

Social Development Working Papers

HARNESSING THE SECOND DEMOGRAPHIC DIVIDEND: POPULATION AGEING AND SOCIAL PROTECTION IN ASIA AND THE PACIFIC

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Harnessing the Second Demographic Dividend: Population Ageing and Social Protection in Asia and the Pacific

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Abstract

This paper explores key trends in population ageing in countries of Asia and the Pacific. It discusses how, through the right mix of institutional arrangements, policy initiatives and behavioural change, governments can address population ageing in order to achieve economic and social gains. The paper notes that, due to changes in the age structure, windows of opportunity might open for countries at different times. In this context, economic and social conditions linked to economic development, social protection investments and the robustness of the enabling environment for ageing well, constitute both prospects and resource constraints within each window of opportunity. The paper ends with conclusions and a series of policy recommendations aimed at managing ageing and ensuring sustained economic growth and greater social equity.

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Acronyms

| | |
|------|--|
| ADL | activities of daily living |
| FDI | foreign direct investment |
| GDP | gross domestic product |
| GNI | gross national income |
| IADL | instrumental activities of daily living |
| ICT | information and communications technology |
| LTC | long-term care |
| NCD | non-communicable disease |
| NTA | National Transfer Accounts |
| ODA | official development assistance |
| OECD | Organisation for Economic Co-operation and Development |
| SHRC | Silver Human Resource Center |

List of ESCAP subregions and respective countries with abbreviations

East and North-East Asia

China (CHN), Democratic People's Republic of Korea (PRK), Hong Kong, China (HKG), Japan (JPN), Macao, China (MAC), Mongolia (MNG), Republic of Korea (KOR)

North and Central Asia

Armenia (ARM), Azerbaijan (AZE), Georgia (GEO), Kazakhstan (KAZ), Kyrgyzstan (KGZ), Russian Federation (RUS), Tajikistan (TJK), Turkmenistan (TKM), Uzbekistan (UZB)

The Pacific

American Samoa (ASM), Australia (AUS), Cook Islands (COK), Fiji (FJI), French Polynesia (PYF), Guam (GUM), Kiribati (KIR), Marshall Islands (MHL), Federated States of Micronesia (FSM), Nauru (NRU), New Caledonia (CNL), New Zealand (NZL), Niue (NIU), Northern Mariana Islands (MNP), Palau (PLW), Papua New Guinea (PNG), Samoa (WSM), Solomon Islands (SLB), Tonga (TON), Tuvalu (TUV), Vanuatu (VUT)

South-East Asia

Brunei Darussalam (BRN), Cambodia (KHM), Indonesia (IDN), Lao People's Democratic Republic (LAO), Malaysia (MYS), Myanmar (MMR), Philippines (PHL), Singapore (SGP), Thailand (THA), Timor-Leste (TLS), Viet Nam (VNM)

South and South-West Asia

Afghanistan (AFG), Bangladesh (BGD), Bhutan (BTN), India (IND), Islamic Republic of Iran (IRN), Maldives (MDV), Nepal (NPL), Pakistan (PAK), Sri Lanka (LKA), Turkey (TUR)

I. Introduction

Asia and the Pacific are undergoing rapid population ageing, driven by falling fertility and mortality rates, coupled with rising life expectancies at birth, as described by the demographic transition.¹

The period of falling fertility rates, leading on a situation where the share of the dependent population, namely children, is falling and the share of the working-age population is increasing, is often referred to as the demographic dividend. Smaller numbers of children typically lead to larger investments per child. When the working-age population is better educated and in good health and are provided with jobs, it can translate into a “demographic dividend”, which has been realized by countries and areas in East and South-East Asia, such as Republic of Korea, Singapore, and Taiwan Province of China. This period has often been defined as the “first demographic dividend”. According to Lee and Mason (2006) a “second demographic dividend” can be realized when countries or areas further age: this requires an extension of the working age and behavioural changes when people accumulate more assets over their working-age assuming the need to dis-save in old age. These demographic dividends are not automatic but depend on the implementation of effective policies (Lee and Mason, 2006).

The share of older persons (those aged 65 years or older)² is projected to more than double over the next 35 years, reaching around one billion by 2050.³ The projected decline in economic support ratios and labour force participation rates, brought about by population ageing, pose challenges to future economic and social development, including resource use. Left unchecked, this could lead to the stifling of productive capacities and the straining of already-fragile social protection systems, with societies pressed to promote the well-being of an increasing number of older persons.

The pace of population ageing, defined as the increase in the number and share of the older population, in Asia and the Pacific is unprecedented. Countries in the region have limited time to prepare for the economic and social challenges associated with population ageing. While countries in more developed regions had up to a century to prepare for population ageing, those in the Asia-Pacific region will only have a quarter of a century, or less, to develop policy and behavioural responses. There is considerable variance, however, in the rate of population ageing among individual countries; some are still experiencing a ‘youth dividend’ (with expanding working age populations), while others are already mature, or are on the way there.

This paper explores key trends in population ageing in countries of Asia and the Pacific. It also discusses how, through the right mix of institutional arrangements, policy interventions

¹ Implying a shift from high to low levels of fertility and mortality.

² Given sources and data according to two age categories to delineate older persons – aged 60 or older and aged 65 or older – this paper also uses both categories.

³ ESCAP Online Statistical Database.

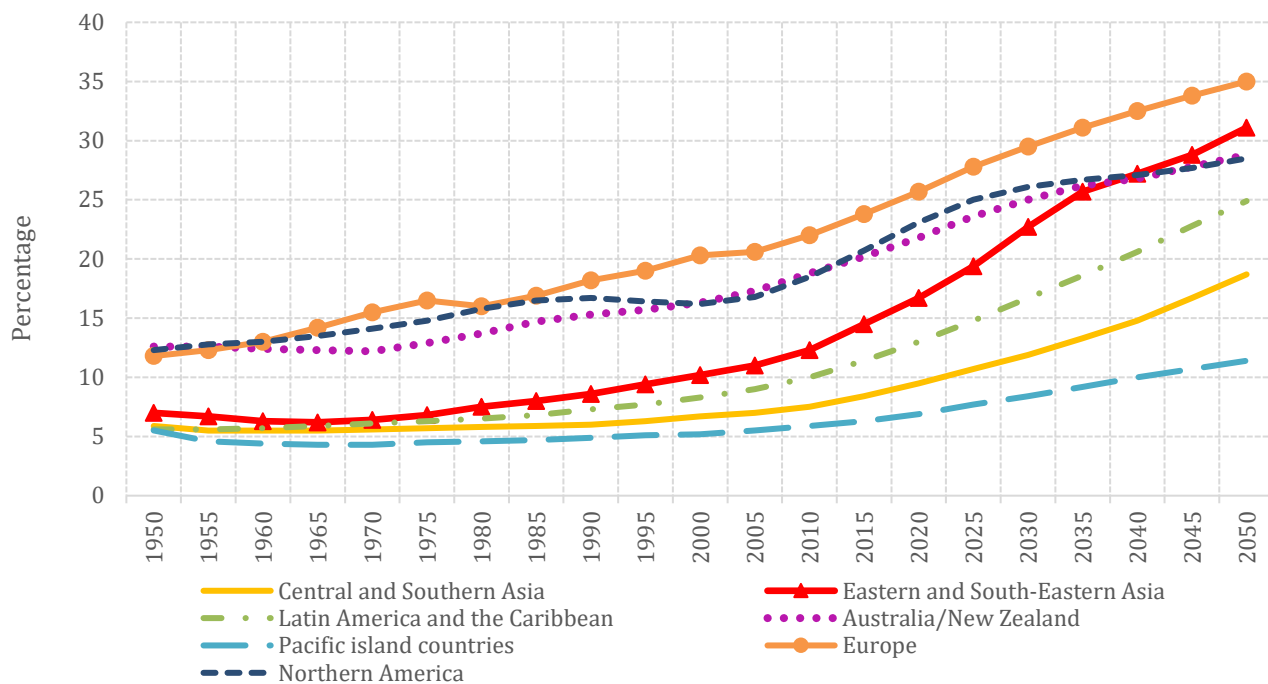
and behavioural changes, governments can utilize their specific demographic conditions to achieve sustained economic growth and greater social equity, while harnessing the 'second demographic dividend'. The paper is structured as follows: section addresses the challenges and opportunities of population ageing in the region and its implications in terms of inclusive growth and social equity; section three examines the consequences of population ageing along three dimensions: income and consumption of older persons, social protection and broader social change, while identifying corresponding policy pathways for managing population ageing; and section presents conclusions and policy recommendations focusing on harnessing the second demographic dividend to achieve inclusive growth, strengthening social protection to obtain greater intergenerational equality and enhancing enabling environments to promote active ageing in an effective manner.

II. Background on population ageing, inclusive growth and social equity

A. *Population ageing is rapidly transforming the region*

Population ageing is a megatrend in Asia and the Pacific, affecting all aspects of society. Measures of population ageing include median age, the age at which exactly half the population is older, and the other half is younger, as well as the percentage of older persons. All measures indicate that the region is ageing at a rapid pace.

In the global context, the Asia-Pacific region, as well as Latin America and the Caribbean, are ageing almost at the same speed, and faster than other regions. From 2015 to 2050, the share of persons 60 years or older is projected to more than double in the Asia-Pacific region, from 8 to 18 per cent; with different parts of the region experiencing varying changes (figure 1). Conversely, in Africa, the share of older persons will remain practically unchanged, at around 5 per cent. The number of older persons in the Asia-Pacific region is projected to reach 1.3 billion by 2050, whilst in Africa the number is projected to reach 150 million, approximately 15 per cent of the Asia-Pacific total. The vastly different demographic scenario facing Asia and the Pacific, and Africa means that their priorities will greatly differ, with Africa focusing on harnessing and protecting a youthful population, and Asia and the Pacific an ageing one.

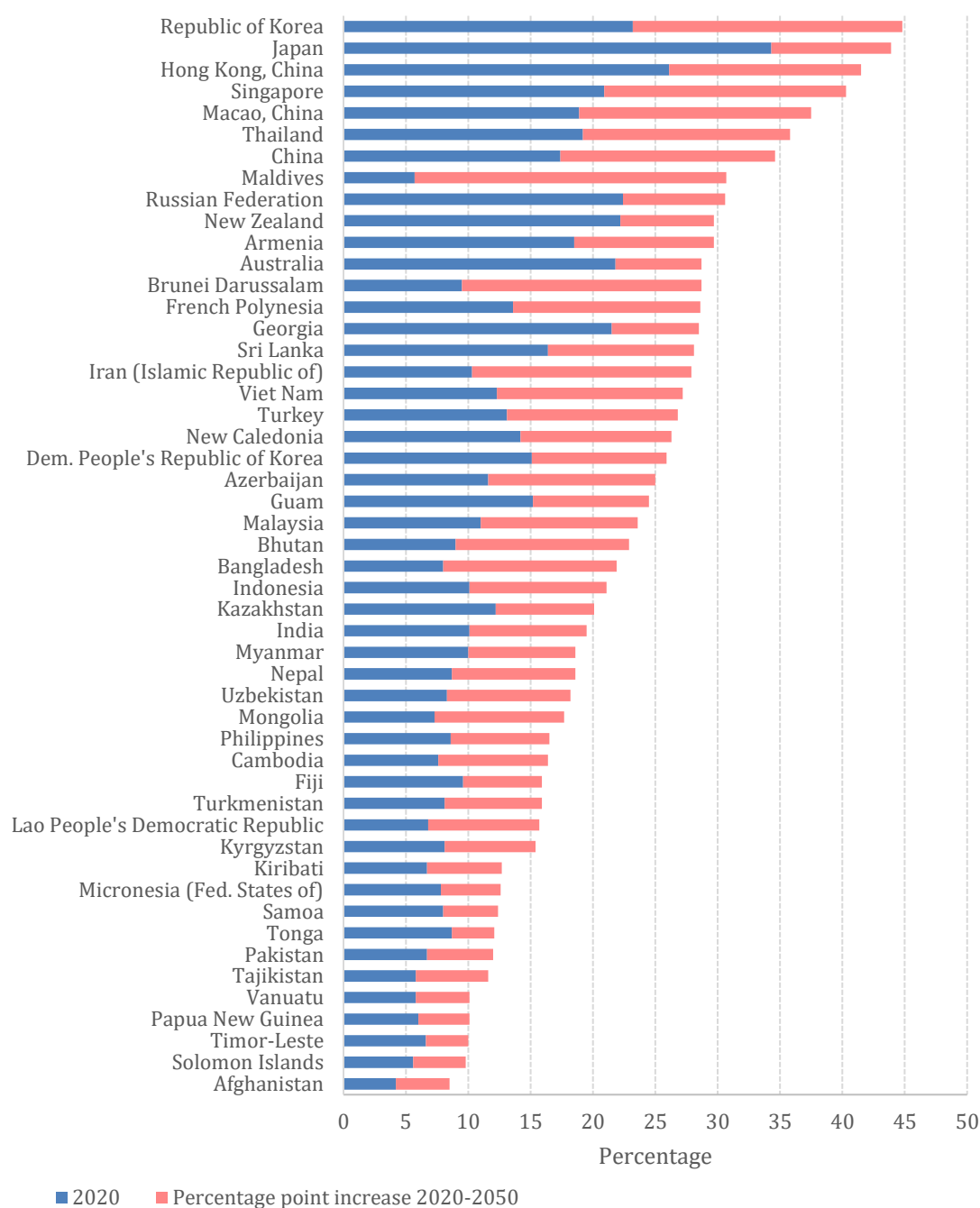
Figure 1. Share of the population aged 60 years or older by region (1950–2050)

Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019).

Note: Medium variant projection used throughout unless otherwise indicated.

More than the absolute or relative increase in the number of older persons, it is the rate in which the population of Asia and the Pacific is ageing that will prove to be the most significant challenge to the region's countries. By historical standards, the region is ageing at an unprecedented pace. In Northern America (namely, Canada and the United States of America), it took 68 years (1950–2018) for the share of the population aged 65 years or older to double from 8 to 16 per cent (Figure 1). Asia and the Pacific will experience an equivalent increase in only 27 years (2016–2043). This fast ageing rate means that countries will have less time to develop the necessary policy and behavioural responses. Country-specific data illustrate the extent of population ageing in Asia and the Pacific (figure 2). All countries will experience a substantial increase in the share of the population aged 60 years or older. Several will have close to or even over 40 per cent of their populations aged 60 years or over. The Republic of Korea will overtake Japan as the country with the highest proportion of older persons. In other countries, such as Brunei Darussalam, the Islamic Republic of Iran and Maldives, though the share of the older cohort is less in absolute terms, it is expected to triple or even quadruple by 2050.

Figure 2. Share of the persons aged 60 years or over, selected Asia-Pacific countries (2020 and 2050)

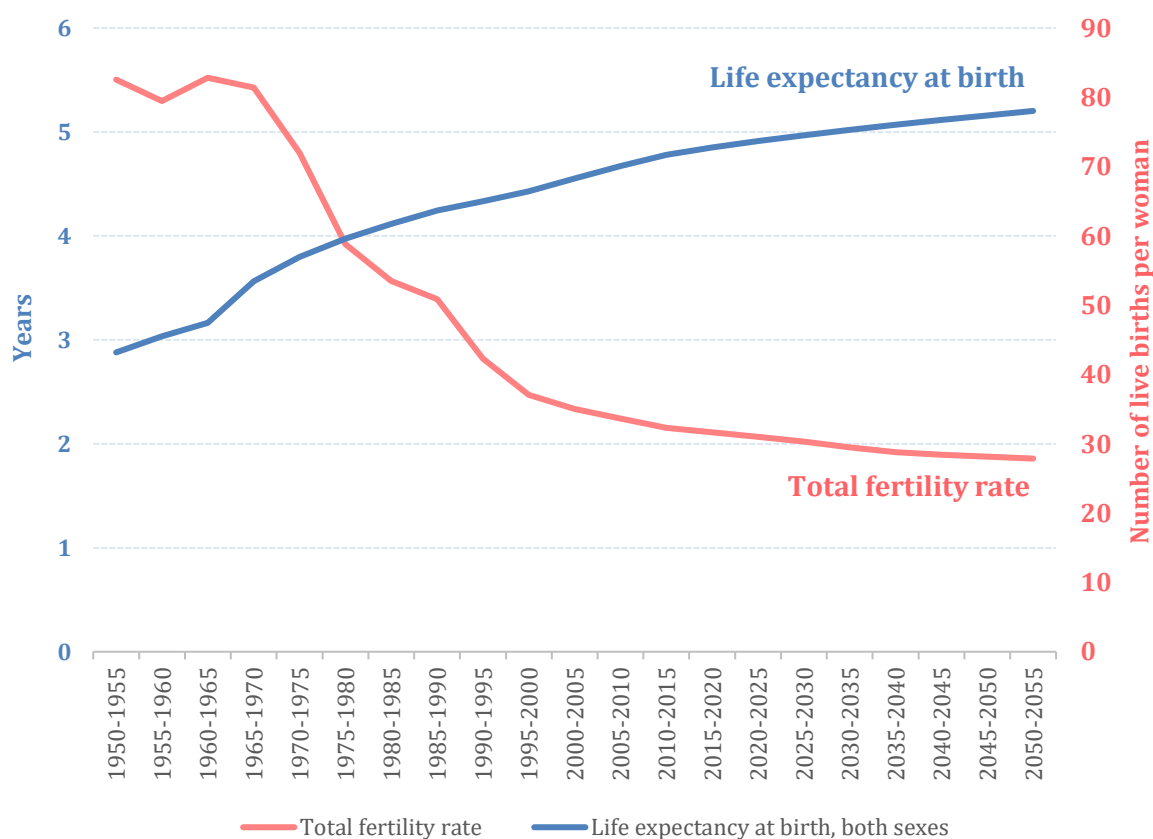


Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019).

Rapid population ageing is often seen as a point of concern; however, it is actually a cause of celebration – highlighting the triumph of development. Decades of remarkable economic growth and investments in social infrastructure (such as food security, sanitation, health care

and education), have greatly improved living standards, allowing hundreds of millions of people to live longer and better lives. The notable improvements in life expectancy at birth, combined with falling fertility rates have led to a demographic transition of young to older age structures (figure 3). In 1950, on average, a woman in Asia would have six children during her lifetime and a newly born child would live until the age of 43. A century later, the fertility rate in the region is projected to drop precipitously to around two children per woman – replacement level – and life expectancy at birth will be close to 80 years.

Figure 3. Total fertility rate and life expectancy at birth, Asia and the Pacific (1950–2050)



Source: United Nations “The 2019 Revision of World Population Prospects, specific aggregations”. Available at: <https://population.un.org/wpp/> (accessed 1 October 2019)

In addition to fertility and mortality, migration is the third variable that needs to be considered when assessing the region’s demographic transition. As migrants disproportionately come from young and prime-adult cohorts, substantial net immigration can attenuate population ageing, at least in the mid-term. Conversely, significant net emigration can accelerate this demographic dynamic. Countries such as Australia, New Zealand and Singapore would be more advanced in the ageing process without their existing policies facilitating immigration of temporary labour. Due to their ageing population structures, the Russian Federation and Thailand, for example, need migrant labour to fill certain gaps and are in the process of drafting policies to facilitate this.

B. Population ageing poses important challenges to inclusive growth and social equity

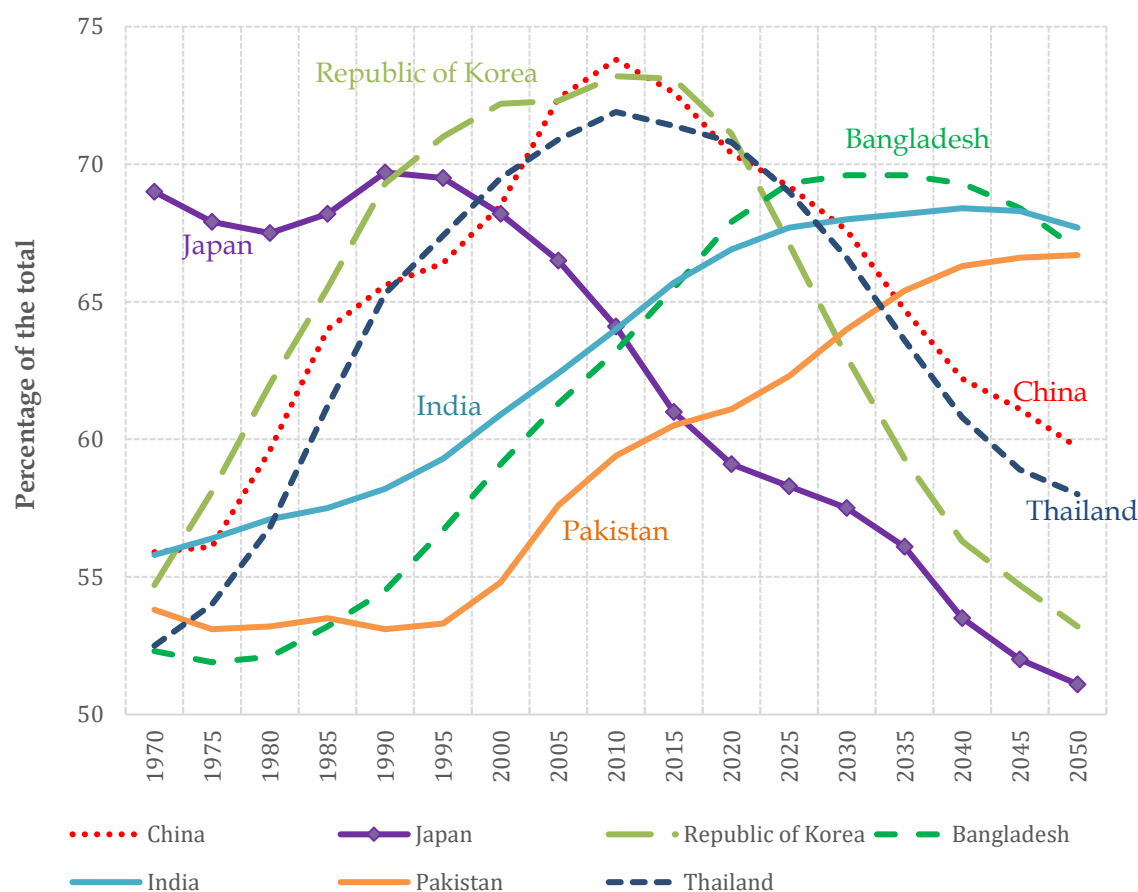
Driven by falling fertility rates and increasing life expectancy, the growing proportion of older persons in the Asia-Pacific region poses major challenges to the three dimensions of sustainable development (economic, social and environmental). This paper focuses on the economic and social dimensions. Population ageing could stifle productive capacities, straining already-fragile social protection systems and the ability of societies to promote the well-being of an increasing number of older persons.

In the absence of adequate policies, population ageing may adversely affect economic growth. This is largely due to a rise in the share of older persons causing a relative decrease in the working-age population (those aged 15–64 years). The decrease in the working-age population leads to a contraction of the supply of labour, hampering a country's productive capacities. Though population ageing will be ubiquitous in the region, not all countries face the same demographic or labour scenarios under the same resource constraints - they therefore face different demographic 'windows of opportunity'.

Figure 4 contrasts the trends in the working-age population of several countries, exemplifying the different demographic scenarios. The share of the working-age population in Bangladesh, India and Pakistan will increase during the next three decades, confirming their young age structure. In Bangladesh, the inflection point will be reached at around 2030, when nearly 70 per cent of the population will be of working age. India will reach its point approximately a decade later, in 2040. In Pakistan, the inflection point is expected significantly later. These countries are still in the position of reaping the 'first demographic dividend', though time is running out for Bangladesh.

In contrast, the share of the working-age population in China, the Republic of Korea and Thailand will decrease in the decades to come. The size of Japan's working-age population reached its peak in 1985, around the time China, the Republic of Korea, and Thailand were facing the final phase of a first demographic dividend. In the next few decades, the proportions of the working-age population for these countries are expected to drop precipitously. Closely linked to the decrease in the working-age cohort, a smaller number of working individuals will be available to support an increasing share of older persons. This is highlighted by the mean old-age support ratio for the region being projected to decrease by more than half, from nine to four, over the next 35 years.

