

Impact of demographic change on developing Asia's economic growth and old-age income support

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Introduction

- Asia faces a number of internal structural challenges to medium and long term growth.
- Perhaps the biggest among these is a region-wide demographic transition to older populations.
- Up to now, favorable demographics played a major role in Asia's rapid growth.
 - Large working-age population, high savings rate
 - Demographic dividend is far from automatic
- However, Asia's demographic dividend is now coming to an end.

Introduction

- As in other parts of the world, demographic transition in Asia is driven by two main factors.
 - Declining fertility and rising life expectancy
 - Higher living standards and rapidly changing social conditions
- Decline in share of working-age population has negative ramifications for growth.
- Within the common region-wide trend of aging, the level and speed of aging differs a lot.
 - For example, South Asia is substantially younger than East and Southeast Asia

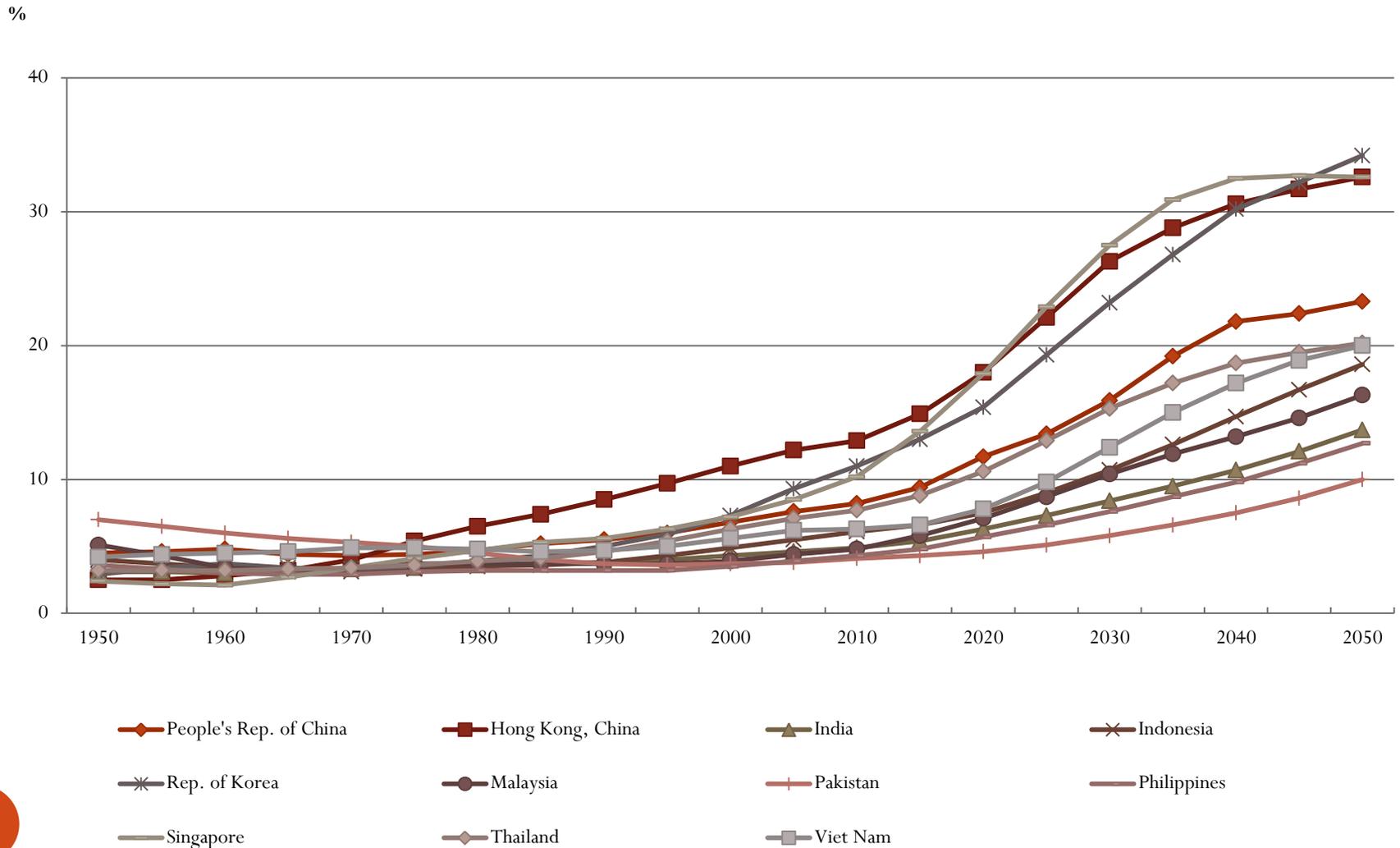
Introduction

- Our research project has two primary objectives –
 - Assess the impact of aging on Asia's growth.
 - Examine old-age income support systems in Asia, an issue of high and growing significance.
- For Asian policymakers, population aging gives rise to two major strategic policy objectives.
 - Sustain rapid economic growth in the face of aging
 - Develop socioeconomic systems which provide economic security to the region's growing elderly population

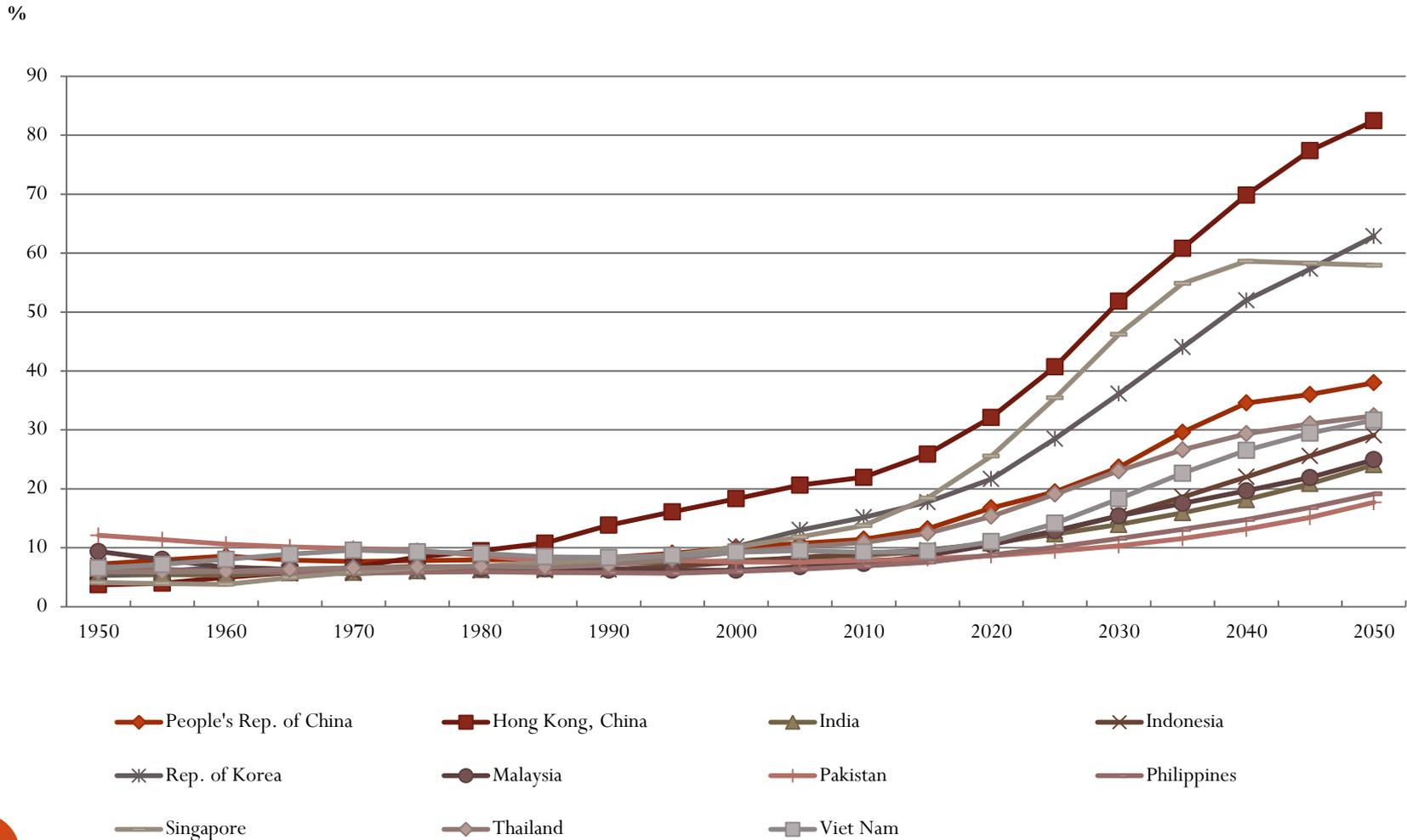
Demographic transition in Asia – key stylized facts

