



## DYNAMICS OF POPULATION AGEING: HOW CAN ASIA AND THE PACIFIC RESPOND?

### INTRODUCTION

Population ageing, the process by which older individuals form a proportionately larger share of the total population, was one of the most distinctive demographic events of the late twentieth century.<sup>1</sup> This phenomenon is equally reflective of the Asian and Pacific region despite diverse trends of ageing. The diversity of demographic transition in the region is reflected in having three distinctive sets of countries in relation to population ageing: countries or areas (such as Japan) whose population has already aged; those (such as Armenia, Georgia, Hong Kong, China, Macao, China, the Russian Federation and Singapore) whose population is likely to age very rapidly in the near future; and those (such as Bangladesh, India, Indonesia, Malaysia and Pakistan) whose population is still young and ageing slowly or moderately (table III.1).

The intensity of ageing in the Asian and Pacific region is bound to increase at a faster rate in the next 50 years with the share of population over 60 years of age more than doubling from 9.4 per cent of the total population in 2000 to an estimated 23.5 per cent by 2050.<sup>2</sup> As such, how Governments respond to the challenges now would be a deciding factor in the well-being of not only the current young and the elderly but also future generations. The diversity in the ageing experience in the region would require different policy responses in each set of countries depending on their current and expected levels of ageing and institutional settings. For example, policy responses in developing countries with large informal sectors would be more complex than with those having dominant formal sectors, where statutory provisions for pensions, provident funds and other forms of savings can exist.

*Ageing, one of the most distinctive demographic events*

*Increasing intensity of ageing*

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<sup>1</sup> “Older persons” are defined as the population aged 60 years and over. This definition used by the United Nations is consistent with the retirement age of most countries in Asia and the Pacific.

<sup>2</sup> *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

**Table III.1. Diversity of the demographic characteristics in the region**

	Fertility rate per woman	Life expectancy	Old-age dependency ratio <sup>a</sup>	Percentage of working age population (15-59 years)	
	DETERMINANTS	INDICATORS	INDICATORS	INDICATORS	
<b>HIGH</b>	<p>Afghanistan ● (2.8)</p> <p>China, Democratic People's Republic of Korea, Mongolia, Republic of Korea, Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Philippines, Timor-Leste, Viet Nam, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Turkey, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Fiji, French Polynesia, New Caledonia, Papua New Guinea, Samoa, Solomon Islands, Vanuatu, New Zealand ●</p>	<p>Japan ● (88.0)</p> <p>Hong Kong, China</p> <p>Macao, China</p> <p>Georgia, Hong Kong, China, Singapore</p> <p>Australia, Singapore, Republic of Korea</p> <p>New Zealand ●</p> <p>Brunei Darussalam</p> <p>New Caledonia, Malaysia</p> <p>French Polynesia, Sri Lanka, Armenia, Georgia, Thailand, China, Azerbaijan, Turkey, Iran (Islamic Republic of), Philippines, Solomon Islands, Viet Nam, Maldives, Uzbekistan, Samoa, Kyrgyzstan, Fiji, Mongolia, Indonesia, Tajikistan, Turkmenistan, Russian Federation, Vanuatu, Kazakhstan, Democratic People's Republic of Korea, Bhutan</p> <p>India, Bangladesh, Nepal, Pakistan, Papua New Guinea, Cambodia, Lao People's Democratic Republic, Myanmar</p> <p>Timor-Leste ●</p>	<p>Japan ● (71.3)</p> <p>Cambodia, Nepal, Maldives, Bhutan, Lao People's Democratic Republic, Vanuatu</p> <p>Papua New Guinea, Solomon Islands, Pakistan</p> <p>(64.6)</p> <p>Bangladesh, Afghanistan</p> <p>Samoa ●</p> <p>Timor-Leste, Philippines, Turkmenistan, India, Malaysia, Tajikistan, Fiji, Myanmar, Iran (Islamic Republic of), Democratic Republic of Korea, New Caledonia, Uzbekistan, Indonesia, Kyrgyzstan, Turkey, Brunei Darussalam, Mongolia, French Polynesia, Kazakhstan, Viet Nam</p> <p>(57.9)</p> <p>Thailand ●</p> <p>Sri Lanka ●</p> <p>Australia, China, New Zealand ●</p> <p>Azerbaijan ●</p> <p>Turkey, Kazakhstan, Brunei Darussalam, Viet Nam, French Polynesia, Fiji, New Caledonia, Democratic People's Republic of Korea, Indonesia, Malaysia, Kazakhstan, Myanmar, Uzbekistan, Laos, Iran (Islamic Republic of), Tajikistan, Philippines, Turkmenistan</p> <p>Georgia, Russian Federation, Macao, China</p> <p>Armenia ●</p>	<p>Japan ● (42.3)</p> <p>Armenia ●</p> <p>Macao, China ●</p> <p>Russian Federation ●</p> <p>Republic of Korea ●</p> <p>Azerbaijan ●</p> <p>China ●</p> <p>New Zealand ●</p> <p>Australia ●</p> <p>Thailand ●</p> <p>(78.2)</p> <p>Sri Lanka ●</p> <p>Kazakhstan ●</p> <p>Brunei Darussalam, Viet Nam, Fiji, French Polynesia, Mongolia, Turkey, New Caledonia, Democratic People's Republic of Korea, Indonesia, Kyrgyzstan, Uzbekistan, Iran (Islamic Republic of), Myanmar, Tajikistan, Malaysia, India, Turkmenistan, Philippines</p> <p>Timor-Leste ●</p> <p>Bangladesh ●</p> <p>Samoa ●</p> <p>Yanmar ●</p> <p>Lao People's Democratic Republic ●</p> <p>Nepal, Pakistan, Bhutan, Maldives, Papua New Guinea, Cambodia, Solomon Islands</p> <p>Afghanistan ● (62.4)</p>	<p>Japan ● (45.2)</p> <p>Afghanistan ● (7.7)</p>
<b>MODERATE</b>	<p>Amintia ● (2.1)</p> <p>Singapore, Thailand, Sri Lanka, Azerbaijan, Georgia, Kazakhstan</p> <p>Russian Federation, Japan ●</p> <p>Hong Kong, China, Macao, China ●</p> <p>Armenia ●</p>	<p>Afghanistan ● (7.7)</p>	<p>Timor-Leste, Bangladesh, Samoa, Vanuatu, Lao People's Democratic Republic, Nepal, Bhutan, Pakistan, Papua New Guinea, Maldives, Solomon Islands, Cambodia</p>		
<b>LOW</b>	<p>(1.5)</p>	<p>(7.7)</p>			

Source: World Population Ageing 1950-2050 (United Nations publications, Sales No. E.02.XIII.3).  
 a The number of persons 65 years and over per 100 persons 15-64 years.

Governments could be increasingly under pressure not only to devise innovative mechanisms to deal with issues arising from an ageing population but also to undertake market reforms and policy coordination to ensure the long-term viability of social welfare programmes while minimizing the negative effects on the economy. A clear objective is to prevent old age poverty. Handling ageing in the context of the already existing high levels of poverty across age groups will be a challenge and a daunting task. At the same time, for least developed countries with a low level of savings in relation to investment requirements, ageing poses special difficulties.

The fact that ageing is not a transitional issue makes it essential to respond to the ageing process in time. The ability to anticipate the demographic transition with a fairly high degree of accuracy provides countries with ample room to better prepare for the challenges posed by ageing and makes it a surmountable problem provided that proper action is taken in time. As different countries have different levels of economic development, market mechanisms, incentive structures and cultures, it is necessary for each country to evaluate the trade-offs of different policy options with the overall objective of improving individual welfare across the age cycle. A package of policies and incentives for countries whose population is already ageing, or likely to age in the near future, would include:

- Boosting labour supply through fine-tuning migration policy and population policy taking into account the complexities involved and expanding women's participation in the labour market
- Increasing labour productivity through technological innovations, capacity-building and training or retraining
- Changing the incentive structure to alter savings and investment behaviour
- Carrying out market reforms, including pension reforms, that ensure a minimum standard of living for the elderly and improved individual welfare
- Bringing about attitudinal change, particularly relating to opportunities for employment in old age, and providing a climate of acceptance to facilitate the integration of older people into mainstream development
- Safeguarding family values in the care of the elderly through incentives while providing institutional care for them in the light of changing family structures

*Countries under pressure to devise innovative mechanisms to handle ageing ...*

*... but the problem not insurmountable if proper action taken in time*

***Time-bound opportunity for some countries to reap the “demographic dividend”***

Responding to ageing in advance would enable countries to reap the “demographic dividend” produced by reduced fertility rates.<sup>3</sup> It would also give countries where the population is still young a time-bound opportunity to capitalize on their demographic conditions and benefit from ageing in other countries by making productive use of their young labour force. However, benefiting from the demographic dividend would also require appropriate policies to be in place. The major policy areas needing particular attention are an enabling environment that ensures macro stability and at the same time provides opportunities for human development; educational reforms; market reforms, including savings generation and sustainability of pension schemes; labour market reforms to improve productivity and mobility; and the provision of social security to the poor.

***Holistic approach needed to respond to ageing***

Countries in Asia and the Pacific could learn from other ageing societies both within and outside the region as to how they have responded to emerging health issues, care of the elderly and social security requirements, as well as policies such as those covering labour and capital markets, government budgets and human migration. In this regard, seeing how countries such as Japan and Germany are coping with ageing while maintaining a high level of economic prosperity, including social welfare, would provide important lessons for other countries. Australia’s strategic approach to older persons and community care, the United States migration policy to stabilize the working-age population and Chile’s pension reforms provide good examples of policy responses to issues relating to ageing. The Australian response to population ageing underscores the need for a holistic approach to ageing with a focus not only on care for the elderly but also on planning retirement, participation in the workforce and staying healthy. An important lesson from the Australian experience is the need for responses to be proactive and forward-looking, with flexibility to change as necessary.

***Labour as a regional public good!***

Addressing issues arising from ageing goes beyond national boundaries as ageing may lead to increasing levels of human migration in the next few decades. How labour issues are treated in a global or regional context would be a key factor not only in making productive use of excess labour in some countries by allowing people to migrate to countries with a shortage of labour but also in containing the destabilizing effects of uncontrolled emigration on labour markets in labour-exporting developing countries. The increasing interdependency of labour markets in a regional context would imply that it is an opportune time for treating labour as a regional public good. These complexities call not only for bilateral and regional cooperation for the orderly use of labour but also for

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<sup>3</sup> For example, the East Asian “economic miracle” shows how reduced fertility can help to create conditions for robust economic growth (see D. Bloom, D. Canning and J. Sevilla, *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change* (RAND, 2002), <<http://www.rand.org/publications/MR/MR1274/>>).

a fresh look at the existing global frameworks, such as Mode 4 of the WTO General Agreement on Trade in Services, to widen the scope of such initiatives for human migration, just as in the case of trade in services.