The increase of the 'oldest-old population', namely those aged 80 years or older, will have further repercussions on economies and societies, most significantly in East and North-East Asia. In Japan, the share of the oldest-old relative to the older population is projected to increase from 23 per cent in 2015 to 35 per cent in 2050. Similarly, in the Republic of Korea, the share will rise from 14 to 34 per cent. In China, the increase will be at slightly lower levels, going from 10 to 23 per cent. In countries with a young age structure, such as Cambodia, the proportion of the oldest-old is also expected to augment significantly, moving from 7 per cent in 2015 to 13 per cent in 2050 (United Nations, 2019).

Figure 4. Share of the population aged 15–64, selected Asia-Pacific countries (1970–2050)

Source: United Nations “The 2019 Revision of World Population Prospects”. Available at: <https://population.un.org/wpp/> (accessed 1 October 2019).

An increase in the oldest-old population implies that a growing share of middle-aged persons is likely to have surviving parents and/or other very old relatives. This will have important ramifications for the provision of care. While many countries still rely on unpaid family care, mainly performed by female family members, there will be fewer younger people able to perform these duties. This situation could compromise already weak social protection systems, as greater private and public investments will be required to cover the needs of an increasingly larger ageing population. Contributory and non-contributory pension schemes and health and long-term care services will be strained. As a result, the inequalities of outcome and opportunity between older persons and working-age individuals and between the youngest and oldest-old could be perpetuated, if not exacerbated.

Protecting older persons is especially important, as they often lack access to adequate resources, services and participation. This makes them vulnerable to poverty and social exclusion, with the incidence of poverty rising with age across all regions (DESA, 2013a). Material deprivation is closely linked to income-earning capacity; in particular, the risk of falling into poverty increases with age if there is an inadequate pension system.

C. Demography is not destiny

Institutional arrangements and policy interventions need to be modified, while the right mix of behavioural changes is also required. This will allow countries in the region to take advantage of specific demographic conditions to achieve sustained economic growth and greater social equity. An analytical framework is therefore needed to understand the diversity of ageing trends and their respective consequences at the regional level, without falling captive to generalizations. At the same time, country-specific analysis is also required for national policymakers and stakeholders. The conceptual strategy applied in this paper seeks to achieve this balance between regional breadth and country-specific depth.

To frame the regional diversity, countries are classified along two axes:

Axis 1: countries are situated along the demographic transition, using median age as a proxy. A handful of countries already have substantially mature age structures; some are experiencing rapid population ageing, in the sense of having age structures that are quickly becoming mature. A third group of countries are still characterized by a predominantly youthful population. Countries in the first group are already within, or at the threshold of the second demographic window of opportunity. The second and third groups still have access to the first demographic window of opportunity. Being further along the demographic transition, countries in the second group will begin to reach the second window of opportunity in a decade or two, depending on the exact composition of their age structure. Countries in the third group will not get to the second window until mid-century.

Axis 2: countries are situated in terms of socioeconomic development, where three dimensions are used. In terms of economic development, the World Bank typology of high-income, medium-income and low-income countries is used. The relative strength of the social protection systems of countries in the region is also determined; the share of government spending invested in social protection is used as the metric. Finally, countries are classified according to enabling environment, namely the access to the broader social, cultural and political resources needed for older persons to flourish and lead meaningful and active lives. This is by far the most difficult dimension to gauge, given the subjective and qualitative elements it encompasses. The HelpAge Global AgeWatch Index serves as a proxy measure for the enabling environment.

Figure 5. Three typologies for Asia-Pacific countries facing the consequences of population ageing

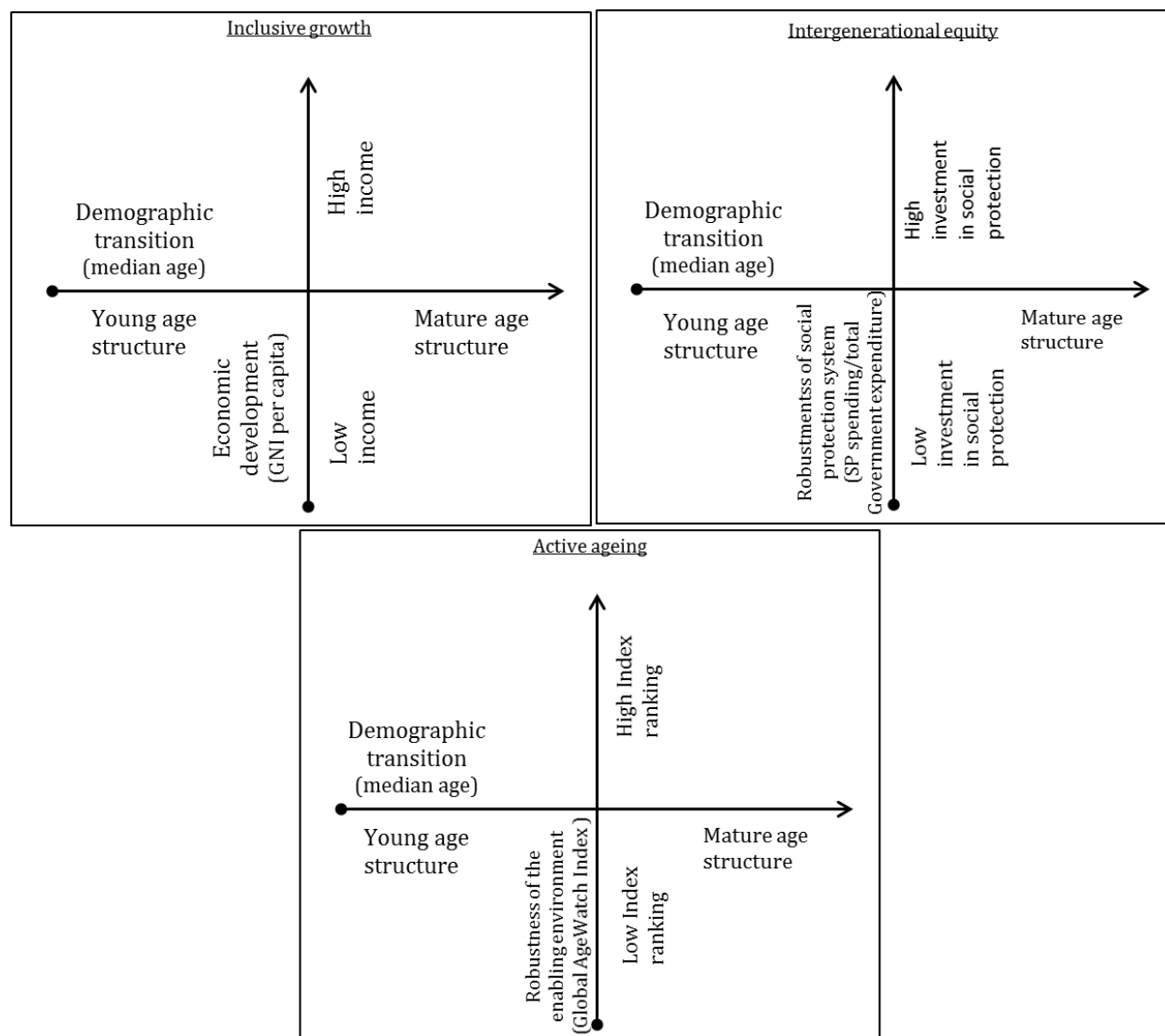


Figure 5 provides stylized renditions of the three resulting typologies that serve as useful heuristic devices for classifying Asia-Pacific countries vis-à-vis the consequences of population ageing. What exact measures are deployed to manage ageing depend on where countries are situated along the demographic transition. Age structure points to possible demographic windows of opportunity. Economic and social conditions linked to economic development, social protection investments and the robustness of the enabling environment for ageing well, constitute resource constraints within each window of opportunity.

To gain country-specific depth, countries located at different positions along the three typologies, and thus representative of the diversity of challenges in the region vis-à-vis population ageing, are analyzed in more detail. This ensures that regional heterogeneity – and specifically different age structures and levels of social and economic development – is taken into consideration.

III. Consequences of and policy pathways for managing population ageing

A. *Income and consumption of older persons*

As a population ages, the share of the working-age population shrinks, leading, most likely, to slower labour force growth. This affects the economy, including the slowing of gross domestic product (GDP) growth, higher financial obligations of the working-age population in supporting the older generations and increasing pressure on fiscal sustainability and adequacy of health-care and pension systems. Standard economic growth models project that slower population growth leads to rising output and wages per worker. The question is whether this higher output per worker translates into higher per capita income. This depends on whether the higher output offsets the increased number of dependents (children and older persons) per worker as the population ages. To investigate these questions, this section examines economic activities by age, using the National Transfer Account (NTA) methodology, the measure of how much individuals consume, work and save in each age group (United Nations, 2013). By understanding the productivity and consumption pattern of individuals, the effects of population ageing on economic growth are assessed, in a situation where the number of workers declines relative to the number of consumers. This is discussed by an analysis of the demographic dividends in the Asia-Pacific region.

Firstly, this section describes a matrix assessing countries on their income per capita and ageing stages. It then examines patterns of individual consumption, productivity, and transfer and savings systems in selected countries where data are more accessible. Finally, demographic dividends are discussed.

(a). Countries in higher income groups tend to have more mature population age structures

Although population ageing is ubiquitous in the region, countries are in different stages of the demographic transition. The exact impact that a rapidly ageing population has on the productive capacities of a country, and what exact measures can be deployed to foster inclusive growth, depends on where the country is situated along the demographic transition. Age structure points to possible windows of opportunity. The level of social and economic development, in turn, constitutes resource constraints within each window. To gain a broad regional overview of the relationship between age structure and economic development, figure 6 plots median age and gross national income (GNI) per capita for 47 countries or areas in the region for which data are available.

In this section, countries with a median age greater than or equal to 35 years are considered to have a mature age structure and are classified as 'ageing or aged'. Those with a median age greater than or equal to 25 years and less than 35 years are considered to be in transition from a young to a mature age structure and thus are classified as 'moving to ageing'. Countries that have a median age less than 25 years are considered to have a youthful age structure and are classified as 'young'. In terms of economic development, the World Bank typology updated in 2018 is used. Countries with a GNI per capita greater than or equal to

US\$12,055 are classified as 'high income'.⁴ Countries with a GNI per capita less than US\$12,055 and greater than or equal to US\$996 are classified as 'middle income', while countries with GNI per capita of US\$995 or less are classified as 'low income'. The result is a nine-quadrant typology. Two quadrants remain empty: the lowest on the right and the top one on the left. Empty quadrants evoke the role of the demographic transition as a determinant of economic development: No young country is a high-income country; and no ageing or aged country is a low-income country.

Countries with higher standards of living also tend to have more mature age structures, while younger countries tend to be less affluent. For example, with a median age of 46.3 years, Japan is the oldest country in the Asia-Pacific region; it is also among the wealthiest, with a GNI per capita of US\$34,224. Conversely, with a median age of 17.3 years, Afghanistan is the youngest country in Asia and the Pacific. With a GNI per capita of US\$610, it is also the poorest country in the region.

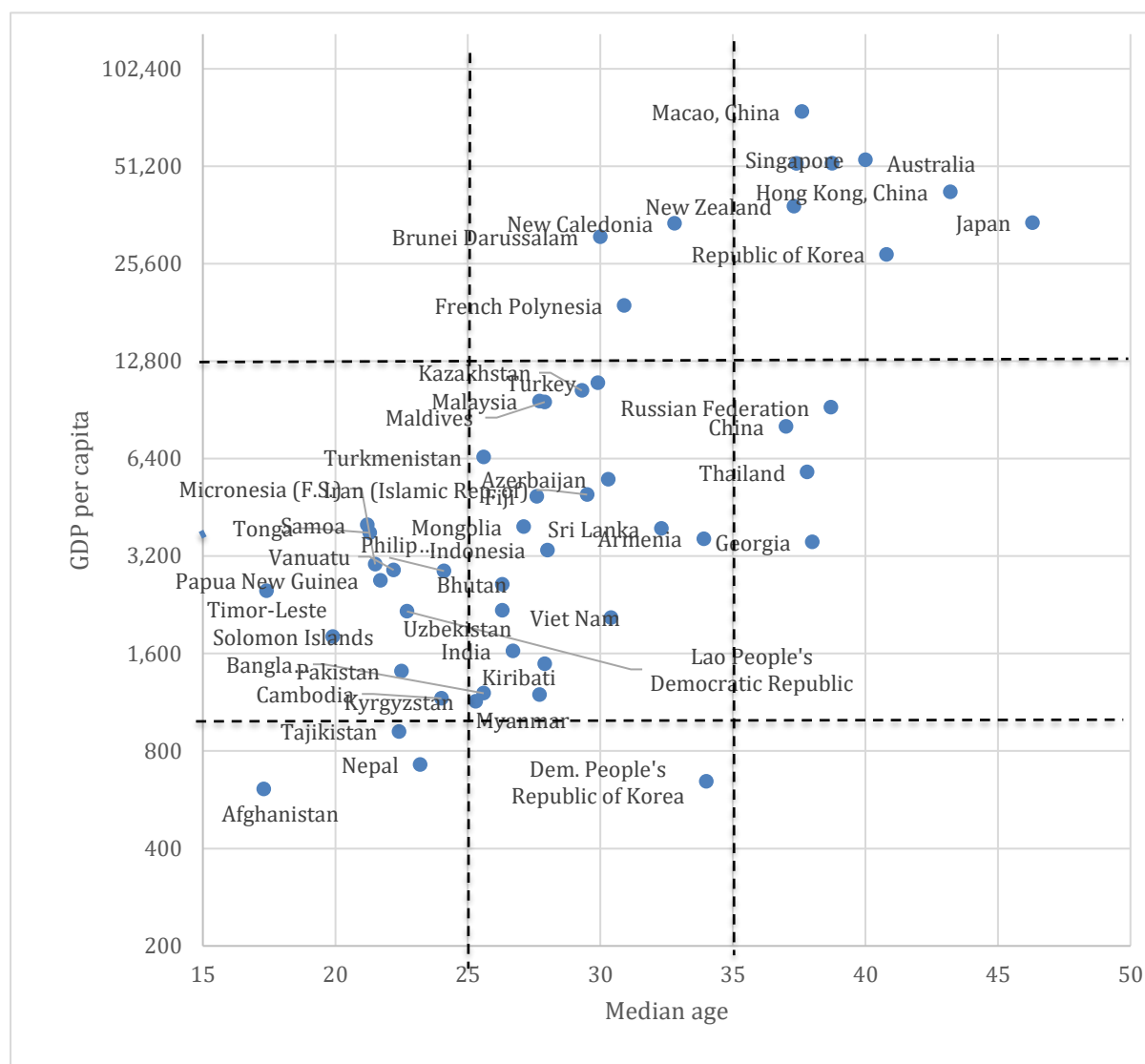
Seven countries or areas occupy the upper-right - 'old-and-high-income' - quadrant, half of which are from East and North-East Asia. Not surprisingly, included among them are the region's four Organisation for Economic Co-operation and Development (OECD) members - namely, Australia, Japan, Republic of Korea and New Zealand.

Three countries occupy the bottom-left - 'young-and-low-income' - quadrant: Afghanistan, Nepal and Tajikistan. The protracted domestic unrest which Afghanistan has faced for decades has significantly affected development. Promoting peace and stability, while investing in education and creating jobs for young people will help countries in the young-and-low-income quadrant harness the first demographic dividend.

Four countries occupy the middle-right - 'ageing-and-middle-income' - quadrant: China, Georgia, the Russian Federation and Thailand. Given the downward pressure on economic growth caused by their mature age structures, these countries are particularly susceptible to the 'middle-income trap' - a situation in which countries lose their competitive advantage resulting from relatively low wages and a large labour force. These countries may become old before getting rich, unless urgent policy measures are taken.

Most countries in the Asia-Pacific region are in the group of middle-income countries and either young or moving to ageing. The majority of the ones that are young are in the Pacific, which face very particular development challenges resulting from their specific situation as Small Island Developing States. Other countries in this category are Cambodia, Lao People's Democratic Republic, Pakistan and the Philippines. The latter group is in a favourable situation, where the first demographic dividend can be reaped.

⁴ All references to dollars (\$) in this report are to United States dollars, unless otherwise indicated.

Figure 6. Median age and GNI per capita, selected Asia-Pacific countries (2015)

Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019) and ESCAP "Statistical Online Database Version 1.6.3). Available at: http://data.unescap.org/escap_stat/ (Accessed 1 October 2019).

Note: The median age for Samoa and Tuvalu are for 2014 and taken from the CIA World Factbook. Throughout this paper GNI per capita is based on the World Bank Atlas method (current US dollars).

The quadrant in the middle hosts a variety of countries ranging from Bangladesh and Kyrgyzstan, with a median age of 25.6 years and per-capita income of US\$1,206, to Turkey, with a median age of 29.9 years and per-capita income of US\$10,985. These countries are in the most favourable demographic and economic situation; they can still harness the remainder of the first demographic dividend and invest in preparing for an ageing population.

Kazakhstan, Malaysia, Maldives and Turkey are all upper middle-income countries with a median age between 25 and 30 years, which puts them in a very favourable demographic situation. Azerbaijan, Armenia, Sri Lanka and Viet Nam already have a median age of 30 years or over but feature a per capita income of less than US\$6,400. They also risk to be aged before

they are rich. Countries such as Bangladesh, Bhutan, Fiji, India, Indonesia, Kiribati, Kyrgyzstan, Mongolia, Myanmar and Uzbekistan are lower middle-income countries with a median age of over 25, but below 30 years. Due to their relatively younger age structure, they are in a relatively more favourable demographic situation. They need to make use of the remaining time to harness the demographic dividend before they age.

(b). Old-age consumption is mostly stable or decreasing by age

This section focuses on six countries, representing different subregions and demographic scenarios: India, Indonesia, Japan, the Philippines, the Republic of Korea and Thailand. Japan and the Republic of Korea are 'old-and-high-income' countries; Thailand is an 'old-and-medium-income' country; India and Indonesia are 'moving-to-ageing-and-middle-income' countries; and the Philippines is a 'young-and-middle-income' country.

When appropriate, and given data availability, these countries are compared with other countries in the region to broaden the frame of reference. Moreover, to explore economic activities, namely how older persons consume, work and save in the Asia-Pacific region, the approach and findings of the NTA initiative, a global research programme on the economic lifecycle spearheaded by Ronald Lee and Andrew Mason, is used (Lee and Mascon (eds.), 2011).

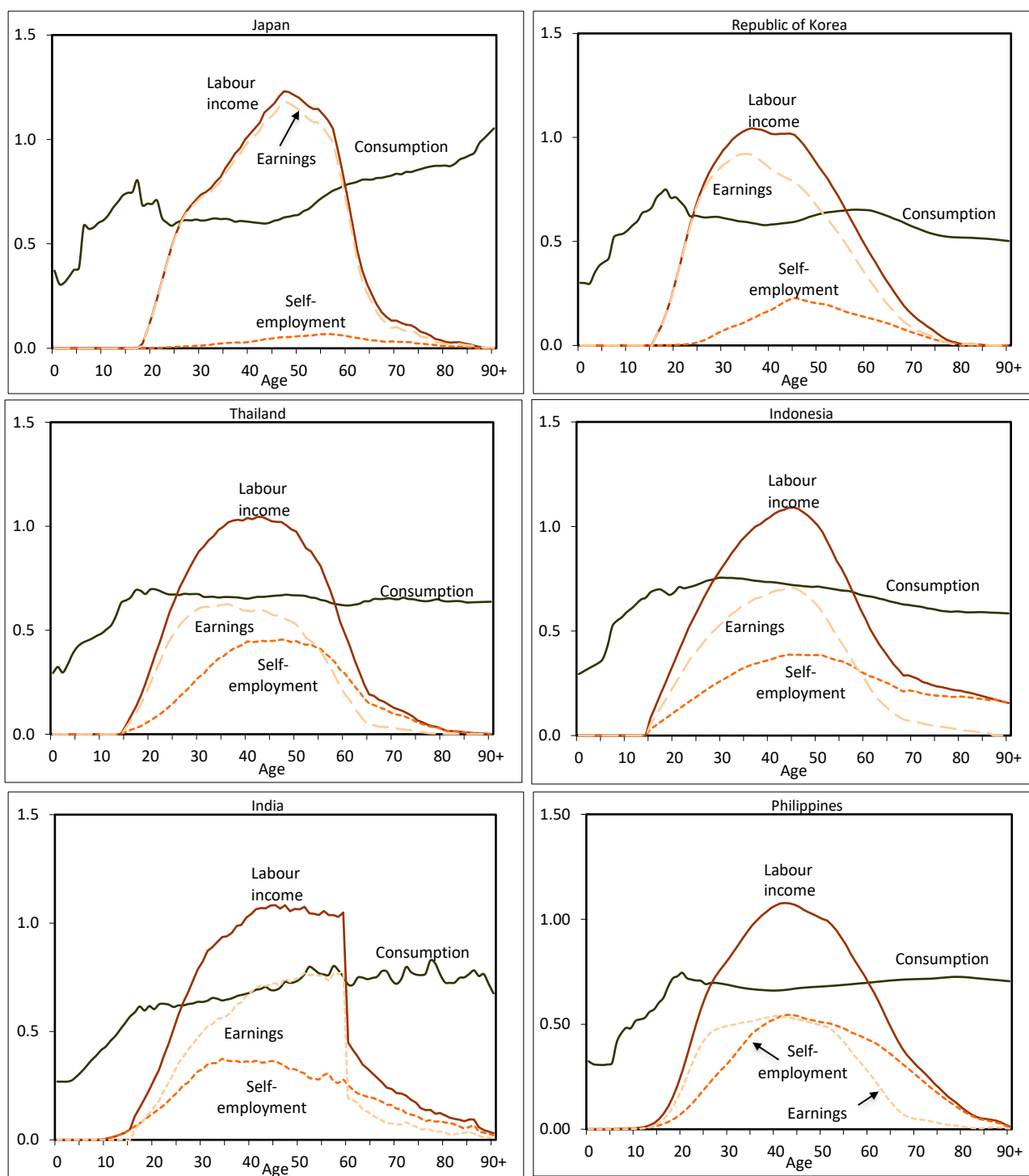
The NTA framework provides a robust account of how changes in age structure affect economic performance, and specifically the mechanisms in and through which the two demographic dividends take form. The NTA framework posits that:

"[a]lthough age structure variables have predictive power and can 'explain' (in the statistical sense) a significant portion of economic growth, the relationship between demographic variables and the economy is not deterministic. Rather, the economic outcome from demographic change is policy dependent" (Mason, 2007: 82).

As such, the NTA project offers useful analytical insights into an array of public policy issues related to demographic ageing, including the development of intergenerational transfer systems, the public financing of pensions, health care and education; labour market dynamics; and the role of social institutions, such as kinship structures.

Figure 7 provides the age-specific consumption and labour income profiles for the aforementioned six countries. On the consumption side, Japan has a hump in consumption that peaks at around 17 years of age – reflecting relatively higher investments in secondary and tertiary education. Consumption slightly decreases until around 21 years of age, and gradually starts to rise throughout the prime-age adult years, increasing at a higher rate from around 65 years of age. As discussed below, this steep increase in consumption in old age reflects greater investments in health care that, in high-income countries, tend to rise significantly during old age (Lee and Mason, 2011). For the Republic of Korea, there is also a hump in consumption peaking at about 18 years, which similarly reflects investments in tertiary education. However, unlike Japan, consumption gradually decreases throughout old age; this trend is also reflected in Indonesia.

Figure 7. Per capita consumption and labour income by age relative to age 30–49 (normalized)



Source: Ogawa et al. (2012); Phananimamai (2011); Ladusingh and Narayana (2011); Racelis and Salas (2011); An et al. (2011); and Maliki (2011).

In Thailand and the Philippines, consumption remains more or less constant throughout the life course, after reaching its maximum level at about 17 years of age. In India, consumption also peaks early in life, at around 17 years, but then increases slightly throughout the working years and old age, dropping sharply at around 80 years.

On the labour income side, there are two apparent differences between Japan and the Republic of Korea, and also between India, Indonesia, the Philippines and Thailand. These could be attributed to their different stages of economic development. The first difference is that in Japan and the Republic of Korea per capita labour income begins to increase at around age 18, which coincides more or less with the completion of secondary education. In Indonesia, Thailand, India and the Philippines, per capita labour income starts to increase at around age 15 in the case of the first two, and age 12 in the case of the latter two. This suggests that, in this group of lower-income countries, a larger percentage of youth are working.

