 2023

- **Averages:** East Asia & Pacific (13%), South Asia (6%), Pacific small states (5%)
- **Superaged countries** (more than 20% of people over 65 yrs): Japan (30%)
- **Aged countries** (more than 14% of people over 65 yrs): Australia (17%), New Zealand (16%), Republic of Korea (17%), Thailand (15%)
- **Ageing countries** (more than 7% of people over 65 yrs): Singapore (14%), China (13%), Democratic People's Republic of Korea & Sri Lanka (11%); India, Indonesia, Iran (7%), Vietnam (9%)
- **Next wave**: Bangladesh, Cambodia, Nepal (6%), the Pacific, Maldives, Philippines (5%), Pakistan, Lao (4%), PNG (3%)

Percentage of older persons (65+) in Asia-Pacific (selected countries, 1950-2100)

East Asia

South-East Asia

Legend (East Asia): Mongolia, China, Japan, Republic of Korea, Dem. People's Republic of Korea

Legend (South-East Asia): Timor-Leste, Philippines, Cambodia, Myanmar, Lao People's Democratic Republic, Malaysia, Indonesia, Thailand, Viet Nam
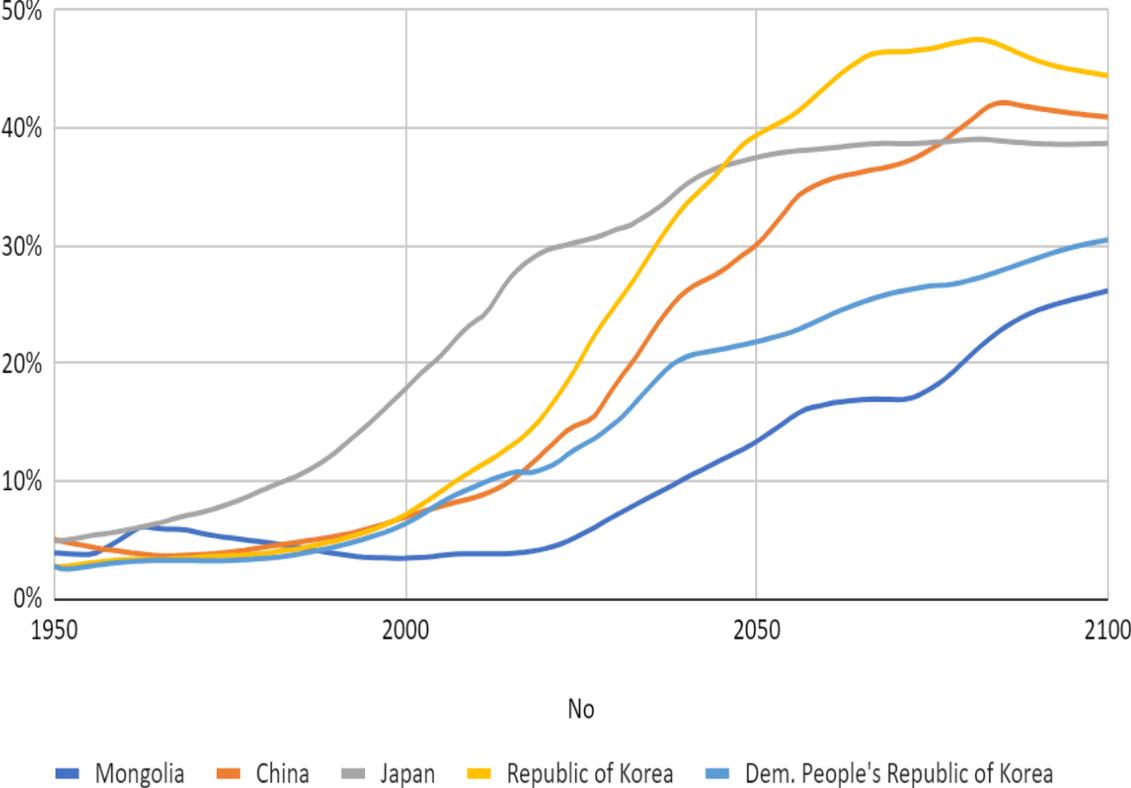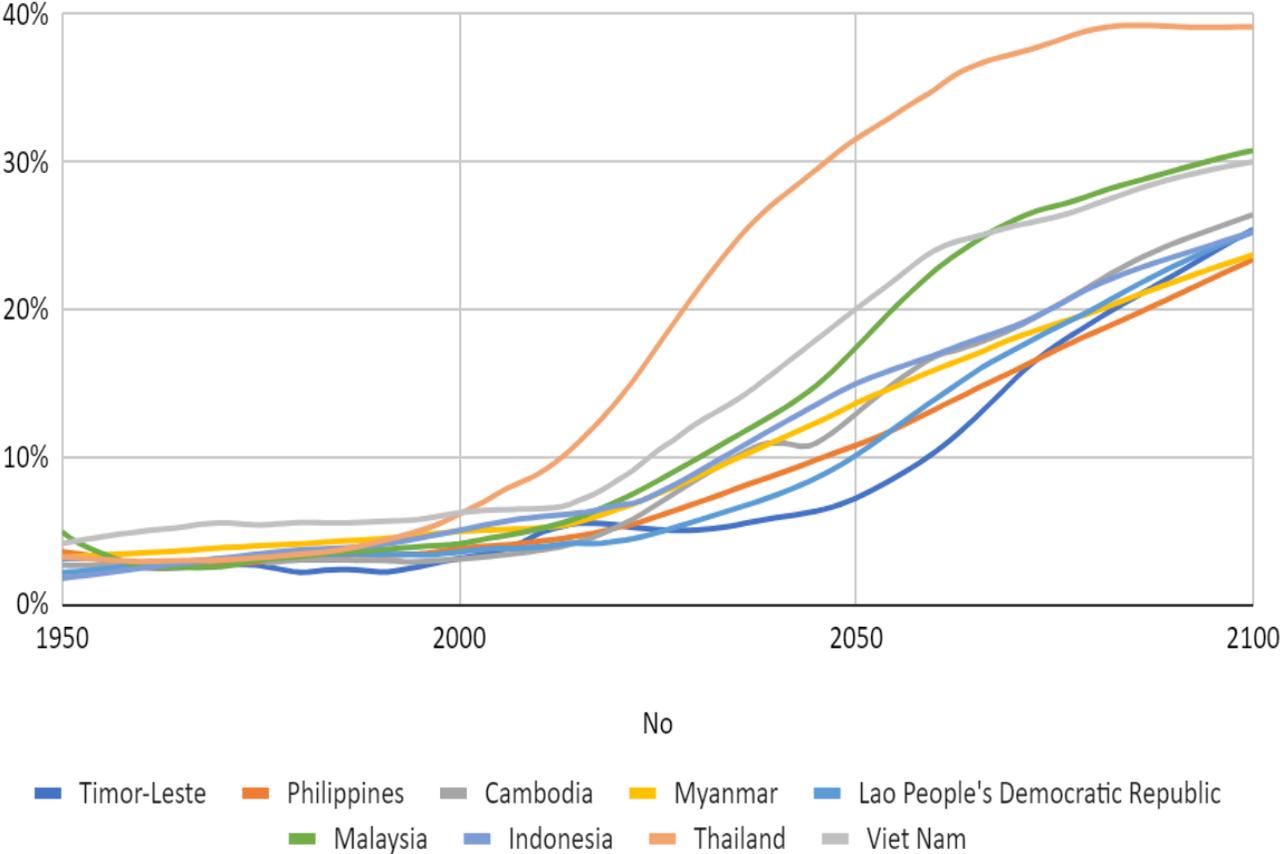
Source: UN Population Prospects, 2022

