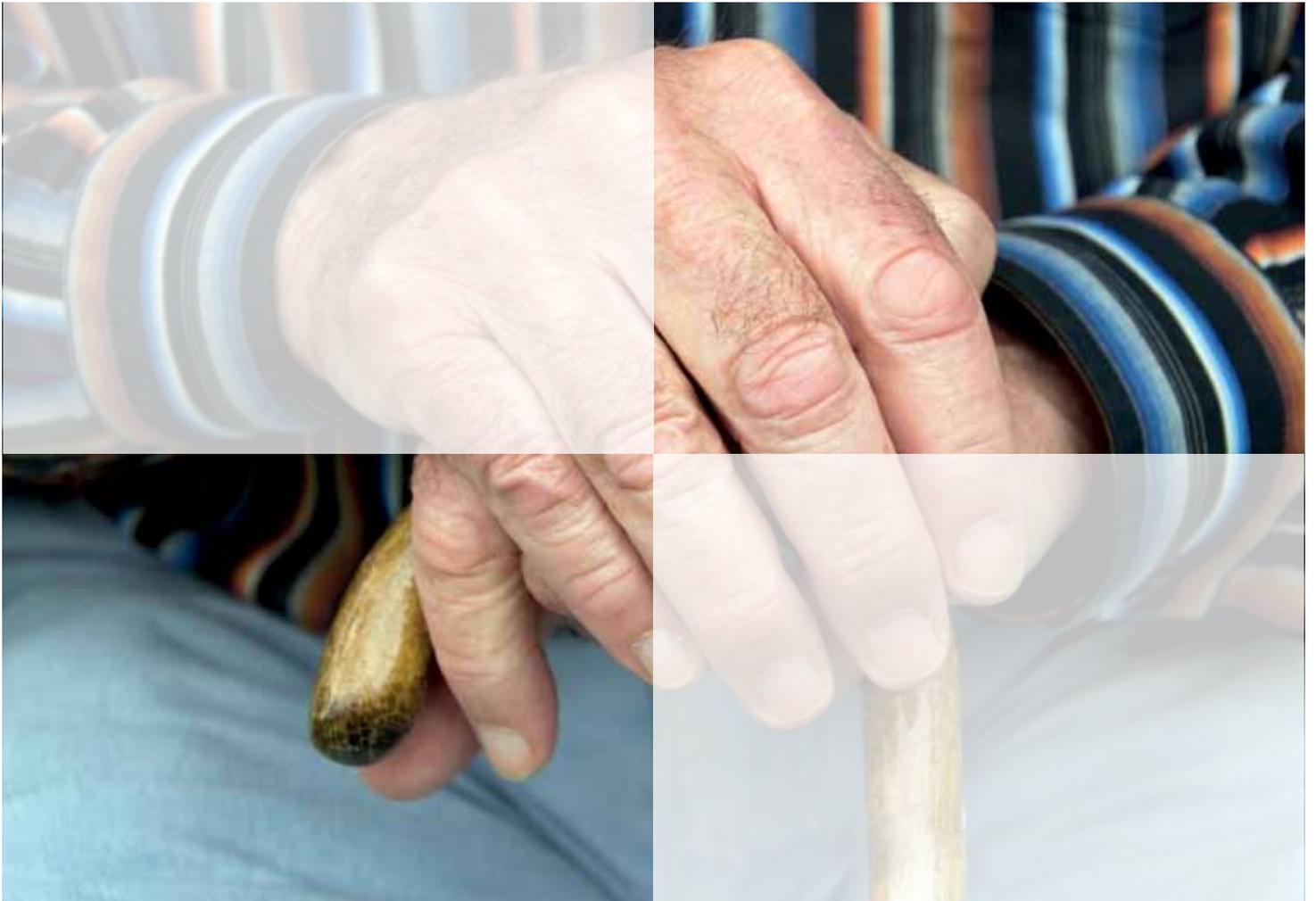


Global Agenda Council on Ageing Society

# Global Population Ageing: Peril or Promise?



# Introduction

In academic and policy circles, ageing is becoming a hot topic. The media is flush with stories on ageing, and international groups are increasingly singling out ageing for discussion and debate. **The World Health Organization (WHO) has dedicated its annual World Health Day in 2012 to ageing.** The European Union has designated **2012 as the Year of Active Ageing and Solidarity between Generations.** The UN General Assembly held a High-Level Meeting in September 2011 on preventing and controlling non-communicable diseases (NCDs) – a threat to human health and the global economy that is strongly associated with ageing.

These activities build on the framework for Active Ageing established by WHO in 2002 in its report, **Active Ageing: A Policy Framework.** “Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age.” This framework embraces and emphasizes the value of a “life course perspective that recognizes the important influence of earlier life experiences on the way individuals age.”

The WHO framework also defines the multiple **determinants of active ageing – from access to health and social services to behavioural, personal, physical and social environments and economic determinants – all influenced by gender and culture.** This framework guides the work of the World Economic Forum’s Global Agenda Council on Ageing Society and informs this introduction and the essays in this book.