The objective of this chapter is to analyse the dynamics of population ageing in the Asian and Pacific region giving particular attention to considering the socio-economic implications of ageing and the policy responses required to face the current and future challenges posed by the demographic changes.

### POPULATION DYNAMICS

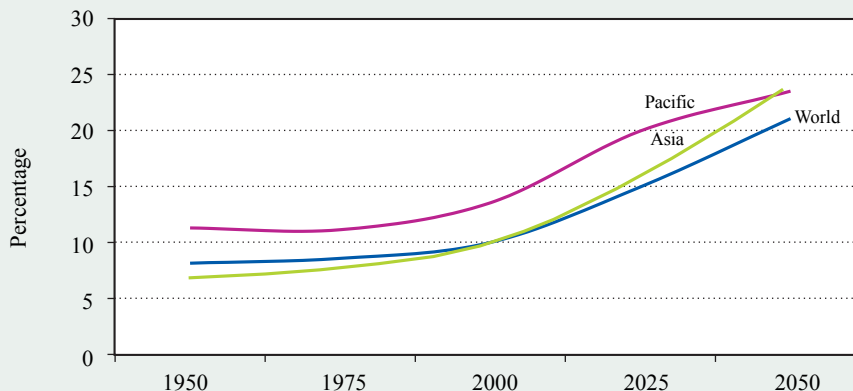
The dynamics of population ageing differs from country to country depending on the level of economic and social development as well as the policies adopted in the past. Population ageing has taken place at a rapid rate in the Asian and Pacific region during the past 50 years and is likely to continue at a faster pace during the next 50 (figure III.1). The region is already home to more than half of the world's older persons and its share will continue to increase in the next 50 years. Further, population dynamics have created several gender-related issues which could worsen the welfare situation, particularly of women.

*More than half of the world's older population live in Asia and the Pacific and the share will continue to increase in the next 50 years*

#### Determinants of population ageing

The demographic transition witnessed in the Asian and Pacific region is underlined by declines in mortality and fertility rates, mainly owing to improved health conditions and family planning, respectively.

Figure III.1. Proportion of population aged 60 and over



Source: World Population Ageing 1950-2050 (United Nations publication, Sales No. E.02.XIII.3).

## Decline in mortality

### *Declining mortality a key determinant*

The decline in the mortality rate has been the main trigger at the initial stage of demographic transition. Advances in the medical field and improved access to health services have led to a sharp reduction in infant mortality along with maternal and adult mortality. Aggressive campaigns to control infectious diseases such as malaria and tuberculosis, along with the successful control of frequent epidemics of smallpox, cholera and yellow fever, contributed positively to improvements in the mortality rate as early as the 1920s. For example, the mortality rate fell sharply in Sri Lanka when public health programmes and campaigns for sanitation were undertaken, particularly to eradicate malaria, which led to an increase in life expectancy by 14 years between 1947 and 1954.<sup>4</sup> Similar trends were seen in countries such as India and Pakistan after the Second World War.

**Table III.2. Changes in infant mortality rate and total fertility rate in developing countries**

	1950-1975	1975-2000	2000-2025
Infant mortality rate (percentage)	-58	-41	-42
Total fertility rate (percentage)	-27	-29	-27

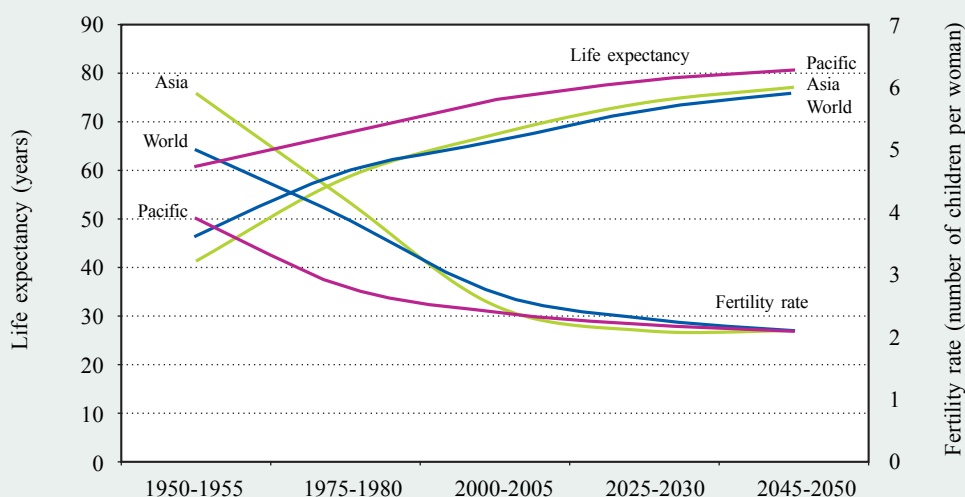
*Source: World Population Ageing 1950-2050 (United Nations publication, Sales No. E.02.XIII.3).*

### *Life expectancy in Asia and the Pacific remains high ...*

As reflected in table III.2, the decline in the mortality rate has been a common feature in developing countries. For example, the infant mortality rate declined by 58 per cent in the period 1950-1975 and by a further 41 per cent in 1975-2000 in developing countries. This trend is expected to continue in the next quarter of a century. Reflecting these improvements in the mortality rate, life expectancy increased by 26 years, or 63 per cent, to 67.4 years in Asia and by 13.5 years, or 22 per cent, to 74.4 years in the Pacific during the last half century. As shown in figure III.2, life expectancy in the Asian and Pacific region stood above the world average, while it had been below the world average 50 years before.

<sup>4</sup> M. Cosio-Zavala, "Demographic transition and social development in low-income countries", in *Population Growth and Demographic Structure* (United Nations publication, Sales No. E.99.XIII.7).

Figure III.2. Life expectancy and fertility trends



Source: World Population Ageing 1950-2050 (United Nations publication, Sales No. E.02.XIII.3).

### Decline in the fertility rate

Fertility rates in many countries in Asia exceeded 6 children per woman until the mid-1960s owing to very early nuptiality and an increase in fertility since 1956 in several countries in the region. As a whole, Asia had a high fertility rate of 5.9 children per woman during the period 1950-1955, while that in the Pacific was 3.9. Thus, fertility played a marginal role in the demographic transition in many developing countries in the region in its initial phase.

*... while the fertility rate declines to close to replacement level*

Table III.3. Total fertility rate

	1950-1955	1975-1980	2000-2005	2025-2030	2045-2050
Asia	5.9	4.2	2.5	2.1	2.1
percentage drop		-28.8	-40.5	-16.0	-
Pacific	3.9	2.8	2.4	2.2	2.1
percentage drop		-28.2	-14.3	-8.3	-4.5

Source: World Population Ageing 1950-2050 (United Nations publication, Sales No. E.02.XIII.3).

However, as shown in table III.3, the total fertility rate in the region declined by 29 per cent between 1950-1955 and 1975-1980. The Asian region, in particular, witnessed a sharp decline of 40 per cent in the fertility rate during the last quarter of the twentieth century. In countries such as Japan, the fertility rate has dropped well below the replacement rate. Several socio-economic factors have contributed to this decline. Foremost among these are the population control policies adopted by Governments either through family planning programmes or fertility control measures, such as the “one child” policy in China,<sup>5</sup> as a response to dealing with poverty. Individual family planning, even in the absence of State-sponsored family planning programmes, especially among the educated, in response to economic pressure is also a major contributory factor in the declining fertility rate.

***Socio-economic challenges in a changing global environment exert pressure on nuptiality control***

Nuptiality control, characterized by a delay in the age of first marriage in response to cultural changes and socio-economic challenges in a changing global environment, is increasingly becoming a major force in population control. Among educated women, there is an increasing tendency to give more priority to career development and independence than to marriage.<sup>6</sup> This has been the case particularly in countries where the wage gap between men and women has narrowed over the years. The difficulty of reconciling work with child-rearing is another reason. A further contributory factor is the steady improvement in pension schemes over the years, which has reduced the need to rely on the traditional sources of old-age support, such as children. The likelihood of using children as old-age support has also declined over the years owing to rural-urban migration and declining fertility rates. As a result of these changes, the fertility rate in the Asian and Pacific region has declined to below the world average (see figure III.2). The sharp decline in the fertility rate since the mid-1960s has made it the driving force behind the demographic transition during the past quarter of a century.

Another important development is the increasing life expectancy at older ages, which is expected to continue during the next 50 years. For example, life expectancy at age 60 in Asia is expected to increase from 18.1 in 2000 to 21.8 years by 2050, while that in the Pacific is expected to increase from 21.5 to 23.9 years.

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<sup>5</sup> F.D. McCarthy and K. Zheng, “Population ageing and pension systems: reform options for China”, World Bank Policy Research Working Paper No. 1607 (1996).

<sup>6</sup> For example, in Japan, as women acquire education their salaries increase, which in turn raises the opportunity cost of withdrawing from the labour force to rear children (see D.E. Horlacher and L. MacKellar, “Population ageing in Japan: policy lessons for South-East Asia”, *Asia-Pacific Population Journal*, vol. 10, No. 1, June 2003). Another study reveals that 25 per cent of ethnic Chinese women in Singapore and Malaysia were still single by the time they reached 30 years (see G. Jones and K. Ramdas, eds., *(Un)tying The Knot: Ideal and Reality in Asian Marriage*, Asia Research Institute, Singapore, 2004).



### Scale and speed of ageing

Many countries in the Asian and Pacific region have experienced rapid ageing of their populations during the past 50 years and the intensity of ageing is expected to increase at a faster rate during the next 50 years. For example, the number of persons aged 60 and over increased from 104 million in 1950 to 351 million in 2000, registering an over threefold increase within half a century. An even higher rate is expected during the next 50 years, raising the number of people aged 60 and over to more than 1.2 billion by 2050 (table III.4). The older population as a share of the total population in the region increased from 7 per cent in 1950 to 9.4 per cent in 2000. This share is expected to rise sharply to 15.4 per cent by 2025 and to 23.5 per cent by 2050.