# Percentage of older persons (65+) in Asia-Pacific (selected countries, 1950-2100)
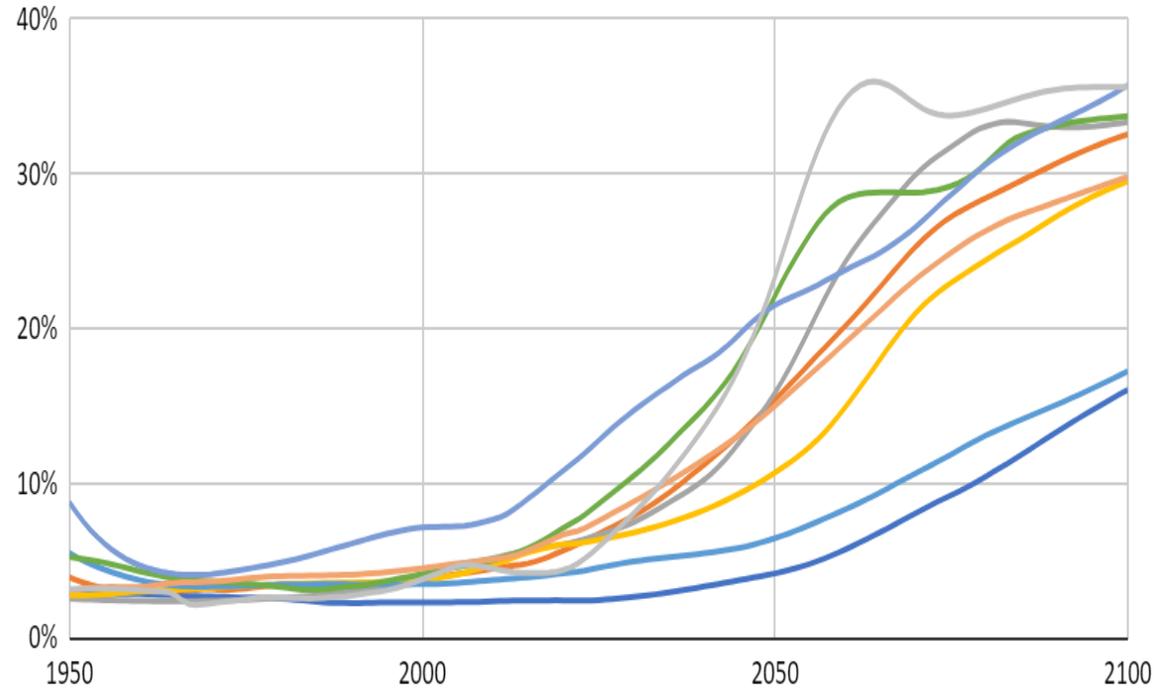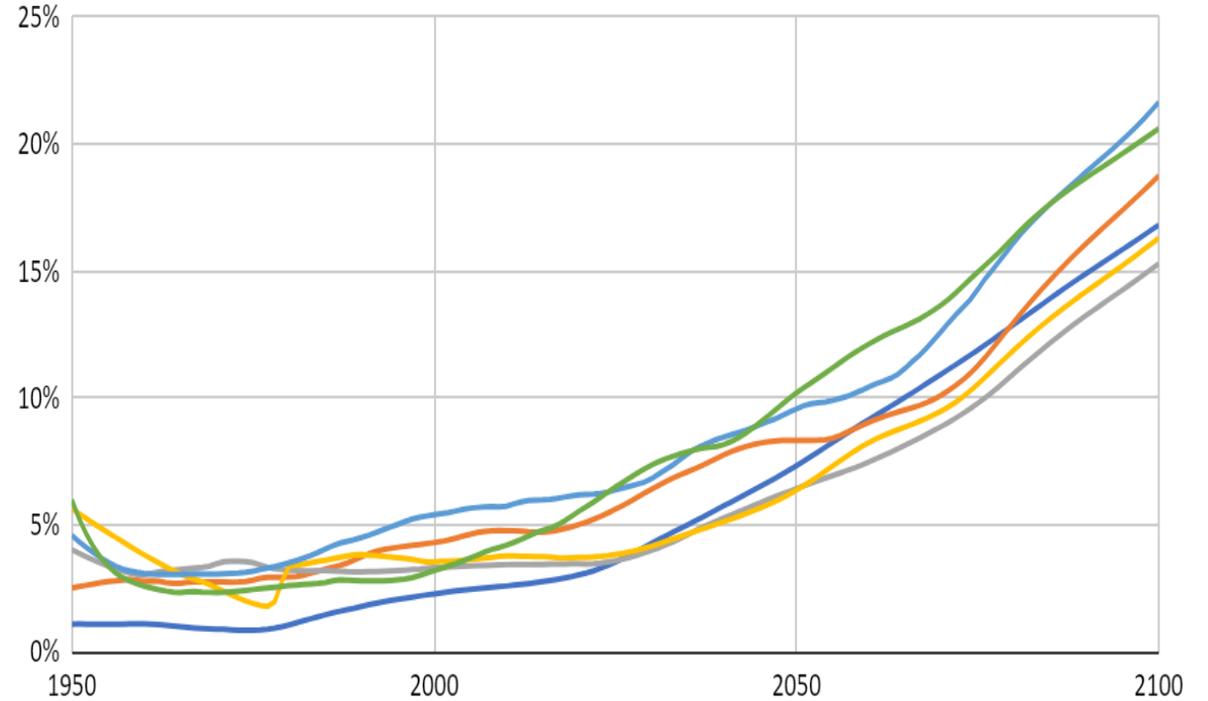
Source: UN Population Prospects, 2022