Why is population ageing attracting so much attention now? One reason is that the rapid ageing of humanity is **perhaps the most salient and dynamic aspect of modern demography.** As a result, **its influence on public health and national economies will be dramatic.** The world experienced only a modest increase in the **share of people aged 60 and over during the past six decades, from 8% to 10%. But in the next four decades, this group is expected to rise to 22% of the total population – a jump from 800 million to 2 billion people (Box 1).**

While this ageing trend started in the developed world, it is now a global phenomenon, and it is **accelerating, especially in the developing world (Figure 1).** In industrial countries, the share of those 60-plus has risen from 12% in 1950 to 22% today and is expected to reach 32% (418 million) by 2050. **In developing countries, the share of those 60-plus has risen from 6% in 1950 to 9% today and is expected to reach 20% (1.6 billion) by 2050.** The pace of this change means that developing countries will have **much briefer periods to adjust and establish the infrastructure and policies necessary to meet the needs of their rapidly shifting demographics.** It also means that unlike developed countries, **they will need to cope with getting old before they get rich.**

The list of countries that have the highest shares of 60-plus populations will change considerably over the next four decades. Although ageing is occurring in every country, the 10 that currently have the highest shares of the 60-plus group are all developed countries, or countries in transition, such as Bulgaria and Croatia (Table 1). The picture will change by 2050 when Cuba makes the list, while some richer countries (Finland and Sweden), leave it. **Remarkably, the UN projects that in 2050 there will be 42 countries with higher shares of the 60-plus group than Japan has now,** with the fastest ageing mainly in relatively newly industrialized or developing countries (Table 2). In fact, China and Brazil will begin to converge with Japan, which by 2050 will have more than 40% of its population 60 and older, outpacing the increase in the United States (Figure 2).

What are the major drivers of population ageing? Three drivers stand out:

- **Declining fertility.** The world’s total fertility rate – that is, the number of children born per woman – fell from 5 children per woman in 1950 to roughly 2.5 today, and is projected to drop to about 2 by 2050. Most of this decline has occurred in the developing world, where the share of children in the population is expected to drop by half by 2050 from the 1965 level. As families have fewer children, the older-age share of the population naturally increases.
- **Increased longevity.** Globally, life expectancy increased by two decades since 1950 (from 48 years in 1950 to 1955 to 68 years in 2005 to 2010), and is expected to rise to 75 years by 2050. There are still considerable disparities between the wealthy industrial countries, at 82 years, and the less developed countries, at 74 years. However, this gap has narrowed greatly in the last few decades. The life expectancy of older people has increased particularly rapidly; a person who reaches age 60 has more years of life left than in the past.
- **Falls in mortality came before falls in fertility.** In the early phases of this transition, large cohorts were born, mainly because mortality, especially among infants and children, tended to decline before fertility fell. Those cohorts are now reaching working ages and the older ages, and their ranks will swell. In developed countries in particular, large-sized post-World War II baby-boom cohorts are reaching the older ages.

Another reason for an emphasis on ageing today is that **“doomsday scenarios” abound.** These alarmist views typically assume a world of static policy and institutions, continuing trends involving low fertility, and constant age-specific behaviour and labour outcomes. **The resulting scenarios yield stark and shocking images of workforce shortages, asset market meltdowns, economic growth slowdowns, the financial collapse of pension and healthcare systems, and mass loneliness and insecurity.**

Such tales are strongly reminiscent of the work by Paul Ehrlich and the Club of Rome in the late 1960s, which predicted mass starvation and human misery in the 1970s and 1980s as a result of rapid population growth, or what was termed “the population bomb”. But lessons can be learned from this experience. Although the world population did double from 1960 to 2000 (from 3 billion to 6 billion), at the same time per capita income increased by 115%, life expectancy rose by more than 15 years, and literacy shot up as primary school enrolments became nearly universal in many countries.

Food production since the 1940s increased twice as fast as population growth. The message we should draw from this experience is that both change and adaptation are possible and within our control. Some portion will be individual and natural, and some will be collective and political. That said, there will be a number of complicating factors:

- The meaning of ageing is evolving, reflecting the **new needs, aspirations and capacities of people now reaching their 60s and 70s.**
- Ageing is occurring in a range of settings: wealthy industrial countries have more resources to draw upon in confronting the challenge, though institutional rigidities and vested interests may limit the possibilities for effective action.
- Resources are severely constrained in many countries, and all the more so in the wake of the global financial crisis.
- In the absence of resource transfer schemes that provide support for older people, many developing countries rely on familial support. But that private safety net is fraying as numbers of older people rise, fertility levels fall, perceptions of family ties change, and children migrate from their less mobile parents to cities or distant places for jobs.
- Many in the media perpetuate negative stereotypes of ageing, such as the view that older people are characterized only by loss, decline, decay, pain, suffering and loneliness. These negative and profoundly inaccurate stereotypes influence not only public policy, but also how society thinks about ageing and how older people think about themselves. Moreover, with people living longer than ever before, and in many cases remaining healthy until later years than in the past, society has an opportunity to reap a “longevity dividend”, in which older people continue to make substantial contributions for unprecedentedly long periods.

In an historical context, population ageing is one of the most **remarkable human success stories of any era, reflecting contributions of public health, medicine, education and economic development.** But capturing and unlocking the full benefits of that success require that we adapt our perspectives and reform our institutions. **The good news is that there is a wide range of behavioural changes and public policy responses to population ageing** that would simultaneously avoid a significant dampening of economic growth and enhance the quality of life for people reaching older ages today and for generations to come.