***By 2050, Asia and the Pacific will be home to over 1.2 billion people aged over 60 years ...***

**Table III.4. Population aged 60 and over**

(Millions)

	1950		2000		2050		
	Population aged 60 and over	Population aged 60 and over	Percentage increase	Share of total population	Population aged 60 and over	Percentage increase	Share of total population
World	205	606	195	10.0	1 964	224	21.1
Asia-Pacific	104	351	237	9.4	1 238	253	23.5
China	42	129	210	10.1	437	239	29.9
India	20	77	282	7.6	324	322	20.6
Indonesia	5	16	226	7.6	70	331	22.3
Japan	6	30	359	23.2	46	57	42.3

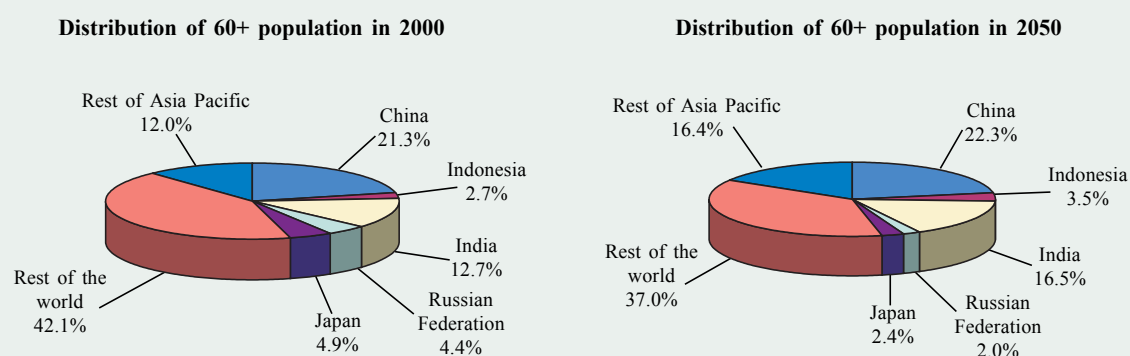
Source: *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

The speed of ageing in the region is such that the share of the population aged 60 and over in Asia and the Pacific, which stood at 50.7 per cent of the world total in 1950, increased to 57.9 per cent by 2000, surpassing the rest of the world. The region's share of older persons is expected to increase to a staggering 63.0 per cent by 2050 (figure III.3).

***... and this will account for 63 per cent of the world total***

Four countries in the region, China, India, Indonesia and Japan, accounted for 71.6 per cent of the region's older persons and for 41.5 per cent of the total older population in the world in 2000. The increase in the region's share in the world total to 63 per cent by 2050 from the current level of 58 per cent partially reflects the expected rapid pace of ageing in other countries in the region during the next 50 years.

**Figure III.3. Distribution of 60+ population in selected economies, 2000 and 2050**



Source: *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

***Ageing, a challenge for still developing economies***

Table III.5 provides a classification of countries in the region according to the rate of ageing. According to this classification, many countries of East and North-East Asia, North and Central Asia, and all developed economies in the region, are ageing rapidly. An interesting feature of demographic transition in the next half century will be the rapid ageing in countries such as China, Sri Lanka, Thailand and several North and Central Asian countries which are still developing. Such a rapid evolution of demography could pose serious challenges for these countries in the immediate future.

***The demographic dividend wasted***

One positive sign is the still moderate rate of ageing in large economies such as India and Indonesia, which have ample room to benefit from the current wave of rapid ageing in the rest of the world by effective utilization of their labour force, as well as to prepare to face the challenges posed by the ageing of their populations well in advance. However, despite these opportunities, the Asian and Pacific region has 80 million unemployed youth, indicating that it has yet to make the demographic dividend effective so as to be able to address its high unemployment rate.

**Ageing of the older population**

***Share of the over 80 age group increasing***

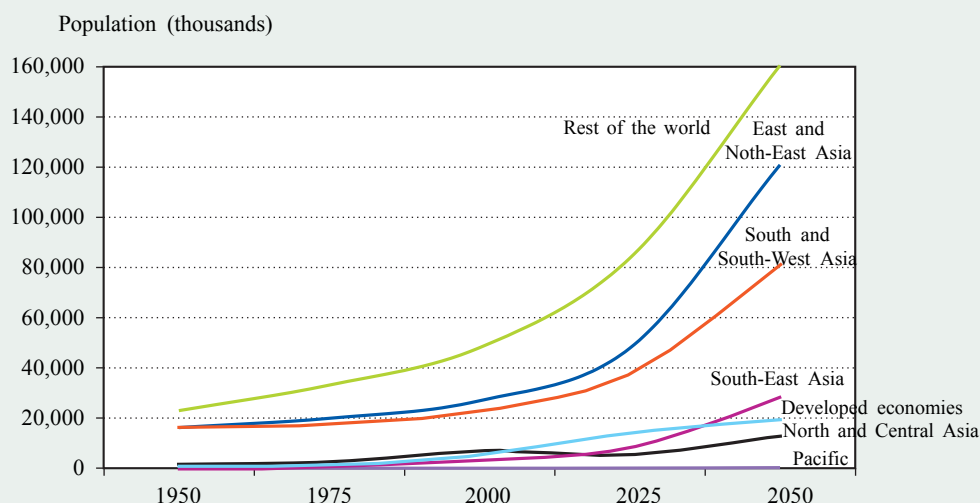
Relative ageing of the older population itself is becoming a notable feature of the ageing process in the Asian and Pacific region (figure III.4). A larger proportion of the older population in the world is living in the Asian and Pacific region and is growing faster. For example, the share of the 80 and over age group in the region is expected to increase from 51.7

**Table III.5. Speed of ageing of 60+ population**

<i>Slow</i>	<i>Moderate</i>	<i>Rapid</i>
<b>East and North-East Asia</b>		
	Democratic People's Republic of Korea Mongolia	China Republic of Korea Hong Kong, China Macao, China
<b>South-East Asia</b>		
Cambodia Lao People's Democratic Republic Timor-Leste Philippines	Malaysia Myanmar Indonesia Viet Nam Brunei Darussalam	Thailand Singapore
<b>South and South-West Asia</b>		
Afghanistan Maldives Bhutan Nepal Pakistan Bangladesh	India Iran (Islamic Republic of) Turkey	Sri Lanka
<b>North and Central Asia</b>		
Turkmenistan	Tajikistan Kyrgyzstan Uzbekistan	Kazakhstan Azerbaijan Georgia Russian Federation Armenia
<b>Pacific</b>		
Solomon Islands Papua New Guinea Vanuatu Samoa	New Caledonia French Polynesia Fiji	
<b>Developed economies</b>		
		Australia New Zealand Japan
<p><i>Source:</i> World Population Ageing 1950-2050 (United Nations publication, Sales No. E.02.XIII.3).</p> <p><i>Notes:</i> Slow - percentage of 60+ population in 2050 less than 20 per cent.  Moderate - percentage of 60+ population in 2050 between 20 and 25 per cent.  Rapid - percentage of 60+ population in 2050 greater than 25 per cent.</p>		

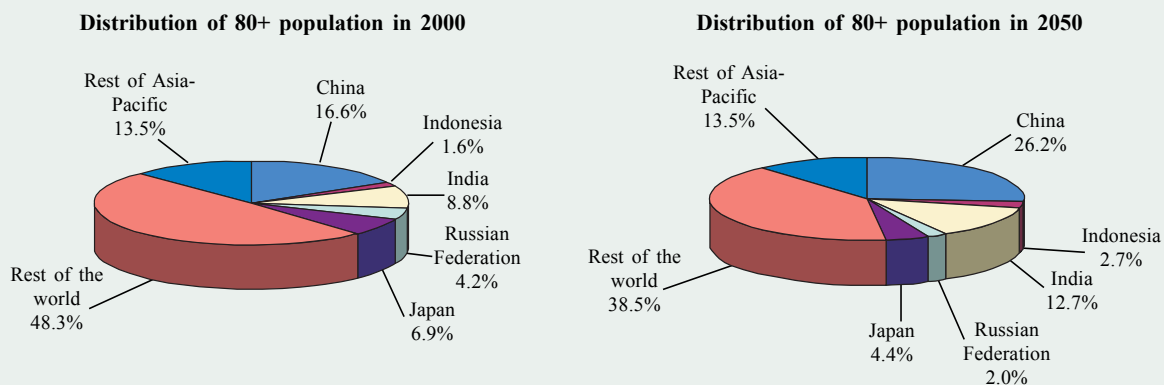
per cent of the world's total in 2000 to 61.5 per cent by 2050 (figure III.5). Four countries in the region, China, India, Indonesia and Japan, accounted for 65.7 per cent of the region's population aged 80 and over in 2000, and this is expected to rise to 74.8 per cent in 2050.

**Figure III.4. Total 80+ population by ESCAP subregions and the rest of the world**



Source: *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

**Figure III.5. Distribution of 80+ population in selected economies, 2000 and 2050**



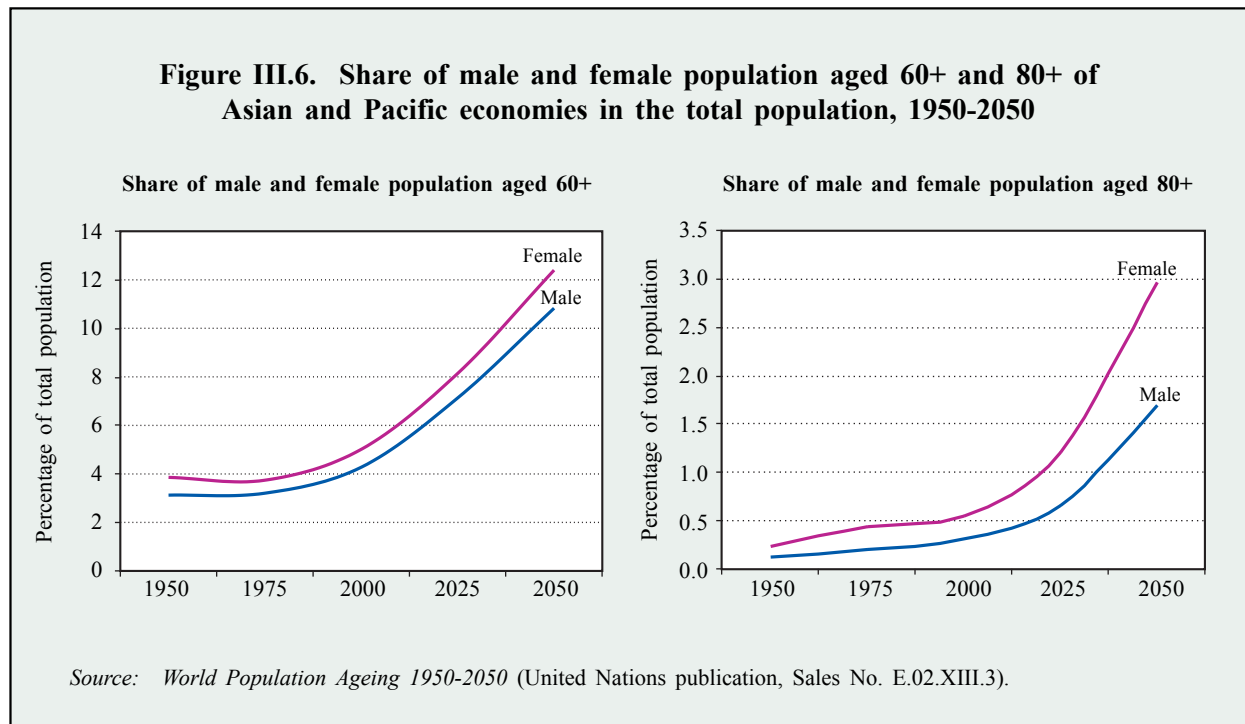
Source: *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