The second difference has to do with labour income in old age. In all six countries, labour income begins to fall precipitously at around 60 years of age. However, in Japan and the Republic of Korea, the decline is much more significant, while in India, Indonesia, the Philippines and Thailand labour income remains relatively elevated through old age, with Indonesia having the most elevated level. This implies that in these four countries, a larger proportion of older persons work. Such a situation is consistent with the different levels of economic and social development of each of these countries. In Japan the incentive to work is lower, given the country's robust pension system and health-care services in old age. This is also the case in the Republic of Korea, albeit to a lesser degree. As for India, Indonesia, the Philippines and Thailand, due to relatively weak redistributive mechanisms, there is a greater need to work in old age. This same logic also holds when comparing India, the Philippines and Thailand, where in the lower-income country – the Philippines – labour income is higher from about 65 to 90 years of age. Given its level of economic development, again, Indonesia is the exception among the four middle-income countries, as labour income is higher from 70 to 90 years than in India and the Philippines.

Figure 7 also disaggregates labour income into its two components: earnings and self-employment labour income. Earnings include all wages and salaries of individuals who work in the formal sector as well as employee benefits, while self-employment labour income comprises all own-account and unpaid family workers, including employment in the agricultural sector. Self-employment labour income serves as a proxy for vulnerable employment.

In many countries of Asia and the Pacific, high levels of vulnerable or informal employment hinder the ability to tackle the economic challenges of population ageing, due to hampering growth and development. Low levels of productivity and labour standards and the underutilization of a country's labour force imply that its full growth-potential is not being realized. Moreover, vulnerable or informal employment is characterized by a lack of income security in the event of unemployment, sickness, disability or work-related injury. Often excluded from more secure work opportunities, youth and older persons have little choice but to accept informal low-quality jobs. Further, the inability of large proportions of the labour

force to earn a safe and decent living limits the capacity to accumulate savings, leading to a lower level of capital available for investment, which further hinders development (ESCAP, 2013).

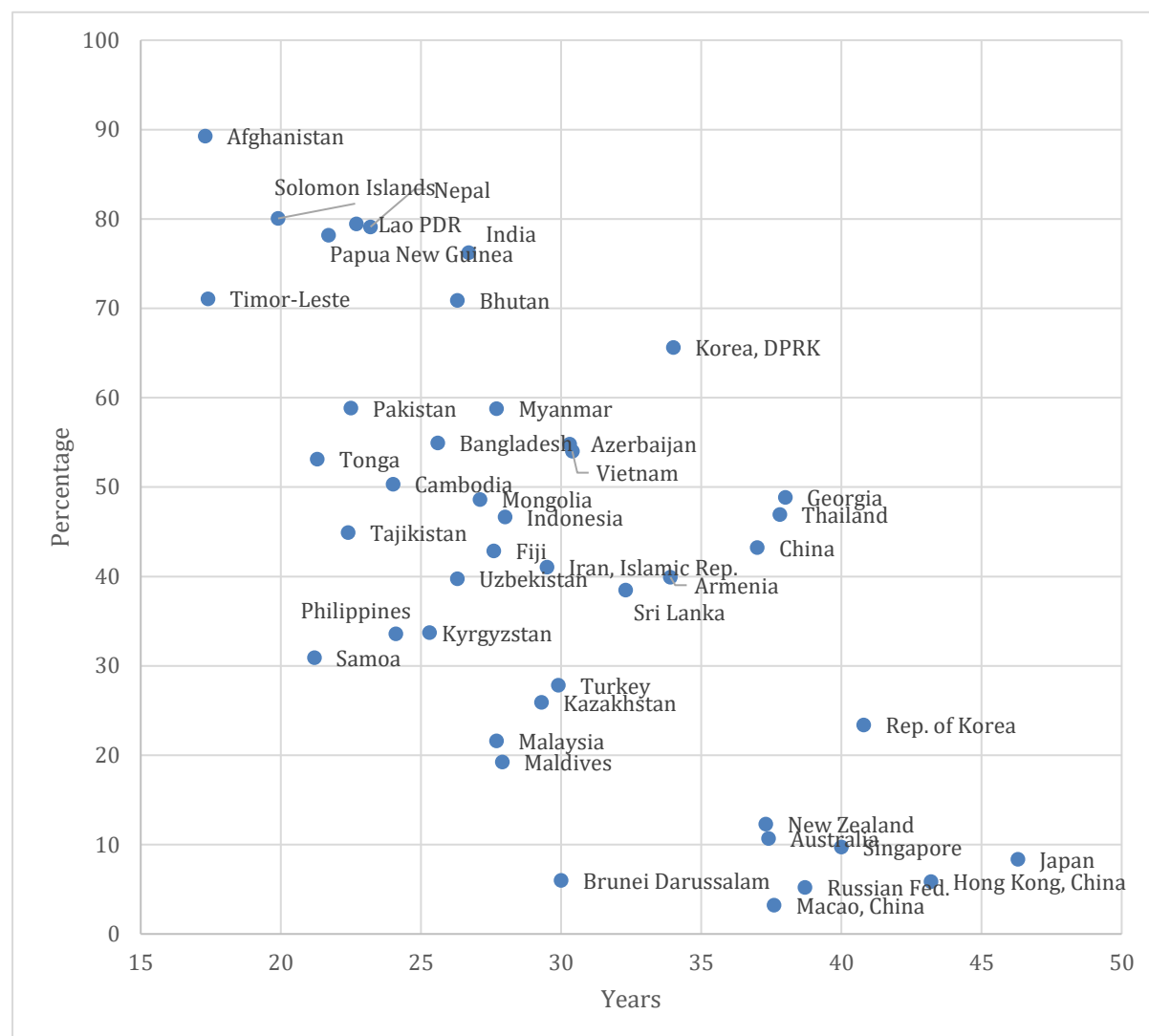
Figure 8 provides estimates of vulnerable employment⁵ as a percentage of total employment for 35 Asia-Pacific countries for which data are available. The countries are grouped according to the demographic categories used in figure 6. Young countries have the highest share of vulnerable employment. At close to 42 per cent, the Philippines has one of the lowest shares of vulnerable employment in this cluster of countries, just slightly below the ESCAP mean of 43 per cent. At the other end of the demographic transition, the old countries for the most part have a relatively small share of workers in vulnerable employment, the exception being Georgia and Thailand, two of the oldest middle-income countries in the region. These two countries face a difficult predicament given their relatively mature age structures.

The Republic of Korea has one of the highest shares of vulnerable employment among the high-income countries, at 23 per cent, whilst Japan has a relatively low share at 8 per cent. Georgia and Thailand also have, with 38 per cent, relatively high shares of vulnerable employment among the rapidly ageing countries.

Consistent with this regional sketch, figure 8 reveals important observations concerning vulnerable employment in the context of the economic lifecycle of the six countries being considered more closely in this section. Self-employment labour income is negligible for Japan and relatively important in the Republic of Korea, while it constitutes a significant portion of total labour income in India, Indonesia, India, the Philippines and Thailand. This reflects the respective levels of economic development of these four countries and is also consistent with the indicators of vulnerable employment that were previously presented.

⁵ Vulnerable employment is defined as the sum of the employment status groups of own-account workers and contributing family workers. Own-account workers are those workers who, working on their own account or with one or more partners, hold the type of jobs defined as self-employment jobs (that is, remuneration is directly dependent upon the profits derived from the goods and services produced), and have not engaged on a continuous basis any employees to work for them during the reference period. Contributing family workers, also known as unpaid family workers, are those workers who are self-employed, as own-account workers in a market-oriented establishment operated by a related person living in the same household (Millennium Development Goals Indicators, Goal 1, Target 1.B, Indicator 1.7).

Figure 8. Vulnerable employment as a percentage of total employment (2019) and median age (2015), selected Asia-Pacific countries



Source: World Bank "World Development Indicators". Available at: <https://databank.worldbank.org/source/world-development-indicators> (accessed 18 November 2019) and United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019).

(c). The two demographic dividends provide opportunities to achieve sustained growth

Sustained fertility declines across Asia and the Pacific have led to increases in the share of working-age populations. That has boosted economic growth, while sharp declines in the share of dependent children has freed up resources for investment in economic development and family welfare. Such a phenomenon is described as the 'first demographic dividend'. As populations age, the large working-age cohorts that produced the demographic dividend in the past decades grow old. The number of workers relative to the number of consumers therefore shrinks, with continued low fertility, eventually diminishing economic growth. Although population ageing poses economic challenges, a study by Lee and Mason (2011) proposed that an additional contribution to economic growth beyond the period of the first dividend, termed the 'second demographic dividend', could be generated when low fertility

and rising longevity lead to an increase in human capital and physical investment, which in turn raises labour productivity and income per capita.

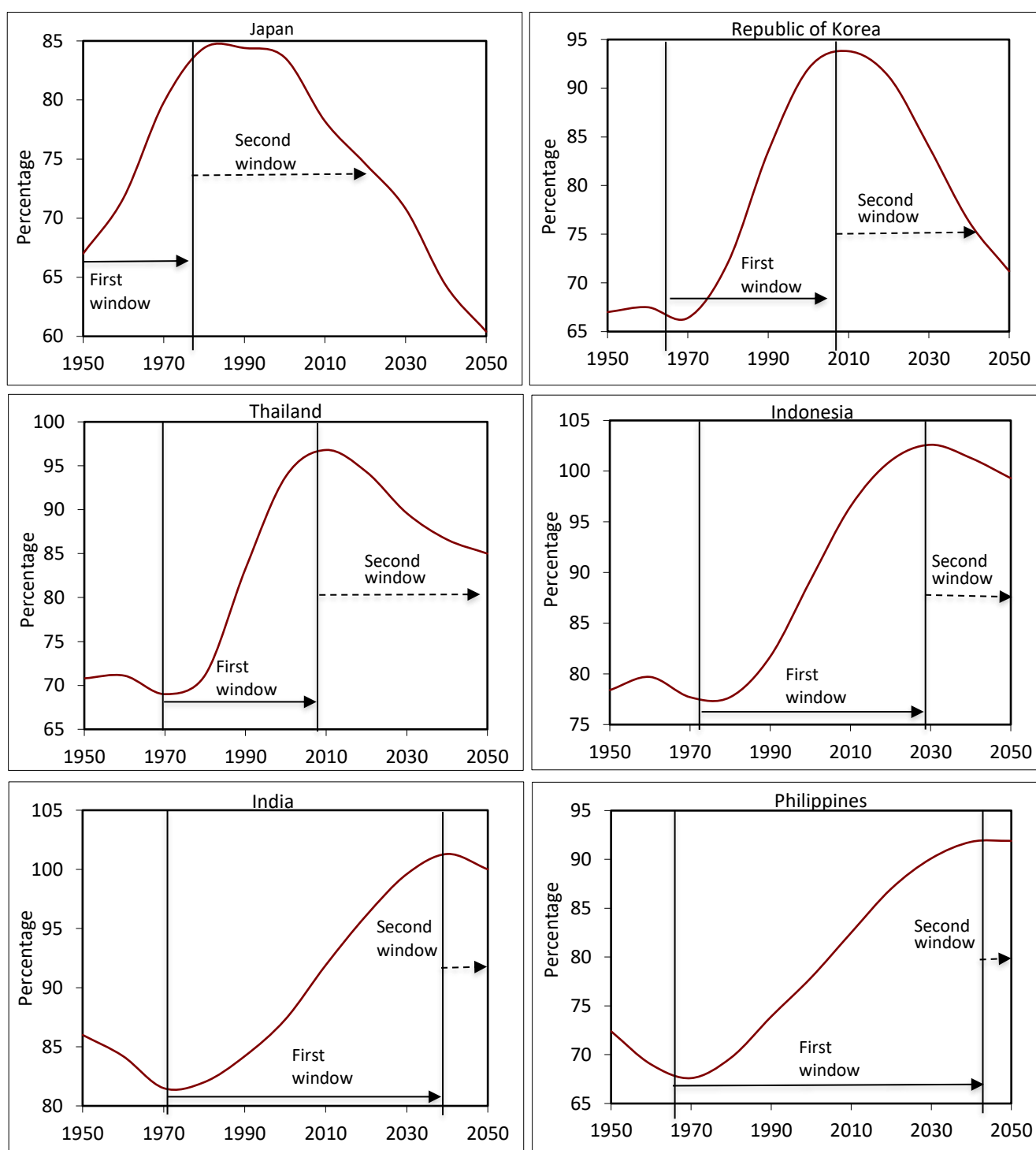
To better understand the economic impacts of the two demographic dividends, a closer look at the economic support ratio is needed. The NTA definition of the economic support ratio is the number of effective producers per effective consumer determined by the population age distribution and the age profiles of per capita consumption and labor income (DESA, 2013b; Lee and Mason, 2011). An intuitive interpretation of this 'economic support ratio' is that:

"...it measures the effect on consumption of changes in population age structure while holding constant other factors – work effort, interest rates, assets, saving, and net transfers from the rest of the world. Each percentage-point increase in the support ratio allows a percentage-point increase in consumption at every age, all other things being equal" (Lee and Mason, 2011:13).

Although the first demographic dividend can be expressed quantitatively as the increase in the economic support ratio, the second demographic dividend cannot. While the decreasing support ratio that is associated with population ageing points to a reduction in consumption, the falling ratio only elucidates the window of opportunity for a second demographic dividend. The actual longevity dividend takes form in and through second-order effects linked to behavioural modification, structural economic change, adjustment of institutional arrangements, and the like. Indeed, "[t]he second demographic dividend does not have a clear demarcation. It depends on how resources generated by the first demographic dividend are used – invested to enhance development prospects or exclusively to raise current consumption" (DESA, 2013b: 12).

Figure 9 tracks the economic support ratios for India, Indonesia, Japan, the Philippines, the Republic of Korea and Thailand from 1950 to 2050. It also delineates for each of these countries the phases during which the first and second demographic dividends are, in principle, accessible. Following the definition of the economic support ratio and consistent with the exercise of delineating dividend phases by tracking changes in the share of the working-age population, the first dividend is accessible during those years in which the economic support ratio increases. By contrast, for the second dividend, its corresponding window of opportunity begins to form once the economic support ratio starts to increase at a decreasing rate or begins to decrease all together.

Figure 9. Economic support ratios for selected Asia-Pacific countries (1950–2050)



Source: Ogawa et al. (2012); Phananimamai (2011); Ladusingh and Narayana (2011); Racelis and Salas (2011); An et al. (2011); and Maliki (2011)

Oriented by the economic support ratio, the demographic predicaments faced by the six countries examined are as follows:

The first window of opportunity closed for Japan in the early 1980s. By the 1990s, after a decade with the support ratio practically constant, the country had entered the second window of opportunity. As already suggested, Japan is relatively well-poised to harness the second demographic dividend on account of its level of economic development and robust reallocation mechanisms.

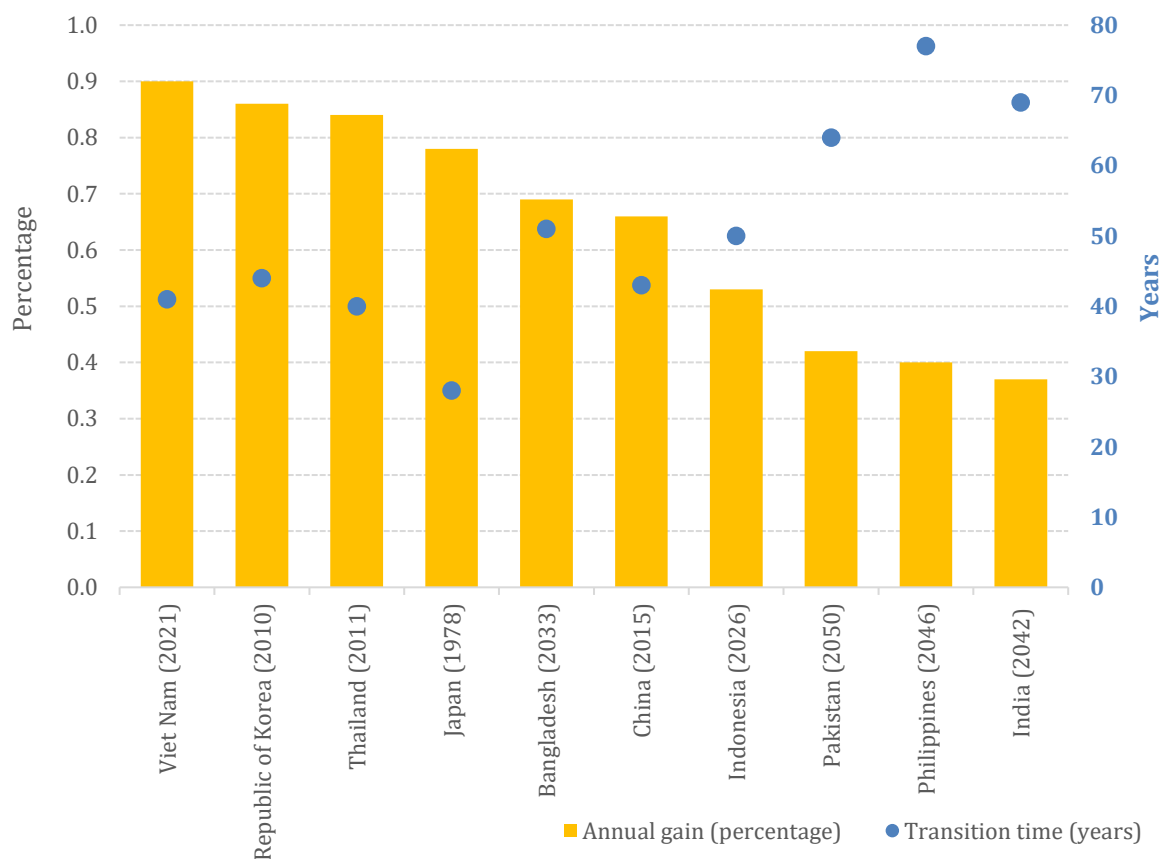
Thailand's first dividend phase began in the early 1970s and came to an end during the first decade of this century. The country is currently entering the second dividend phase, which it will have access to until 2050.

The sequence of the two windows of opportunity is very similar in India and the Philippines. Both have had access to the first demographic dividend since the early 1970s. They are projected to continue to do so until 2035 and by 2040 enter the second dividend phase. India and the Philippines will need to negotiate two sets of priorities. Firstly, tapping the youth dividend through investments in secondary and tertiary education, enhancement of the scientific and technological base, initiatives to smoothen the school-to-work transition and the creation of productive and decent work for hundreds of millions of youth and prime-age individuals. Secondly, laying the foundations for sustaining high standards of living and meeting the lifecycle needs of an increasing number of older persons before a more mature age structure sets in. Essential to this transition from the first to the second dividend, is facilitating capital deepening through increases in lifecycle savings. As suggested, "[a] common misunderstanding is that young countries can postpone addressing aging issues, but nothing could be further from the truth" (Lee and Mason, 2011: 26-27).

Initially motivated by an attempt to gain greater insight into the demographic determinants of Asian economic dynamism, a body of literature focusing on the analysis of the first demographic dividend in the region emerged. The evidence suggests that the demographic dividend associated with population growth has been significant across Asia and the Pacific (Mason and Lee, 2011). Figure 10 summarizes NTA estimates of the economic gains associated with the first dividend for selected countries in the region.

During the 28 years (1950-1978) of the first dividend phase in Japan, the rise in the economic support ratio led to a total increase in consumption per effective consumer of around 25 per cent, or about three-quarters of a percentage point per year. In Thailand, consumption per effective consumer increased a total of 40 per cent during the four decades that marked its first dividend phase (1971-2011). This is around four fifths of a percentage point per year. As for India, the country is projected to experience a total gain in consumption per effective consumer of 29 per cent throughout the 69 years that the first dividend phase is expected to last. This represents less than half of a percentage point per year. The first dividend is expected to last seven decades in the Philippines, with the country projected to gain a total increase in consumption per effective consumer of 36 per cent. As with India, this comes to less than half a percentage point per year.

Figure 10. Annual percentage gain in support ratio and time between minimum and maximum support ratio, selected Asia-Pacific countries



Source: Mason and Lee (2011: 14). The year after the country names indicates when the support ratio reaches its maximum and when the window of opportunity for the first demographic dividend ends.

The transitory nature of the first demographic dividend, therefore, stems from the fact that economic gains are achieved largely through increasing the quantity of labour, which is reflected in rising support ratios and increasing consumption per capita. On the other hand, the second demographic dividend is anchored in productivity growth that stems, in part, from improvements in the quality of labour as well as capital deepening.

(d). Stocktaking

The second demographic dividend results from an increase in adult longevity, which causes individuals to save more in preparation for old age. This increase in savings can thus contribute to capital accumulation and economic growth. This dividend is not automatic, but depends on a broad set of institutional, policy and behavioural adjustments to population ageing. These counters the downward pressure associated with falling support ratios and declining consumption per capita that ensue once the first window of opportunity begins to close. The adjustments involve all social institutions, including the family, private sector, markets and government. If the second demographic dividend is to be aligned with inclusive growth, the adjustments need to balance fostering sustainable economic growth with

achieving greater intergenerational equity. These two dimensions of inclusive growth synergistically interlock: while economic growth is needed to produce more wealth for all, redistribution makes it sustainable. To achieve qualitative and permanent change in production and reallocation, the second dividend must take the form of inclusive growth. The set of adjustments at play in the second dividend can be organized under six policy measures, which are further discussed in the next section.

B. Implications for social protection

(a). Social protection is essential for inclusive growth and intergenerational equity

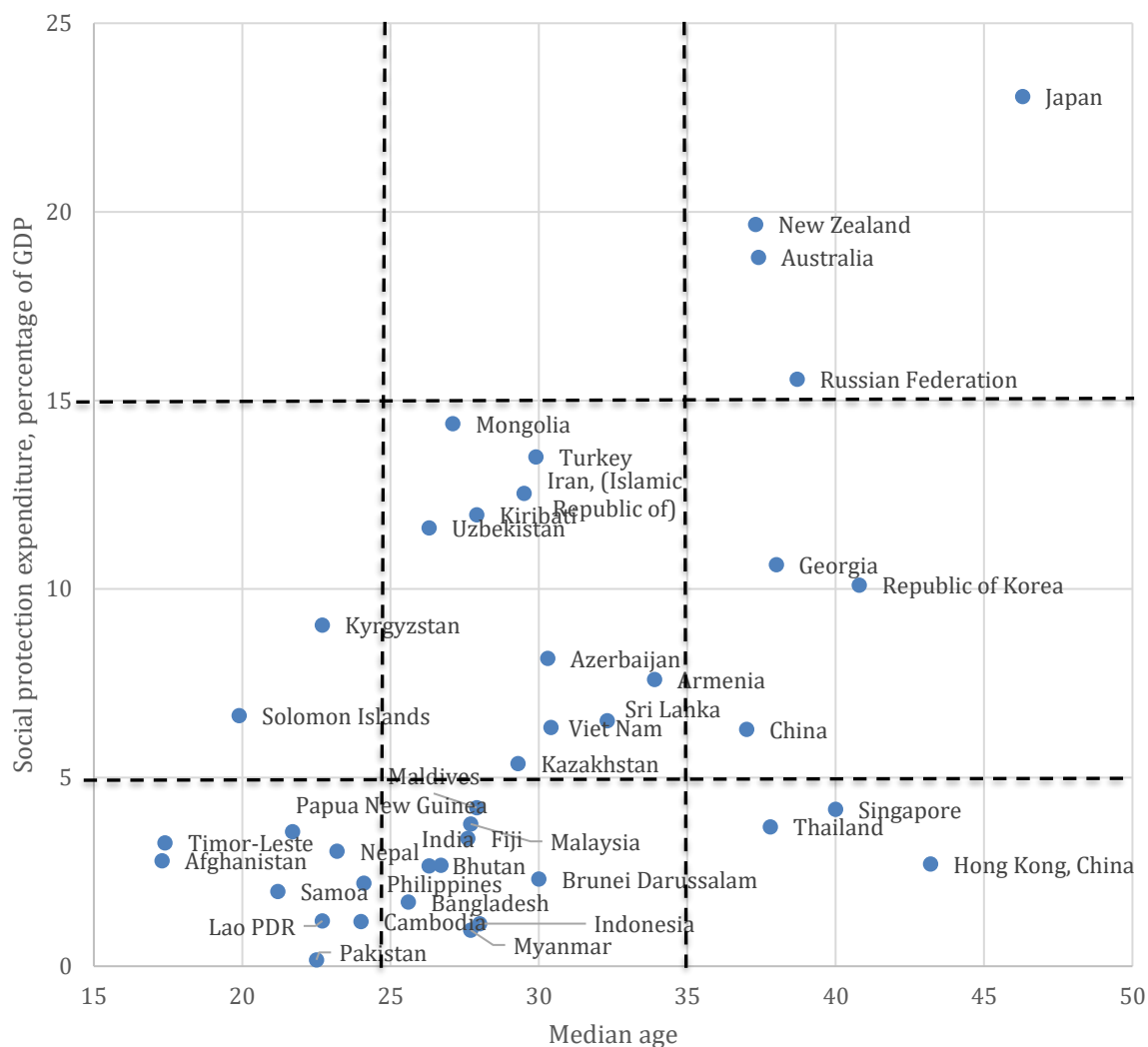
Social protection is essential to mitigate income inequalities and ensure older persons do not fall into poverty. Social protection also contributes to inclusive growth and is fundamental to harnessing the demographic window of opportunity associated with the ageing of the Asia-Pacific region (Ostry et al., 2014; Berg and Ostry, 2011). Recognizing its central role in economic and social development, countries in the region have increased their investments in social protection. However, fiscal strain caused by a declining workforce and an increase in the demand of public transfers in old age will test the commitment of countries to the social sector.