On the behaviour side, declining fertility and increased educational opportunity have been and will continue to be associated with changing social roles and greater labour force participation by women; and fewer children generally yield healthier, smarter and better-educated younger generations. Insofar as health and intellectual enhancement through education translate into higher adult productivity – all well-established links – lower fertility is tantamount to an increase in the effective labour force, suggesting a further boost to growth. Lower fertility also leads to a decline in youth dependency, which offsets the increase in old age dependency.

In fact, a recent econometric study (referenced in Chapter 6) shows that increases in older-age dependency do not significantly impede the growth of income per capita, unlike increases in youth dependency. These results support the view that the negative impulse that high fertility conveys to economic growth cannot be offset by behavioural and institutional changes, unlike the negative impulse of increased longevity, which can be offset by changes in behaviour and policy.

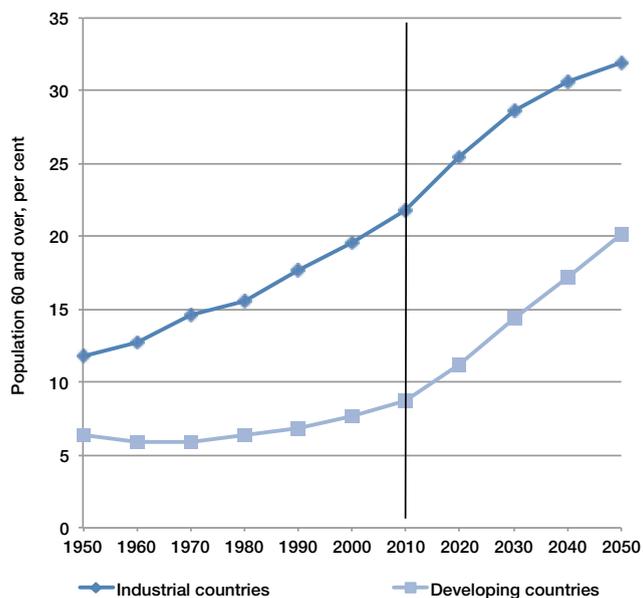
Moreover, when people expect to live longer, they have an incentive to save more for the years after they are no longer working. In economic terms, savings translates into investment, which fuels the accumulation of physical and human capital and technological progress, the classic drivers of economic growth.

## Box 1: Key facts on ageing

- At the global level, the share of those 60-plus has risen from only 8% of world population (200 million people) in 1950 to around 11% (760 million) in 2011, with the dramatic increase still ahead as those 60-plus are expected to reach 22% (2 billion) by 2050.
- At the global level, the share of those 80-plus has edged up from 0.6% of world population in 1950 (15 million) to around 1.6% of world population (110 million) in 2011, and is expected to reach 4% (400 million) by 2050.
- The global population is projected to increase 3.7 times from 1950 to 2050, but the number of 60-plus will increase by a factor of nearly 10, and the 80-plus by a factor of 26.
- Between 2010 and 2050 the total population will increase by 2 billion, while the older population will increase by 1.3 billion.
- Women account for about 55% of the 60-plus group, rising to 64% of the 80-plus group, and 82% of the 100-plus group. On average, women outlive men by nearly 4.5 years.

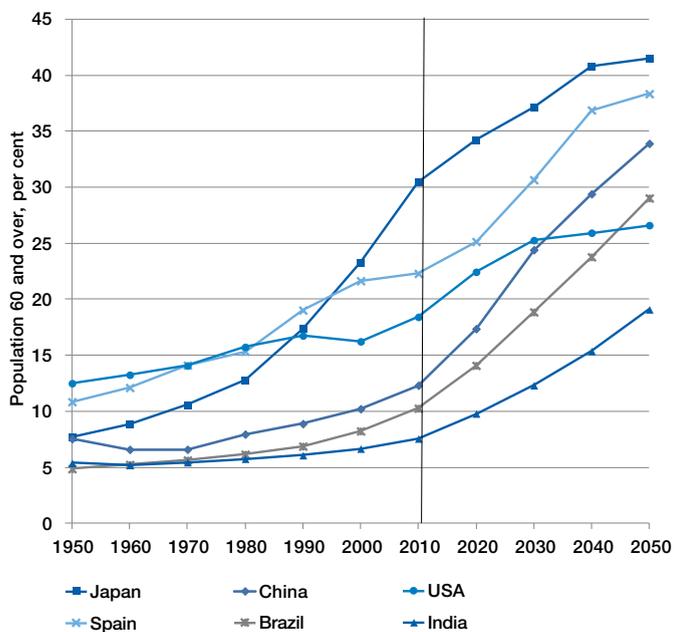
Note: The UN Population Division uses the terms “more developed regions” and “less developed regions”, which correspond with “industrial countries” and “developing countries” used in this book.