### Is ageing a gender issue?

#### *More women in the older age groups*

An important dimension of the ageing process is the rising number of women in the older age groups. Ageing has been a progressively gendered experience in the Asian and Pacific region (see figure III.6). The share of women in the 60 and over age group is expected to increase

from 5 per cent of the total population in 2000 to 12.4 per cent by 2050. In contrast, the share of men in that age group would rise from 4.3 to 10.8 per cent during the same period. A similar pattern is observed in the 80 and over age group, with a sharp increase in the share of women over 80 years predicted during the second quarter of the twenty-first century. This phenomenon is underlined by the higher life expectancy of women owing to their better survival chances in old age for biological reasons.



## IMPLICATIONS OF POPULATION AGEING

Population ageing could have profound implications for the economies as well as societies experiencing a rapid increase in the share of older persons in the total population. While the rising demand for medical services in old age and high medical costs could impose pressure on government and family budgets, an ageing population could lead to a drastic shift in the consumption and savings behaviour of people. Labour markets may also experience a shift in the supply of labour with implications for labour productivity. However, ageing can also lead to the emergence of social welfare and gender-related issues. The combined effect of these changes could have an impact on economic growth and thereby the welfare of the people. These issues are discussed below in detail.

*Ageing may shift consumption and savings behaviour and labour productivity*

## Fiscal implications

### *Possible shrinking of the tax base amid growing expenditure*

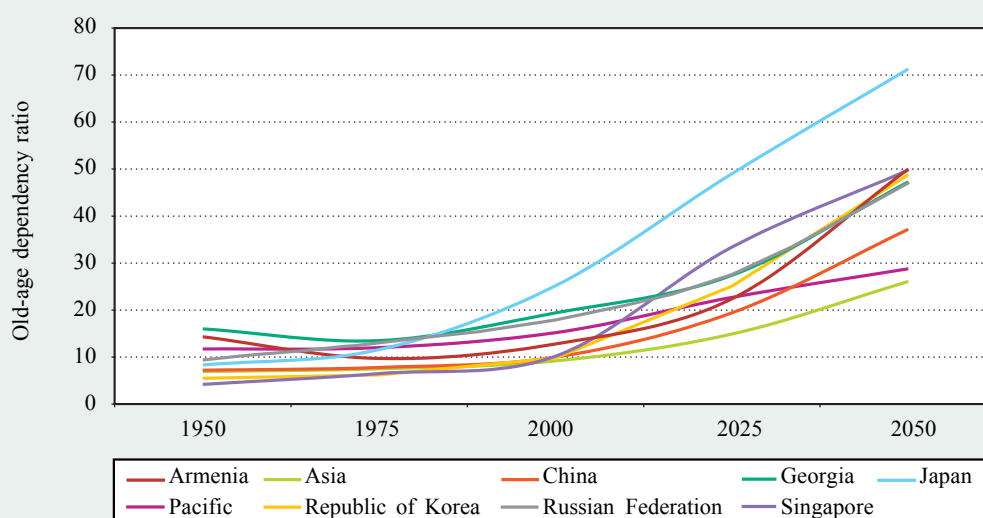
The demographic changes that would be experienced by countries are likely to have a significant influence on public expenditure, in particular on the provision of pensions and health care. Since expenditure on pensions and health care is a major component of government budgets, pressures arising from demographic changes would have adverse effects on the budget deficit or surplus. The expected decline in the share of the working-age population in the region from 62.4 per cent in 2025 to 57.9 per cent in 2050, as well as the possible drop in output, could lead to a shrinkage in the tax base and thereby tax revenues in the second quarter of this century. The fiscal implications of ageing would be felt strongly and much earlier in such countries as Armenia, Australia, China, Georgia, Japan, New Zealand, the Republic of Korea, the Russian Federation, Singapore, Sri Lanka and Thailand, where the population is ageing rapidly and the working-age groups will decline in the first quarter of the century.

## Public pensions

### *Unsustainable pay-as-you-go pension schemes*

In many countries of the Asian and Pacific region, public pension schemes are unfunded and operate on a pay-as-you-go system. In most cases the pension benefits are defined. With the number of workers per pensioner declining rapidly, as reflected in the predicted sharp rise in the old-age dependency ratio in the Asian and Pacific region during the next 50 years (see figure III.7), the financial burden on Governments to provide

**Figure III.7. Old-age dependency ratio in Asia and the Pacific and selected economies**



Source: *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

adequate public pensions under the existing defined benefit pension schemes could be substantial. Such systems also lead to wider intergenerational inequality of burden-sharing.<sup>7</sup>

In the absence of increased contributions to compensate for the declining workforce or policy changes, an increase in public pension expenditure could lead to large budget deficits.

### Health care

The rapid ageing of the population in the region, in particular the ageing of the older population, would increase expenditure on public health, for three reasons. First, older people and, in particular, those of advanced age, are more prone to diseases.<sup>8</sup> The older population group is expected to expand more than fourfold during the next 50 years and is bound to increase the demand for health services on a substantial scale. Second, health care for older persons is on average more expensive than that for younger people. Finally, the declining trend in the number of families operating as caretaking institutions for older persons owing to the decrease in the size of family units may result in a shift in health financing from family-financed to publicly financed health services. For example, money transfers by children as a source of income of older people declined from 72.4 per cent of their total income in 1980 to 56.3 per cent in 1995 in the Republic of Korea, while those in Japan declined from 18.7 to 6.6 per cent during the same period, reflecting the declining role of the family as a source of income for older persons.<sup>9</sup>

*Increasing demand  
for health services  
likely*

### Implications for the labour market

Population ageing could have implications for both the supply of and the demand for labour, leading to a labour market mismatch. On the supply side, the share of the working-age group (15-59 years) in the Asian and Pacific region is expected to drop from 61 per cent in 2000 to 58 per cent by 2050. The expected drop would imply that the labour force could

*Decline in the  
working-age  
population in  
some countries ...*

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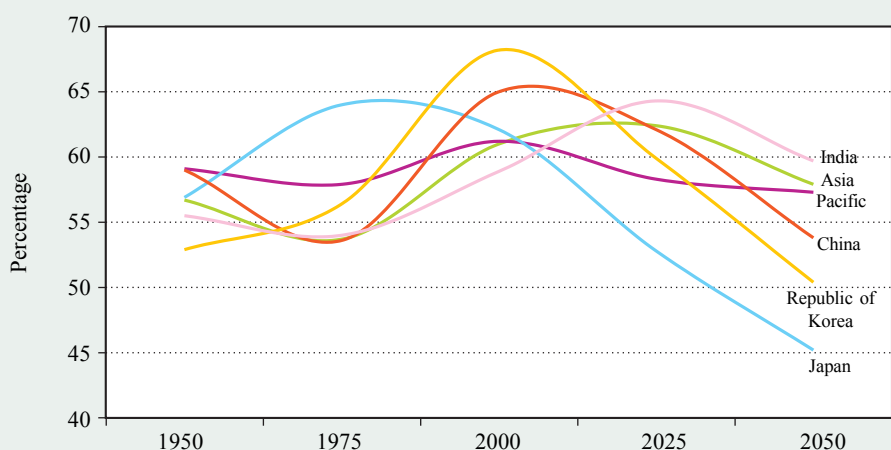
<sup>7</sup> For example, in Japan, the intergenerational inequality of burden-sharing under the existing public pension system is so large that the young decline to pay their contributions to the national pension system (see K. Iwata, "Japan's economy under demographic changes", summary of the speech given at the Australia-Japan Economic Outlook Conference, Sydney, 7 December 2004, <<http://www.boj.or.jp/en/press/04/ko0412c.htm>>).

<sup>8</sup> For example, industrial country data suggest that older people consume almost three times more medical services than those aged 0-14. The results also suggest that there is a positive link between medical cost and age (see P.S. Heller, "Aging in the Asian 'Tigers': challenges for fiscal policy", IMF Working Paper No. WP/97/143).

<sup>9</sup> H.S. Phang, "Rapid ageing and labour force changes in Korea", paper presented at the International Seminar on Low Fertility and Rapid Ageing, organized by the Korea National Statistical Office and the Population Association of Korea, Seoul, 31 October 2003.

shrink in many countries in the region within the next 50 years. In countries such as Japan, the share of this most productive age group in the population may drop from 62.1 per cent in 2000 to 52.8 per cent by 2025 and further to 45.2 per cent by 2050. Countries such as China, the Republic of Korea and Sri Lanka may follow suit, albeit to a lesser extent, during the second quarter of the twenty-first century (see figure III.8).

**Figure III.8. Dynamics of the working-age population in selected economies: population aged 15-59 for selected Asian and Pacific economies as a percentage of the total population, 1950-2050**



Source: *World Population Ageing 1950-2050* (United Nations publication, Sales No. E.02.XIII.3).

**... but hope remains alive in others**

On the demand side, there will be a growing demand for labour-intensive services such as old-age health-care, institutional, social and home-care services during the next 50 years. The demand for educational services could drop as the population of school-age is expected to decline in the next few decades. The demand for labour in the former category, however, may not be met domestically as long as the labour force is shrinking and there is no excess labour. However, countries with moderate ageing and high unemployment rates would be in a position to meet their labour demand and benefit from the ageing processes, but the migration of labour in response to changes in immigration policies in more advanced economies in the face of rapid ageing in those economies may eliminate that advantage unless a coordinated approach to immigration policies is adopted in labour-importing and -exporting countries.