Demographic profiles of selected countries in different stages of demographic dividends
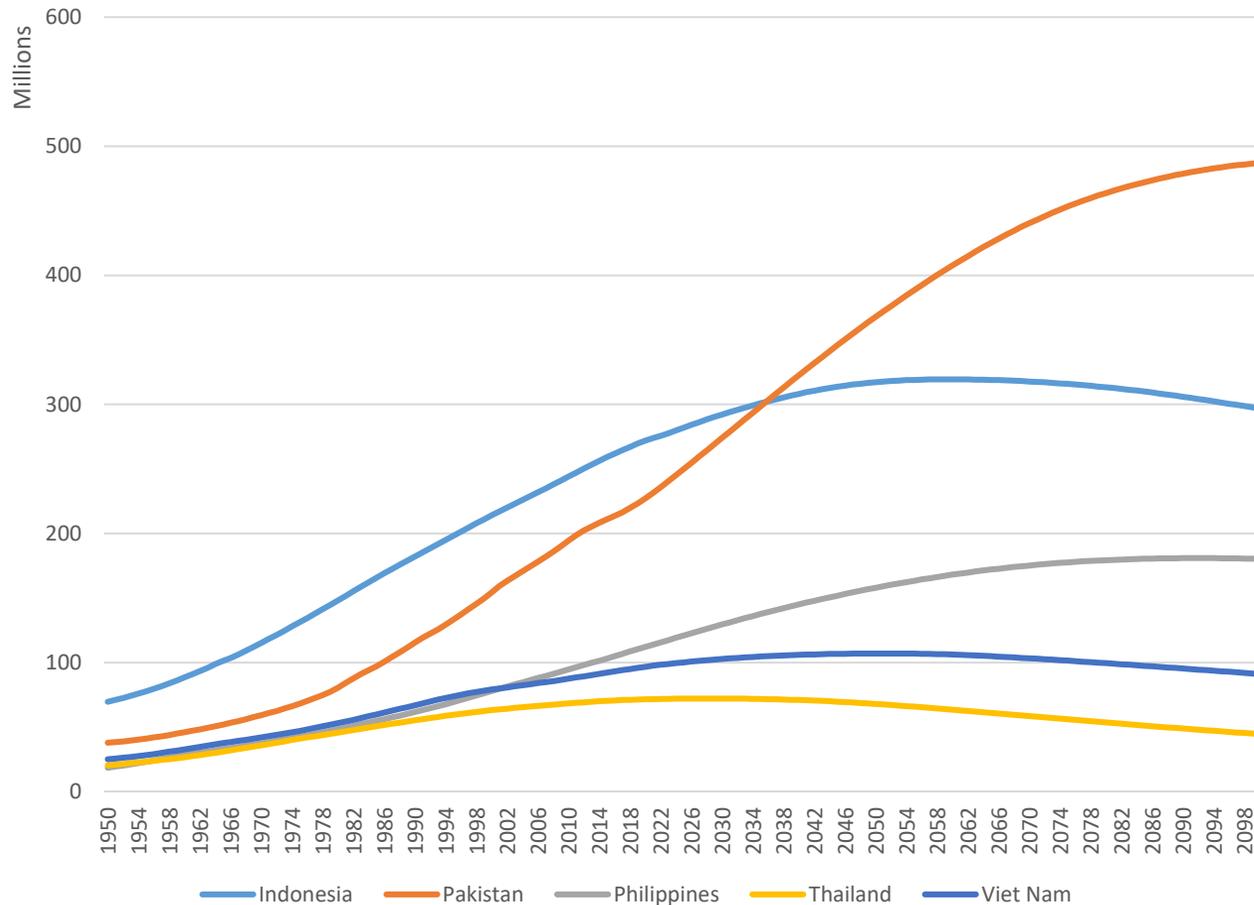
	Total population (millions) 2023	TFR 2022	Life expectancy at birth, 2022 Male	Fem	% CPR*
Fiji	0.9	2.4	67	70	44
Indonesia	277.5	2.1	69	73	60
Pakistan	240.5	3.3	65	70	30
Philippines	117.3	1.9	70	74	44
Thailand	71.8	1.0*	76	84	75
Vietnam	98.9	1.9	70	79	66

Chart legend: Indonesia, Pakistan, Philippines, Thailand, Viet Nam

Source: UN Population Prospects, 2022; *UNFPA Asia-Pacific Regional Office, forthcoming. Demographic Dividend Atlas for Asia-Pacific