Although high social investments are not a sufficient condition for the development of robust social protection systems, they are a necessary condition. Regardless of the position they occupy along the demographic transition, the majority of countries in the region should increase their investments in social protection to reduce inequality (ESCAP, 2018). In order to gain a broad regional overview of the relationship between age structure and social investments, figure 11 plots median age and social protection spending as a percentage of GDP for 40 countries and areas in the region for which data are available.

Similar to figure 6, the demographic axis has been categorized by: countries with a median age greater than or equal to 35 years are considered to have a mature age structure and are classified as 'ageing or aged'. Countries with a median age greater than or equal to 25 years and less than 35 years are considered to be in transition from a young to a mature age structure, and are classified as 'rapidly ageing'. Countries that have a median age of less than 25 years are considered to have a youthful age structure and are classified as 'young'.

In terms of the social protection axis, the following categories are used: Countries with social protection spending as a percentage of GDP greater than or equal to 15 per cent are classified as having 'high social protection investments'. Countries with social protection spending as a share of GDP greater than or equal to 5 per cent and less than 15 per cent are classified as having 'moderate social protection investments'. Countries with social protection spending as a share of GDP less than 5 per cent are classified as having 'low social protection investments'.

Figure 11. Median age (2015) and social protection spending as a percentage of GDP, selected Asia-Pacific countries (latest available year)



Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019); and ILO (2017).

Note: Consistent with the Social Protection Floor framework, government spending on social protection is calculated as the sum of government expenditures on health and social security and welfare, where social security and welfare includes public pensions. It therefore does not include spending on education.

As in figure 6, the result is a nine-quadrant typology. The 40 countries and areas are contained in 7 quadrants. In figure 11, two quadrants remain empty: No young or moving-to-ageing country has high investments in social protection. At the same time, and analogous to the previous scatter plot, only aged countries have high investments in social protection.

Similar to the aforementioned relationship between age structure and GNI per capita, the correlation between median age and spending on social protection is positive, albeit relatively weak. One explanation for this weaker correlation and larger spread in the case of median age and social investments is that social protection is more responsive to the policy context than to demographic conditions vis-à-vis economic growth. This weaker correlation is another way

of demonstrating that the impressive economic growth in the region has not always been shared across all segments of society.

To return to a country-level comparison made earlier that brings forth the difference between the two scatter plots: Japan has the oldest population structure in the region, with a mean age of 46 years, and is among Asia and the Pacific's wealthiest countries, with a GNI per capita of US\$34,334. It also has the highest level of investments in social protection, at 23 per cent of GDP. Although Afghanistan has the youngest population structure, with a median age of 18 years, and is the poorest country in the region, with a GNI per capita of US\$611, its level of social protection expenditure is higher than 12 other countries or areas in the region.

There are several shifts in the position of countries between figure 6 and figure 11 which support this interpretation. For example, Thailand moves from the middle-right quadrant under the first scatter plot to the bottom-right quadrant under the second, showing that its level of social investments is relatively low compared to its ageing status.

Four countries occupy the upper-right - 'old-and-high-social-protection-investments' - quadrant, the OECD trio - Australia, Japan and New Zealand - and the Russian Federation, which have built strong social protection systems before growing old.

Three countries occupy the middle-right - 'ageing-or-aged-and-moderate-social-protection-investments' - quadrant, namely, China, Georgia and the Republic of Korea. China has increased its spending on social protection significantly and started building a social protection floor. The Republic of Korea provides universal access to health care, although health-care spending is relatively low as a percentage of GDP - which may point to high effectiveness in spending.

Ten countries occupy the middle-central - 'moving-to-ageing-and-moderate-social-protection-investments' - quadrant, ranging from Mongolia, with a median age of 27 years and 14.4 per cent of GDP dedicated to social protection, to Sri Lanka, with a median age of 32 years and a 6.5 per cent of GDP commitment to social protection.

Fourteen countries or areas in the Asia-Pacific region commit 3 per cent of GDP or less to social protection. This includes ageing Hong Kong, China, which is already aged, with a median age of 43. Six countries among them occupy the lower-middle 'moving-to-ageing-and-low-social-protection-investments' quadrant, namely Bangladesh, Bhutan, Brunei Darussalam, India, Indonesia and Myanmar. These countries may consider increasing their social protection spending, keeping spending efficiency in mind. Having age, and therefore time, on their side, the youthful countries in the bottom-left quadrant must ensure that the first demographic dividend involves investments in the construction of robust pension systems and age-sensitive health-care services for the impending demographic transformation.

(b). Disparities between breadth and depth of coverage continue to stymie pension systems

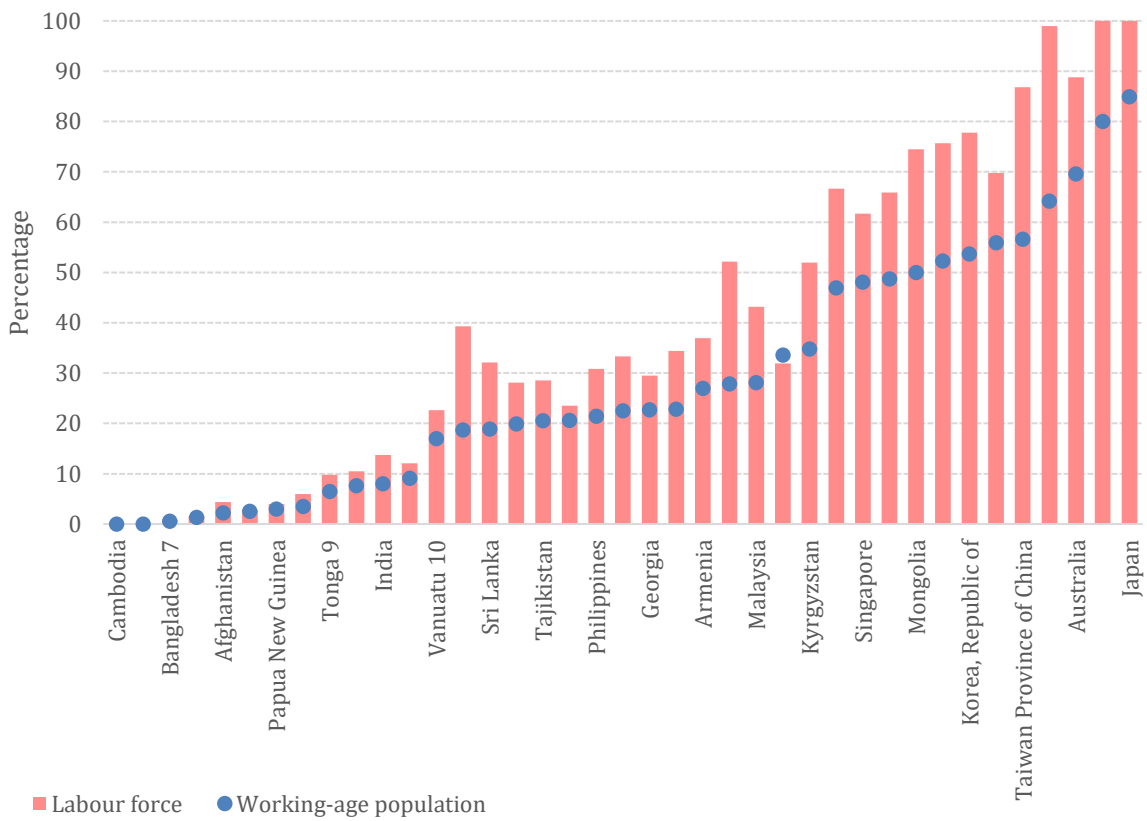
While almost all countries in the region have some pension scheme, these typically cover only the public sector, with some extension to workers in formal employment in the private sector. Hence, pension systems so far have tended to provide relatively high benefits to a few, rather than a certain level of coverage to all.

Pension systems in the region tend to be skewed toward the formal – public – sector and to urban areas. The limited coverage of rural and informal-sector workers is symptomatic of the weak institutional capacity of pension systems across Asia and the Pacific. These disparities result in low breadth of coverage, as seen in figure 12, which shows the share of the labour force and working-age population that has either contributed to or accrued pension entitlements in any of the major mandatory pension schemes during a given year. These estimates indicate how effectively a pension system is utilized by the pre-retirement population (OECD, 2013).

While the coverage levels for the labour force suggest pension entitlements linked to employment-based contributions, coverage levels for the population aged 15–65 indicate pension benefits are being accrued through some kind of non-contributory mechanism. Further, the ratio of the share of the labour force receiving benefits to the share of the population aged 15–65 receiving benefits provides an indication of the coverage gap between both cohorts. The higher the ratio, the greater the coverage gap between the labour force and the working-age population, or the higher the ratio, the more effectively is the labour force covered vis-à-vis the working-age population.

Figure 12 reflects some of the trends of social protection spending in the region. In Japan and Kazakhstan, all people in the labour force are effectively covered by the contributory pension system, which is at least four fifths of the working-age population. By contrast, in 30 countries or areas in the region, less than half of the working-age population is effectively covered by a contributory pension system. This is highlighted by Thailand, a rapidly ageing country, having a lower coverage rate than Solomon Islands, a primarily young country. Fiji stands out as one of the countries with relatively high coverage, particularly compared to its ageing status.

Figure 12. Share of the working-age population and labour force covered by pensions, selected Asia-Pacific countries, percentage, latest available year

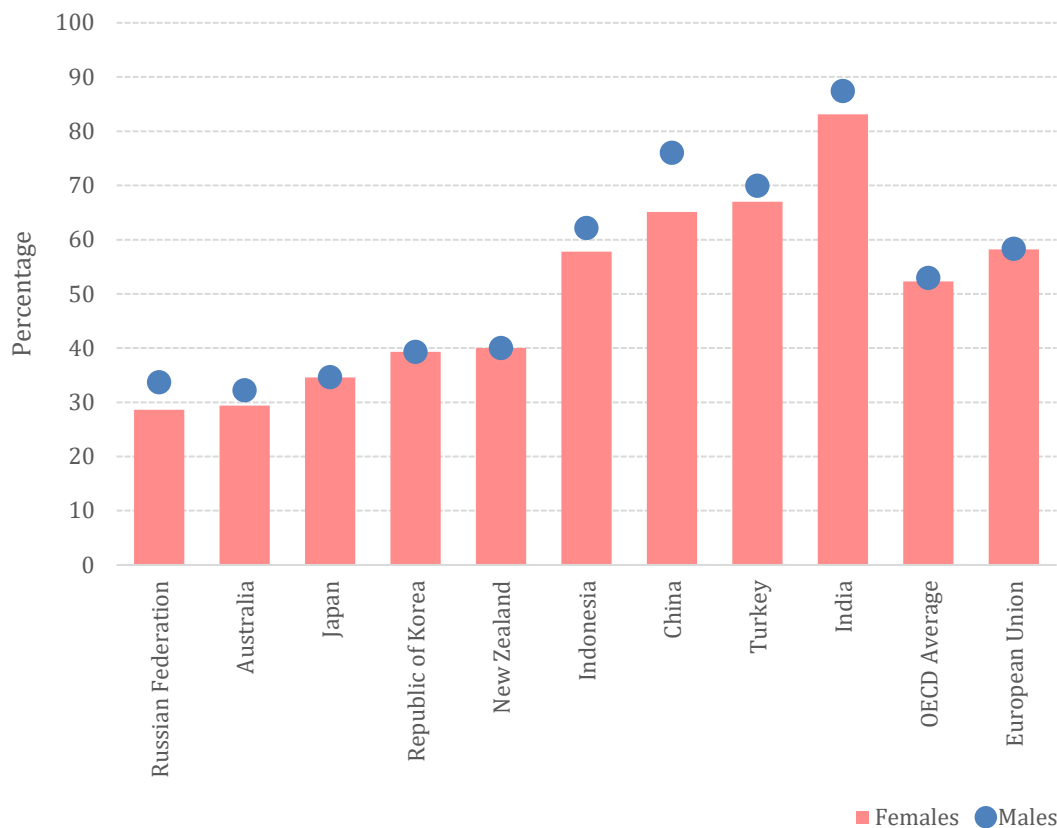


Source: ILO (2017).

In almost all countries, coverage levels for the population aged 15–65 are lower than coverage levels for the labour force. This reflects the challenges of extending pension coverage to individuals that are not economically active and the centrality of contributory mechanisms in the funding of pension systems.

Given limited financial resources, countries inevitably face a trade-off between deepening and broadening pension coverage. The breadth of coverage, while providing a good indication of the share of the preretirement population covered by pension entitlements, is only one dimension of the issue. The other dimension is the depth of coverage, for which a proxy is the gross replacement rate of the average worker, or the ratio of retirement income to income earned during working years. A higher replacement rate implies greater benefit levels. Figure 13 displays the replacement rates of statutory pensions for nine Asia-Pacific countries for which data are available – half of which are OECD countries.

Figure 13. Gross pension replacement rates (percentage) for men and women, 1.00 of the average workers (2016)



Source: OECD. "Pensions at a Glance database" Available at: <http://stats.oecd.org/index.aspx?queryid=69535>. (accessed 14 August 2019).

Considerable variation in depth of coverage exists across the region. In India and Turkey, gross pension entitlements are relatively close to preretirement earnings, while in Australia, Japan, the Republic of Korea, New Zealand and the Russian Federation, gross retirement benefits are less than half of average earnings, well below the OECD average. However, these countries have broad coverage, while India, with a high replacement rate, has very low coverage.

Gender parity should exist in terms of replacement rates. Yet, in several countries of the region, the difference is significant, such as in China, where women's replacement rates are approximately 11 per cent lower than men's. This is influenced by a lower female retirement age, with women having less time to contribute to the pension system. In general, gender disparities can be attributed to different actuarial assumptions, such as a higher retirement age for men or a longer life expectancy for women (OECD, 2013). These assumptions need to be vetted from a gender lens to ensure that inequalities between men and women are not being perpetuated.

As a result of increased standards of living across the region, a growing number of individuals are demanding better health-care services. With rises in longevity, people are requiring these

services for longer periods of time. Given the age-dependent nature of health care, the costs of these services increase geometrically with age and, in a context of a rising share of older persons, translate into significantly higher costs of health care at the aggregate level.

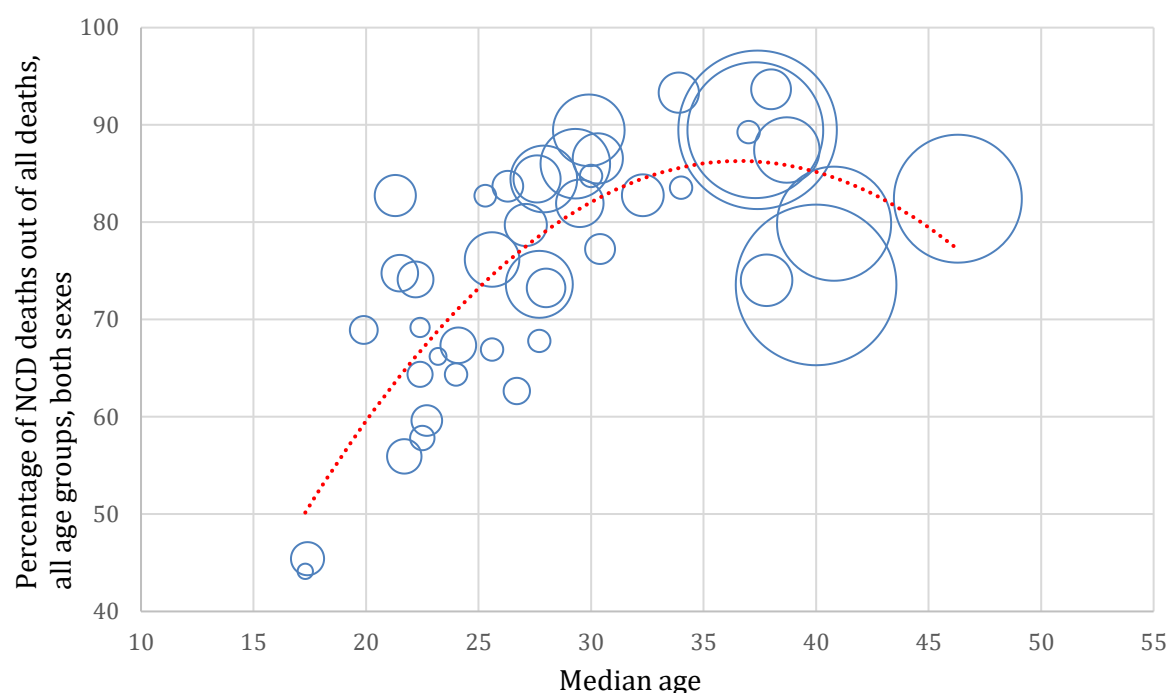
The challenges these economic and demographic changes pose for the health-care systems of Asia and the Pacific are largely exemplified by the region's rapid epidemiological transition from infectious diseases to non-communicable diseases (NCDs). As with population ageing, this shift in the pattern of disease is a manifestation of certain development dilemmas. NCDs are becoming more prevalent in the region, given rising living standards, a shift to more mature age structures and increasing life expectancy, unhealthy diets, pollution and sedentary lifestyles often associated with urbanization.

While the annual number of deaths due to infectious disease has steadily fallen for decades, the total annual number of NCD deaths is projected to rapidly increase by 2030. In 2012, South-East Asia and the Pacific recorded the fastest increase in NCD deaths in the world (WHO, 2014). NCDs can have a more pernicious impact than infectious diseases at both the national and household level. Numerous studies conclude that substantial national income would be lost if NCDs go untreated (Stanciole, 2006). At the household level, the risk of catastrophic health spending is significantly higher for NCDs than for communicable diseases, as studies in India and Sri Lanka have revealed (WHO, 2011).

NCDs can no longer be considered diseases of affluence, as they are most prevalent in the region's middle-income countries. This is substantiated by figure 14, which provides the share of total deaths attributable to NCDs for 42 countries across the region in 2016. While ageing and economic development are associated with an increase in the prevalence of NCDs, even in low- and middle-income countries NCDs play a significant roles.

Georgia, Armenia, Australia, New Zealand, Turkey and China are, in order, the countries with the highest percentages of deaths attributable to NCDs: in Georgia and Armenia, more than 93 per cent of all deaths can be attributed to NCDs, in the other countries it is between 89 and 90 per cent of all deaths. In Japan and the Republic of Korea, the level is relatively low, at 82 and 80 per cent. This suggests that NCD deaths do not necessarily increase in aged societies and that the promotion of healthy lifestyles and chronic disease management play an important role. For example, in Japan, lower respiratory infections play a relatively large role, responsible for 12 per cent of all deaths of people aged 70 years or over.

Figure 14. Median age (2015), percentage of deaths of non-communicable diseases out of all deaths, all age groups, both sexes (2016) and GDP per capita (2016), reflected by bubble size



Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019); WHO "Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2016". Geneva, World Health Organization; World Bank "World Development Indicators". Available at: <https://databank.worldbank.org/source/world-development-indicators> (accessed 9 September 2019).

The prevention and control of NCDs will pose a significant challenge to the health-care systems of most countries in the region. NCDs require methods of early detection and preventive interventions that seek to modify behavioural risk factors. A comprehensive and primary health-care approach to strengthen early detection and timely treatment is therefore essential. Older persons, especially those who have already developed NCDs, need to have equitable and affordable access to medicines and treatment, but also need to be equipped with tools for the self-management of these diseases. However, many Asia-Pacific developing countries currently have limited capacities and many NCD services are not covered by public health-care systems (WHO, 2014).

(c). Developing systems for long-term care

The demographic and epidemiological transition is generating an increase in the need for long-term care (LTC) across the region. LTC refers to the provision of services for persons who have long-term functional dependency, measured in terms of difficulties related to mobility, activities of daily living (ADL), instrumental activities of daily living (IADL) and

cognition.⁶ Dependency generates the need for an array of services designed to compensate for these limitations, as it creates difficulties in accessing health-care services, impinges on the ability to maintain an active and healthy lifestyle, and creates additional psychological and social needs and strains. LTC spending includes palliative care, long-term nursing care and personal care services related to ADL support, as well as broader social services related to IADL support which fall outside traditional health-care needs (World Bank, 2010).

The demand for LTC is driven by the size of the older population, especially the size of the population 85 years or older (the so-called 'oldest old'), and the share of older persons that are dependent (World Bank, 2010). LTC spending in recent years has increased, particularly among the region's old and affluent countries. For example, in the Republic of Korea, public expenditure on LTC grew at an average annual rate of 44 per cent between 2005 and 2011, although it has since fallen subsequent to the introduction of long-term care insurance. The average figure before the fall is about 10 times greater than the OECD average of 4.8 per cent. During the same period, public investments in LTC grew by 12.5 per cent a year in Japan, and 5.1 per cent a year in New Zealand (OECD, 2013).

Growth in LTC spending is rapidly increasing among the region's OECD countries, not only because they are far along the demographic and epidemiological transition, but also because they have the health-care resources and capacities upon which to build LTC services. Already at the turn of the century, Japan had introduced a national LTC insurance system, while the Republic of Korea introduced a similar scheme in 2008. In order to reduce costs, the trend among Asia-Pacific OECD countries is to prioritize home- or community-based care over institutional support. For instance, between 2005 and 2011, in Japan, New Zealand and the Republic of Korea, annual growth in public spending on home- or community-based LTC outpaced annual growth in public spending on institutional LTC almost two-fold (OECD, 2013). One of the fundamental challenges facing Asia-Pacific developing countries – particularly middle-income countries with mature age structures – like China, Georgia, and Thailand – is to negotiate the trade-off between broadening and deepening traditional health-care schemes and investing in national LTC systems.

In overall terms, there has been a steady rise in health-related spending across the region, as countries increasingly see the value of investing in health. However, in the absence of public health-care coverage, it is often households that must absorb this rise in health-related spending. Poorer households can often only access health services after detrimental reductions have been made to other expenditures such as nutrition. Due to high out-of-pocket spending, people may forgo care altogether. One of the reasons why the incidence of poverty tends to be higher among older persons than among the general population is because older

⁶ ADL refer to daily self-care activities within an individual's place of residence, like dressing and feeding oneself. IADL include more complex activities, such as shopping for daily necessities and managing money. Cognitive disabilities have to do with deficiencies related to concentration, attention and memory that impede daily functioning (WHO, SAGE, 2007-2010).