Figure 1: Ageing is accelerating worldwide



Source: UN, World Population Prospects: The 2010 Revision

Figure 2: Major developing countries will start converging with developed ones



Source: UN, World Population Prospects: The 2010 Revision

Table 1: The top 10 for ageing

Countries with the highest shares of 60+ populations in 2011 and 2050 (percentage), (among countries with 2011 population of 1 million or more)

2011		2050	
Japan	31	Japan	42
Italy	27	Portugal	40
Germany	26	Bosnia and Herzegovina	40
Finland	25	Cuba	39
Sweden	25	Republic of Korea	39
Bulgaria	25	Italy	38
Greece	25	Spain	38
Portugal	24	Singapore	38
Belgium	24	Germany	38
Croatia	24	Switzerland	37

Table 2: Developing countries ageing fastest

Countries with largest percentage increase in 60+ share, (among countries with 2011 population of 1 million or more)

2011	Increase, 2011-2050	60+ share, 2050
United Arab Emirates	35	36
Bahrain	29	32
Iran	26	33
Oman	25	29
Singapore	23	38
Republic of Korea	23	39
Viet Nam	22	31
Cuba	22	39
China	21	34
Trinidad and Tobago	21	32

## A Menu of Policy Responses

It is natural for people to respond to longer lifespans, particularly longer healthy lifespans, by planning on longer working lives and other forms of social contribution. However, public policy has been extremely sluggish in adapting to new demographic realities as **most of the world's social security systems create strong incentives for retirement between the ages of 60 and 65.** A recent study (referenced in Chapter 6) of 43 countries (about two-thirds of which are industrial) **shows that during the 1965 to 2005 period, male life expectancy rose an average of nearly nine years, but the mean legal retirement age rose by less than half a year.**

**One option currently gaining traction in many countries, such as France, Greece, Ireland and the United Kingdom, is raising the normal legal age of retirement.** However, even an increase of a couple years has created some social and political tension, especially given the high rates of unemployment in the wake of the 2008 economic slowdown.

**A second option is using international migration to ameliorate the economic effects of population ageing,** with youthful poor country populations filling job vacancies in ageing countries. But counterbalancing population ageing in this way requires very large migrant flows that have significant implications for the broader functioning of society. It is not at all clear that the world will capture the large potential benefits of international migration, as most countries have gone in the opposite direction. They have done this by instituting immigration barriers in an effort to protect their economies from low-wage workers, preserve traditions, maintain cultural and ethnic uniformity or respond to anti-immigrant sentiments.

The fact that social protections are not portable across countries creates impediments for increased migration and increases the vulnerability of migrants who, themselves, ultimately become part of the older population. Increased immigration could therefore offset some of the workforce issues posed by population ageing, though not likely a significant portion.

A third option is reforming health systems. An increased emphasis on disease prevention, health promotion and early screening has considerable potential to contain the direct treatment cost and the lost income occasioned by chronic diseases such as cancer, diabetes and cardiovascular disease. New models of long-term care need to be designed and tested. In addition, there is a need to train more healthcare providers, especially in low- and middle-income countries.

The nature of medical training also needs to change. Health providers should be better able to address the multiple and interrelated health conditions specific to the older people who form the bulk of their clientele. Most broadly, health systems need to adopt a life course approach to population health because prevention efforts at all ages promote health in old age.

A fourth option is rethinking business practices. Public policy should encourage, rather than discourage, businesses in the public and private sectors to employ older workers, even part-time. This would involve: (i) catering to older employees' desire for flexible roles and schedules; (ii) investing in worker wellness programmes to enhance attendance and productivity and avoid unnecessary healthcare and turnover costs as the workforce ages; and (iii) taking advantage of the new core business opportunities that will accompany population ageing, such as designing and marketing consumer products and services that are customized to the physical needs, the financial capacities, the interests and the channels of influence that characterize the "silver generation".

## Box 2: The rationale for investing public resources in older people

There is a range of powerful social justifications for devoting public resources to the challenges ageing brings:

- Older people are a valuable and productive economic resource that should not be stifled by outmoded public policies such as mandatory retirement or other disincentives to work beyond certain ages.
- Inherent in the challenge of population ageing are huge opportunities, because older people who live healthy lives can continue to be productive for longer than in the past.
- On ethical and humanitarian grounds, devoting resources to older people is arguably the right thing to do, the fair thing to do and a just thing to do.
- Older people have a fundamental human right to make claims on social resources, such as healthcare. These claims are grounded in and justified by international law, for example, in the 1948 Universal Declaration of Human Rights.
- The formation of social capital and societies that are cohesive, peaceful, equitable, and secure requires that we attend to the needs of all groups, especially the most vulnerable, such as older people. Doing so will strengthen societal and cross-generational cohesion.
- Governments have a natural and fundamental role to play in the health sector, for everyone, including older people, because unregulated markets do a poor job of achieving socially desirable and economically efficient levels of health provision. Infectious disease puts communities at risk, health providers can use their informational advantages to exploit health consumers, and problems of moral hazard and adverse selection exist.

## Essay Highlights

Against this backdrop, the World Economic Forum's Global Agenda Council on Ageing Society assembled this collection of essays to help inform and stimulate discourse, defuse the perceived threat, and promote a proactive vision for adaptation to support positive population ageing – one that will require forward-thinking frameworks and innovations in technology, education and policy. It is intended for a broad audience: the media, the public, political leaders, public policy-makers, the private sector and specialists seeking to round out their knowledge.

We examine from myriad perspectives how individuals perceive ageing; how society empowers people to live longer, healthier, and more productive and fulfilling lives; and how these realities are affected by the individual and societal construction of the notion of the chronological advancement of age.