Trend in population shares by age group, selected countries, 1950-2100

Source: UN Population Prospects, 2022
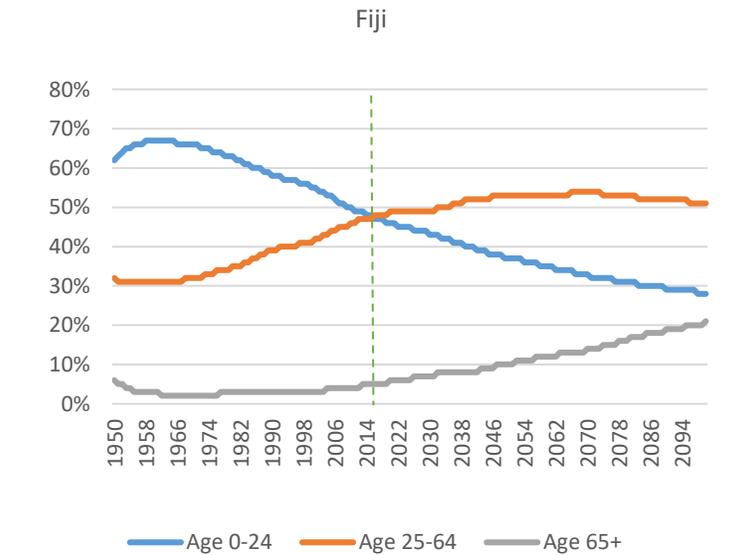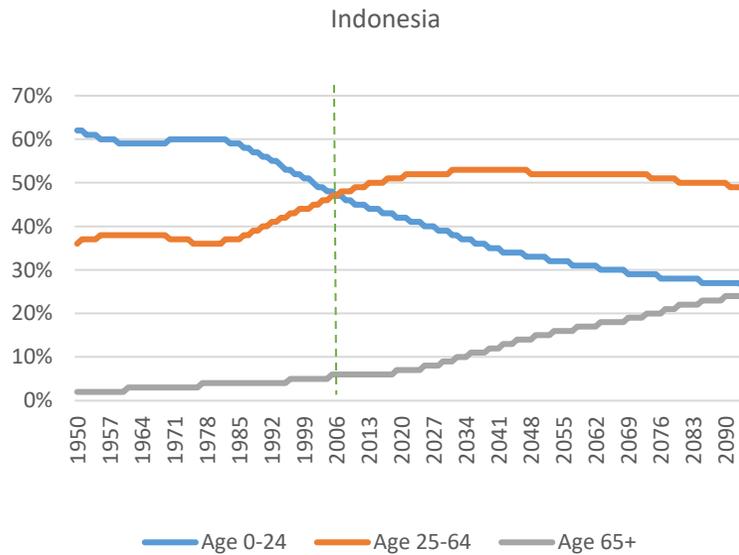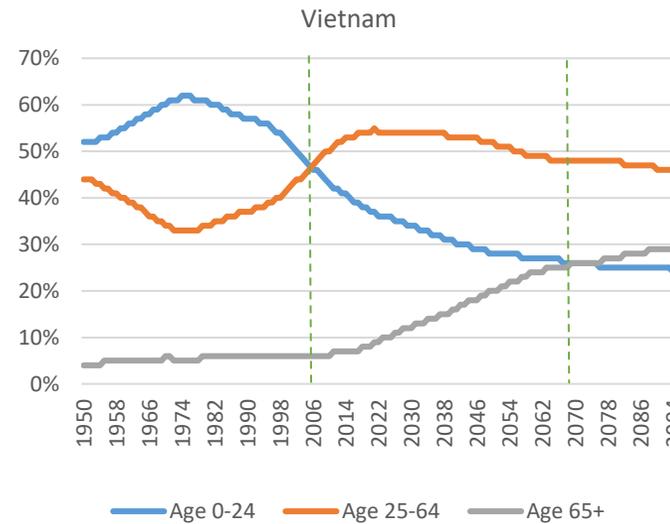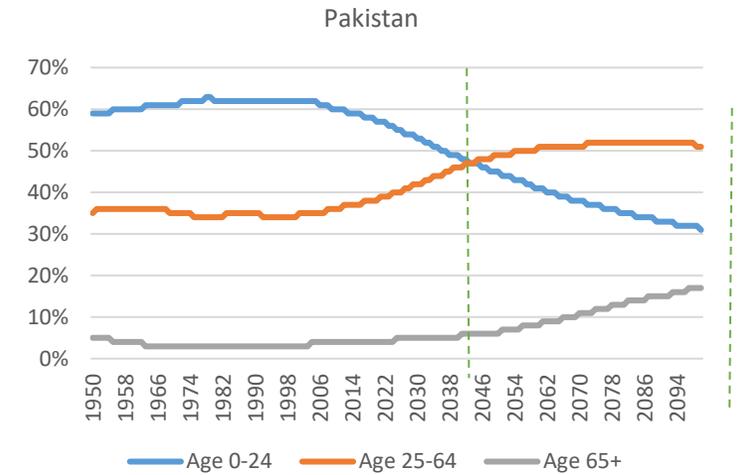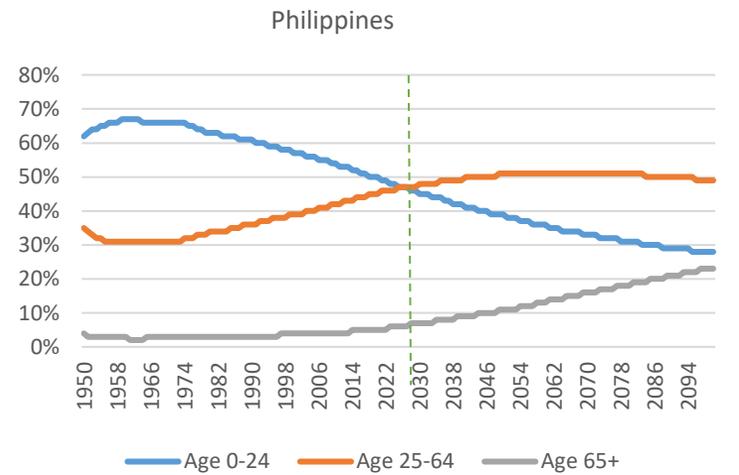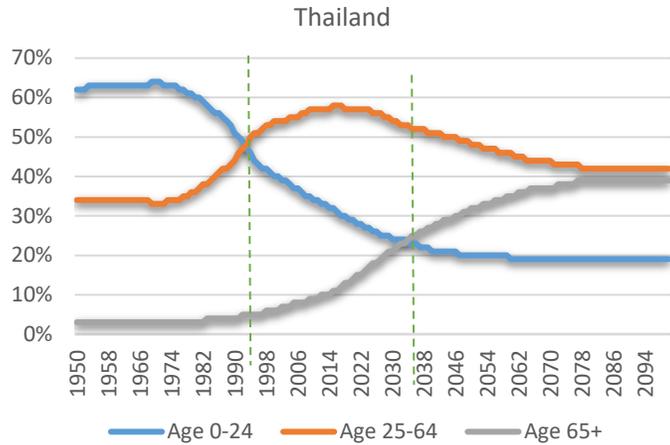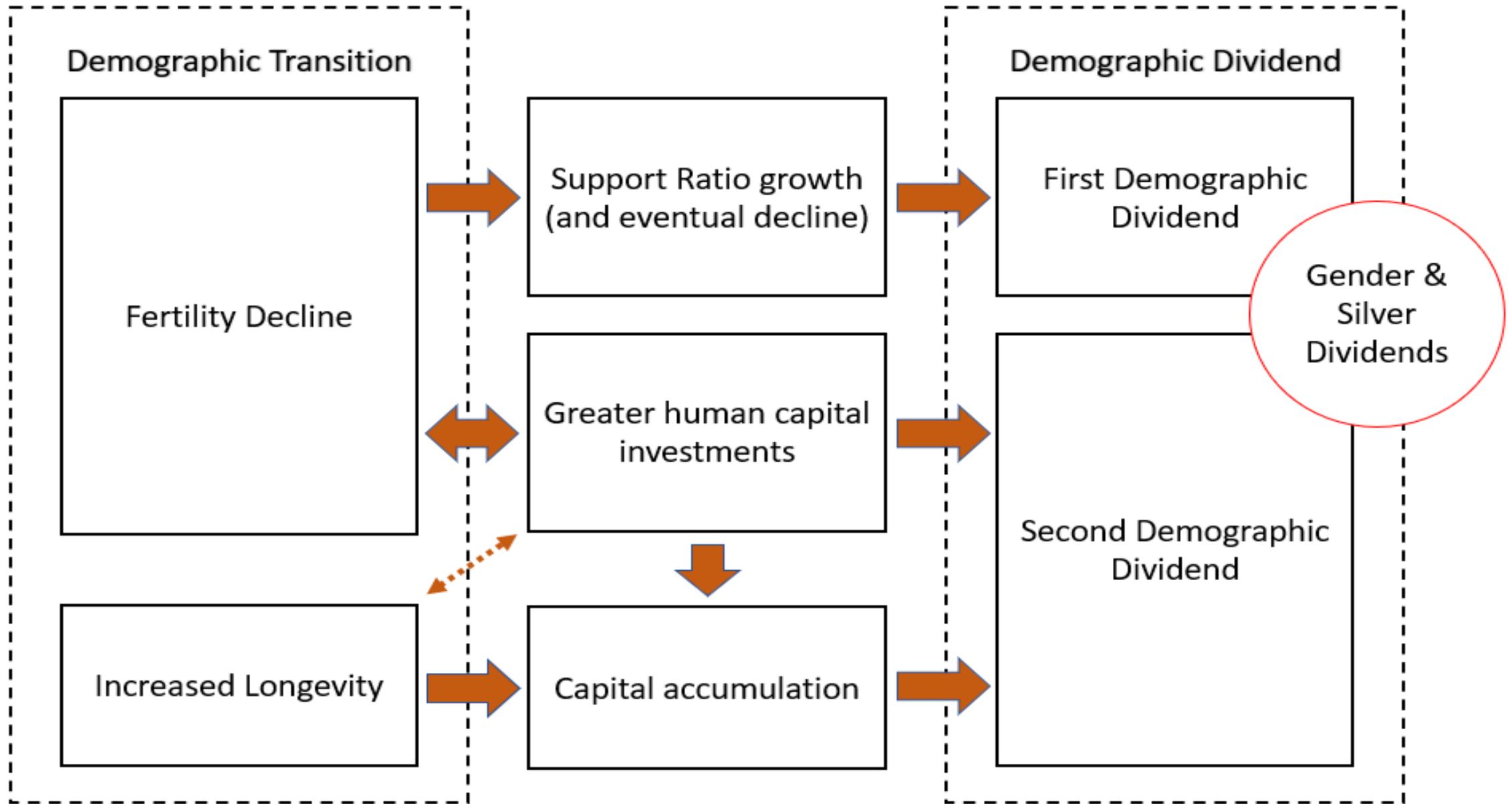
Source: Michael Abrigo, a presentation given in August 2023