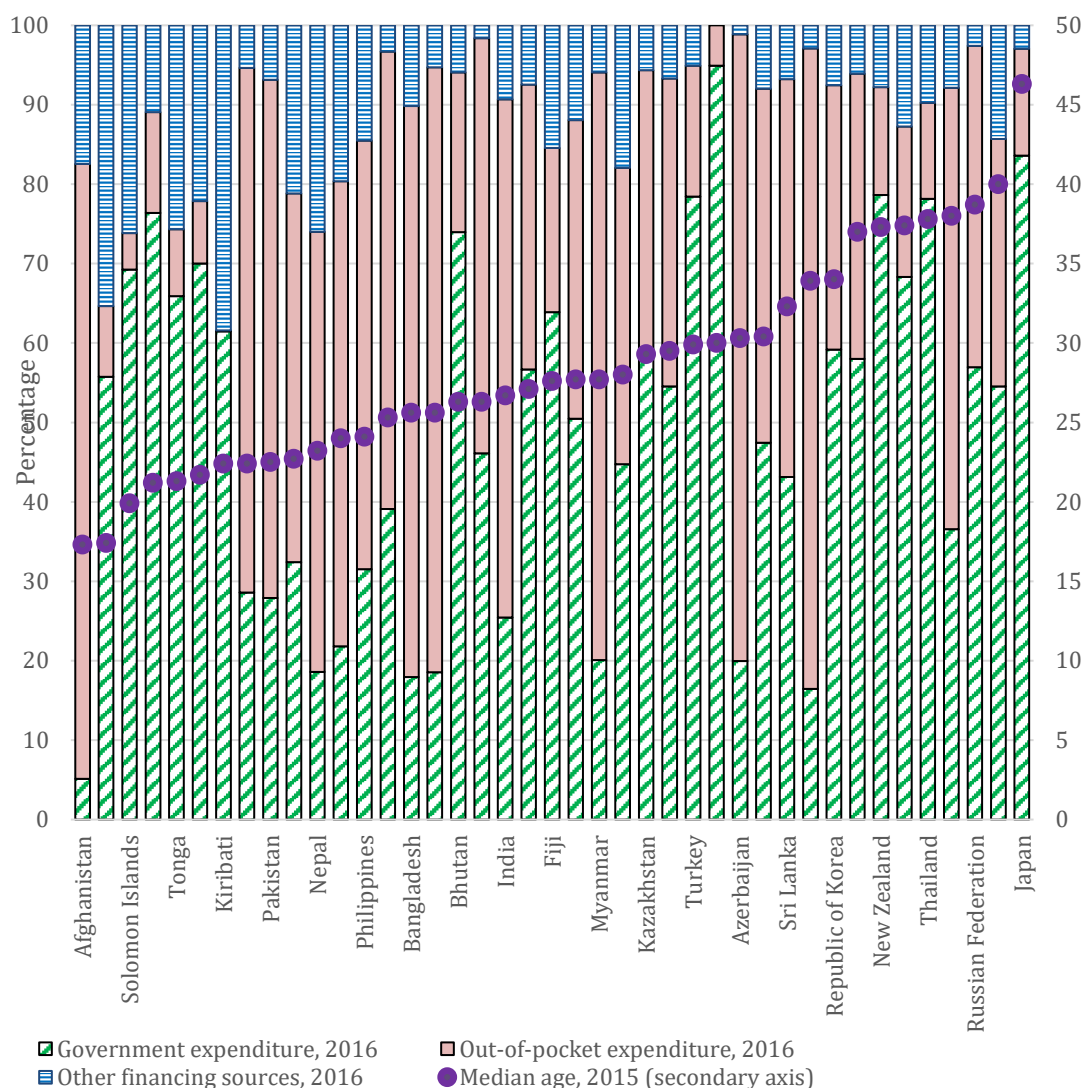
persons are more susceptible to catastrophic health spending, defined as out-of-pocket health payments of at least 40 per cent of non-subsistence spending.

Although households in the Russian Federation have reported lower overall levels of catastrophic spending, when compared to China and India, the disparity between the two types of households was the largest, with older persons' households around four times as likely to experience catastrophic spending than households without older persons. Being more prone to catastrophic spending, households with older persons are, therefore, more likely to be in poverty or be more vulnerable to falling into poverty, and consequently, more likely to borrow money from relatives.

Health-care costs, either unexpected or recurring, can cause financial catastrophe for households, particularly for poor or vulnerable households with older persons. In several countries in the region, more than half of overall health expenditures originate from households. In a number of countries, households bear more than two thirds of total health expenditure, making health care especially difficult to afford for lower income groups. High out-of-pocket spending tends to be correlated with low public investments in health care.

Figure 15 compares these two principal sources of health-care spending for the Asia-Pacific region. Except for Pacific island countries, where access to health care is free, in countries that are further along the demographic transition, government spending constitutes a larger share of overall health expenditure. This relationship tends to invert as countries moves along the demographic transition. In countries with younger age structures and lower levels of economic development, out-of-pocket spending constitutes a larger share of total health expenditure.

Figure 15. Government and out-of-pocket health spending as a share of total health expenditure (2016) and median age (2015), selected Asia-Pacific countries



Source: WHO. "Global Health Expenditure Database". Available at <https://apps.who.int/nha/database> (accessed 14 August 2019).

(d). Population ageing will strain public investments in the social sector

To adapt the flow of public transfers to the conditions of population ageing, a majority of countries in the region have increased investments in pensions and health care since the end of the last century. Despite governments dedicating greater attention to social protection, a substantial social investment gap continues to exist in the region, as do wide disparities in social protection expenditure, as discussed earlier in this paper.

The increase in public transfers needed to meet the needs of older persons can lead to budgetary pressures, as governments attempt to finance public pensions, health care, and other intergenerational schemes in the context of a declining workforce and an increasing

population of older persons. Upward or downward change in the economic support ratio carries with it fiscal ramifications. When countries have a young age structure and economic support ratios are on the rise, there is a corresponding increase in the number of taxpayers relative to the number of beneficiaries. This implies that governments could raise benefit levels of public pensions, without running a deficit or having to increase the tax rate. In contrast, when countries have a maturing age structure and economic support ratios are falling, a corresponding decline in the number of taxpayers relative to the number of beneficiaries may exist. This implies that governments either have to run deficits or collect more taxes and revise the tax structure in order to sustain benefit levels of public pension systems (DESA, 2013b).

(e). Stocktaking

Population ageing will create increasing fiscal strain across the region due to the combined effects of a decrease in public revenues caused by the falling share of the working-age cohort and a rise in the demand for social protection stemming from an increase in the number of older persons. At the same time, social protection is a necessary condition in ageing societies to achieve sustainable development - without social protection, poverty and inequality levels are likely to increase. For this reason, as further discussed later in the paper, it is paramount that public transfers aimed at supporting individuals in old age are augmented by financing streams from other stakeholders, particularly the private sector. At the same time, it is the public sector – the state – that needs to take the lead, not only in investing in social protection, but also in prioritizing social infrastructure projects and building a national consensus around the importance of redistributive measures.

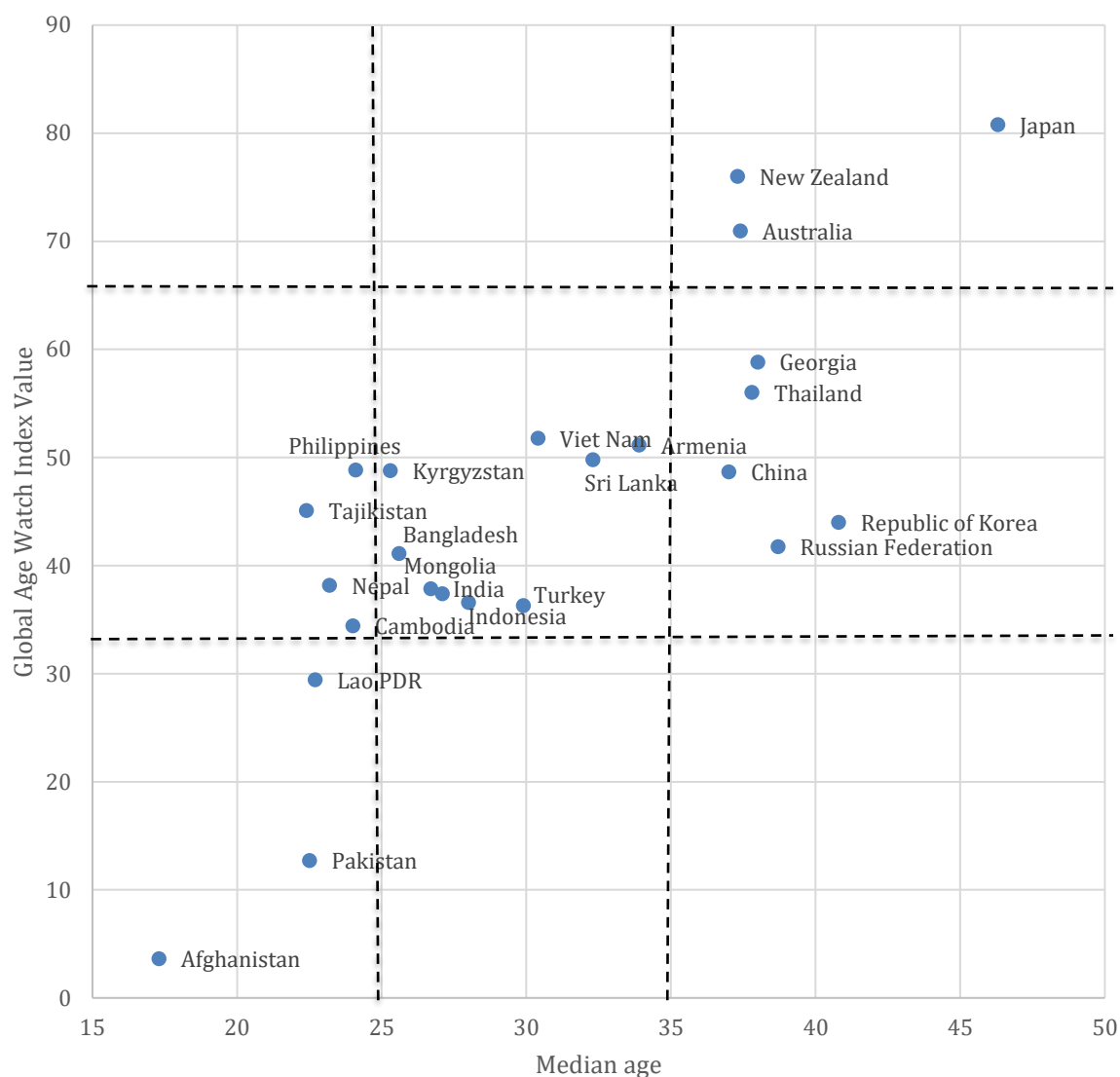
C. Broader social ramifications

(a). Enabling environments are essential for mitigating vulnerabilities associated with social change

Earlier in this paper the economic consequences of population ageing and the implications of ageing on social protection were considered. This section focuses on the broader social ramifications of population ageing in the region. In addition to downward pressure on economic growth and strained social protection systems, extensive social changes of the last decades may make older persons increasingly susceptible to poverty and social exclusion. One of the fundamental challenges' countries must address is ensuring that, in addition to income security and basic social services, older persons have access to the wide range of social, cultural and political resources needed to flourish and lead meaningful and active lives.

As was the case with economic growth and social protection, the position a country occupies along the demographic transition provides different scenarios under which it can enhance enabling and supportive environments for older persons. To get a sense of the regional diversity in terms of this dimension of population ageing, figure 16 plots median age and the Global AgeWatch Index prepared by HelpAge International for 24 countries from which data are available.

Figure 16. Median age (2015) and Global AgeWatch Index (2015), selected Asia-Pacific countries



Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019); HelpAge International. "Global Age Watch Index". Available at: <https://www.helpage.org/global-agewatch/> (accessed 1 October 2019).

The Global AgeWatch Index measures the well-being of older persons along several domains, including health status, labour market participation, educational attainment, support networks, civic engagement and access to public transportation. The Index goes beyond traditional measures of social protection and includes an evaluation of the institutional arrangements and social structures that facilitate the pursuit of meaningful life projects in old age. In this way it serves as a proxy metric for the robustness of the enabling and supportive environment for active ageing (HelpAge International, 2015). Countries are scored from 0 to 100 – 100 being the most favourable. Ninety-six countries were included in the 2015 Index, with Switzerland ranking first and Afghanistan last.

As was done with the scatter plots presented in figures 6 and 11, the axis that situates countries along the demographic transition has been categorized by: Countries with a median age greater than or equal to 36 years are considered to have a mature age structure and are classified as 'ageing or aged'. Countries with a median age greater or equal to 26 years and less than 36 years are considered to be in transition from a young to a mature age structure, and are classified as 'moving to ageing'. Countries with a median age less than 25 years are considered to have a youthful age structure and are classified as 'young'. In terms of the axis for the enabling environment, three categories have been defined: Countries with a score of 66 or higher in the Global Age Watch index, are categorized as 'top third'; those with a score below 66, but 33 or higher, are categorized as 'middle third'; those with a score of 33 or lower are the 'bottom third'.

The result is a nine-quadrant typology. As was the case with the earlier two scatter plots, the upper-left quadrant remains empty. No country that is early along the demographic transition has built a robust enabling environment for the well-being of older persons. Further, the upper-middle quadrant remains empty. No rapidly ageing country either has constructed a strong enabling environment. Only Asia-Pacific countries with mature age structures are found in the top ranks of the Index.

Three countries occupy the upper-right - 'old-and-top-third' - quadrant: Australia, Japan, and New Zealand. Unsurprisingly, the OECD trio is considered to have the most robust enabling environments for active ageing in Asia and the Pacific. These countries enjoy high standards of living, universal pension and health-care systems, well-developed legal frameworks to protect older persons against multiple forms of discrimination, and networks of civil society organizations that support the civic integration of older persons.

Five countries - China, Georgia, the Republic of Korea, the Russian Federation and Thailand - are situated in the central-right - 'old-and-middle-third' - quadrant. Among the oldest of the middle-income countries, and currently in transition from the first to the second window of opportunity, China and Thailand have made good progress in developing policies and a legal framework to support older persons. However, as with social protection, these two countries need to continue to strengthen their enabling environments, especially for older persons living in rural areas. Given its level of economic development, the Republic of Korea has a relatively low position in the typology, yet the country faces relatively high levels of poverty and social isolation among older persons. This stated, the Government has undertaken several recent reforms to strengthen the basic pension in the country, which should lead to higher scores in the future.

Figure 16 suggests that even with modest economic growth and social protection investments, countries can prioritize policies to enhance the well-being of older persons. This is the case for Georgia and Thailand, which, though of relatively lower income and spending less resources on social protection, score a Global AgeWatch Index higher than 50. Likewise, Armenia, Sri Lanka and Viet Nam promote older persons' well-being.

This section focuses on three social issues associated to population ageing which pose challenges to Asia-Pacific countries as they aim to strengthen their enabling environments. First, the dynamics of discrimination associated with the overlapping of old age and marginalized identities is considered. Second, the transformation of living arrangements and familial support structures that are taking form in and through the demographic transition and socioeconomic development is examined. Lastly, the inroads ageism has made into the public, economic and political spheres across the region is analysed.

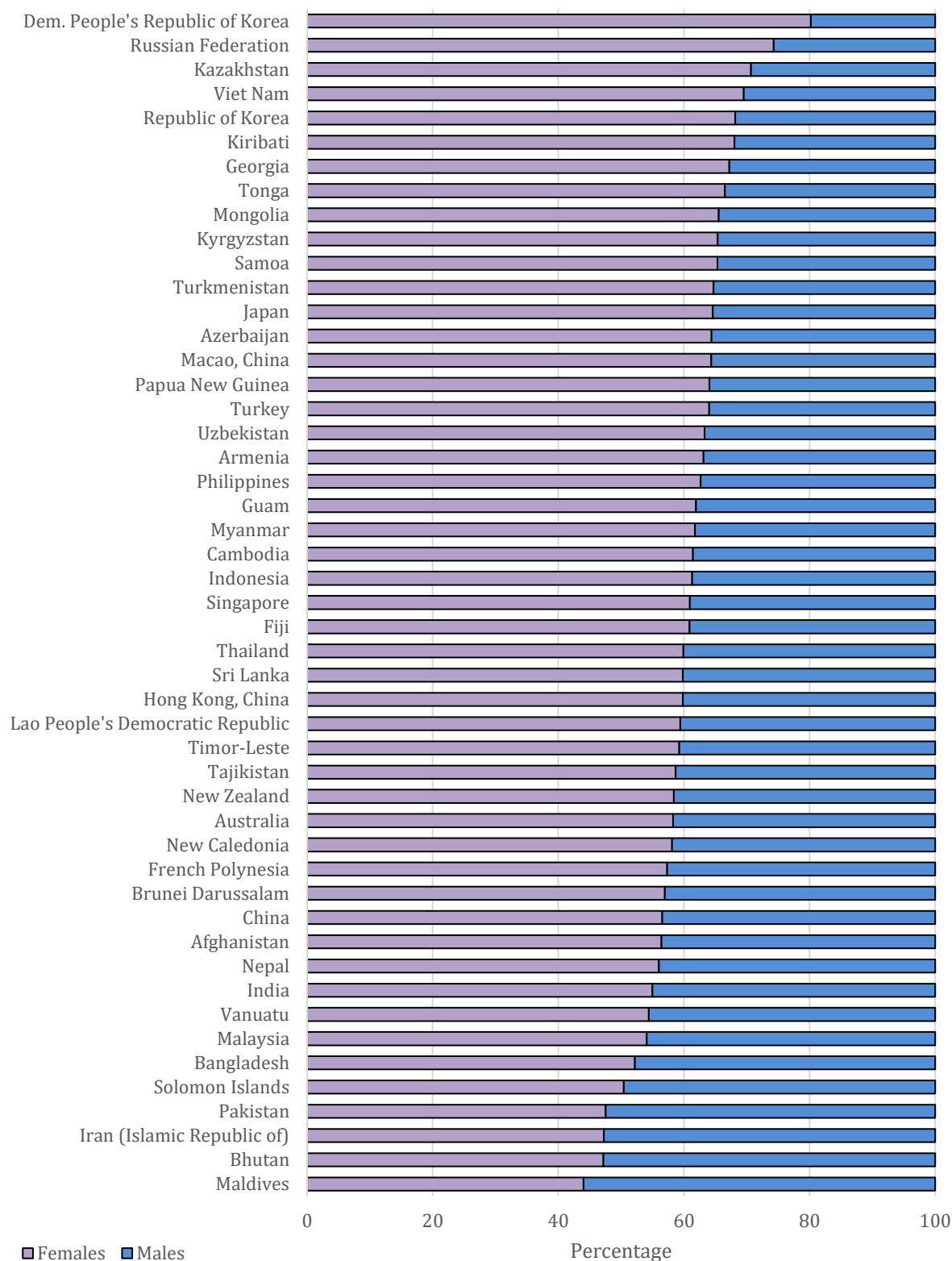
(b). Social markers of difference accentuate the vulnerabilities associated with old age

When they intersect with age, ascriptive markers of difference such as gender, caste, ethnicity, religion, disability and migrant status, which link older persons to discriminated identities and marginalized social groups, can create inequality traps. These may compound and further intensify the vulnerabilities associated with age. If Asia-Pacific countries are to promote the well-being and social integration of ageing populations, in addition to tackling the inequality of income and barriers to accessing social services faced by older persons, horizontal or historical inequalities must be addressed. Owing to their longer life expectancy, women are disproportionately represented in the older populations of many countries (figure 17). The share of women increases with age, such that the number of women relative to men is largest among the oldest-old.

This 'feminization of ageing' brings with it the compounding effects of lifelong gender-based inequalities in access, treatment and outcomes and the specific vulnerabilities and forms of discrimination associated with old age. Consequently, older women are more susceptible to falling into inequality traps than are older men (Devasahayam, 2014). Older women have a higher prevalence of morbidity and disability and are often more financially dependent than men because of their lower participation in the workforce, as well as higher rates of vulnerable employment and lower education levels. Not having been remunerated for their work or having received lower wages than men, women tend to have fewer or no savings and relatively low access to contributory pension schemes. A higher share of older women than older men are 'single', (unmarried, divorced or widowed). Of concern is the substantial number of widowed women without adequate income, access to social services or community support.

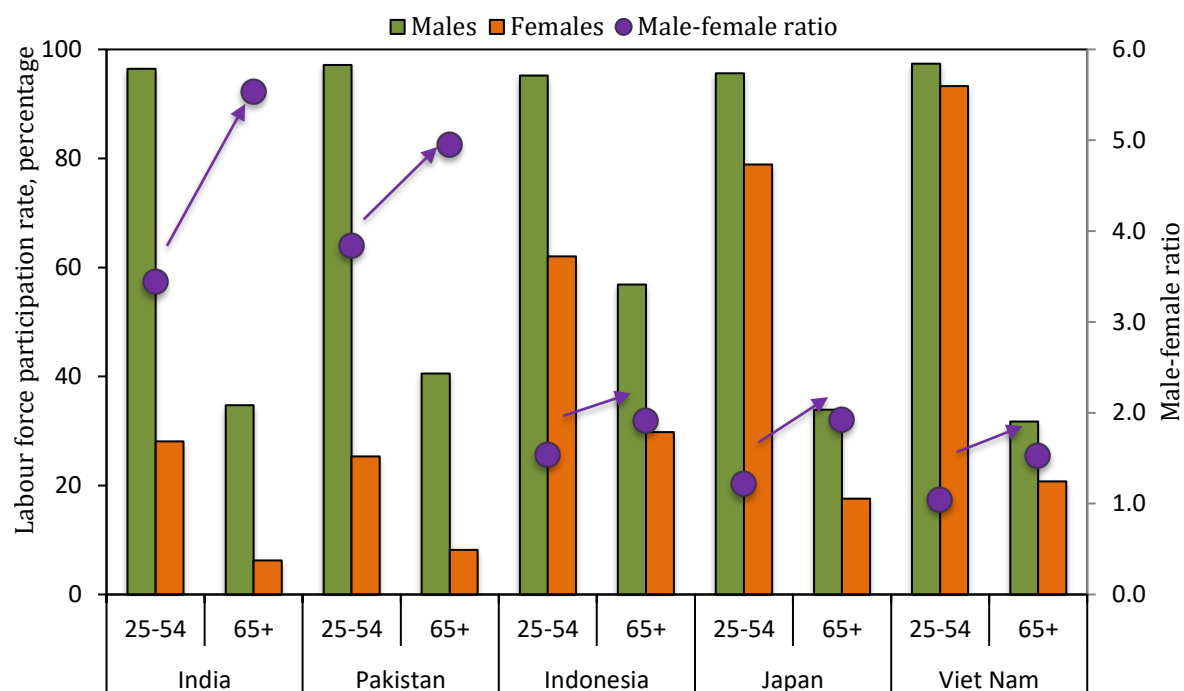
As further developed below, access to the labour market is essential to secure economic security and ensure active ageing; however, labour force participation is disproportionately low across the region. One important determinant of the gender inequalities across the region is the disparity in accessing the labour market and obtaining decent jobs. In most countries, women are less likely than men to be integrated into the labour market, that is, employed or actively looking for a job (ILO, 2012). The gender gap vis-à-vis labour force participation that persists during the prime working age only increases in old age.

Figure 17. Female share of the population aged 80 years or over, Asia and the Pacific (2017)



Source: United Nations "The 2019 Revision of World Population Prospects". Available at: <https://population.un.org/wpp/> (accessed 1 October 2019).