The essays also examine the interplay between ageing and many facets of the modern world. Some of these are natural concomitants of the treatment of ageing, such as social protection and human rights. Others, such as urbanization, intergenerational equity, leadership, and the media portrayal of ageing, explore paths that have been less well travelled. In doing so, these essays reflect the key features of country contexts – paying social attention to stage of development and cultural setting, along with the nature and operation of key public and private institutions (such as the health system, extended family, and mechanisms for promoting economic security among older people).

Many of the authors identify options and make recommendations for societal transformations that are necessary or desirable to address the challenges – and capture the potential benefits – of population ageing.

This book consists of 22 essays, divided into four themes: setting the scene, investing in ourselves, pursuing healthy ageing and redesigning our environment. The central theme that emerges is the increasingly urgent need to adapt to population ageing, identify and take advantage of the opportunities it offers, and find ways to unlock the human capital resources that population ageing and our longer lives make available.

## Section I: The Backdrop – What We must Contend with and why We Must Act Now

The first group of essays paints a picture of the social economic, and political environment that will set the stage for policy decisions on ageing. We see anxious, unprepared societies that are being bombarded by the media with stories about the “burdens” of growing older.

In “The Meaning of Old Age”, Laura L. Carstensen and Linda P. Fried note the irony that older people, who throughout history have been portrayed as prophets, saints, tribal leaders and healers, are now often the source of fear and anxiety in discussions on ageing. The problem, they say, is that societies today are “enormously ill-prepared” for populations with more people over 60 than under 15. Cultures are youth-oriented, as are physical and social environments and institutions. The authors contend that if societies are to reap the social capital that older people offer, they need to (i) “modify the life course” (that is, invest throughout life in health, education, and social integration); (ii) improve the care and autonomy of disabled older adults; and (iii) build infrastructure that supports long life and taps the talents and potential contributions of older people who are healthy, such as wisdom and experience.

On the financial front, Jack Ehnes, in “Ageing and Financial (In)security”, points out that as people live longer, it is natural for many of them to develop financial security concerns. But these concerns have been ratcheted up sharply in the wake of the global financial crisis, which resulted in trillions of dollars of retirement savings depleted. As a result, he says, there is a “significant questioning of our underlying retirement and savings models, which ultimately bear heavily on the quality of life for seniors, labour market stability, and intergenerational relationships”. He calls for an urgent rethinking of official retirement ages and company policies on work after retirement in developed countries. And he cautions that Asian countries “lack the institutionalized pension schemes to fill in the gaps from the weakened informal family-based support mechanisms”.

Wasted social capital and financial insecurity feature especially strongly among older women, who tend to have a lower standard of living than older men, we learn in “Women and Ageing” by Saadia Zahidi. Why is this so? The author suggests that in developed and developing countries “current societal arrangements cumulatively result in a lifetime of unequal and inadequate access to education and economic participation and opportunity for women”. To remedy this situation, she recommends policies and practices that protect and empower these women, such as access to quality education and removing barriers to women's access to economic activity. Also needed are (i) policies and practices that catch women “upstream”, before they get old; (ii) the application of a gender lens to existing and new measures affecting older people to ensure women are not overlooked; and (iii) policies and products focused on older women's needs and interests.

Complicating matters, the media (news, television and film) and advertising often convey images of older people through a “lens of decline and diminished value”, according to Colin Milner, Kay Van Norman, and Jenifer Milner in “The Media's Portrayal of Ageing”. This tactic, they say, confirms beliefs and entrenches negative stereotypes, in turn affecting how older people see themselves and how society views and treats them. What is needed now are realistic portrayals “so depictions encompass the many different experiences of ageing without attaching a value judgement”. How can the media and advertising reshape perceptions of ageing? The authors suggest that one way would be to show the financial benefit, that is, the value of creating marketing messages that resonate with older customers.

How should we think about equity across adjacent (as opposed to distant) generations? In “Ageing and Intergenerational Equity”, Norman Daniels explains that with global ageing comes a sharpening of the problem of intergenerational equity. Developed countries worry that they can no longer afford transfers to the elderly that were part of a social contract over many decades. However, developing countries – with even fewer resources – do not even have such resource transfer schemes in place. Daniels discusses the Prudential Lifespan Account as a framework for thinking about resource allocation over the lifespan that aims to be fair to all age groups, even if they are treated differently at different stages of life.

## Section II: Investing in Ourselves – How to Release Social Capital

The second group of essays looks at innovative ways to tap the valuable social capital that older people offer. The emphasis is on engaging older workers in fruitful activities, whether through flexible retirement policies, age-friendly cultures and working places, lifelong learning, or redesigned pensions and healthcare systems.

In “Population Ageing: Macro Challenges and Policy Responses”, David E. Bloom, Axel Börsch-Supan, Patrick McGee and Atsushi Seike note that because of high past fertility rates there has been little need for rapid policy changes so far, but this will change as baby boomers retire, labour force growth slows, and the costs of pension and healthcare systems rise – especially in Europe, North America and Japan. To adapt and possibly benefit from population ageing, the authors urge public policy-makers to (i) allow greater choice on retirement timing; (ii) undertake pension reform; (iii) re-design healthcare financing systems with older people in mind; and (iv) be open to migration of working-age people. The authors also call on businesses to alter attitudes towards older workers and to change practices in a number of areas, such as work schedules and routines, training, healthcare, and pay systems – with the emphasis on being proactive rather than reactive.