The expected sharp increase in the median age during the next 50 years implies that many countries in the region will have an ageing labour force, which may have the following adverse implications:

- (1) *A structural change in production owing to a shift in demand towards services and products for older people and the resulting frictional unemployment if labour mobility remains restricted.* Such frictional unemployment could widen the qualification gap, producing a situation in which the highly qualified are in short supply and the poorly qualified are out of work.
- (2) *A possible change in labour productivity, although research in this area is not conclusive.* While older workers are likely to have a positive attitude, be more reliable and possess better skills than the average workers, they are also more expensive in terms of health-care costs and lack flexibility in accepting new assignments and training.<sup>10</sup>

*Negative impact of the shift in the age structure on productivity ...*

### **Savings and investment**

According to the life-cycle theory of savings, individuals make a choice between present consumption and savings for future consumption. Assets accumulated during their working years are spent during their retirement. This is particularly the case when there are no or limited retirement benefit schemes to smooth out consumption during retirement. However, empirical evidence in support of the life-cycle hypothesis is mixed.<sup>11</sup> While some studies provide support for a strong link between demographic changes and private savings,<sup>12</sup> others find only a weak relationship between them.

*... and on savings and investment*

Ageing could have a negative impact on savings in many developing countries in the region because retirement benefits are inadequate to support living in old age and additional years of life expectancy, particularly of the older groups, as retirees would involve greater consumption.

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<sup>10</sup> M.C. Barth and others, "Corporations and the ageing workforce", in Philip J. Mirvis, ed., *Building the Competitive Workforce* (John Wiley and Sons, 1993).

<sup>11</sup> For example, in a study of major industrial economies, it is estimated that an increase of 1 percentage point in the dependency ratio causes a commensurate fall in the savings ratio (see P.R. Masson and K.W. Tryon, "Macroeconomic effects of projected population aging in industrial countries", IMF Working Paper No. 90/5). With the old-age dependency ratio in the region rising to 26.2 per cent by 2050 from 9.2 per cent in 2000, this would imply that, everything else remaining constant, the region's savings rate could drop by 17 percentage points by 2050.

<sup>12</sup> For example, Ando and others projected a drop in Japanese savings rates to 10 per cent by 2040 (see A. Ando and others, "Dynamics of demographic development and its impact on personal savings: case of Japan", *Ricerche Economiche*, September 1995).

The severity of the drop in savings could be offset to some extent if young workers had prior knowledge of increases in life expectancy which could prompt them to save more for future consumption.

The drop in savings would ultimately lead to a contraction in investment in countries that are ageing, unless compensated by investment from abroad. As the demand for homes, recreation, transport and schooling drops as a result of the shift in the relative age structure and preferences, investment in such areas may be particularly affected.

### **Public debt**

*Many countries have large implicit pension debts*

The pressures arising from an ageing population on public expenditure on pensions and health care, particularly in the absence of reforms in pensions and health services, could lead to a build-up of public debt in developing countries in the region. Countries with weak tax systems and high levels of public debt and fiscal deficits could be at a particular disadvantage unless specific policy actions are in place to broaden the tax base, and efficiency in tax administration and debt management improved. The expected drop in savings would impose additional pressure on public debt as the increasing demand for pensions and health care could compel Governments to depend on borrowing to finance increasing expenses. The unfunded pension schemes in a majority of countries could lead to large implicit pension debts, undermining the sustainability of such systems (see box III.1).

### **Impact on capital markets**

*A negative impact on domestic capital markets ...*

The dominance of the pay-as-you-go systems in the provision of pensions in many countries in the region and the rapid ageing of populations would require substantial reform of public pension schemes, leaning more towards defined contributory pension schemes. Such a policy change could have important implications for both the domestic and international capital markets and their governance behaviour.

The possible emergence of prefunded public and private pension systems and insurance schemes would enable the development of capital markets in developing countries in the region whose population is ageing, provided that proper incentives for innovations and efficient regulatory structures are in place and Governments refrain from manipulating the public pension funds for budgetary purposes.

However, the lower propensity of the older generation to save could have a negative impact on capital markets, in particular stock markets. This effect would be heightened by the ageing of the baby boomers beginning in 2010.<sup>13</sup>

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<sup>13</sup> IMF, *World Economic Outlook, September 2004* (Washington, 2004).

### Box III.1. Growing implicit pension debt

Implicit pension debt (IPD),<sup>a</sup> which refers to the benefit promises a pension scheme makes to workers and pensioners, is perhaps the largest single unreported liability in the public sphere. Such implicit liabilities have grown rapidly with the proliferation of publicly managed, defined benefit pension plans during the twentieth century. Estimates of IPD for selected countries in the Asian and Pacific region are given in the following table.

**Implicit pension debt in selected countries**

	<i>IPD as a percentage of GDP</i>		<i>IPD as a percentage of GDP</i>		<i>IPD as a percentage of GDP</i>
Australia	115	Kazakhstan	88	Republic of Korea	33
China	94	Kyrgyzstan	185	Turkey	72
Japan	162	Philippines	107		

*Source:* Wang and others and Holzmann and others (see note<sup>a</sup> below).

The above estimates show that unfunded pension liabilities are large even in developing countries such as Kyrgyzstan and the Philippines where the population is still young. A similar pattern can be expected for other countries in the region as most countries have pay-as-you-go pension systems. IPD liabilities will become larger and heavier as the population ages. The rapid ageing in the Asian and Pacific region, as well as the dominance of a publicly funded pension scheme, would add an additional burden to the existing levels of IPD. Such large implicit liabilities will have serious implications for the intertemporal budget constraints as such liabilities become due in the future. The design and implementation of pension reform, as well as fiscal policy, would be influenced very much by the level of IPD.

<sup>a</sup> IPD is measured by adding the present value of benefits that have to be paid to current pensioners plus the present value of pension rights that current workers have already earned and would have to be paid if the system were terminated today (see Wang and others, "Implicit pension debt, transition cost, options and impact of China's pension reform: a computable general equilibrium analysis", World Bank Working Paper No. 2555 and R. Holzmann and others, "Implicit pension debt: issues, measurement and scope in international perspective", World Bank Social Protection Discussion Paper No. 0403).

### Economic growth

The rising dependency ratio in the Asian and Pacific region could have a major impact on economic growth as the output is produced by a declining labour force. The drop in labour force and investment could affect economic growth adversely unless factor productivity improves commensurately or the drop in the labour force is matched by migrant labour. However, the negative impact of slow output growth on per capita income would be mitigated to some extent by the declining population growth. For example, the level of real GDP in Japan is estimated to drop by a cumulative 20 per cent over the next century owing to a shrinking population and associated lower employment levels while per capita GDP is

*... and on growth*

expected to drop by about 5 per cent.<sup>14</sup> Real economic growth rates could also drop in Hong Kong, China, the Republic of Korea, Singapore and Taiwan Province of China during the third quarter of the twenty-first century.<sup>15</sup> Developing countries which experience ageing at early stages of their development could be at a particular disadvantage as they are resource-constrained, are subject to labour outflows owing to migration and lack initiatives for productivity gains.

### **Care of older persons**

*Familial care is still a deep-rooted social norm, but changing family structures are putting pressure on the tradition*

Familial care of older persons is a deep-rooted social norm in most parts of Asia and the Pacific. Caring for older people has been a moral obligation of children and as a result only a small proportion of older people in the region live alone. However, with the changing family structure and composition in the face of urbanization, industrialization, migration and the increasing trend towards nuclear families coupled with declining fertility and increasing longevity, the ability of families to take care of older persons is gradually declining. The extent to which the family will remain the primary source of care for older people will have important implications for formal arrangements for the care of older persons.

### **Poverty, isolation and discrimination**

Older persons are often afflicted by poverty owing to a host of factors, including lack of skills or skills mismatch, lack of resources, ill-health and social prejudices. Poverty among the rural elderly, in particular older women, tends to be severe owing to the lack of formal or informal social security in old age. As reflected in figure III.6, women tend to live longer than men and rapid urbanization, resulting from the migration of mostly youth to urban areas, leads to the isolation particularly of rural women in old age. With the expected decline in the potential support ratio<sup>16</sup> from 10.9 per cent in 2000 to 3.8 per cent by 2050, the poverty aspects of ageing could become worse in the next few decades, underscoring the need for formal social support and care of older persons. Discriminatory treatment of older people, particularly in relation to job recruitment, promotion and training, creates stigma and social exclusion.

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<sup>14</sup> H. Faruqee and M. Mühleisen, "Population aging in Japan: demographic shock and fiscal sustainability", IMF Working Paper No. WP/01/40, <<http://www.imf.org/external/pubs/ft/wp/2001/wp0140.pdf>>.

<sup>15</sup> This is against a baseline simulation with a stationary population (see IMF, *Finance and Development*, <<http://www.imf.org/external/pubs/ft/fandd/2001/03/mahleise.htm>>).

<sup>16</sup> The number of persons aged 15-64 per every person aged 65 or older.

In order to eliminate such discriminatory attitudes, a climate of acceptance must be provided so that older people can be integrated into mainstream development.<sup>17</sup>

## POLICY RESPONSES

The rapid ageing of populations, unless managed in a proactive manner, could impose serious challenges for policy makers in Asian and Pacific countries. The severity and complexity of such challenges would depend on the level of economic development, the stage of ageing and the level of preparedness. Rapid ageing in the region and the resulting socio-economic implications would require Governments to take corrective action to minimize the negative effects of ageing in a host of areas, including fiscal operations and social welfare provision for older persons. These measures may also cover market reforms, institutional reforms, economic policy responses and initiatives for regional cooperation. Fundamental changes in policy design, particularly in health and pension systems, would be necessary to minimize the pressures on public expenditure and the overall growth potential of the economy. Countries experiencing a shift from a relatively young to an ageing population at a rapid pace while their economies are still not sufficiently mature to manage such shocks would face a daunting task in putting in place such policies and institutional changes. However, the effective implementation of national and regional action plans established in line with the Shanghai Implementation Strategy for the Madrid International Plan of Action on Ageing 2002 could provide an enabling and supportive environment for ageing.