Estimation of 1ˢᵗ and 2ⁿᵈ Demographic Dividends

Consumption Identity

$$\frac{C}{N} = (1-s)\frac{Y}{L}\frac{L}{N}$$

C — aggregate consumption

Y — aggregate income

s — saving rate (S/Y)

L — effective number of workers

N — effective number of consumers

Effective producers and consumers

$$L = \sum_{0}^{\omega} \frac{y_l(x)}{\bar{y}_l(30-49)} P(x)$$

$$N = \sum_{0}^{\omega} \frac{c(x)}{\bar{c}(30-49)} P(x)$$

$P(x)$ — population age x

$y_l(x)$ — per capita labor income age x

$\bar{y}_l(30-49)$ — per capita labor income age 30-49

$c(x)$ — per capita labor income age x

$\bar{c}(30-49)$ — per capita consumption age 30-49

Two Dividends

Channel for first dividend:
Increase in the support ratio (L/N) holding other factors, saving and income per effective worker, constant.

$$\frac{C}{N} = (1-s)\frac{Y}{L}\left(\frac{L}{N}\right)$$

Two Dividends

$$\frac{C}{N} = \left(1-s\right)\frac{Y}{L}\frac{L}{N}$$

Channel for second dividend:
Changes in saving and capital per effective worker influence income, from labor and assets, per effective worker.

https://thailand.un.org/en/165765-nta-national-transfer-accounts

Support Ratio, % of effective number of workers/effective number of consumers (L/N)