Figure 18. Labour force participation rate by sex and age, and ratio of male-to-female labour force participation rates, selected Asia-Pacific countries, latest year



Source: International Labour Organization “ILOSTAT: The leading source of labour statistics”. Available at: <https://ilostat.ilo.org/> (accessed 26 November 2019)

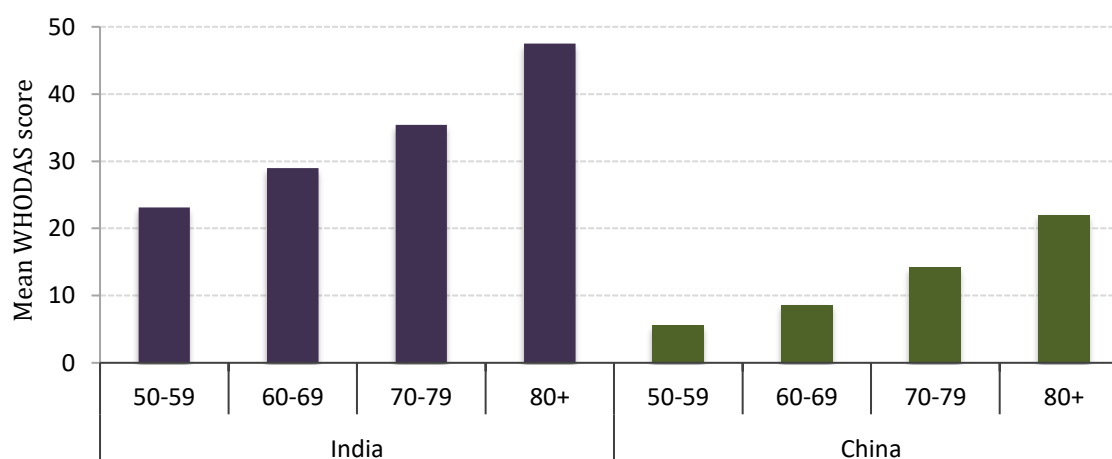
Figure 18 illustrates this compounding effect of the intersectionality of gender and age in five countries in the region. There is a gender gap in all countries among the population aged 25–54 and 65 years or older, and the ratio of this gap increases in old age. In India, women are three and a half times less likely than men to participate in the labour force at ages 25–54, whereas they are more than five and a half times less likely at ages 65 years or older. In Pakistan, the ratio of the male-to-female labour force participation rate increases from three to almost five; in Viet Nam, the ratio increases from around one to one and a half, and in Japan from one to almost two. The increase in the Indonesia is the smallest among the five countries, from one and a half to almost two.

In addition to the intersection of gender and age, the harmful effects of the intersection of caste and age have also been well documented in South Asia. SAGE India Wave 1, administered to over 11,000 individuals in six states, found evidence that belonging to one of the constitutionally recognized disadvantaged – ‘scheduled’ – tribes or castes (also referred to as ‘Untouchables’, ‘Harijans’ or ‘Dalits’) increases the likelihood of poor health outcomes in old age. The survey found that for respondents aged 18–49 health and well-being measures – including self-reported health status, everyday mobility indicators, and presence of chronic conditions – were similar across scheduled tribes and castes and non-scheduled tribes and castes as well as all those not belonging to either a caste or tribe. However, respondents aged 50 years or older from scheduled tribes and castes reported inferior health outcomes vis-à-vis respondents from the non-disadvantaged groups (Kowal and Afshar, 2015).

Directly impinging upon the ability to age actively and with important repercussions for funding health and long-term care, the intersection of disability and old age is particularly important. While longevity has increased throughout the region, many individuals are living longer, but with disabilities. When conceptualized beyond the reductionist medical model to include impairments, activity limitations, and participation restrictions caused in interaction with the social environment, disabilities undermine the ability of older persons to lead meaningful lives and contribute to society (WHO and World Bank, 2011). Intuitively, the incidence of disability increases with age. For example, in China, the share of persons aged 60 years or older was five times greater among persons with disabilities than among the total population in 2006. In Australia (2009), India (2001), Lao People’s Democratic Republic (2005), Myanmar (2010) and the Republic of Korea (2010) the share was about three times greater (ESCAP, 2012). SAGE Wave 1 data for India and China corroborates the greater prevalence of disability at older ages.

Figure 19 provides the average WHODAS (WHO Disability Assessment Schedule) score for various age groups in China and India. The score is derived from responses to SAGE questions on ADLs, IADLs, and cognition, with higher scores indicating greater difficulty in these areas. As the graph illustrates, the incidence of disability increases substantially with age for both countries. Overall, levels of disability are markedly higher in India, with mean WHODAS scores for respondents aged 50–59 being even higher than that for respondents aged 80 or older in China. However, the rise in disability incidence as one ages is much higher in China; mean WHODAS scores increased by four times between the two age cohorts, while the rise in India was only two times.

Figure 19. Mean WHODAS score for different age groups, India and China (2007–2010)



Source: WHO, SAGE (2007-2010).

The social dynamics in and through which the intersection of age with gender, caste, ethnicity and disability compound and further intensify the vulnerabilities associated with old age have been relatively well documented. Moreover, governments and stakeholders across the region have begun to take action to address relevant inequality traps.

(c). Familial systems of support are being renegotiated as living arrangements are transformed

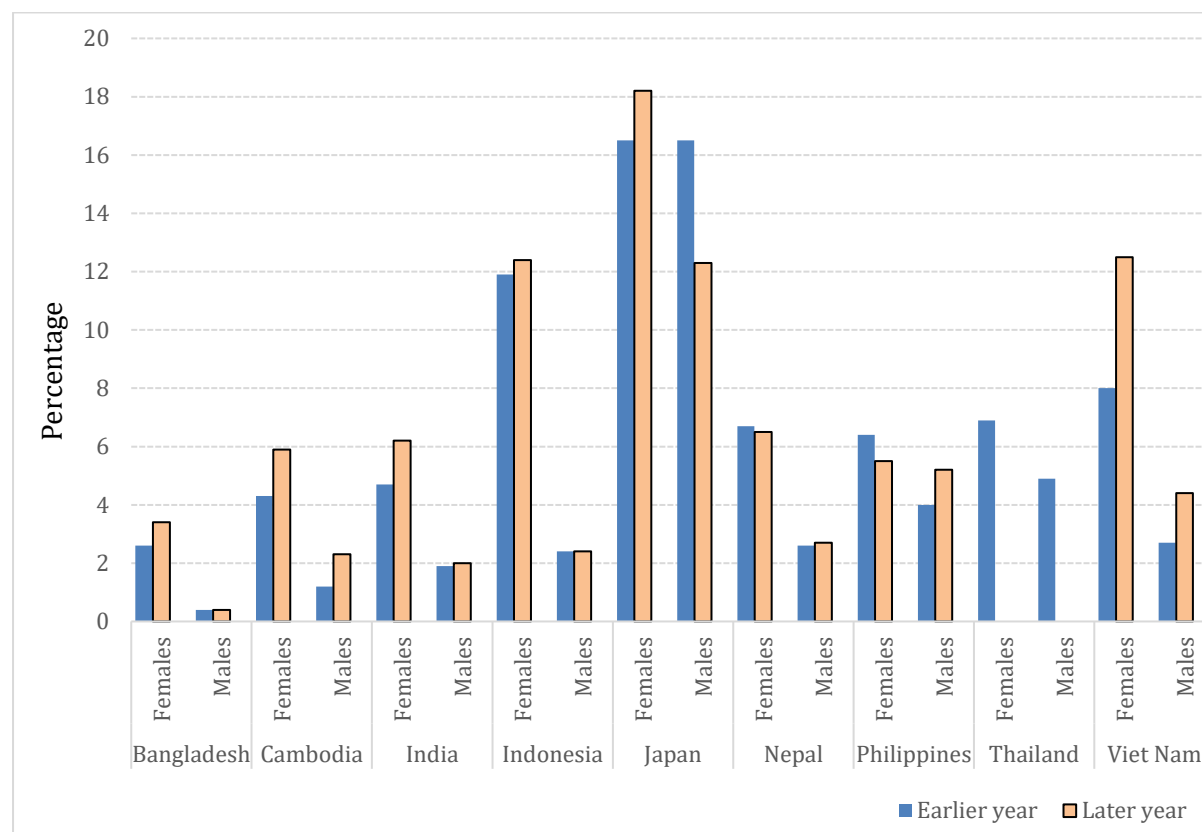
Given the strong cultural norm of filial piety or obligation – in the more general sense of a moral duty to care for one’s kinfolk – and weak formal social protection systems, the role of the family has long been central in meeting the lifecycle needs of older persons in Asia and the Pacific. How the dynamics of development are bringing about changes in living arrangements and familial support has for decades been a subject of analysis throughout the region (UNESCO, 1992). There is concern that demographic, economic and ideational changes are eroding familial support for older persons, which in turn is resulting in greater material precarity and social exclusion in old age.

While the share of older persons that co-reside with children or grandchildren has steadily decreased, this trend needs further analysis from both an inter-regional and intra-regional perspective. The demographic transition and socioeconomic development in the region have led to a decrease in the share of multi-generational households and an increase in the share of older persons living alone. Figure 20 provides data on older persons living alone for selected countries in Asia and the Pacific, demonstrating upward trends across the region. It also shows that a greater number of older women than older men live alone. This is consistent with the feminization of ageing. In some countries – such as Cambodia, Indonesia and Viet Nam – there are three to five times more older women than older men that dwell alone.

There has been a steady decline in intergenerational households across the region. This tendency can be expected to continue as countries move along the demographic transition. Moreover, the one-person household is the fastest growing type of household, not only among older persons, but also among all adult cohorts (Yeung and Cheung, 2015). While it may be assumed that living alone is associated with lower levels of well-being for older persons, studies show that this is not always the case.

A study comparing the well-being of solo-dwelling older adults in Myanmar, Thailand and Viet Nam paints a more nuanced reality (Teerawichitchainan et al., 2015). First, in terms of self-assessed economic well-being, the study found that in Myanmar and Viet Nam, the economic well-being of older persons living alone was lower than that of those in other living arrangements. However, this was not the case in Thailand, the country farthest along the demographic transition and where the adverse consequences of living alone are expected to be most prevalent. Second, in terms of social participation, the study found no evidence that older persons living alone are socially excluded. In fact, in all three countries, solo-dwelling older adults tended to be as – if not slightly more – socially integrated as older adults residing in multi-generational households. One possible explanation is that fewer family obligations allow older persons to be more involved in community-based activities.

Figure 20. Percentage of women and men aged 60+ living in one-person households as share of all households with people aged 60+, selected Asia-Pacific countries



Source: United Nations, “Database on the Households and Living Arrangements of Older Persons 2018” (POP/DB/PD/LAOP/2018).

A third finding concerning psychological distress was more consistent with generally held views: In all three countries, solo dwellers reported more psychological distress than those living with others. In Thailand and Viet Nam, childless and solo-dwelling older persons were the most psychologically distressed when compared to older persons co-residing with their children or older persons living alone who had children, whether their children lived close by or not. A fourth finding is intuitive: In all three countries, solo-dwelling older adults that needed assistance with activities of daily living were at a disadvantage in comparison to their counterparts living in multi-generational or conjugal households. This was particularly the case for solo-dwelling older adults in rural areas.

Another resounding finding of the study in question was that older adults who live alone and are childless are the most vulnerable group of older persons. At the same time, given the cross-sectional nature of existing studies it cannot be determined which of the two variables is the cause and which one is the effect. To explore the causal relationship between living alone and well-being in old age, comparative longitudinal research is needed (Teerawichitchainan et al., 2015).

Though there is increasing nuclearization of the household and a concomitant increase in the number of solo-dwelling older persons across the region, it is not yet clear if these trends result

in an erosion of familial support for older persons. Studies show that in some countries a ubiquitous and robust system of familial support has endured broad social change. This suggests a renegotiation of the social contract between generations (Knodel, 2014). An illustration of this is that a substantial number of solo-dwelling older persons live in what can be referred to as 'quasi-coresidence', with a child residing next door or very nearby (Teerawichitchainan et al., 2015). This new social reality, facilitated by improvements in the standard of living and the development of transportation infrastructure and information technology, is subverting the binary logic of living alone versus living with the family, of individualism versus filial obligation. The new familial relations that are taking form place greater emphasis on less hierarchical forms of interaction such as mutual care, reciprocal exchanges, and interdependence (Croll, 2006).

(d). Ageism is making inroads into public, economic and political spheres

Evidence shows that, in terms of familial relations, responsibility to one's kinfolk is not eroding, but is rather being altered and renegotiated across the region. Filial piety not only applies to the realm of the family though; it is a cultural norm that orients all spheres of social life.

One observation from the latest wave (2010-2014) of the World Values Survey, a nationally representative survey conducted in over 60 countries around the globe, is that households and countries are increasingly confronted with the socioethical dilemmas brought forth by rapid population ageing. Some 16 per cent of Japanese respondents and 7 per cent of Chinese respondents declared not to know whether or not older persons were a burden. Similarly, 21 per cent of Japanese respondents did not know whether or not older persons were treated with the respect they merited and 12 per cent of Chinese respondents opted not to answer this question (World Values Survey, 2015). With the exception of one or two cases, the other 60 or so countries from the region and across the globe that participated in the survey had rates of 'don't know' and 'no answer' below 4 per cent. Japan and China – two countries that have deeply rooted cultural norms of filial piety and that are also far along the demographic transition – are where survey respondents demonstrated the greatest amount of vacillation in terms of the values orienting the treatment of older persons. This could be the result of a growing inability to reconcile how one ought to treat older persons with how society is treating them.

Stoking ageism are negative stereotypes of old age perpetuated by mass media and mass culture. As countries move along the demographic transition and achieve greater levels of economic development, mass media and mass culture exert increasing sway on public opinion and will-formation (Habermas, 1991). Across the region, the commercialization and consumerization of the public sphere is becoming a powerful vehicle for the alienation of old age. Advertising, news, film and television tend to feature stereotypes depicting older persons through a lens of diminished value, thus emphasizing the burden of growing old. These stereotypes reflect and reinforce attitudes and responses to growing older and population ageing (Milner et al., 2012). The messages and images of material affluence and a 'better' life are associated with the vivacity of youth. The aesthetics of anti-ageing products and

techniques and the speed of information technology are just two examples of the veneration of youth implicit in mass culture.

Table 1. Abuse of older persons prevalence estimates, selected Asia-Pacific studies

| Country | Population | Measure/method | Prevalence | Study |
|--------------------------|---|--|--|---------------------------|
| China | 2,039 older adults from rural communities from Hubei (≥ 60 ; 59.9% female) | Hwalek-Sengstok Elder Abuse Screening Test (H-S/EAST); Vulnerability to Abuse Screening Scale (VASS) | 1 year, 36.2%; ≥ 2 types, 0.4% | Wu et al. (2012) |
| Thailand | 233 cognitively functioning older adults (ages 60-90; 73.4% female) | Interview protocol for elder abuse screening | 1 year, 14.6%; 1 time, 9.9%; ≥ 2 times, 4.7% | Chompunud et al. (2010) |
| Republic of Korea | 15,230 older adults in Seoul (≥ 65 ; 65.2% female) | Household interviews | 1 month, 6.3%; emotional abuse > physical abuse | Oh et al. (2006) |
| Republic of Korea | 1,000 primary care givers of family members with disabilities in Seoul (65-102; 69.5% female) | Regression analysis to identify indicators of elder abuse in the Comprehensive Study for the Elderly Welfare Policy (2003) | 10.9% yelled; 18% confined; 9.7% hit; 13.6% neglected | Lee (2008) |
| China | 412 older persons from community dwellings in medical clinics (≥ 60 ; 34.0% female) | H-S/EAST; VASS | 35.2% since age 60; 1 type, 64%; 2 types, 16%; ≥ 3 types, 20% | Dong et al. (2007) |
| Japan | 412 pairs of disabled older adults and family caregivers (mean age 80.5; 60.1% female) | Checklist developed through a literature review | 6 months, 34.9% | Sasaki et al. (2007) |
| India | 400 cognitively intact community-living older adults (≥ 65 ; 49.5% female) | Conflict Tactics Scale (CTS) | 1 year, 14.0% | Chokkanathan & Lee (2008) |
| Hong Kong, China | 355 community-living older adults (≥ 60 ; 62.0% female) | Revised CTS | 1 year, 21.4%; multiple types, 17.1% | Yan & Tang (2001) |

Source: Dong (2015).

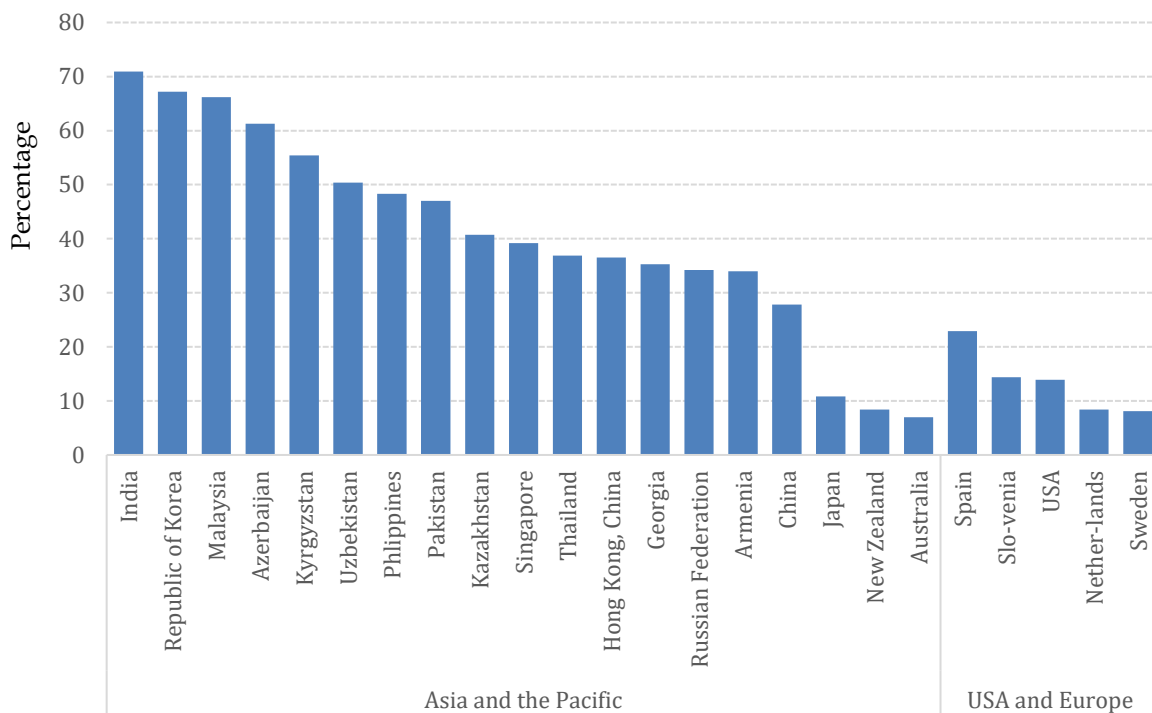
Age discrimination often occurs as elder abuse, a public health and human rights issue in Asia and the Pacific, and across the globe. Taking the form of physical and psychological harm as well as financial exploitation, elder abuse is the most underdeveloped field in violence studies, especially in comparison to domestic violence and child abuse. The pervasiveness of elder abuse has been found to vary depending on research methods, demographic conditions

and cultural setting (Dong, 2015). Among the key Asia-Pacific studies on elder abuse that are summarized in Table 1, the highest 1-year prevalence was found in China (36.2 per cent), while the lowest was found in India (14.0 per cent). To put these figures into a global perspective, in North and South America, the prevalence of elder abuse ranges from about a tenth of all cognitively intact older persons to half of all older adults suffering from dementia. In Europe, the prevalence of abuse varies from about 3 per cent in Ireland to approximately 60 per cent in Croatia (Dong, 2015).

In terms of risk factors, physical function impairment, psychological distress and social isolation have been associated with elder abuse in both private households and community dwellings. Of the many risk factors, cognitive impairment seems most robustly associated with a likelihood of elder abuse. Further, elder abuse has been linked to adverse health outcomes, including psychosocial distress, morbidity and mortality (Dong, 2015).

Figure 21. Share of respondents of the World Values Survey (wave six) that strongly agree or agree with the following propositions, selected Asia-Pacific countries

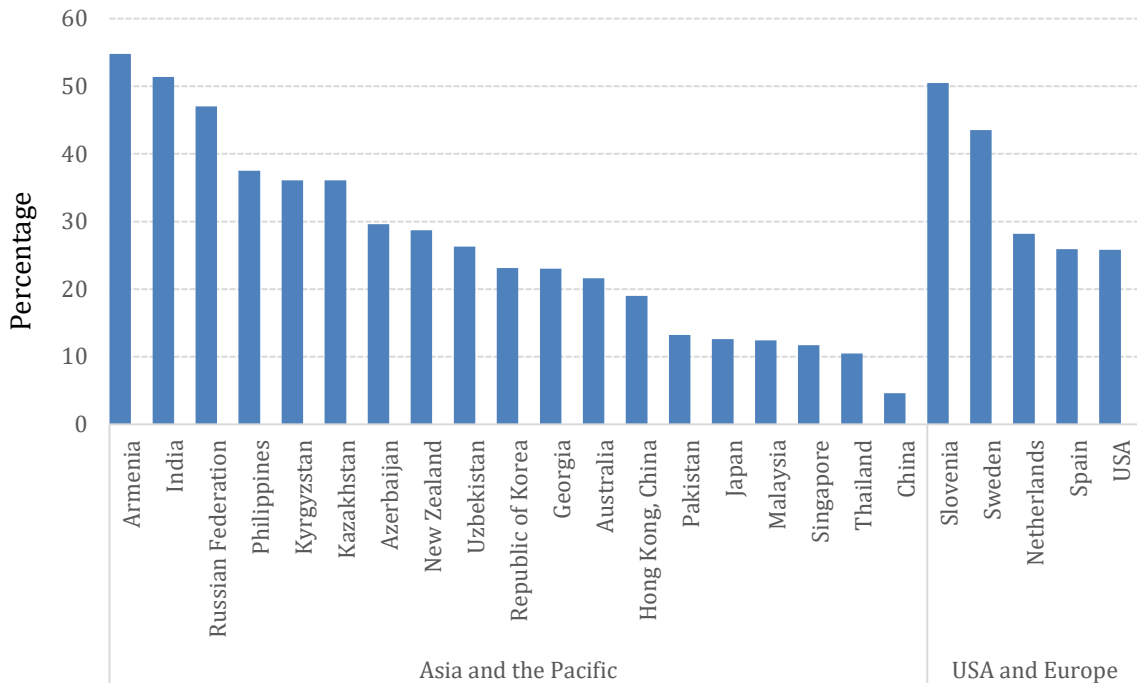
(a) Companies that employ young people perform better than those that employ people of different ages



Source: World Values Survey (2015).

Figure 22. Share of respondents of the World Values Survey (wave six) that strongly agree or agree with the following propositions, selected Asia-Pacific countries

(b) Completely unacceptable or unacceptable to have a suitably qualified 70-year old as my boss



Source: World Values Survey (2015).

Figure 21 and 22 illustrate the paradoxical forms age-based discrimination take in the workplace across the region. The upper panel suggests factors underpinning age-based discrimination in employment are much more entrenched in Asia-Pacific countries than in Europe and the United States. A larger share of respondents in Asia and the Pacific agree with the proposition that businesses with younger employees are more successful. At the same time, comparing response rates across the region reveals that ageistic values in the workplace are weakest in the more affluent countries, such as Australia, Japan and New Zealand.

In contrast, consistent with the Asian values hypothesis, the bottom panel suggests filial respect is more solidly transplanted in systems of management across Asia and the Pacific than in Europe and the United States. As indicated in the bottom panel of figure 21, a smaller share of respondents in Asia and the Pacific than in Europe and the United States agreed it was unacceptable to have a qualified 70-year old as a supervisor.

Ageism in the workplace is an important demand-side barrier for the integration of older persons in the workforce, though low labour force participation rates in old age also have to do with a disincentive to work. Modifying the behaviour of older persons to work longer therefore requires countries to consider incentive structures. This highlights the importance of reallocation mechanisms, and specifically the need to find a balance between fostering economic growth through labour income and ensuring intergenerational equity through public and private transfers.

(e). Stocktaking

In addition to strained social protection systems, broad cultural and social change, in the region over the last century, could make older persons increasingly vulnerable to poverty and social exclusion in the years to come. The difficulties of promoting the social integration and well-being of older persons are compounded by various factors. These include the erosion of traditional values, like filial piety, the attenuation of kinship support structures through the redefinition of familial co-residence and the reinforcement of ageistic cultural norms through media channels and popular culture. One of the fundamental challenges Asia-Pacific countries must address in the coming decades, is ensuring that, in addition to income security and basic social services, older persons have access to the broader social, cultural and political resources needed to flourish and lead meaningful and active lives.