*Fundamental changes in policy design in pension and health systems necessary*

### Pension reforms

As indicated earlier, in many countries of the region public pension schemes are pay-as-you-go systems with the financial burden accumulating over time. Rapid ageing of the population with a shrinking labour force would put pressure on public pension expenditure on two counts. First, an ageing population along with increasing life expectancy implies that the share of retirees who receive public pensions would become larger in the next half century. Second, the share of contributors to pension funds would become smaller with the declining share of the working-age population. This would have a negative impact on pension funds unless corresponding adjustments are made in contribution rates and new solutions found to address this issue. Under these circumstances, drastic policy changes would be inevitable to sustain such pension schemes to prevent poverty in old age. The policy options available for Governments are as follows.

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<sup>17</sup> For a discussion on the situation of older persons in the region, see *Policies and Programmes for Older Persons in Asia and the Pacific: Selected Studies*, United Nations Social Policy Paper No. 1, 2001 (United Nations publication, Sales No. E.02.II.F.6).

***Converting pay-as-you-go pension systems to funded schemes vital***

(a) *Converting unfunded pension schemes to funded pension systems.*

A move towards the actuarial neutrality of old-age pension systems through prepayment as against unfunded schemes would not only reduce the financial burden on Governments but also ensure the sustainability of such schemes.

The advantage of moving towards funded pension schemes is that it enables Governments to minimize the economic costs of restoring long-run fiscal sustainability in the face of ageing-related pressures by spreading the required adjustment over a long period.<sup>18</sup> The Latin American experience shows not only that fully or partially funded, privately managed pension systems can be more effective provided that adequate regulatory and supervisory mechanisms are in place, but also that pension reform is possible under very different economic, political and social conditions.<sup>19</sup>

***Parametric changes to pension systems required***

(b) *Increase in the age of retirement*

In the majority of countries the mandatory retirement age is 60 years and workers are given the option of early retirement at age 55. The fact that a substantial number of retirees enjoy a healthy life, especially during the first five to seven years after retirement, would make extending the retirement age to 65 or 67 years, depending on the existing retirement age, an effective and practical option.<sup>20</sup>

Although such an option would not be feasible in countries having high unemployment rates, the mismatch in the labour supply and demand in the years ahead would make such an approach a justifiable and productive one. The impact of such an increase in the retirement age on unemployment could be offset to some extent by implementing pension reforms along with labour market reforms to increase the flexibility of the labour market. Prolonging working lives, along with the move towards funded pension schemes, would reduce the scale of money transfers and minimize the long-term economic costs. Older workers may have to be trained or retrained to ensure that they are equipped with the necessary skills and competence and their specific needs have to be met so as to achieve efficient outcomes of this policy option.

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<sup>18</sup> D. Carey, "Coping with population ageing in the Netherlands", OECD Economics Department Working Paper No. 325.

<sup>19</sup> M. Queisser, "The second-generation pension reform in Latin America", OECD Working Paper No. AWP 5.4.

<sup>20</sup> This is also supported by the fact that many rural elderly people continue to work despite being over 60 years of age. Shortage of labour in rural areas owing to rural-to-urban migration of the younger cohorts makes it necessary for the elderly to continue to work (see L.J. Domingo, "Ageing and women in developing countries: examination of issues from a cohort perspective", in *Population Growth and Demographic Structure* (United Nations publication, Sales No. E.99.XIII.7)). In the Republic of Korea, older persons tend to remain in the work-force as the majority are either self-employed or act as employers (Phang, loc.cit.).

(c) *Remove incentives to early retirement*

Along with the above policy measures, reforms are also needed in the public pension systems, taxation policy and social transfer programmes to remove financial incentives for early retirement and disincentives for late retirement. Incentives for early retirement have become a major policy option for countries facing high unemployment rates and removing such incentives in those countries may be counterproductive in the short run. However, future trends of a declining labour force would make such a policy option an effective one as it would not only enable the retention of productive workers in the labour force without undue impact on unemployment rates but also reduce the fiscal burden on Governments.

*Incentives to early retirement could nullify the effectiveness of parameters of pension schemes*

(d) *Providing adequate social security coverage to the poor through a multi-pillar pension scheme*

An evaluation of the existing pension schemes in selected Asian countries, along with possible policy options, is given in table III.6.

### **Increasing efficiency in the health-care sector**

The demand for health services is bound to increase substantially in the next few decades with the rising share of older age groups in the society. Older people are usually prone to diseases, especially at older ages, and will require services for the specific needs of their age group. Policy options for addressing the emerging health needs of older persons will also need to take into account resource requirements, present and future institutional constraints and the sustainability of such policy measures.

*Lack of an efficient regulatory mechanism could undermine the very objectives of a multi-pillar system*

### **Healthy ageing**

Health promotion throughout the life course is a key factor for a healthy life in old age. The promotion of healthy diets, physical activity, the prevention of unhealthy and risky behaviour and health education could be as important as improving the efficiency of health service delivery at both the local and national levels and investing in health infrastructure and human resources development. Several countries and areas in the region have introduced health promotion campaigns aimed at healthy lives in old age. For example, in 2001 Hong Kong, China, introduced the Healthy Ageing Campaign to effect a cultural change in the society's mindset in the longer term, so that ageing is seen in a more positive manner and there is greater awareness in the community of the need to adopt a healthy lifestyle from an early age in order to achieve active and healthy ageing.

*A healthy lifestyle key to healthy ageing*

**Table III.6. Common features of pension schemes in the Asian region and policy options**

<i>Common features</i>	<i>Policy options</i>
<p><b>Low coverage:</b> Coverage is below 20 per cent in most countries.<sup>a</sup> The vast majority in the informal sector are not covered by any social security and rely mostly on family support.</p> <p><b>High replacement rates:</b> Formal public sector schemes are relatively generous making them fiscally unsustainable in the long run when such schemes mature and the potential support ratio declines.</p> <p><b>Low rate of return:</b> Publicly managed pension schemes governed by mandates and limitations on investments result in a lack of portfolio diversification. These are mostly tied up with government bonds with low return for budgetary needs.</p> <p><b>Limited investment options:</b> Statutory restrictions on investment abroad and shallow capital markets limit investment options.</p> <p><b>Non-portable:</b> Impedes labour mobility between sectors and creates obstacles to reforms.</p>	<p>Increase coverage by introducing multi-pillar structures consisting of:</p> <ul style="list-style-type: none"> <li>(i) Mandated publicly managed defined benefits scheme for redistributive and coinsurance objectives;</li> <li>(ii) Privately managed and funded defined contribution scheme for savings;</li> <li>(iii) Retirement provisions on a voluntary basis for those who would like more protection in their old age.<sup>b</sup></li> </ul> <p>Move towards notional defined contribution pension schemes and link benefits to contributions.</p> <p>Limit early retirement windows.</p> <p>Shift the indexation of pensions to prices rather than wages.<sup>c</sup></p> <p>Move away from politically determined investment decisions by giving autonomy in decision-making to fund managers.</p> <p>Reduce administrative costs.</p> <p>Shift towards independently managed systems along with reforms of the capital market, providing opportunities for innovation in market instruments. Care needs to be taken to protect the interests of the account holders through regulatory mechanisms and oversight procedures. Another option would be the establishment of pension protection funds, as in the United Kingdom.</p> <p>Foster the development of government bond markets to provide a term structure which serves as a benchmark for the private sector.</p> <p>Make pensions portable and improve labour market flexibility.</p>
<p><sup>a</sup> Coverage in countries such as Singapore and Malaysia exceeds 50 per cent. India has recently switched to a defined contributory pension system.</p> <p><sup>b</sup> Such a system would address not only short- and long-term sustainability issues of pension systems but also economic and distributive concerns. For a detailed account of the multi-pillar system for pensions, see World Bank, <i>Averting the Old Aged Crisis: Policies to Protect the Old and Promote Growth</i> (Washington, World Bank and Oxford University Press, 1994).</p> <p><sup>c</sup> H. Polackova, "Population ageing and financing of government liabilities in New Zealand", World Bank Policy Research Working Paper No. 1703.</p>	



### **Health insurance**

The increasing public health expenditure would make health insurance an effective mechanism for financing the health-care needs of older persons. However, at present private prepaid health insurance is almost non-existent in most developing countries in the Asian and Pacific region. In many countries, health-care expenditure is borne either by the Government or by individuals themselves. More advanced economies, such as the Republic of Korea and Singapore, provide substantial coverage under medical insurance programmes funded largely by a combination of employer and employee contributions, budgetary transfers and direct co-payments by patients. Japan provides a separate system of health care for older people. Private prepaid health insurance plans are being developed in Indonesia, the Philippines, the Republic of Korea and Thailand.

*Pooling of risks  
through the  
promotion of health  
insurance*

### **Institutional arrangements for care of the elderly**

An important implication of the declining fertility rate to replacement or even below-replacement level for care of the elderly is the pressure on family caregiving. This demographic change would result in a 2-2-4 (or 1-2-4) family structure, that is, a middle-aged couple would have to support their two children (or one child as in the case of China's one-child policy) as well as four old parents (grandparents of the children). Such a family structure would compel present and future generations to look for alternative arrangements for taking care of older parents. For example, the gradual weakening of the residual mechanism for care of the elderly in Sri Lanka has led to an increase in the demand for institutional support by the elderly.<sup>21</sup> One way of meeting such demand is the public provision of institutional care for the elderly. The other option would be to create an environment conducive to the not-for-profit organizations providing such services. Residential and community care constitutes a key element of Australia's strategic approach to population ageing (see box III.2). The establishment of international retirement centres in low-income countries, which would be beneficial not only for retirees but also for the host country, is another option in dealing with the rising cost of care of the elderly.

*Greater requirement  
for institutional  
care of the elderly*

### **Promotion of familial care of the elderly**

Despite the pressures arising from the changing socio-economic environment, familial care continues to be the main support system for older persons in the Asian region, reflecting the affection of children for

*“Asian values” of  
familial care  
drastically reduce  
the burden of  
institutional care  
of the elderly*

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<sup>21</sup> This argument is supported by the growing number of homes for the aged and also by the long waiting lists of persons requesting admission to them (see K.A.P. Siddhisena and K. Ratnayake, “Ageing of population and elderly care in Sri Lanka”, *Sri Lanka Journal of Population Studies*, vol. 1, No. 1, 1998).