An important way to move forward, say Simon Biggs, Laura Carstensen and Paul Hogan in “Social Capital, Lifelong Learning and Social Innovation”, is to recognize older people’s social capital, which is often obscured by overly negative views of ageing that result in underutilized talent and misperceptions about abilities. They contend that despite normal age-related decline in some aspects of functioning, in the absence of dementia or serious illness, age-related changes do not prevent people from making substantial contributions to workplaces, families and communities. Older people typically have accrued social and process skills that are particularly useful for service economies. To release social capital, they advocate a virtuous cycle of lifelong learning (updated skills); social adaptation (age-friendly cultures and working environments); and social innovation (activities arising from newly identified potential).

In “Leadership: The Elders”, S. Jay Olshansky describes a small group of highly distinguished older people formed in 2007 to help resolve global issues and ease suffering. Over time, the group – known as The Elders – has included Graça Machel, Desmond Tutu, Marti Ahtisaari, Kofi Annan, Ela Bhatt, Lakhdar Brahimi, Gro Brundtland, Fernando Cardoso, Jimmy Carter, Nelson Mandela, Mary Robinson, Aung San Suu Kyi, and Muhammad Yunus. So far, The Elders have successfully addressed many world problems, but the group is equally important as an example of how older people can make vital contributions to society, in part, because they are older. Leadership is just one of many attributes that highlight the need to portray ageing as a period of constant adaptation and transitional phases that can lead to rewards for individuals and societies.

At the business level, in “Organizational Adaptation and Human Resource Needs for an Ageing Population”, Atsushi Seike, Simon Biggs, and Leisa Sargent contend that in a society with fewer younger people relative to mature workers, an organization’s ability to succeed may hinge on whether it can attract and retain mature workers. At the policy (macro) level, it is vital to establish employment conditions and compensation terms that make it desirable to keep working. At the workplace (mezzo) and personal (micro) levels, the key is age-friendly working environments. Such environments include flexible working practices (career breaks, part-time work and flexi-place working), health and well-being promotion (supervised fitness programmes), and continuous learning (updating skills). These initiatives would help promote cultural adaptation to an ageing society.

This theme is echoed in “Ageing Workforces and Competitiveness: A European Perspective”, by Giles Archibald and Raymond Brood, who call for a new corporate model to unlock the social capital in healthy, older populations. If this is not done, they argue, the demographic profile of Western countries is likely to be a significant hindrance to economic growth. How can business respond? One way is to hold on to current workers, but adopt more flexible pay practices. This would enable older workers to reduce responsibilities, but with commensurate smaller compensation. Another way is to provide more flexibility in the work-life-care balance. But whatever is done, the key is to plan ahead and act now. For example, both 3M Europe and Lanxess (Germany), have begun developing new human capital planning models to find ways to maintain productive workforces as the average age rises.

## III. Pursuing Healthy Ageing – What Healthy Ageing Involves

The third group of essays focuses on ways that we can arrive at old age healthier, whether by investing in preventive care throughout the life course, modernizing medical education, effectively managing advanced illness and NCDs, or even delaying the biological process. While we know many people are living longer, evidence that they are also living healthier is somewhat thin and still preliminary. Widening and deepening this evidence base is a high priority because if people can retain their health as they age, it is easier for them to remain socially connected and participate actively in the workforce. In the coming decades, a significantly greater number of employees, especially those not doing manual labour, may be able to work productively into much later ages than they do today.

In “The Longevity Dividend: Health as an Investment”, S. Jay Olshansky, John R. Beard and Axel Börsch-Supan advocate investing in health to live better, not just longer. If we can achieve that, society can get a healthy return in longer working lives; lower healthcare outlays; and social, economic, and health dividends. In fact, the authors say, “the economic value of a rapidly growing healthy older population is so large that healthy ageing should be aggressively pursued, on its own merits, as a societal investment”. How should this dividend be pursued? The authors say that first, we need to invest in health throughout the life course, so that people are healthier when they reach older ages. Second, we need to better understand the biology of the ageing process, in the hopes of delaying the infirmities of old age and further compressing the morbid years at the end of life.

For developed countries, Linda Fried, Paul Hogan and Jack Rowe argue in “Design and Operation of Health Systems in Wealthy Industrial Countries” that it is time to redesign our health systems to better handle the altered healthcare and prevention needs that come with living longer. The authors advocate (i) re-engineering the 20th-century medical model, with a stronger focus on prevention throughout the life course; (ii) doing a better job of educating health professionals on geriatrics; (iii) creating a strong partnership between the government and the corporate sector on shared goals and aligned implementation; and (iv) facilitating the transfer of best practices to developing nations. The goal, they say, is “a decreased burden of disease and a successful compression of morbidity in the latest points in the human lifespan”, which should lower healthcare costs and “amplify the benefits to society of being an ageing world”.