D. Addressing population ageing to contribute to sustainable development

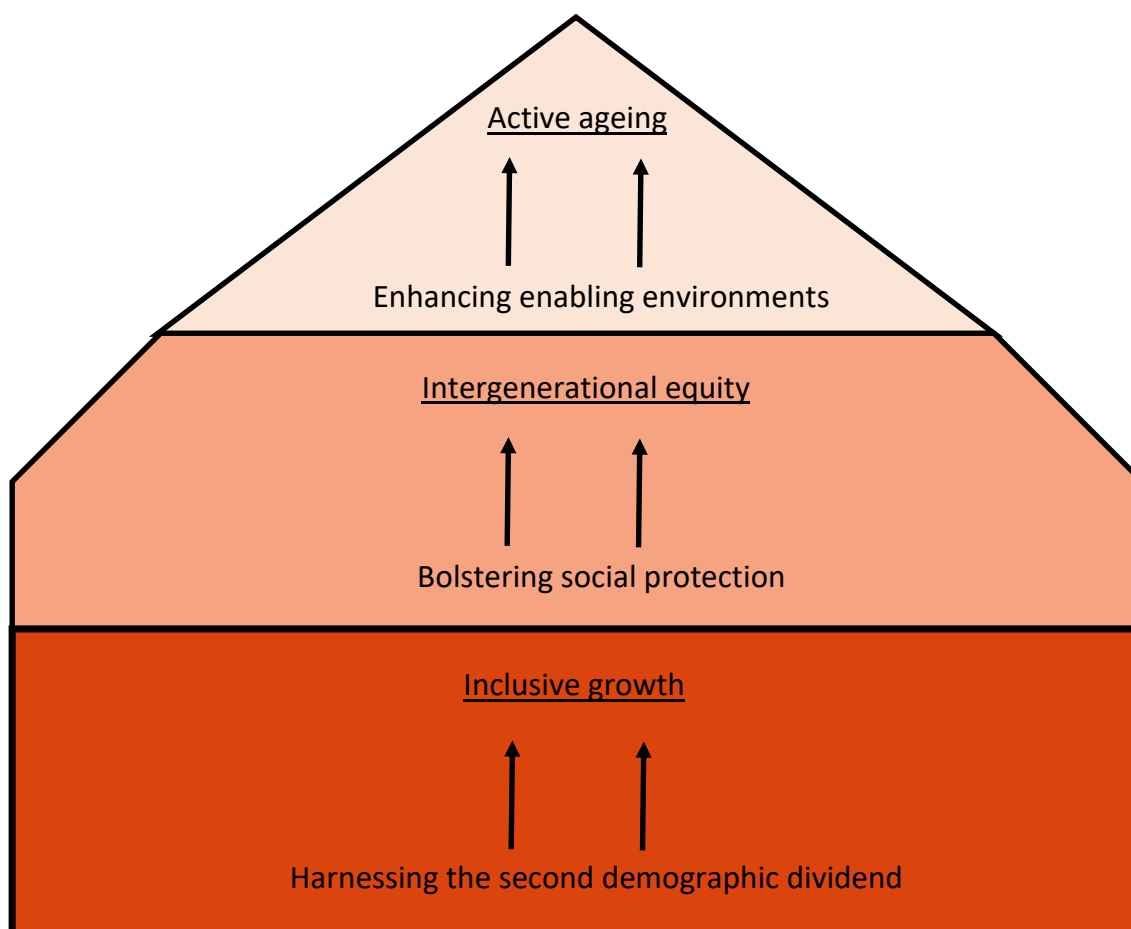
There are three general pathways through which Asia-Pacific countries can address population ageing to ensure sustainable development that leaves no-one behind. The first involves harnessing the second demographic dividend to achieve inclusive economic growth. The second relates to bolstering social protection to obtain greater intergenerational equality and the third involves enhancing enabling environments to effectively promote active ageing (figure 23). These pathways are a response to the challenges outlined earlier in the report.

(i) First pathway: harnessing the second demographic dividend for inclusive growth

As outlined earlier, harnessing the second demographic dividend encompasses a broad set of institutional, policy and behavioural adjustments to population ageing that counter the downward pressure associated with falling support ratios and declining consumption per capita. Drawing from NTA work, the set of adjustments can be organized under six responses.

The first two responses involve increasing productivity growth. The demographic conditions of population ageing (falling fertility and rising longevity) favour, increases in human capital investments that can improve labour productivity and capital deepening, through augmenting in the savings rate, capital per worker and per capita income. The following two responses call for additional financial resources for the social sector, and labour market and employment initiatives, such as promoting longer work lives and tapping the productivity of women and older persons. The latter response contributes to both productivity growth and redistributive efforts to the extent that labour is both a factor of production and a means to enhancing income security. Ensuring the lifecycle needs of an increasing number of older persons are met by facilitating the redistribution of income and consumption upwards through enhancement of public transfers, particularly through pensions and health care is also crucial.

Figure 23. There are three principal pathways for addressing population ageing



a. Fostering human capital investments

Lower fertility rates and the smaller size of the age group between 0 and 14 years provides opportunities for an increase in spending per child. Greater investments in human capital can raise the net productivity of the work force. Findings from NTAs suggest that the resulting increase in education-related productivity more than offsets the adverse economic effects associated with the decline in the ratio of effective producers to consumers. In other words, the human capital effects linked to falling fertility rates are substantial enough to generate a second demographic dividend (DESA, 2013b).

An essential quantity-quality trade-off therefore underpins the demographic transition. Though less in number, the young individuals that enter the workforce in the context of population ageing are often more educated and healthier, and therefore, can be more productive. A decline in the number of children implies less pressure on budget constraints, such that spending per child on health and education increases (Lee et al., 2010).

Thus, population ageing creates favourable conditions for increasing human capital investments per capita. Only if these investments lead to higher productivity during the working life will an increase in spending per child effectively tap the second demographic dividend. To ensure the return on human capital investment, countries need to enhance intangible infrastructure, such as an environment that promotes innovation and productivity and social capital (Natella and O'Sullivan, 2014).

In particular, there is a need to increase participation in, and completion of, higher education; build a solid information and communication technology infrastructure that is accessible to all; and enhance the scientific and technological base. As countries integrate into the regional and global economy, demands for a labour force with more sophisticated skills rise, making secondary and tertiary education increasingly important to compete for medium-skill jobs. Research has also shown that transferable skills and the ability to adjust rapidly to new technological developments will become more important in the future

To improve the quality of education in both countries that are rapidly ageing and those that are still young, it is essential to raise access to and completion of high school and university studies. Despite a trend toward convergence, a 'digital divide' continues to exist between people and between countries in the region (ESCAP, 2014a). Unequal access to information and communications technology (ICT) provides a barrier to fostering human capital. In the late-modern age of the Information Society, ICT is an essential pedagogical tool, facilitating interactive and long-distance learning, broadening access to the knowledge base and enabling research-related activities. ICT literacy is fundamental to secure work and to increase the productivity of workers. Across the region, however, important inequalities continue to exist in terms of the share of households that have access to a computer and to the Internet from home (International Telecommunication Union Indicators).

Along with facilitating access to higher education and the development of ICT infrastructure, another pathway for ensuring the return on investments on human capital is for countries to support the enhancement of the scientific and technological base. Strategic investments in research and development ensure quality of education and drive the demand for ICT infrastructure. Yet, across the region, asymmetries in terms of investments in research and development, the number of scientific journal articles published, the number of researchers per capita and the number of patent applications continue to exist (World Bank Indicators and ESCAP Statistical Database).

b. Fostering capital deepening

Low population growth associated with population ageing in the region can lead to a 'capital deepening effect' where higher productivity could translate into higher incomes which in turn would result in higher savings (DESA, 2013a). This is also based on the assumption that population ageing leads to behavioural modifications, whereby working individuals, in the face of increasing longevity, are incentivized to increase their savings to fund a longer period of retirement. This may be achieved through personal or household savings, through employer-funded pension systems or through public retirement programmes. While such a

response initially leads to higher savings and lower consumption, the additional capital that is generated enhances growth and, eventually, income per worker rises (Mason and Lee, 2011).

The region has a large pool of savings yet to be effectively put to the service of inclusive growth and social equity (ESCAP, 2015). In 2012, Asia-Pacific high net worth individuals had \$12.7 trillion in assets and the mass affluent had \$20.5 trillion in assets.⁷ It is estimated, that these values will increase to \$43.3 trillion and \$22.6 trillion respectively by 2020 (PricewaterhouseCoopers, 2014). While the assets and savings of the regional elites are essential to finance development objectives in the face of population ageing, it is perhaps more important to ensure that the hundreds of millions of workers – particularly those in vulnerable employment – are generating assets and saving these assets. This is the financial equivalent to job-rich growth. In the same way that sustainable development cannot be achieved through jobless growth, sustainable financing cannot be achieved by depending on only a few institutional investors.

Population ageing can create favourable demographic conditions for capital deepening by increasing demand for assets and creating a greater incentive to save in the face of rising longevity. There are two main channels through which Asia-Pacific governments – in collaboration with the private sector and civil society – can support capital deepening: promoting financial inclusion and expanding capital markets.

Research demonstrates that integration of vulnerable and/or excluded populations into the financial system unleashes entrepreneurial and innovative potential, stimulates investments in human and physical capital, induces risk management and builds resilience to economic shocks. Inclusive financial mechanisms provide individuals, households and firms with greater access to resources to meet their financial needs, such as saving for retirement, seizing business opportunities, and grappling with economic shocks and natural disasters (Demirguc-Kunt et al., 2014).

Despite progress, the majority of households and small- and medium-sized enterprises in the region still lack access to reliable financial services and are characterized by low financial literacy and capacity. A World Bank study conducted in 2014 found that Asia and the Pacific accounted for more than half of the world's unbanked adults, defined as persons without bank accounts. About 31 per cent of the world's unbanked adults were living in South Asia, followed by 24 per cent in East Asia and the Pacific. That stated, an increasing number of Asia-Pacific governments are introducing comprehensive measures to improve access to and use of financial services in order to more effectively harness domestic savings for investment (Demirguc-Kunt et al., 2014).

⁷ A 'high net worth individual' is a person owning US\$1,000,000 or more in assets, while a 'mass affluent individual' owns between US\$100,000 and \$1,000,000 in assets.

In addition to fostering financial inclusion, developing capital markets is another channel to ensure that the favourable demographic conditions for capital deepening are effectively tapped by countries in the region. Well-functioning capital markets are fundamental mediating institutions between households and investors, facilitating the flow of savings to infrastructure development. The region's large savings pool needs a productive investment vehicle and vast infrastructure requires active capital markets to bridge the gap and coordinate between asset managers and borrowers (APEC, 2015). The development of Asia-Pacific capital markets has not kept up with the pace of the region's economic growth (ESCAP, 2015); this needs to change.

(ii) Second pathway: Bolstering social protection for greater intergenerational equity

In the 2030 Agenda for Sustainable Development, social protection has been identified as a crucial tool to reduce poverty and inequalities. Social protection could lift at least 233 million people out of poverty in the Asia-Pacific region. Social protection throughout the lifecycle, covering people from the risk of illness, accidents, job loss, inability to work and others is particularly crucial in ageing societies to ensure that older persons are not being left behind (ESCAP, 2018).

This section discusses the other four measures. Firstly, to bolster social protection for older persons, countries have to muster additional resources to finance the social sector. Next, tapping the productivity of older persons has the potential of contributing to both economic growth and intergenerational equity to the extent that labour market schemes aim to correct labour market inefficiencies as well as to provide income security through decent work. The two other measures involve meeting the lifecycle needs of an increasing number of older persons by enhancing pension systems and health and long-term care.

a. Enhancing pension systems

The pension systems in the region are as diverse as their demographic and socioeconomic conditions. The heterogeneity of these pension systems stems from the diversity of national constraints and preferences. While high-income countries such as Japan effectively cover 100 per cent of their population and transition economies from North and Central Asia have relatively high coverage rates, in most countries of the Asia-Pacific region, less than one third of the working-age population effectively contributes to a pension system.

Figure 6, presented earlier, visually shows how the challenges facing countries in the upper-right hand quadrant, such as Australia, Georgia, Japan, New Zealand and the Russian Federation, which have established robust social protection systems before growing old, are different from the challenges facing countries in the bottom-left and bottom-central quadrants, which have attenuated social protection systems, yet still have relatively young age structures.

Though pension systems vary due to different country-specific conditions, all publicly-managed and government-backed pension systems need to fulfill the basic functions of ensuring income security for older persons, reduce poverty and inequalities in old age.

Pension systems also smoothen consumption over time, both at the micro- or household level, allowing individuals to meet lifecycle needs in old age, as well as at the macro- or national level, stabilizing aggregate demand (ILO, no date).

A multi-pillar system provides the flexibility required to meet a variety of country-specific conditions and is also better suited to address the various risks associated with population ageing than a mono-pillar system. (Park and Estrada, 2013). Two pillars are seen as fundamental for well-functioning pension systems: The non-contributory pillar targets poverty alleviation and aims to provide all older persons with a minimum level of protection. These social pensions can be considered a type of social assistance and can either be universal or targeted (means-tested). The mandatory contributory pillar linked to earnings that aims to replace a certain share of lifetime pre-retirement income.

According to the International Labour Organization, pension systems should be guided by the following principles to meet international social security standards (ILO, no date):

1. Universality in meeting universal protection without leaving anyone behind.
2. Social solidarity and collective financing
3. Adequacy and predictability of benefits
4. Overall and primary responsibility of the State
5. Non-discrimination, gender equality and responsiveness to special needs
6. Financial, fiscal and economic sustainability
7. Transparent and sound financial management and administration
8. Involvement of social partners and consultations with other stakeholders

Many pension systems in the Asia-Pacific region currently fall short of most of these principles. With low coverage, as discussed earlier in this paper, they provide access only to those under legal coverage of the pension system. However, an increasing number of countries in the region is introducing social pensions, which provide universal protection without leaving anyone behind, although benefit levels are often low (HelpAge, no date). China recently actively expanded coverage of the pension system, starting first with a rural and an urban pension scheme, which in 2014 was merged to one single pension system. The aim is to achieve universal coverage by 2020. Rapid expansion of pensions coverage was achieved through a combination of strong political will, administrative support through local governments and fiscal support by public subsidies for pension contributions (ILO, 2015).

Pension systems in the Asia-Pacific region are currently designed in a way that they are based on individual accounts without redistributionary elements. Pension benefit levels exclusively depend on the amounts paid in, which are again determined by wage levels and contribution times. Thus, they currently do not meet the principle of social solidarity and collecting financing. This perpetuates income inequalities which are then accumulated throughout the

lifecycle. Moreover, many countries in the region have a provident fund that provides a lump sum instead of an annual pension. Provident funds contribute to increased savings, but do not necessarily provide income security in old age because experience shows that lump-sums are often depleted rapidly (ESCAP, 2016 and 2017).

Further, most countries introduced defined contribution schemes or turned defined benefit schemes into defined contribution schemes. While it seems to be easier to ensure sustainability of the pension fund for defined contribution schemes, the predictability of benefits is limited: contributors know how much they contribute, but do not know their future benefit levels.

Women are often left behind in current pension systems in Asia and the Pacific due to women's lower labour force participation. When women are covered by pension systems and actively contribute, their benefit levels are often lower than men's. This is a result of women's lower wages combined with lower contribution times because of childcare and other care breaks (ESCAP, 2019).

The pension systems of several countries in the region currently lack sustainability, with low benefit levels and in some cases increasing Government expenditure resulting from larger numbers of older persons. Pension reforms are important to increase coverage and sustainability of pension systems. The Republic of Korea, for example, is conducting regular reviews of the pension systems and making adaptations to ensure its sustainability (ESCAP, 2016). Ensuring the sustainability of the pension system can be done through measures such as reducing benefit levels, increasing contribution rates, increasing the retirement age or having a flexible retirement age without a mandatory retirement age, which would also allow men and women to take breaks during their work life. In cases where pension benefits are already relatively low, further reduction of benefit levels would not be conducive to providing income security for older persons.

While comprehensive pension reforms would be required in many countries and are often complex to implement, countries may give priority to increasing coverage of pension systems, including to those in the informal sector. Given the importance of the informal sector in many Asia-Pacific countries, expanding contributory pensions to this sector will be crucial in ageing societies. Several countries in the region are currently considering voluntary contributions with a Government matching scheme. In 2018, Malaysia launched a housewives' pension which encouraged women to make a minimum monthly contribution of MYR5 into the employees' provident fund. These payments are matched by a MYR40 government contribution. This programme particularly encourages single women to contribute (ESCAP, 2019).

b. Strengthening health and long-term care

In the context of the demographic and epidemiological transition in the region, it is imperative for countries to increase investments in health services and adapt health and social systems in response to the needs of older persons through an integrated continuum of care, including preventive care, acute care, chronic disease management, long-term care and end-of-life care.

It is also essential to strengthen family and community networks for the provision of health and social care for older persons. Key areas for development are: the improvement of training for caregivers among both family or specialized personnel, integration of home-based health care and rehabilitation care with social support, promoting age-friendly homes and environments to facilitate mobility for older persons, encouraging volunteerism and promoting association among older persons so they could serve as self-help groups and undertaking outreach and advocacy or income-generating activities. Countries therefore need to encourage community-based and non-profit organizations, as well as the private sector, to play a major role in the provision of care services and training for older persons, in cooperation with government agencies (Kay, 2017).

Achieving universal health coverage is reflected in the sustainable development goals, target 3.88, and has economic and social benefits. Investments in health foster economic and social cohesion. A healthier population is more productive, as workers are less absent, take less time to recover from sickness, and spend less time looking after ill dependents. In addition, healthier individuals spend less on health-related goods and services and can instead consume other necessary commodities, which further stimulates domestic demand. Making sure that all have access to affordable health care is thus a fundamental component to promoting inclusive and sustainable development (Bloom and Canning, 2008).

c. Mobilizing additional financial resources for the social sector

To enhance investments in the social sector, countries need to address the challenge of raising new and additional resources, reallocating existing ones and creating a supportive environment for investing in the social sector, in particular, health care, pensions and labour market programmes for older persons. This requires strengthening domestic resource mobilization as well as catalyzing additional financial resources through innovative partnerships. Given the dynamics of globalization and regionalism, international sources of financing will also be essential to complement domestic resource mobilization (table 2).

Table 2. Domains for mobilizing domestic and international resources

| | Domestic | International |
|---------|---|--|
| Public | <ul style="list-style-type: none"> • Tax reform • Reallocation of public expenditures | <ul style="list-style-type: none"> • Official development assistance • International funds |
| Private | <ul style="list-style-type: none"> • Sovereign wealth funds • Microfinancing | <ul style="list-style-type: none"> • Foreign direct investment • Remittances |

⁸ A/RES/70/1

Domestic public finance

Investments in social protection should be solidly grounded in domestic public financing streams. This is because the government should set a clear direction, not only by ensuring the right to development and generating solidarity, but also by establishing the long-term sustainable development horizon against which the social and economic benefits of a solidly funded social sector become evident.

1. Tax reform

Tax reform based on a redistributive impetus is essential for more effective domestic resource mobilization in the context of population ageing. The social sector in the region has been largely financed through general government taxes. Countries like China, the Maldives, Nepal, Thailand and Viet Nam, are providing tax-financed non-contributory pensions that aim to cover all older persons (HelpAge, no date). Tax revenues have also been essential to finance non-contributory health-care services, with the aim of achieving universal health coverage. Examples of such initiatives include China's Urban Residents Basic Medical Insurance, Bhutan's Primary Health-Care system, and Thailand's Universal Health Coverage scheme.

Despite this progress, tax revenues in the region remain low, reflected in low government expenditures dedicated to social protection, and, consequentially, enduring coverage gaps. Tax revenues in Asia-Pacific developing countries averaged only 14.8 per cent of GDP in 2011, compared with 34.1 per cent for OECD countries, 17.1 per cent in Latin America and the Caribbean, and 16.3 per cent in sub-Saharan Africa (ESCAP, 2014b). There is scope for improving tax collection in the region by expanding the tax base and strengthening compliance frameworks. Increasing tax revenues is an effective way of broadening fiscal space for financing public pensions and health care for a rising number of older persons, while also fostering intergenerational solidarity.

Earmarked (dedicated or hypothecated) taxes, especially for tobacco, can be a means to finance health care in the region. Earmarking tobacco taxes aims to correct the negative externality of tobacco use for the non-smoking members of society (namely, the effects of 'second-hand smoke') and reduce consumption of these products, while generating additional revenue for health, especially for health promotion, including prevention of NCDs (WHO, 2012).

Another option is taxing carbonated beverages with a high content of sugar or foods with a high content of salt – the so-called 'fat tax'. Several Pacific island countries have introduced such taxes as part of efforts to address high rates of obesity and diet-related chronic diseases. For instance, Fiji, French Polynesia and Samoa have introduced a tax on carbonated sugar beverages; while Nauru introduced a 'sugar levy' of 30 per cent on imported sugar, confectionery, carbonated soft drinks and drink mixes in 2006. In French Polynesia, the tax was earmarked for a health prevention fund (Thow et al., 2011).

2. Reallocation of public expenditures

Mobilizing public revenues from extractive industries is another way government in the region can finance the increasing social protection needs of older persons. Governments may raise revenues by directly extracting natural resources through state-owned enterprises or joint ventures or by selling the exploitation rights to national or foreign companies and taxing the profits (Ortiz et al., 2015). Another way to utilize the wealth from natural resources is to set up sovereign wealth funds, as further discussed below.

Several smaller resource-rich Asia-Pacific countries, including Mongolia, Myanmar, Papua New Guinea and Timor-Leste, are affected by the so-called 'resource curse' or the 'paradox of the plenty' (Barma, 2014). Though they have an abundance of natural resources, social development often does not keep pace with economic growth. Research has demonstrated that the public sector has played a central role in those mineral-rich countries that have performed more successfully, both in terms of achieving inclusive growth and fostering intergenerational equity (Hujo, 2012). To transform the 'curse' into a 'blessing', especially given the dynamics of population ageing, resource-rich countries should consider investing revenues from mineral extraction in the social sector, particularly for pensions and health care.

The case of Botswana, the eighteenth largest diamond exporter in the world, serves as a good example. This small and land-locked, mineral-rich country was able to escape the resource curse by channelling a portion of its resource revenues to recurrent health and education spending (Merchant-Vega, 2011). Botswana fully funds its social protection programmes from its own domestic resources (World Bank, 2013).

Another landlocked developing country, Bolivia, has mobilized public revenues obtained through a direct tax on hydrocarbons to fund a universal, non-contributory pension scheme, called 'dignity pension' (*renta dignidad*). This social pension was established in 2008 to provide income security to the large majority of older persons – over four-fifths of the cohort – who were not receiving benefits under the national contributory pension system. This initiative made a number of important modifications to the more rudimentary cash transfer programme it replaced (Bonosol), including lowering eligibility from 65 to 60 years, moving from an annual to monthly disbursements and incorporating a progressive benefit formula (Ticona Gonzales, 2011).

In addition to implementing tax reform and mobilizing rents from natural resources, an area of public expenditure with great potential in creating fiscal space for social protection is subsidies (ILO, 2014a). Asia-Pacific countries can demonstrate their commitment to fostering social protection and prepare for population ageing by financing social investments through the removal or reduction of non-social sector subsidies, for example in energy. Countries in the region spend considerable resources on such subsidies. In South-East Asia alone, energy subsidies amounted to \$51 billion in 2012 (ESCAP, 2015). In Bangladesh, Kyrgyzstan and Pakistan, energy subsidies represented between a quarter and half of total government revenues. These energy subsidies are often regressive and incentivize fuel-intensive production. Further, they have had little impact on reducing poverty or enhancing inclusive

growth. Estimates suggest that savings from these subsidies would be sufficient to finance income security for all older persons as well as provide universal access to health and education in Indonesia, Malaysia, the Philippines and Thailand (ESCAP, 2015).

Domestic private finance

Public resources alone will not suffice; domestic private actors will need to play a role in the financing of social protection for older persons. Complementing the traditional investments of the public sector (that is, the state), private actors – business actors in particular – are carriers of resources and incentives. In certain cases, the profit-seeking impetus of private financing can bring with it greater effectiveness in the use of resources.

1. Sovereign wealth funds

Seeking greater financial sustainability for natural resource revenues, Governments in the region have increasingly turned to sovereign wealth funds – investment funds owned by sovereign states and generally funded by revenues accrued from the export of non-renewable natural resources. Such funds are innovative in that they handle public money but are managed like private investors.