### **Box III.2. Responding to rapid ageing in Australia: a strategic approach<sup>a</sup>**

The proportion of people aged 60 years and over in Australia is predicted to reach 28.4 per cent by 2050, reflecting the rapid ageing of the Australian population. Such rapid ageing will have important ramifications for both the economy and society at large. Recognizing these potential implications, Australia has adopted a strategic approach in addressing issues relating to the ageing of its population. The main elements covered in the strategy are:

- Encouraging the continued participation of older persons in the workforce.
- Supporting retirement planning, which covers financial and social or lifestyle issues.
- Encouraging people to stay healthy and active and continue to participate in their community as they age.
- Improving the health and care services for older persons.

#### ***Key aspects of old-age and community care***

- Family and other informal care arrangements play a significant role in enabling older people to remain in the community and avoid premature admission to residential old-age care.
- A national needs-based planning framework for residential and community old-age care places has been introduced, ensuring that growth in care services is controlled and targeted to areas of greater need.
- A national needs-based assessment mechanism has been introduced at an individual level to control access to services by the needy on a priority basis.
- A national accreditation framework has been established for residential old-age care services to ensure high standards of care and for eligibility of government funding.

#### ***Key lessons***

The key lessons learned from Australia's experience in developing a response to population ageing include the need to:

- Develop a strategic and holistic response to population ageing.
- Maintain national leadership and direction in developing a response to such a complex policy area.
- Engage all stakeholders in the process.
- Ensure coordination of activities and collaboration between Governments, businesses, other organizations and the community.
- Ensure that responses are proactive and forward-looking with flexibility to incorporate the required changes as they arise.
- Maintain a strong evidence base to inform policy responses to population ageing.

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<sup>a</sup> For a detailed account, of Australia's approach to ageing, see *Ageing in Asia and the Pacific: Emerging Issues and Successful Practices*, Social Policy Paper No. 10 (United Nations publication, Sales No. E.03.II.F.13).

their parents. Such "Asian values" underscore the importance of the quality of interpersonal relationships between generations as an effective way of care of the elderly. How can Governments promote the filial responsibility of taking care of older people? Some Governments use social and fiscal policies to achieve these goals. For example, in Singapore, the Government promotes filial responsibility through government policies on housing, health and infrastructure. In Malaysia, institutional care is considered a last resort. The National Welfare Policy

formulated in 1990 calls for the welfare of older persons to be safeguarded with the support of the family and the community. To this end, tax deductions for medical expenses incurred by parents have been proposed. The Plan of Action for Older Persons introduced in 1998 recognizes community-based programmes as one of the feasible approaches for meeting current and future challenges.

### **Market reforms**

One of the most important aspects of policy design to face the challenges of rapid ageing would be regulatory and market reforms that would provide an enabling environment for promoting higher levels of efficiency in both the public and private sectors and raising the growth of factor productivity. Macroeconomic stability, increased competition in an open market setting, transparency and accountability would ensure the sustainability of the dynamic gains from such reforms with a positive impact on growth and welfare.<sup>22</sup> Such reforms could help countries to transform the ageing problem into opportunity (see box III.3).

### **Labour market reforms**

Reforms in the labour market are required to face the challenges and opportunities of population ageing. Liberalization of the labour market would need to focus on the effect of the declining labour force, productivity, migration and the adaptability of older workers to the existing working environment.

Implementing measures that would increase the efficiency of the economy could offset the adverse effects of population ageing to a large extent. Initiatives to improve total factor productivity at both the local and national levels through technological innovation and more efficient allocation of resources could be the most important strategy, particularly in countries where the labour force is likely to shrink owing to an ageing population. This would allow countries experiencing rapid ageing of their populations to sustain their current levels of economic growth.

*Labour market reforms critical*

Liberalization of the labour market would also enable countries to face the possible adverse effects of increasing labour migration. The threat of large-scale migration would be inevitable, particularly in developing countries in the face of a declining labour force and in countries

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<sup>22</sup> Regulatory and market reforms are probably the most important as the gains could have a permanent positive influence on growth and living standards (see Dave Turner and others, "The macroeconomic implications of ageing in a global context", OECD Economics Department Working Paper No. 193, <<http://www.oecd.org/eco/eco>>).

### Box III.3. Population ageing: from problem to opportunity

The cost of ageing populations is becoming a serious concern for policy makers in countries in the Asian and Pacific region where the population is ageing rapidly. The adverse implications of rapid ageing could be reflected in slow growth and deterioration in social welfare. Contrary to these pessimistic views, the paradigm shift in population dynamics could be transformed into an opportunity for both economies with a young population and those with an older population provided that the right incentives are in place and opportunities are seized in time.

For economies whose population is still young, the “demographic dividend” is derived mainly on four counts:

- *The increasing labour force* could be an impetus to higher growth. For example, large countries such as India and Indonesia, whose population is ageing moderately, and countries such as Bangladesh, Pakistan and the Philippines, whose population is ageing slowly, could benefit from their still young workforce. These countries would be competitive at the labour-intensive end of manufacturing for several decades to come.
- Those economies whose population is ageing slowly would benefit more from a “consumption dividend” than those whose population is ageing rapidly such as Japan, as they would be better placed to invest less and still maintain a given level of per capita output during the next two to three decades.
- *Higher return to capital in economies* whose population is young could attract foreign direct investment. The relative scarcity of capital in developing economies where the population is ageing slowly would drive up the rate of return on capital in these economies. Such high rates of return could induce capital flows from economies in which the population is ageing and where capital is abundant while the rate of return is low.
- *Increasing opportunities to export labour to economies with a rapidly ageing population.* The still growing labour force and excess labour would enable these economies to export labour to countries with a labour shortage. For example, countries such as India, which has one of the largest stocks of skilled human capital in the world, while having limited opportunities in the domestic market, would be in a better position to exploit the evolving global labour market conditions, including the acceleration in outsourcing in services and manufacturing.

The realization of these opportunities in the face of generally favourable demographic trends, however, depends critically on the progress made with the closely intertwined tasks of fiscal consolidation and structural reforms, educational reforms to suit the changing environment in a globalized world, development of infrastructure, provision of legal protection and adoption of an effective migration policy.

Economies with a rapidly ageing population could also benefit from an ageing population. The following are key areas:

- *Productivity growth.* A relative shortage of workers would increase the incentives for developing labour-saving technologies which would spur technological development.<sup>a</sup> Economic incentives such as patent rights could provide a boost for technological innovation.
- *Increasing the purchasing power of older persons.* Unlocking the purchasing power of older persons as a consumer force could yield growth as the demand for health-care and recreation services could increase in an ageing population. Older people could also constitute a productive power as they have good work ethics and are experienced and knowledgeable.

<sup>a</sup> One reason that the United States surpassed the United Kingdom in the early nineteenth century as the leader in technological innovation was the relative scarcity of labour in the United States (see the Testimony of Chairman Alan Greenspan before the Special Committee on Aging, Senate, <<http://www.federalreserve.gov/boarddocs/testimony/2003/20030227/default.htm>>).

which are experiencing rapid ageing.<sup>23</sup> A flexible labour market would enable migrant labour to return to their home countries after their short-term contracts abroad are completed, a process necessary to avoid transforming short-term labour migration into permanent migration.

An important source of labour for many countries in the region would be the unemployed and underemployed women themselves in home countries. In many countries in the region the participation of women in the labour force is constrained by factors such as lack of flexibility in career and child-rearing, the lack of day-care facilities for children, the lack of home care for older persons and social norms which lead to gender bias in education and employment. Removal of these constraints alone could neutralize a large part of the negative impact of ageing on labour markets.

Labour markets should also respond to the needs of older workers as the older workforce will become an important component of the labour force in the years to come. Job redesign, the reorganization of the division of labour and the provision of a flexible working environment to meet the aspirations of older persons and make the best use of a growing number of older workers could be effective policy responses to an ageing workforce.

*Labour markets should also respond to the needs of older persons*

### Migration policy

The historical movement of natural persons indicates that international migration can play an important role in offsetting many of the consequences of population ageing and labour shortages. How can migration policy be fine-tuned to cope with the adverse effects of ageing in labour-importing countries, while minimizing the negative effects of the “brain drain” on labour-exporting countries?

*Critical role of international migration in stabilizing labour markets ...*

The fact that international human migration is a transnational phenomenon makes handling migration for the benefit of both the home and host countries a global issue. Formal arrangements between labour-exporting countries and labour-importing countries through bilateral or regional cooperation could benefit all parties, as such arrangements could solve the unemployment problem in the exporting country while meeting the supply shortages in the importing country. The following are some proposals for consideration.

- Explore the possibilities of bringing international human migration under a global framework to ensure an orderly and rule-based flow of persons. A fresh look at the existing global

*... and a greater need for a global framework for the orderly flow of persons*

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<sup>23</sup> Immigration or temporary worker flows have already proved important in Malaysia and Thailand. For example, foreign workers account for 25 per cent of Malaysia's labour force (see Heller, op. cit.).

frameworks, such as Mode 4 of the WTO General Agreement on Trade in Services, for widening the scope of such initiatives for human migration, just as in the case of trade in services, would be a starting point.<sup>24</sup>

- Facilitate return migration and introduce compensation systems for countries of origin to recover the cost of education, lost innovation and creativity in the event that temporary migration becomes permanent.
- Make efforts to integrate migrants into local society along with measures to protect the rights of migrants and meet their obligations.

However, as elaborated in box III.4, international migration by itself may not be able to offset completely the effects of population ageing on the labour market. For certain countries, a migration policy may not be an option at all as cultural identities and values may compel them to focus on alternative choices, such as productivity improvement and market reforms.<sup>25</sup>

### **Population policy**

*What size population is affordable?*

Just as the population policies of the past have played some role in the present-day demographic dynamics, population policy could also be used to reverse rapid fertility declines. Increase in fertility, removing restrictions on having large families and promoting early marriage could reverse the future demographic trend. Some countries have already taken steps in this direction. For example, countries such as Singapore provide incentives such as housing priority for large and multigeneration families, flexitime for mothers to nurture their children, cash and fiscal incentives, child-care subsidies and enhanced child relief in income taxation.

*Population policies need to be carefully planned*

However, changing the hard-earned gains of low fertility may not be a good choice for certain countries as overcrowding could create serious problems. What size population can be affordable? Even with declining fertility rates, the world population is projected to increase to over 9 billion by 2050. Overcrowding in countries which already have high

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<sup>24</sup> A similar argument was put forward in *World Economic and Social Survey 2004* (United Nations publication, Sales No. E.04.II.C.3).