- One notable feature of Asia's aging is its exceptional speed → unprecedented in human history.
 - This is primarily due to a sharp fall in fertility
 - In East Asia, fertility rates have reached exceptionally low levels.
 - Rapid improvement in life expectancy is also a factor.
- Asia's aging is a natural and final outcome of the demographic transition.
 - A welcome trend but its sheer speed is cause for concern.
- Broadly three groups of countries in terms of aging
 - Advanced-aging, middle-aging and early-aging

Share of elderly in total population



Ratio of elderly to working-age population



Demographic transition in Asia – key stylized facts

- Demographic profile of 2050 may appear too remote to matter for today's economic concerns.
 - This is especially true in younger countries.
- However, today's working-age population is tomorrow's elderly.
 - Prospects of old age and retirement will influence today's behavior.
 - And, today's policies influence today's behavior.

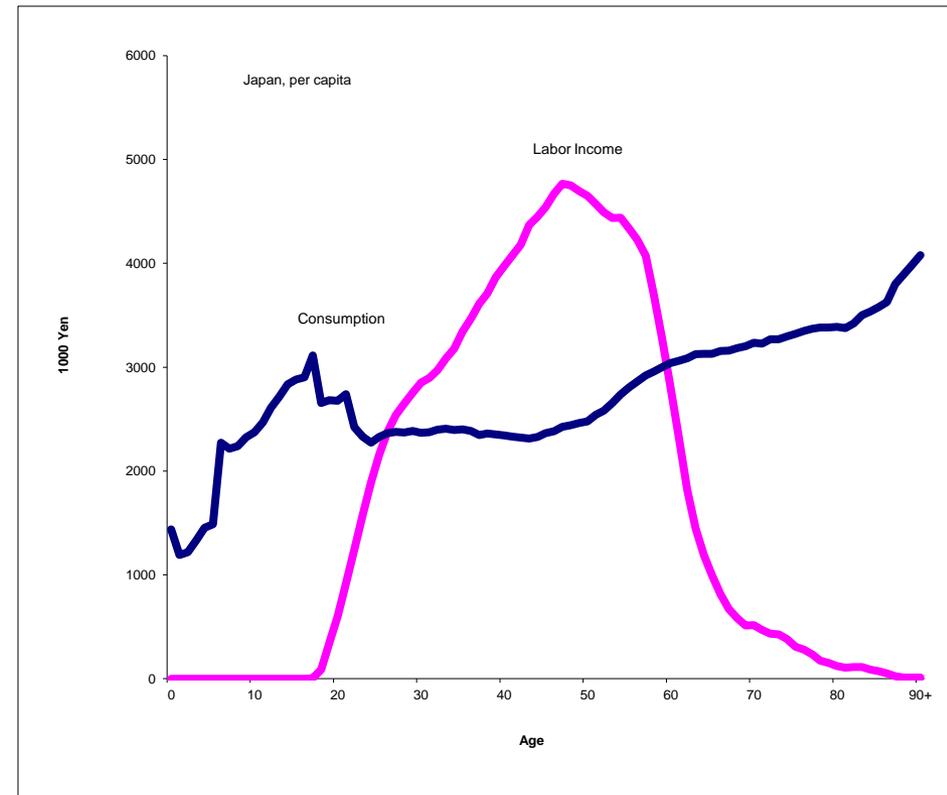
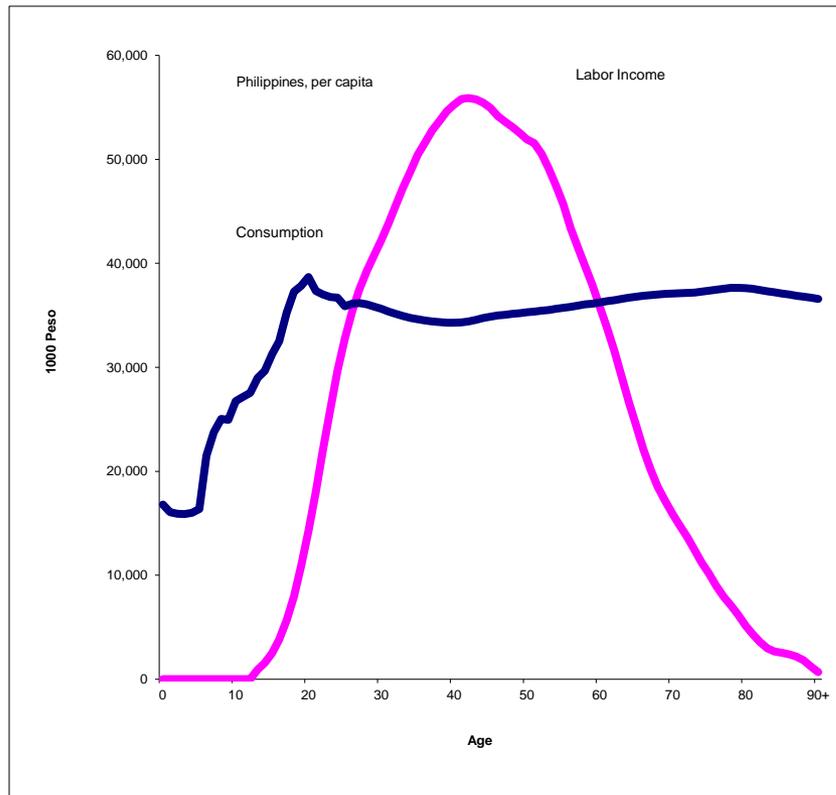
Economic lifecycle and consequences of demographic transition