Legend: Thailand, Philippines, Indonesia, Viet Nam, Indonesia, Fiji

The 1st demographic dividend (NTA estimates) of selected countries, percentage points of economic growth per year, 1950-2100
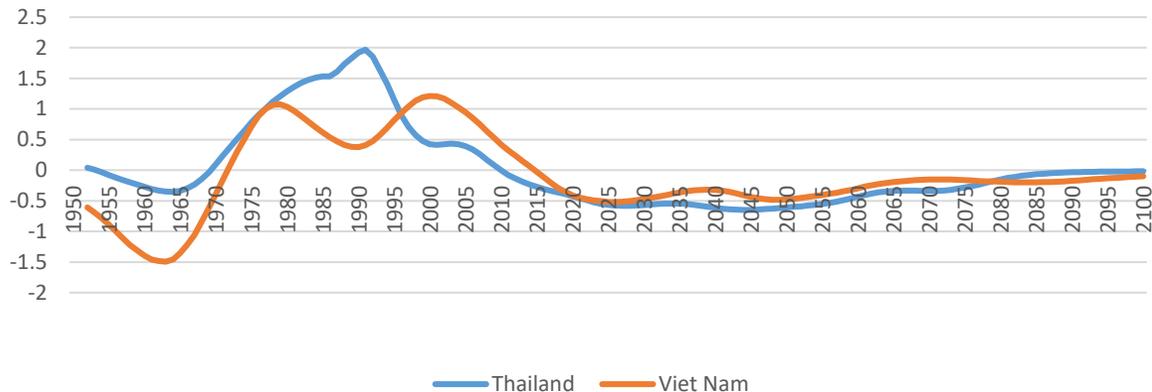
The calculation is based on the UN Population Prospects 2022 and NTA estimates of the normalized consumption and labor income profiles. The 1st dividend is calculated as the growth rate of the support ratio. Measuring the direct contribution of changes in the support ratio to economic growth.

Source: UNFPA Asia-Pacific Office, forthcoming, Demographic Dividend Atlas for Asia-Pacific
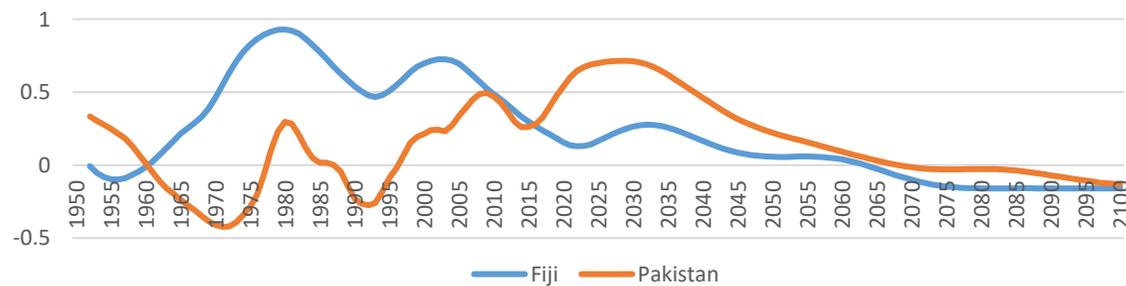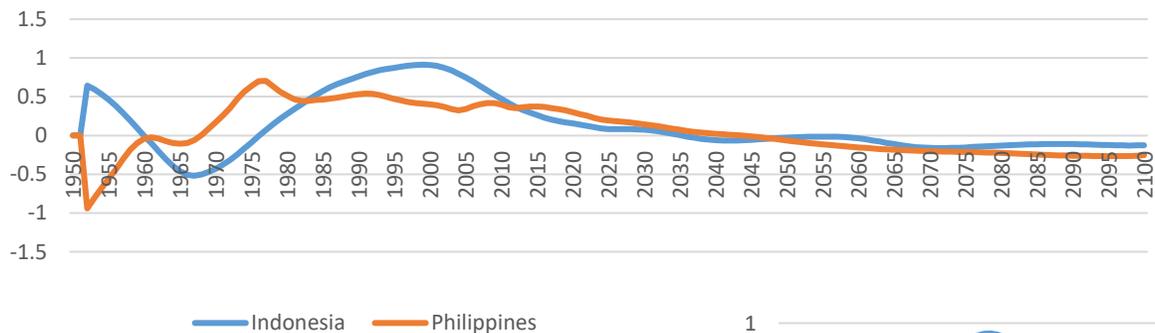
Key message 1: The government's investments in human capital development need to be accelerated to lessen the burdens on the working-age population