<sup>25</sup> For example, Japan is taking initiatives such as support measures for the balancing of work and child-raising instead of receiving migrant workers. The House of Lords of the United Kingdom, in its report to the Select Committee on Economic Affairs on *Aspects of the Economics of an Ageing Population*, <<http://www.parliament.the-stationery-office.co.uk/pa/ld200203/ldselect/ldeconaf/179/179.pdf>>, concludes that it is neither appropriate nor feasible to attempt to counter the trend towards a more aged society in the United Kingdom through a manipulation of immigration policy.

### Box III.4. Migration policy: a cushion for the ageing process?

The Asian and Pacific region constitutes both labour-importing and labour-exporting countries. For example, Bangladesh, India, Indonesia, Pakistan, Sri Lanka, Thailand and Viet Nam serve as a pool of migrant workers for countries experiencing labour shortages. The number of migrant workers deployed from these countries had increased from 1 million in 1990 to 2.4 million by the end of 2000. About 5.5 million foreign workers are estimated to be living in main areas of destination in East and South-East Asia.<sup>a</sup> With rapid ageing, economies such as Japan, the Republic of Korea and Singapore are expected to experience severe shortages in labour supply in the coming decades.

In these circumstances, would immigration be a promising cushion for the ageing process in the region? The current debate provides support for answering both yes and no.

On the positive side are the following factors:

- Higher net migration may mitigate the negative fiscal consequences of an ageing society because of the expected age distribution of migrants, who are more likely than the resident population to be of working age.<sup>b</sup> Migrant workers are on average younger than non-immigrants and are likely to contribute more in taxes than they receive in services.
- The imbalance between labour supply and demand and the resulting labour market mismatching could be avoided to some extent with migrant labour, thereby sustaining growth.<sup>c</sup>

On the negative side are the following factors:

- The amount of migration required to prevent a decline in the working-age population may be larger than exporting countries can afford owing to its adverse implications for the labour markets in the countries of origin. For example, if Japan wished to keep the size of its population at the level attained in 2005, the country would need 17 million net immigrants up to 2050, or an average of 381,000 immigrants per year between 2005 and 2050. By 2050, 30 per cent of the population would be immigrants and their descendants. Similarly, the Republic of Korea may need an average of 100,000 immigrants per year between 2035 (the population will peak in 2035) and 2050 although migration is already taking place.<sup>d</sup> It is unlikely that such large flows can happen in these countries in the foreseeable future.
- In most of the ageing economies, labour markets are not sufficiently flexible to absorb migrant workers and offer the requisite training on a large scale.<sup>e</sup>

The above arguments underscore the fact that immigration alone may not be an effective solution for labour market distortions arising from an ageing population. It has to go hand in hand with reforms in labour markets and social insurance. However, the evolving dynamics of population ageing would provide an opportunity for a collaborative effort by both the labour-exporting and -importing countries to exploit the labour market conditions to their advantage. An understanding on a common migration policy framework at the regional and multilateral levels and bilateral negotiation within such a framework would enable mitigation of the labour shortages in ageing economies, while allowing countries of origin to benefit from such initiatives without disrupting the labour markets in home countries. Labour market flexibility, the portability of pensions and restricting such migration to a fixed term or mechanisms for compensation for the countries of origin would be key ingredients of such a framework.

<sup>a</sup> J.W. Huguet, "International migration and development: opportunities and challenges for poverty reduction", in *Fifth Asian and Pacific Population Conference: Selected Papers*, Asian Population Studies Series No. 158 (United Nations publication, Sales No. E.03.II.F.27).

<sup>b</sup> H. Polackova, "Population ageing and financing of government liabilities in New Zealand", World Bank Policy Research Working Paper No. 1703.

<sup>c</sup> Y. Katsumata, "The impact of population decline and population ageing in Japan from the perspectives of social and labour policy", paper presented at the Expert Group Meeting on Policy Responses to Population Ageing and Population Decline, New York, 16-18 October 2000.

<sup>d</sup> United Nations, *Replacement Migration: Is It a Solution to Declining and Ageing Populations?* (ESA/P/WP.160).

<sup>e</sup> Axel Boersch-Supan, "Labor market effects of population ageing", National Bureau of Economic Research Working Paper No. 8640, <<http://www.nber.org/papers/w8640>>.

population densities could have serious repercussions in the long run, undermining the well-being of future generations. Thus, such changes should be implemented only through a carefully planned population policy.

### **Fiscal policy**

*Fiscal consolidation and overall macroeconomic stability vital*

The most important policy issue arising from an ageing population from the Government's perspective is the fiscal burden of rising public pension and health-care expenditure. Many developing countries in the region already have large budget deficits and the fiscal demands arising from an ageing population would be an additional burden on them. The challenges facing the developing countries with ageing populations may thus become more difficult in the years ahead.

In this context, effective fiscal consolidation would become an important policy goal for developing countries in the Asian and Pacific region. While maintaining macroeconomic stability should be a primary goal, policy coordination to ensure the coherence and consistency of policies would be essential. Taxation could be an important policy instrument in financing social security. For example, a consumption tax earmarked for social security and care of the elderly would be an effective means of raising funds in developing countries, although this mechanism may be counterproductive in countries that are struggling to recover from economic downturns. Efforts to reduce the public debt burden would be necessary not only to absorb future shocks but also to prevent the country from falling into a debt trap in the face of rising public expenditure. The provision of an environment conducive to saving more is another option which would lessen the pressure on the budget. While the negative impact of pensions on the budget could be minimized by linking pension benefits to contributions, that arising from health-care expenditure could be reduced to a certain extent by introducing privately managed health-care systems.

### **Role of the private sector**

*Strategic public-private partnerships necessary to narrow the gap between the rich and the poor*

The rapid ageing of populations in many countries in the region would open the door for the private sector, including NGOs, to play an important role in addressing issues relating to ageing. The diminishing role of Governments and the increasing influence of the private sector on society in a globalized world and the increasing gap between rich and poor would necessitate strategic partnerships between the Government and the private sector, as no single sector or organization can address issues relating to ageing on its own.<sup>26</sup>

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<sup>26</sup> J.E. Austin, *The Collaboration Challenge: How Nonprofits and Businesses Succeed through Strategic Alliances* (Jossey-Bass, 2000).



The increasing demand for health insurance, annuities and savings instruments and institutionalized care services for older persons would provide ample opportunities for the private sector to expand its services while contributing to easing the pressure on the public sector. The role of NGOs would be critical in providing community-based support systems for older persons and covering gaps in public and private services.

## CONCLUSION

Many countries in the Asian and Pacific region are experiencing rapid ageing of their populations, reflecting declines in mortality and fertility rates. The intensity of population ageing in the region is bound to increase rapidly during the next 50 years with the share of the population aged 60 and over predicted to more than double to 23.5 per cent by 2050. A distinctive feature of ageing in the region is the rapid ageing of populations in economies which are still developing. For example, the implementation of family planning as an anti-poverty measure had a significant impact on the demographic structures of countries such as China, India, Indonesia, Malaysia, Singapore and Sri Lanka.

The rapid ageing of populations in developing countries could have profound implications for their economies and societies. The rising demand for health-care services in old age and increasing pension liabilities, particularly in the face of declining potential support ratios, would place the fiscal implications of ageing at the forefront. Labour markets could experience a shift in the supply of labour, with adverse implications for labour productivity. The changing age structure could also induce a shift in the consumption and savings behaviour of people. The combined effect of these changes would have adverse implications for capital markets, growth and social welfare.

In many countries a large proportion of older persons are poor and work in the informal sector, without any support from formal pension schemes in old age. In many countries, effective institutions, procedures, rules and regulations for addressing issues relating to older persons are not in place. Moreover, the changing family structure and composition in the face of urbanization, globalization and migration would have a negative impact on social norms in familial care, imposing pressure on the provision of formal residential care for older persons. As a result, the challenges faced by developing economies in the region with an ageing population in the years to come would be more complex than those faced by developed economies with an ageing population.

A balanced and holistic approach, taking into account both economic and social considerations with a view to achieving improved individual welfare, would be necessary to respond effectively to the challenges of ageing. On the economic front, fundamental changes are needed in policy design, particularly in health and social security systems, to minimize the pressures on public expenditure which would have an impact on the

*Anti-poverty family planning playing an important role in ageing*

*More complex challenges for developing economies*

potential for overall growth. Pension schemes in many countries in the region are pay-as-you-go systems with the financial burden accumulating over time, resulting in an intergenerational transfer of liabilities and a disproportionate reduction of welfare for future generations. The implementation of multi-pillar social security structures consisting of mandated, publicly managed defined benefit schemes on an equity basis, privately managed and funded defined contributory schemes for the working class and additional retirement schemes for voluntary contributions would constitute an effective and sustainable approach in addressing old-age social security. Such an approach would not only make pension schemes financially sustainable but also function as an anti-poverty measure.

Regulatory and market reforms to provide an enabling environment for promoting a higher level of efficiency in both the public and private sectors and the provision of incentives for innovation would be important aspects in addressing issues relating to ageing. The liberalization of labour markets to make them more flexible and boost labour supply, fiscal consolidation and policy coordination, while maintaining macroeconomic stability to withstand the pressures on social expenditures and negative effects on the economy, should be key elements in such a policy agenda.

***The Millennium Development Goals could be a benchmark in responding to ageing***

On the social front, the promotion of health throughout life and the creation of an environment conducive for the private sector to develop alternative social security schemes such as health insurance and annuity schemes are important policy options to consider. While the promotion of family care for the elderly by providing incentives should be a priority, the development of institutional care for the elderly by both the public and private sectors would also be necessary, particularly in the light of the changing family structures and their negative impact on familial care. The fundamental thrust of both economic and social policies should be avoiding the elderly becoming poor, isolated and discriminated against while maintaining the socio-economic conditions of the public in general. The Millennium Development Goals could provide a benchmark for both the economic and social policies required to face the challenges of ageing.

***Fresh look at Mode 4 of the WTO General Agreement on Trade in Services needed***

Regional and global actions could also play a key role in responding to ageing. For example, how migration is treated at the regional and global levels would have important implications for both ageing and non-ageing economies. Treating labour as a regional public good and measures for the orderly flow of labour would be necessary, particularly in the light of increasing international human migration in the coming decades. To the extent that population ageing could pose risks, particularly for the future labour supply, and international migration could play an important role in minimizing such risks, regional cooperation on human migration could be a key vehicle for harmonizing labour resources in the region. It is thus important to explore the possibilities of bringing international human migration within a global framework to ensure the orderly and rule-based flow of persons. In this regard, a fresh look at the existing frameworks, such as Mode 4 of the WTO Agreement, would be a starting point.