Developing countries, however, will have to cope with population ageing and the associated burden of chronic disease before they reach high income levels, as pointed out by David E. Bloom, Ajay S. Mahal, and Larry Rosenberg in “Design and Operation of Health Systems in Developing Countries”. They warn that a business-as-usual approach could lead to an inadequate healthcare supply, out-of-date healthcare systems, insufficient human resources for health and greater health inequality. But this bleak outcome can be avoided with a proactive and innovative approach that takes advantage of these countries’ socio-economic development. Top priorities include primary prevention efforts aimed at reducing the incidence of NCDs; reform of healthcare worker training to focus on NCD prevention, early detection, treatment and care; creation of social health insurance programmes; and development of the primary healthcare sector.

One region that would benefit greatly from investing in older people is Africa, which on the face of it seems the least likely to fall into that category given that it is home to the world’s youngest population. In “Ageing Africa: Opportunities for Development”, Isabella Aboderin tells us that by the year 2100, Africa’s older population will explode to 716 million from 56 million today, the sharpest increase for any region. The reality, she says, is that investing in older people offers Africa a way to realize key development goals, such as raising agricultural productivity and sustainability, providing more jobs, and enhancing equity and stability. Policy options, especially for older people who are poor, include (i) social pension programmes and stronger support for informal, family-based support systems; (ii) better access to healthcare; (iii) greater access to agricultural extension services; and (iv) intergenerational knowledge transfer.

What role does medical education play? In “Modern Medical Education”, Daniel Ryan and John Wilden suggest it is time to refocus medical education by shaping a future medical workforce of doctors and nurses designed to meet the needs of an older population. Many older people have multiple chronic diseases, such as hypertension, diabetes and heart failure, in addition to functional difficulties, such as incontinence and cognitive impairments. Yet, the emphasis of medical education is towards greater specialization, raising concerns over the number of doctors able to adopt a multidisciplinary and geriatric knowledge approach. Can this deficit be addressed through training and investment? The authors say yes, but that it will require a seismic shift in priorities that will take many years to achieve.

On the cost front, can we afford an ageing population? In “The Challenge of Non-Communicable Diseases and Geriatric Conditions”, Ron Williams and Randall Krakauer contend that as long as populations age and health technology advances, the cost of healthcare will rise. In 2007, total US health outlays stood at 15.7% of GDP, about double the world average of 8.6%. The authors say there will be many opportunities to reduce the rate of increase of healthcare costs by intelligently manipulating the economic levers of healthcare. Which levers should we focus on? One is the effective management of NCDs, which account for the lion’s share of medical costs for older people. Another is the effective management of advanced and terminal illnesses. A third is a more collaborative, coordinated and integrated healthcare system – from caregivers and clinicians, to facilities to health plans. This would include collaboration among those who provide care and those who finance it to develop a set of incentives that appropriately align rewards with effective and efficient patient care.

#### IV: Redesigning our Environment – What a Better World Might Look Like

The final group of essays explores what an age-friendly world might look like. One vision involves greater social protection for older people, greater clarity and respect for their rights, better financial education, easier labour mobility across borders, age-friendly cities, and robots and other technologies to assist them.

In “Social Protection of Older People”, David E. Bloom, Emmanuel Jimenez, and Larry Rosenberg explain that despite the growth and extent of social protection programmes in rich and poor countries alike, older people remain extremely vulnerable. These programmes typically include pensions, basic healthcare, child benefits, and social assistance and employment plans but the coverage gaps especially in the poorer countries, are huge. What can be done to fix the problem? First, gather the evidence that there is a problem. This means developing a comprehensive information system about the financial, physical and social situation of older people. Second, mobilize a consensus on the need for including older people in national social protection – perhaps do a “stress test” to assess their coverage – and devise a strategy. Third, mobilize domestic resources. Fourth, seek help from the international community.

What about the rights of older people? In “Human Rights in Older Age”, Alexandre Kalache and Richard Blewitt argue that older people should enjoy the same intrinsic rights as everyone else. In reality, however, ageism (the stereotyping and prejudice against older people) and age discrimination (the use of age as a reason to treat individuals negatively) is prevalent worldwide. Ageism and age discrimination range from limited access to services, education, and job opportunities to abuse, neglect and abandonment. National laws against age discrimination exist in some countries, but they typically focus on jobs. At the international level, following the 1948 Universal Declaration of Human Rights, UN conventions on the rights of children, women, indigenous populations, ethnic minorities, immigrants and disabled persons have been adopted. Is further action required on behalf of older people? The authors contend that a gradual consensus is emerging on the need for strengthening older persons’ rights within the framework of international law.

With an ever increasing share of the world's population residing in cities, in "Ageing and Urbanization", John Beard, Alex Kalache, Mario Delgado and Terry Hill ask whether cities can be redesigned to foster more active and healthier ageing. Many such initiatives are under way. They are focused on needs related to participation (access to information, accessible buildings and public transportation), health (accessible and affordable healthcare services and opportunities to be physically active), continuing education (models of lifelong learning), and security (affordable housing and services; and home, community and transportation safety). An indication of the rapid uptake of these ideas globally is the WHO's Global Network of Age-Friendly Cities, which now counts over 400 affiliated members from large cities such as New York to small rural communities in Australia. Fortunately, the authors say, the experience of these municipalities is that "many of the features advocated by the age-friendly cities movement are low cost".