- Why does age structure matter for growth?
 - Economic life cycle
 - Humans have extended periods of dependency at beginning of life and at end of life
 - In those periods, individual consumption exceeds production
 - Aggregated over individuals, implies a general deterioration of economic conditions
 - Our ability to measure the economic lifecycle has been vastly improved due to the recently developed National Transfer Accounts (NTA) ---
Lee, Mason and Lee
 - Purpose of NTA is to measure, at the aggregate level, how people at each age in the lifecycle acquire and use resources.

Economic lifecycle and consequences of demographic transition

- Why does age structure matter for growth?
 - NTA represents a significant advance in our understanding of resource allocation across ages.
 - Comprehensive measures of key variables such as production, consumption, saving and transfers by age at aggregate level
 - NTA is constructed so that it is consistent with National Income Accounts
 - NTA distinguishes between the private and public sectors

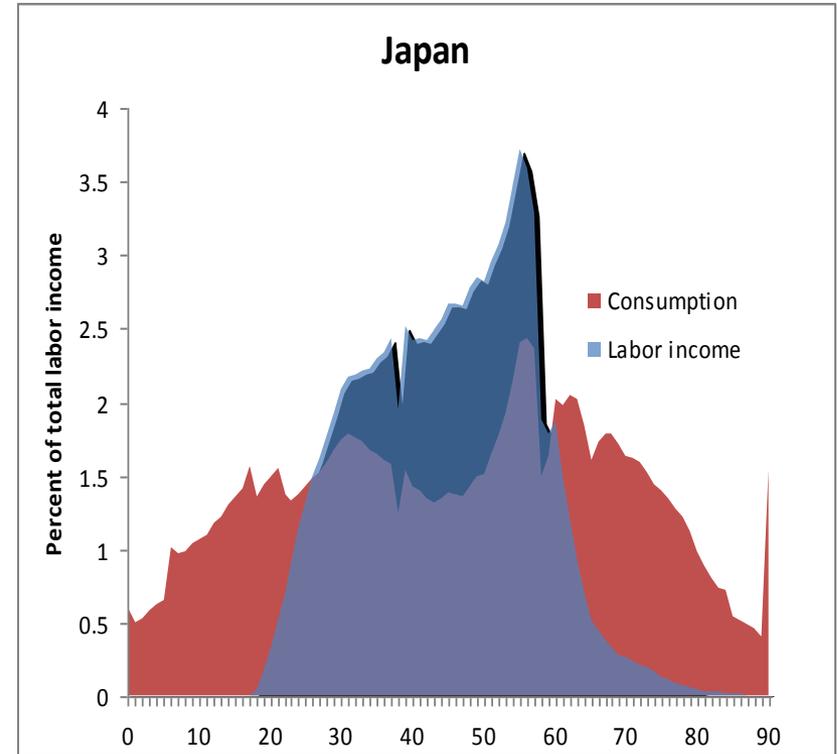
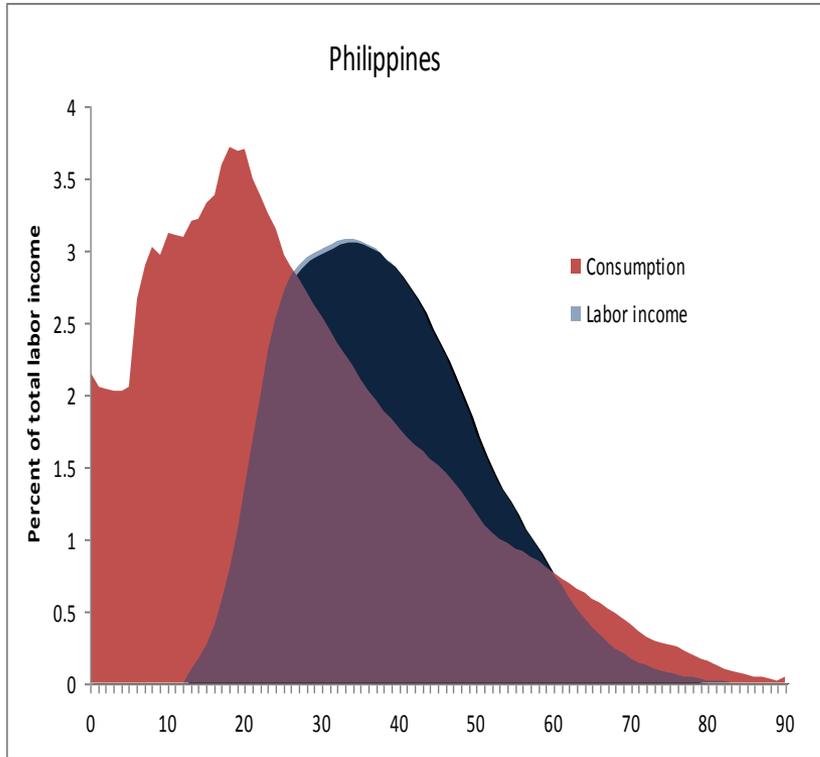
Labor income and consumption in Japan and Philippines, NTA, individual



PHILIPPINES

JAPAN

Labor income and consumption in Japan and Philippines, NTA, aggregate



PHILIPPINES

JAPAN

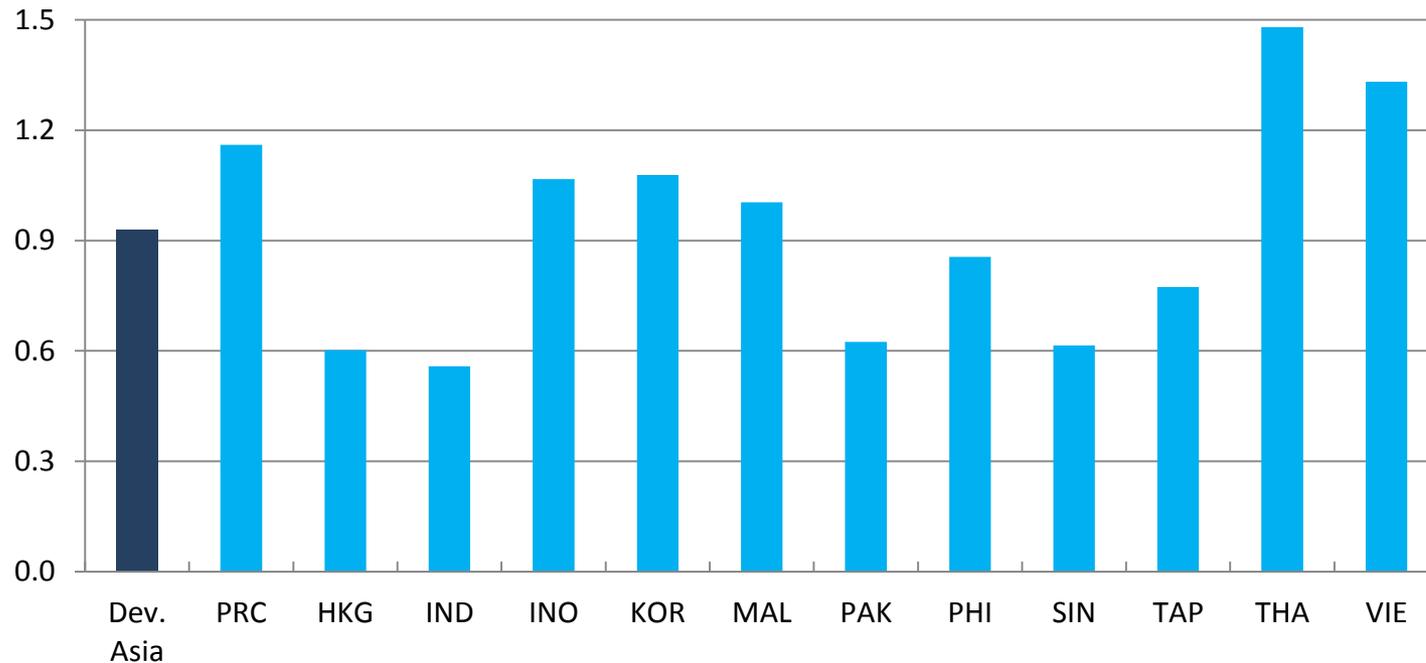
Quantitative estimates of impact of demographic change