1st Demographic Dividend based on NTA analysis, 2023
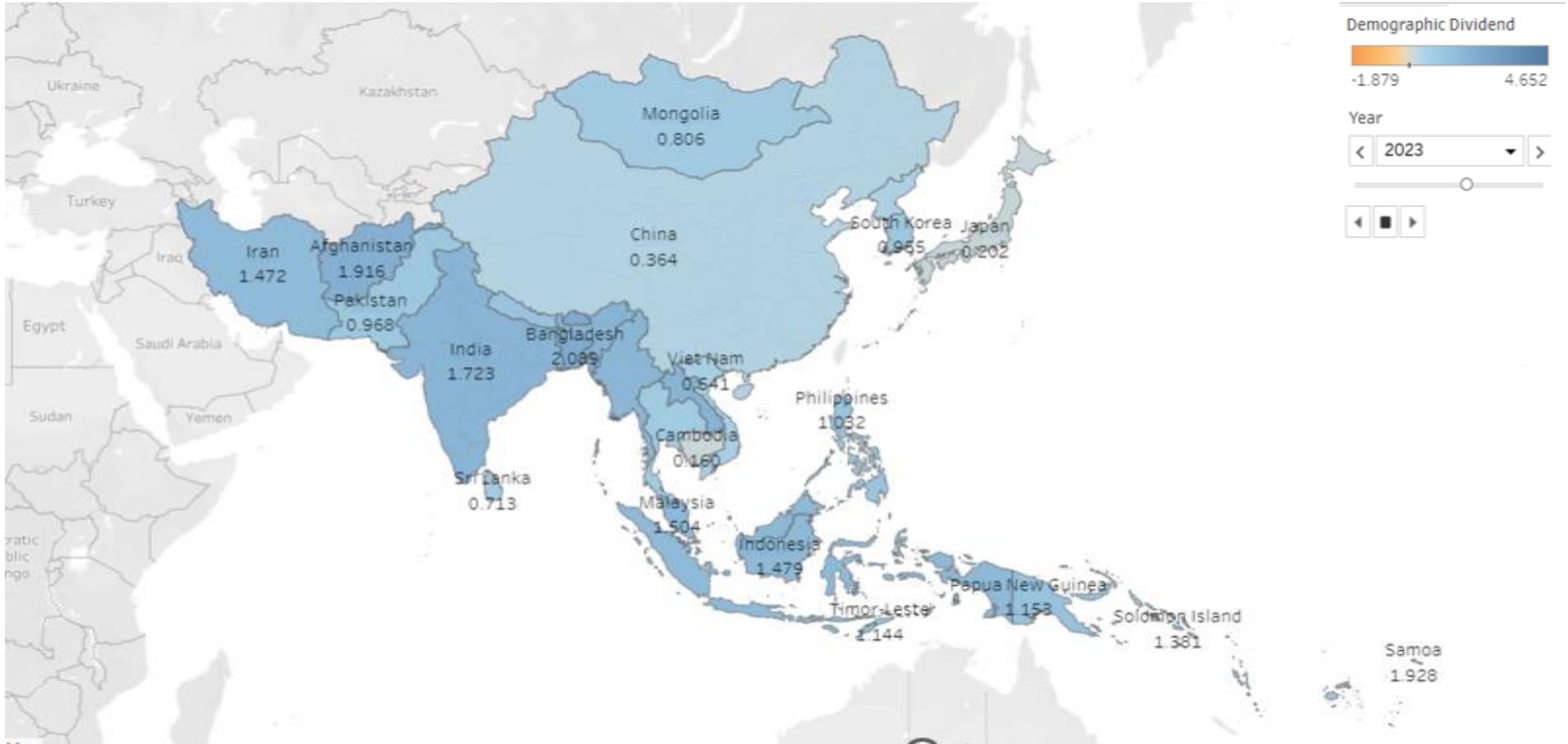
1st Demographic Dividend based on NTA analysis, 2050
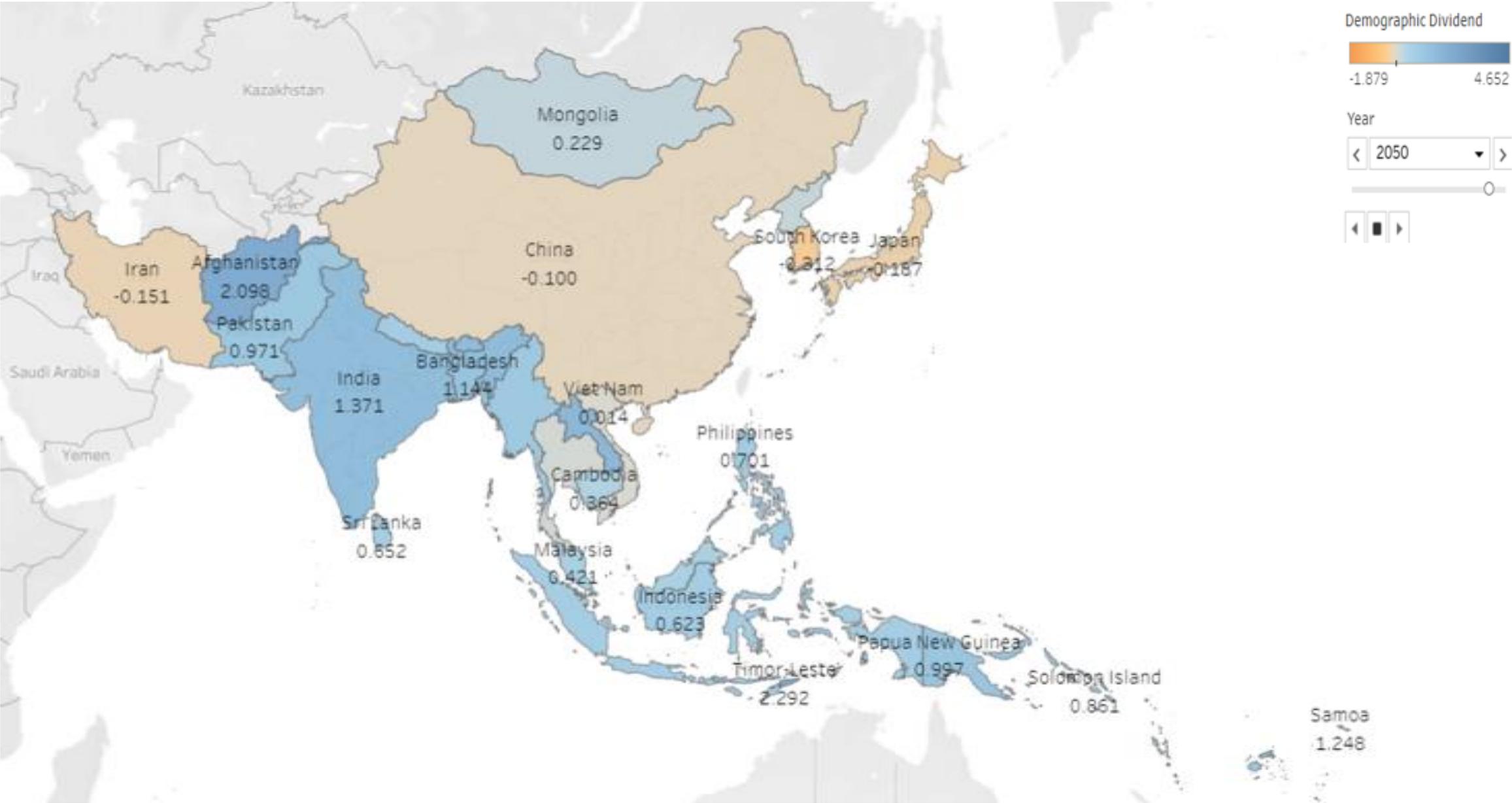
Health Spending (public transfer for 60+ years as % of labor income age 30-49 years)

Kazakhstan

Mongolia
0.52

North Korea
0.00

South Korea
3.40

Japan
13.63

Iraq

Iran
1.32

Afghanistan
0.00

China
2.23

Saudi Arabia

Pakistan
0.00

Nepal
0.12

Bhutan
0.00

Bangladesh
0.15

India
2.04

Myanmar
0.00

Viet Nam
0.29

Philippines
0.33

Yemen

No data for the Pacific

Thailand
3.89

Cambodia
0.30

Sri Lanka
0.00

Maldives
4.32

Malaysia
1.50

Indonesia
0.90

Timor-Leste
0.53

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Health Spending (private transfer for 60+ years as % of labor income age 30-49 years)

No data for the Pacific

Kazakhstan

Mongolia
1.241

North Korea
0.000

South Korea
1.063

Japan
2.614

China
1.263

Iran
1.284

Afghanistan
0.000

Pakistan
0.000

Nepal
0.450

Bhutan
0.000

Bangladesh
1.182

India
3.379

Myanma
0.000

Vietnam
1.701

Thailand
2.516

Cambodia
2.579

Philippines
0.912

Sri Lanka
0.000

Maldives
1.635

Malaysia
1.680

Indonesia
1.079

Timor-Leste
0.089

Yemen

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Key message 2: Several countries with rapid aging did not manage to have a human capital deepening through a better investment in higher education