There are two principal types of sovereign wealth funds: savings funds and stabilization funds. While the latter are established to reduce the volatility of government revenues in the face of general economic slowdown or, in the case of resource-rich countries, to hedge against price instability and overdependence on resource revenues, the former accumulate wealth for future generations. Most sovereign wealth funds tend to include elements of each of these functions, of which the latter is particularly relevant in the context of population ageing.

Established in 1990, the Government Pension Fund, which invests Norway's oil wealth, is in many ways the global benchmark. This sovereign wealth fund serves two primary purposes: The first is to provide a long-term source of wealth for the benefit of future generations, achieved through financing social security expenditures, which are projected to steadily rise because of population ageing. When it was established in 1990, the prospect of escalating pension and health payments due to an increasing number of older persons was cited to justify the fund (Gelb and Grasmann, 2010). Though the spending of the returns is not earmarked, in relation to future pension commitments, there is a public consensus that the Government Pension Fund should serve to alleviate the pressures on state coffers projected to be caused by population ageing. The second purpose of the fund is to counter fluctuations in government receipts caused by changes in oil prices and production.

Due to the long-term and relatively stable returns this type of asset can provide, sovereign wealth funds in the region have generally been established to build on and improve existing infrastructure, including energy, transportation and telecommunications (Goodall et al., 2013). However, given concerns with the fiscal consequences of population ageing and growing recognition of the link between sustainable development and social protection, this

financial mechanism is increasingly being used to finance the social sector, in particular the supply-side of social services like schools and hospitals. For example, in 2009, Mongolia established the Human Development Fund, a sovereign wealth fund specifically developed to invest mining revenues in the social sector, including old-age pensions (Campi, 2012). Timor-Leste used its petroleum fund to support the implementation of a series of cash transfer programmes, the first of which was targeted at older persons and persons with disabilities.

Australia has established three sovereign wealth funds linked to the social sector to mitigate the adverse consequences of population ageing: Established in 2006, the Future Fund aims to strengthen the long-term financial position of the public sector by making provisions for unfunded, compulsory pension contributions ('superannuation') liabilities; the Health and Hospitals Fund, established in 2008, supports the development of health infrastructure; and, established in 2015, the Medical Research Future Fund aims to improve the health and well-being of Australians by providing grants of financial assistance to support medical research and medical innovation (Future Fund Board of Guardians, 2014).

The New Zealand Superannuation Fund is a sovereign wealth fund, established in 2001, to partially pre-fund the future cost of the New Zealand Superannuation pension, projected to increase due to population ageing. All citizens or residents aged 65 or older receive New Zealand Superannuation payments, currently financed through tax revenues. However, over the coming decades, the New Zealand population will age significantly, which could result in fiscal strain. Between 2003 and 2009, the Government contributed NZD14.88 billion to the Fund. Contributions are scheduled to resume in 2020. From 2030, the Government will begin to withdraw money from the Fund to help pay for New Zealand Superannuation. The Fund will continue to grow until it peaks in the 2080s. In 2015, J.P. Morgan ranked New Zealand's \$30 billion sovereign wealth fund as the best performing sovereign wealth fund over the previous five years, generating returns of more than 17 per cent a year (Greene and Johnson, 2015).

Given their natural resource reserves, including oil and gas, the countries of North and Central Asia are particularly well positioned to benefit from sovereign wealth funds, especially to achieve intergenerational equity in light of the fiscal pressures associated with population ageing. Two important sovereign wealth funds from this subregion are the National Fund of the Republic of Kazakhstan, established in 2001, and the State Oil Fund of Azerbaijan, established in 1999 to accumulate income from hydrocarbon exports. While both funds were created to preserve macroeconomic stability as well as to preserve revenues for future generations, the latter objective has been largely neglected thus far (Aslanli, 2015).

2. Microfinancing

Another potential mechanism for augmenting investments in the social sector and remedying the limited capacity of governments to protect older persons is microfinance. This can be defined as any financial service that targets poor and vulnerable households, entrepreneurs, and small business owners who have no collateral and would not otherwise qualify for a standard bank loan or insurance. Rather than collateral or credit history, microinsurance and

microcredit initiatives are based on mutual trust. For this reason, these initiatives have long been lauded for fostering social capital (Feigenberg et al., 2014).

The majority of individuals in the region, especially those in vulnerable employment, are excluded from core financial services, including savings, credit, and insurance. This stymies the ability of individuals to build assets, stabilize consumption and protect against risks during their working life. The cumulative effects of these forms of exclusion intensify precarity in old age. Furthermore, the low financial literacy and capacity endemic among poor and vulnerable populations can increase the difficulties of managing lifecycle deficits in later life.

Since the turn of the millennium, the number of microfinance initiatives has increased exponentially across the region, particularly in South and South-West Asia. One initiative especially relevant in the context of population ageing is micropensions. These allow for informal sector workers that are excluded from contributory pension schemes to accumulate wealth, ensuring old-age income security. Micropensions are typically set up as defined-contribution schemes that function on the principle of voluntary savings accumulated over a long period. These savings are usually mediated through non-governmental organizations and microfinance institutions. At the established withdrawal age, the accumulated balances can be withdrawn as a lump sum, a phased withdrawal, annuity, or some combination of these methods (Asher and Shankar, 2007).

In 2000, the Grameen Bank was one of the first microfinance institutions to offer a micropension in Bangladesh. Under the Grameen Pension Savings Scheme, all borrowers are required to deposit a minimum monthly amount in a personal pension savings account (Hu and Stewart, 2009). In the Philippines, the Center for Agriculture and Rural Development Mutual Benefit Association (CARD MBA) offers an obligatory provident fund to CARD Bank and CARD Inc. (a non-governmental organization) as well as products related to health-care financing. To complement its flagship New Pension Scheme (NPS), the Government of India started a micropension plan – “NPS-Lite” – for the informal and low-income workforce along with the co-contributory Swabalamban scheme which provides a contribution top-up in NPS-Lite.

International public finance

Given the forces of globalization and increasing regional integration, international stakeholders will continue to play an important role in the financing of development in the region. International public finance should complement and facilitate national efforts to prepare for an ageing society. Bilateral and multilateral official development assistance (ODA) will remain essential and should be focused on where social sector needs are greatest and the capacity to raise resources is weakest. In most Asia-Pacific countries, these priority areas include health care, pensions, and employability-enhancing initiatives for older persons.

ODA flows to the Asia-Pacific made up \$17 billion in 2017 (OECD, 2019). Many donors have been reprioritizing the sectors over time. Social infrastructure is now the sector receiving the

highest flows from countries in the OECD Development Assistance Committee (DAC), receiving almost double the amount as economic infrastructure (OECD, 2019).

In the future, more ODA could be particularly targeted to initiatives to address population ageing. The Japan International Cooperation Agency (JICA) is already providing age-related assistance. Japan is providing technical cooperation in community-based welfare to support older persons in other countries in Asia and the Pacific. Initiatives have been started in Thailand, the Philippines and Indonesia (Oizumi et al., 2006).

In addition to the more traditional ODA, innovative international funds and delivery channels have become increasingly important in funding the social sector, particularly health care. The Global Fund to Fight AIDS, Tuberculosis and Malaria and the Global Alliance for Vaccines and Immunisation are examples of these initiatives organized around multi-stakeholder partnerships between Governments, the private sector, civil society, and traditional and emerging donors. The lessons learned, and the funding and monitoring mechanisms that have been put in place for the financing for AIDS in Asia and the Pacific, can be tapped by countries in the region to facilitate meeting the health and long-term care needs of a growing number of older persons (UNAIDS, 2015).

International private finance

With globalization and the intensification of regional integration, as well as the proliferation of private actors, international private financing streams will play a significant role in the region. As is the case with international public finance, Asia-Pacific countries must ensure that part of these international private financing streams, foreign direct investments (FDI), and remittances are directed toward meeting the challenges of population ageing.

1. Foreign direct investment

FDI is an important source of financing in Asia and the Pacific, surpassing ODA. FDI flows have tended to favour the larger emerging countries and the resource and energy sectors, failing to reach the countries or sectors that need them the most – namely, least developed countries and the social sector. However, FDI to developing countries in the Asia-Pacific region, including least developed countries have been increasing rapidly. For example, FDI to Cambodia increased from \$33 million in 1992 to \$3.1 billion in 2018 (UNCTAD, 2019).

As outlined earlier, the increase in the standard of living across the region means a growing number of individuals are demanding better health-care services. With the rise in longevity linked to the demographic transition, individuals are requiring these services for longer periods of time, while their costs increase significantly with age.

In this context, FDI can play a role in bridging investment gaps. In particular, FDI-related technology transfers can support the development of diagnostic tools and medical equipment, as well as the training of health professionals. Technology-driven initiatives, such as telemedicine, may also attract foreign investors. FDI can finance larger scale infrastructure projects aimed at developing the supply-side of health services, including the construction of

hospitals and diagnostic centers. Technology can also be used, and is already being used, to support the delivery of health care to rural and remote areas. It can further be used to support to support older persons in self-monitoring their health status (Park, 2017)

In harnessing the potential of FDI for health care, Asia-Pacific countries should ensure that private provision of social protection is made affordable and available to all segments of society. This requires developing a robust regulatory framework for FDI (OECD, 2002).

2. Remittances

Asia and the Pacific remains the highest remittance-receiving region in the world, both in absolute and relative terms. In 2019, countries in the region received US\$328 billion of personal remittances. Remittances are, therefore, a crucial source of income for both families and the State, comprising as much as 30 per cent of GDP, such as in Kyrgyzstan or Tajikistan in 2019 (World Bank 2019).

At the macro level, remittances have kept current account deficits stable. This financing stream could thus play a relatively important stabilizing role in contexts where rapid population ageing generates downward pressure on economic growth. At the household level, remittances can meet lifecycle needs and bolster familial transfers to children and older persons. Remittance flows are also positively linked to asset creation, as they increase household savings (International Organization for Migration, 2014).

It can be assumed that as societies move further along the demographic transition, a greater share of remittances goes to remedying increasingly larger lifecycle deficits in old age. Concomitantly, as studies in Sri Lanka show, the changing demographic conditions pose a dilemma, particularly for potential women migrants who have to choose whether to work abroad to remit money to their families or stay in their home country to care for their older parents and relatives (Gamburd, 2015). From this angle, population ageing could depress the flow of remittances. In the final analysis, however, remittances have undoubtedly contributed to reducing vulnerabilities and building community resilience in many countries of the region.

While being a private source of income, this financial stream provides an informal social protection mechanism that can play an important role in the context of population ageing. The principal challenge for Asia-Pacific countries is harnessing remittances into sustainable social investment projects and community development initiatives. The Philippines has had successes in this regard. In 2011, the United Nations Development Programme, in collaboration with Western Union, launched the Overseas Filipinos Remittances for Development: Building a Future Back Home project with the Philippine government to tap the potential of overseas remittances for local economic development. Also launched in 2011, by the Commission on Filipinos Overseas, in partnership with the Transnational Institute for Grassroots Research & Action, the Remit4change project established a financing mechanism through which each use of specific US-based money transfer companies generates a US\$1 contribution to a community development project of the remitter's choice (ADB, 2015).

The challenge with remittance mobilization projects in general is devising strategies for scaling them up.

d. Tapping the productivity of older persons

Though effective at strengthening income security in old age, increasing the productivity, employability and labour force participation of older persons tends to be part of a more general strategy to directly counter the decline in the economic support ratio. This occurs by addressing the contractions in the supply of labour associated with the demographic transition. Countries in the region have attempted to counter such contractions through policy initiatives.

Some countries in the region, especially the most aged ones, are also promoting family-friendly policies. In Japan, the government provides subsidies for childcare, aiming to create a more supportive environment to combine family formation and labour force participation. Further, in the Republic of Korea and Singapore, the governments offer financial and housing incentives to couples with more than two children. These initiatives have not been entirely successful, with little changes in fertility rates, suggesting these incentives are insufficient to modify reproductive behaviour.

One of the most popular and often discussed solutions to the economic downturn linked to population ageing is that older persons should work for more years as they live longer. Increasing the retirement age can contribute to the sustainability of pension funds as well as active and inclusive ageing. However, such formal and legal measures do not necessarily apply to persons in vulnerable employment. In this context, the focus should be on creating more decent work opportunities throughout the life-cycle, including for older persons.

While social insurance and social assistance schemes provide income support, they do not draw on one of the root causes of vulnerability, the inability to earn a decent and reliable income which contributes to the exclusion of the most vulnerable. For this reason, employment generation schemes are an indispensable aspect of social protection. These schemes increase the probability that the unemployed find work or that the underemployed increase their productivity and earnings. They also generate social benefits in the mode of the inclusion and participation that come from productive employment (ILO, 2014b).

Despite their potential advantages, there are very few labour market schemes in the region. It is only in South and South-West Asia that employment guarantee programmes have been established (ADB, 2013). Skills development and training programmes remain scarce, existing for the most part in the more developed countries or as pilot initiatives. As the number of older persons rises rapidly, challenges to economic growth will only intensify and longevity will continue to increase. In this context, countries in the region should not only develop labour market schemes, but also target these schemes at older persons.

Labour market initiatives for older persons should address both supply- and demand-side barriers. In this regard, a multi-country OECD initiative on employment policies to address ageing has highlighted three broad areas where policy action is vital to encourage work at an

older age. These are: 1) strengthening financial incentives to carry on working; 2) improving the employability of older workers; and 3) tackling employment barriers on the side of employers (2006).

Following the OECD approach, on the supply side, the aim should be to increase incentives to expand working life; and develop life-long training opportunities to increase employability. On the demand side, efforts need to be made to counter ageism, in particular in regard to employment discrimination and to providing private sector incentives to employ older persons. Another essential demand-side initiative, particularly pertinent to developing Asia-Pacific countries, needs to be added to the OECD approach: promoting productive and decent work for older persons.

Japan has a set of labour market programmes for older persons. Since at least the passage of the Employment Promotion Measures Act in 1966, the Government of Japan has deployed a number of measures to enhance the labour force participation of older persons. The majority of government efforts have aimed at providing the private sector with incentives to help individuals find alternative employment after retirement.

In 1971, Japan enacted an important government measure to support the continued employment of older workers, namely, the Law Concerning Stabilization of Employment of Older Persons. The 2002 Amendment to this Law required the private sector to take steps to ensure that those individuals that so desired could continue to work up to at least the age of 65 years. The amendment also included several measures to provide unemployed older workers with training and counselling services to increase their employability and prospects of labour market insertion (Williamson and Higo, 2007a). The 2004 Amendment to the 1971 Law put in place a system of financial incentives to promote employment among older workers. These incentives take the form of subsidy programmes designed to encourage employers to retain their older workers and to reach out more to older workers when hiring.

Another noted labour market initiative in Japan is the Silver Human Resource Center (SHRC). Completely subsidized by the national and municipal governments, SHRCs serve as community-based employment agencies, providing temporary and/or part-time paid work to older men and women. Rather than putting older persons in competition with younger job seekers, SHRCs arrange temporary/part-time employment in certain areas related to community development. Assignments include janitorial services at a local school, household chores for working parents and teaching at a community center (Vogt, 2010). Since 2003, in partnership with business actors, civil society and relevant public employment agencies, the association of SHRC chapters has been organizing employability-enhancing workshops where SHRC members receive skills training and job-interview coaching (Williamson and Higo, 2007a). Research shows that older persons that participate in SHRC activities have increased well-being (Weiss et al., 2005). Studies also provide evidence that SHRC initiatives can foster social capital (Vogt, 2010).

As developing countries without the standard of living of Japan, India and Thailand have prioritized providing social assistance and/or social insurance to older persons over

initiatives to increase old-age labour participation. For both countries, the principal challenge has been to provide pensions to older persons that have spent their work life in informal and vulnerable employment (Fujioka and Thangphet, 2009; Rajan, 2010).

However, given its rate of population ageing, Thailand has acknowledged the need to increase the productivity, employability and labour force participation of older persons. At the turn of the millennium, the government of Thailand established the Brain Bank, aiming to encourage older persons with specific technical skills to remain active after retirement, and contribute their knowledge to the social development of the country (Fujioka and Thangphet, 2009). The Bank maintains a database of older persons by type of expertise. This is disseminated to organizations that wish to receive specific technical assistance from an older person (Ministry of Social Development and Human Security, 2007). In 2004, as part of the Brain Bank initiative, Thailand's Bureau of Empowerment for Older Persons put in place the Elderly Brain Bank Project. This project aims to promote the sharing of knowledge and skills between older persons and younger cohorts to increase the employability of the latter and promote community development.

As suggested in this report, countries in the region with a relatively young population age structure should not wait to implement a policy framework to promote economic growth and intergenerational equity. Labour market initiatives aimed at increasing the employability, productivity and labour force participation of older persons constitute an essential pillar of this framework.

(iii). Third pathway: Enhancing enabling environments for active ageing

Ensuring inclusive growth and prioritizing investments in social protection are necessary but not sufficient conditions to foster the well-being and social integration of older persons. That is particularly so considering horizontal inequalities and the dynamics of intersectionality, the transformation of living arrangements and the inroads ageism is making in modern social life.

In this regard, countries should promote 'active ageing', implementing measures to improve the well-being of older persons to allow them to take charge of their own lives, such that they can participate meaningfully in the social, economic and political spheres. Efforts in this area require the transformation of legal frameworks and institutional arrangements, the development of enabling and supportive environments and the mobilization of social partners.

To pose the issue of demographic change in terms of active ageing is to recognize that, in addition to economic foundations, individuals need broader social, cultural and political resources to flourish and lead meaningful lives. Active ageing brings forth a broad human capability approach to population ageing. This framework is oriented by a positive view. Rejecting the ageist assumption that older persons are a burden to society, the principle of active ageing acknowledges the potential of older persons to contribute to economic growth and social integration (WHO, 2002)

Essential for promoting active ageing is a rights-based approach. Active-ageing policies need to be grounded in rights-based foundations, where the rights of older persons are an essential component in building supporting and enabling environments. As universal principles, these rights regulate social structures and markets, ensuring that ageing cohorts are treated as the ends and not the means of development. At the global level, the fundamental issue orienting the rights-based approach is how best to integrate the rights of older persons into human rights instruments. The Madrid International Plan of Action on Ageing provides a global guiding document for United Nations Member States to implement policies to respond to population ageing and build societies for all ages.

IV. Conclusions

The shift to an older age structure, while being an outcome of development gains, will in the future pose important challenges to inclusive growth and social equity in the region. Downward pressure on economic growth seems likely and social protection systems will come under increasing strain. Ensuring that the ever-growing number of older persons age well and actively contribute to development will progressively challenge policymakers and stakeholders, governments and families, and public and private resources alike.

Though population ageing is ubiquitous in the region, countries are at different stages of the demographic transition. A three-prong heuristic device, derived from a series of scatter plots, has been used throughout the paper to frame this regional diversity. Broadly, this conceptual framework depicts the following regional picture: Some countries have become affluent before growing old. These countries have built robust social protection systems and strong enabling environments for active ageing. Other countries have got old or are quickly getting old before becoming affluent. While some of these countries have managed to build relatively strong social protection systems and enabling environments for active ageing, the majority of them face important social protection coverage gaps and attenuated enabling environments. The remaining countries are still young and not affluent, or young and poor. These countries must expand and enhance social protection coverage for older persons and strengthen their enabling environments for active ageing.

Through the right mix of institutional arrangements, policy initiatives and behavioural change, population ageing can generate economic and social gains. What exact measures should be deployed to manage ageing will depend on where countries are situated along the demographic transition. Economic and social conditions linked to, economic development, social protection investments and the robustness of the enabling environment for ageing well, constitute resource constraints within each window of opportunity.

(i) Economic repercussions of ageing and the second demographic dividend

As populations age, there is concern that the shrinking labour force and falling support ratios lead to slowing economic growth and fiscal strain. However, this ignores the possibility of a 'second demographic dividend', which could be generated when low fertility and rising longevity lead to greater investments and savings, and ultimately raised productivity and

income per capita. Challenges exist, with most people in Asia and the Pacific continuing to face a lack of sufficient decent and productive employment opportunities. In several countries, vulnerable or informal employment constitutes half to more than four fifths of all employment, stymieing the ability of governments to tackle the economic challenges of population ageing. On an individual level, the mechanisms of private asset-based reallocations and public transfers, serving to meet lifecycle consumption needs in old age, are dependent on securing decent employment. Pervasive vulnerable or informal employment therefore hampers growth and development, and, together with low levels of productivity and labour standards, leads to the underutilization of a country's labour force and untapped growth-potential.

In the coming decades, the window of opportunity for the second demographic dividend will become accessible to developing countries in Asia and the Pacific. The onus then will be on governments to harness this dividend through investment in education and health, enhancement of science and technology, improvement in governance, including strengthening conditions for savings and facilitation of meaningful employment of hundreds of millions of prime-age individuals.

(ii) Social protection systems will have to be enhanced

A main aim of social protection is to reduce and prevent poverty and vulnerability throughout the life cycle, such as through ensuring income security and access health care. This will become increasingly important for the region as its population ages, serving the purpose of mitigating poverty in old age as well as age-based income inequalities. However, expanding social protection coverage means augmenting the strain on national budgets. Most Asia-Pacific countries have low or moderate investments in social protection. Despite increased public expenditure in this area over the years, and even as increases in health spending outpace economic growth, significant investment gaps continue to exist between developed and developing countries; the former continue to dedicate a much larger proportion of government budgets to the social sector than the latter.

With regard to pensions, countries in the region have tended to prioritize depth of coverage over breadth, choosing to provide relatively high benefits to a limited number of people – usually those employed in the formal/public sector. Given high levels of informal employment, a significant number of individuals continue to lack access to income security in old age. Over the coming decades, governments will have to continue negotiating the trade-off between broadening basic coverage to all and deepening it for the few.

Demand for health care is also on the rise, as individuals live longer and require a range of services, including long-term care and palliative care, for greater periods of time. NCDs, such as cardiovascular disease and cancer, are becoming increasingly prevalent. Today, NCDs can no longer be considered diseases of affluence, as low- and middle-income countries experience high absolute numbers of NCD deaths, with these deaths accounting for more than three fifths of all mortalities even in more youthful and less developed countries. Given the age-dependent nature of health care, costs are expected to rise sharply with population

ageing. This means that, across the region, households with older persons face an increased risk of catastrophic health expenditure. Coupled with the generally high levels of out-of-pocket health spending in many countries, governments must strive to contain rising costs while building and expanding capacity in national health systems.

(iii) Broader social ramifications are important

Population ageing is also associated with broad social changes that make older persons increasingly susceptible to poverty and social exclusion. Ensuring that they have access to the social and cultural resources needed to participate meaningfully and actively in society is a fundamental challenge for many countries. In this respect, there are three pertinent social issues to address:

1. Vulnerabilities of old age are accentuated by social markers of difference. When applied to older persons, markers of difference (such as gender, caste, ethnicity, religion, disability and migrant status) intensify vulnerabilities associated with discriminated identities and marginalized social groups. These vulnerabilities are reflected in, for example, poorer health conditions for older individuals, such as those belonging to scheduled castes, and lower labour force participation rates among older women.
2. Familial systems of support are renegotiated while living arrangements change. As societies age, there is a decrease in the average size of households and the share of multi-generational households and an increase in the share of older persons living alone (particularly among women). While solo dwelling could lead to poorer well-being for older persons, familial support could also continue to exist in a different form, such as in 'quasi-co-residences' where children live nearby.
3. Ageism is manifesting in the public, economic and political spheres. There is concern that the media and popular culture increasingly perpetuate negative stereotypes of older persons. For example, World Values Survey responses in China and Japan suggest a certain degree of ambivalence toward the treatment of older persons. Another issue is elder abuse, for which older persons with cognitive impairment are most at risk, and which has been linked to adverse health outcomes, including psychosocial distress, morbidity and mortality. These and other issues need to be addressed for ageing in Asia and the Pacific to be considered a success story.

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The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest intergovernmental platform with 53 member States and 9 associate members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which it does by reinforcing and deepening regional cooperation and integration to advance connectivity, financial cooperation and market integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aim to support countries' sustainable and inclusive development ambitions.

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