- We use regression estimates to make backward-looking estimates and forward-looking projections about the impact of demographic change on economic growth.
- There are three channels through which demographic change affect growth – (i) per capita labor force, (ii) TFP and (iii) capital accumulation.
 - The third channel is further divided into direct impact and indirect impact through the saving rate.
 - The relationship between demographics and labor force & savings is well known.
 - Demographics can also have a direct effect on investment, as well as an effect on total factor productivity.

A young population gave Asia's growth a big boost in the past.....

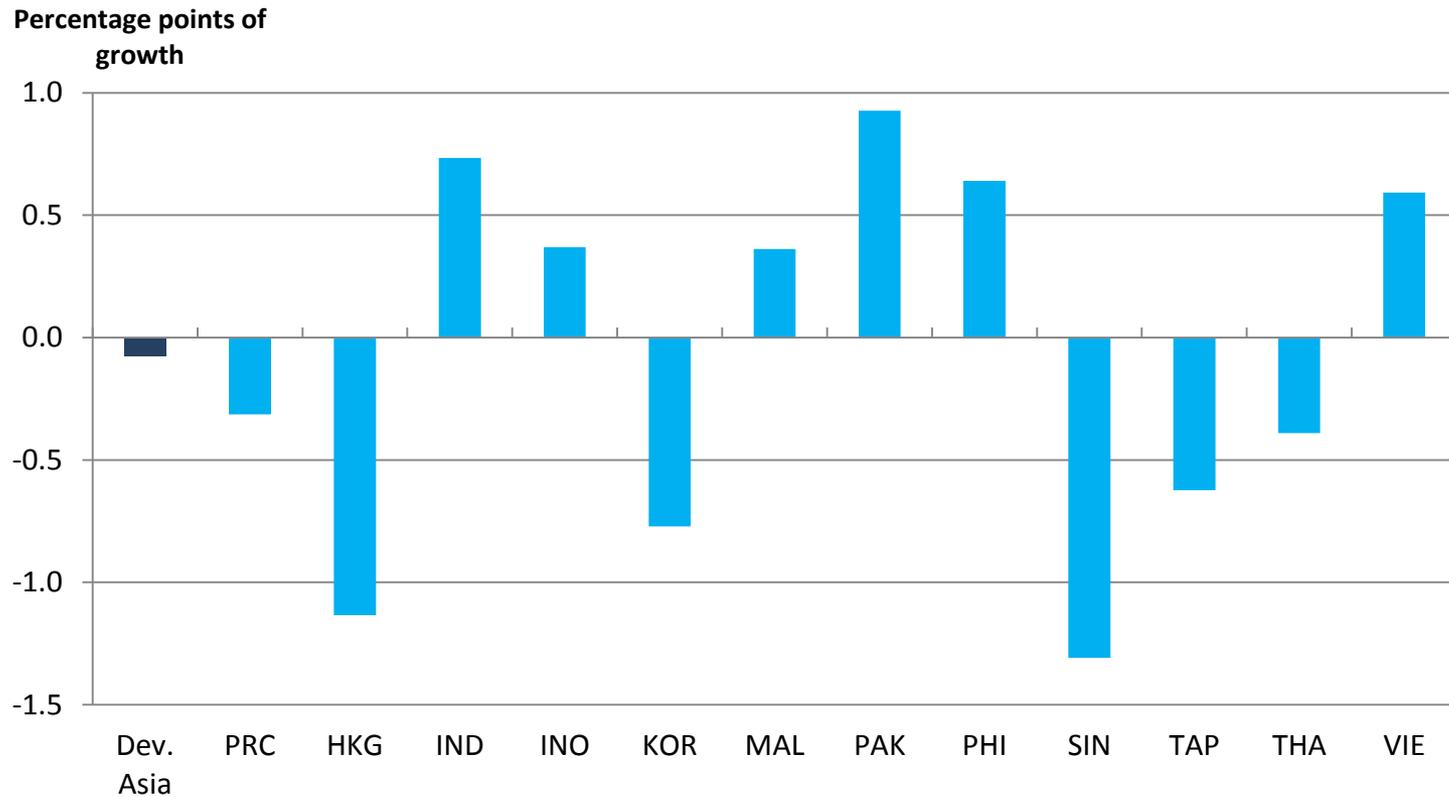
Demographic Dividends, 1980-2010

Percentage points of growth



.....but the dividend is set to decline due to rapid demographic change

Demographic Dividends, 2011-2030



Population aging and old-age income support systems

- Complex system of institutions and mechanisms reallocate resources from surplus ages to deficit ages.
- There are two basic age reallocation mechanisms.
 - Transfers --- no quid pro quo, private and public
 - Asset-based reallocations --- acquire asset in one period to finance consumption in another period
- Important contribution of NTA is to improve our ability to measure reallocation of resources to deficit ages.
 - Asset-based reallocations, or savings, are important in Asia.
 - Private family transfers remain important in some countries.
 - Public transfers are somewhat less important.

Family support is declining in Asia, but public transfers are underdeveloped

Support system for people ages 65 and above, selected economies



Policy options for sustaining growth in the face of population aging

- One strategy emphasizes investment and physical capital accumulation.
 - Link between age structure and capital accumulation depends on nature of old-age income support system.