Educational attainment, at least completed upper secondary, population 25+, female %(cumulative)

Women	Men
India: 19.4 (2011), 25 (2018), 24.9 (2020)	India: 34.2 (2011), 38.7 (2020)
China: 19.2 (2010)	China: 25.4 (2010)
Japan: 63.4 (1990), 79.1 (2010)	Japan: 68.1 (1990), 81.7 (2010)
Korea: 55.3 (2000), 70.4 (2015)	Korea:72.6 (2008), 82.7 (2005)
Singapore: 56 (2005), 63.7 (2011), 72.3 (2020)	Singapore: 63 (2005), 69.7 (2011), 77 (2020)
Philippines: 20.5% (2019)	Philippines: 27.7% (2019)
Indonesia: 22.8 (2006), 29.8 (2016), 34.6 (2020)	Indonesia: 28.4 (2006), 34.2 (2011), 41.6 (2020)
Malaysia: 26.4 (2006), 58.6 (2016), 63 (2019)	Malaysia: 51 (2009), 62.3 (2019)
Thailand: 26 (2010), 35.1 (2019)	Thailand: 23.4 (20004), 28.7 (2010), 35.4 (2019)
Fiji: 46.8% (2017)	Fiji: 42.3% (2017)
French Polynesia: 50.8% (2007)	French Polynesia: 48.4% (2007)

Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate)

PHL 46% (2022)

	< 21.44
	21.44 - 34.37
	34.37 - 47.45
	47.45 - 57.05
	> 57.05

Points
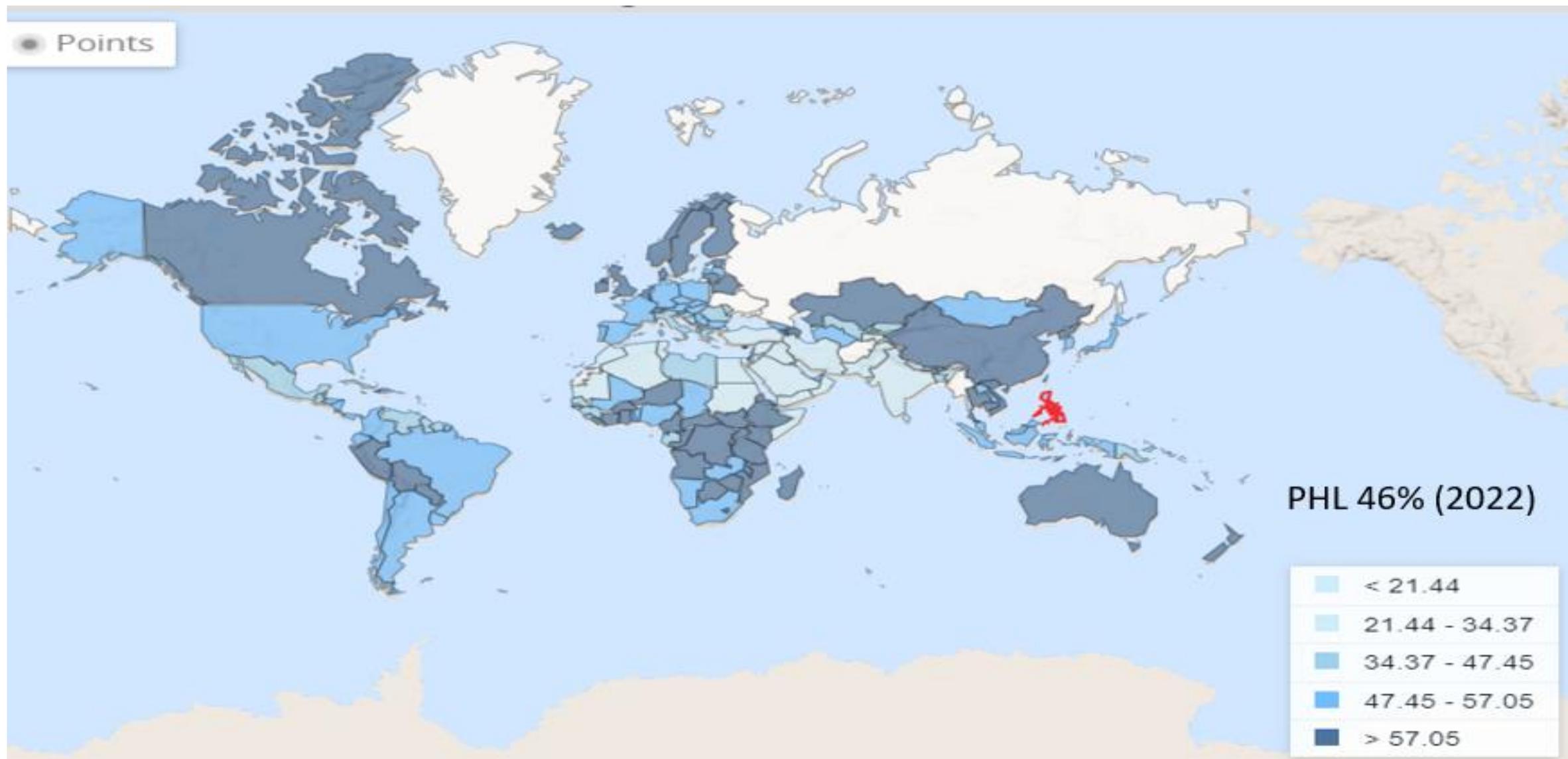
A drop in fertility leads to an increased concentration of the population at working ages, creating an opportunity for accelerated economic growth per capita, and potentially could lead to the 1st & 2nd demographic dividend if proper policies and interventions are in place

Taking a life-cycle approach to support a better generational economy

Provide better employment and support to women so they can be self-reliance

Invest in the further development of their human capital by ensuring access to health care and quality education at all ages and by promoting opportunities for productive employment and decent work

Better investment in sexual and reproductive health and gender equity including human capital deepening with skilled workforces for decent employment, especially among young people, needs to be accelerated.