 - If the needs of the elderly are met largely through lifecycle saving, this can give rise to “second demographic dividend”.
 - Such capital deepening can dominate the negative impact on the support ratio – i.e. ratio of workers to retirees.
- Another strategy is to scale up investment in human capital
 - But a key issue here is effectiveness of human K investment
- The two strategies are not mutually exclusive.

Pension assets relative to labor income, Asia

	Low income profiles			High income profiles		
	2010	2030	2050	2010	2030	2050
Asia-Pacific Countries	1.6	2.4	3.0	1.1	1.6	2.0
Developing Member Countries	1.2	2.1	2.7	0.8	1.4	1.8
Central and West Asia	0.9	1.3	1.9	0.6	0.9	1.3
East Asia	1.4	2.4	3.0	0.9	1.6	2.0
South Asia	0.9	1.3	2.0	0.6	0.9	1.3
Southeast Asia	1.1	1.9	2.5	0.8	1.3	1.6
Pacific Island Nations	0.7	1.0	1.4	0.5	0.7	1.0
Non-DMCs	2.9	3.7	4.4	1.9	2.5	3.0

Concluding observations

- Demographic change is perhaps the single biggest structural shift facing Asia in post-global crisis era.
- While there are differences, demographic change is a region-wide trend with region-wide ramifications.
 - Even younger countries such as India and Philippines are set to experience a substantially grayer future.
- How well Asia tackles the two aging challenges will hold the key to whether Asia can maintain its success.
 - The two sometimes come into sharp conflict

Concluding observations

- Asia must overcome a number of structural obstacles to meeting the two challenges.
 - Underdeveloped financial systems
 - Rigid labor markets
- Sheer speed and scale of Asia's demographic transition adds a sense of urgency to preparing for aging.
 - 2050 may seem distant but today's policies will influence the ability of today's workers to prepare for their retirement
 - Those policies will also determine economy's ability to sustain growth in the face of aging
 - Younger countries should make full use of their breathing space