In "International Migration and Population Ageing", Hania Zlotnik explores whether international migration can provide a solution to labour shortages created by population ageing. It is true, she says, that dynamic economies can rely on migrants to satisfy their labour needs. But what most researchers have found over the past few decades is that demography, which has a long gestation and takes a long time to play itself out, is not the main driver of international migration. Rather, it is factors such as economic and political developments in both the countries of destination and origin. The general conclusion, she notes, is that it would be difficult, politically, socially and even in terms of the management of international migration, to admit continuously and over a long period the relatively high numbers of migrants of particular ages that would be required to counterbalance in a significant way the ongoing population ageing.

In "Financial Education and Older Adults", Andre Laboul advocates better financial education and awareness for older people. The reason is that older people are being asked to cope with a financial landscape that increasingly transfers financial risks to individuals and features ever more sophisticated financial products at a time of great uncertainty. Yet older people, along with many others, are ill equipped to handle these responsibilities and often overestimate their financial skills and awareness. Given that pensions and retirement savings plans are vital for individual and social welfare, they should be a top priority. The education should occur early on, when proactive action is still possible – savings must be built up over a long period of time – but it is also needed in the phase out period, as assets are being drawn down. In addition, stronger financial consumer protection is essential to protect older people from financial abuse.

Finally, is there any chance of helpful robots? In "Technology and Design", Gerald C. Davison and Aaron Hagedron bring us up to speed on gerontechnology, which involves designing products and services to help older people with limited physical or cognitive abilities live more independent lives. We now have "smart homes", tele-health, m-health (mobile phone-based monitoring), assistive technology (such as a foot orthotic that improves balance) and socially assistive robots for rehabilitation or for behavioural treatment of dementia symptoms. The authors stress that "perhaps the most important, but currently overlooked opportunity" for gerontechnology lies in developing countries, which need basic assistive devices that are more appropriate for a less developed environment and new technology that can cheaply ensure access to diagnostics in remote areas.

## Conclusions and Recommendations

The success story of population ageing and longer lives is often accompanied, in the end, by tales of doom and gloom; but it is vital that the global community not succumb. Although there are serious challenges, which must be weighed, understood, and in some cases adapted to, there are also enormous opportunities that must be seized. The essays in this book do not point to the existence of a magic bullet or uniform plan. We will need to customize responses to different countries' social, economic, and political systems and histories. Even so, some general principles of change stand out because of their broad applicability and pragmatic nature.

- Committing at the highest levels. History teaches us that big and complex issues need high-level champions. As we saw with HIV/AIDS, it took public pronouncements from French President Jacques Chirac in 1997 and US President George W. Bush in 2003 to mobilize enormous resources and energy to battle the disease, even though HIV had been discovered and identified as the cause of AIDS in 1981. In the case of ageing, a commitment to an age-friendly society must come from the top, given that policy responses include raising the retirement age, reformed health systems and encouragement for businesses to rethink practices. In addition, councils of distinguished older people, which enjoy a moral authority, should embrace the cause and spread the word to broaden commitment.
- Acting early and swiftly. We cannot wait for a crisis to act. One reason is that many of the policy responses – such as a new medical curriculum that focuses more on prevention and chronic diseases and less on ever-greater specialization – require a long lead time to design and implement. Another reason is that good options may evaporate as constituencies shift, making gradual responses more difficult. For example, it would be fairer to give workers a decade of lead time to plan their retirement rather than informing them as they prepare to retire in a year or two that they must work longer. Moreover, it will be harder to convince workers to back higher retirement ages as they themselves form a bigger share of the affected population.
- Embracing the new reality of ageing. Individually and collectively, we must change our behaviour, institutions and public policies to reflect the new meaning of ageing, and along with it, the altered needs and capacities of older people (Box 3). This means raising the legal retirement age (though this change may focus

primarily on those not predominantly engaged in manual labour), investing in older people so that they can continue to learn and contribute to society, rethinking business practices (such as work schedules) to facilitate the participation of older workers, making sure that there are adequate social protections (such as pensions), and reforming health systems to better meet the needs of older people. It also means investing in health throughout the life course so that people are healthier when they get older.

- Acting on all levels. Pragmatism dictates that we start on the path of social, economic, and political change at all levels – local, national and global. Urban design is a local issue. The legal retirement age is a national issue. The concept of human rights for older people is an international issue. And migration is a bilateral and multilateral issue.
- Better use of existing resources. There is considerable scope to use our resources more effectively. This entails everything from the design of age-friendly cities and assistive robots, to health systems that place greater emphasis on disease prevention and early screening. It also entails holistic life course policies such as enabling older people to acquire financial planning skills and the ability to update their workplace skills.
- Sharing best practices. In demographic terms, the challenge of population ageing is historically unprecedented, which means that we should conduct and learn from a multiplicity of experiments in developed and developing nations. These would include:
  - The Dutch city of Eindhoven's pioneering efforts to become a zero-emission community (with the world's most interactive urban lighting system) and a healthy city in which citizens have the latest technologies at their disposal to maintain a high quality of life even when suffering from chronic diseases
  - Shanghai's ambitious urban policy, which will see the creation of widespread and accessible community centres for older residents
  - Efforts by the Andalusian province (Spain), the State of São Paulo (Brazil), and the State of South Australia to broaden city concerns to the state level, given that many aspects of urban living that affect the quality of life of older people go beyond municipal boundaries (such as housing policies, public transportation, access to health and social services, and recreational facilities).

- Developing new indicators. We should develop a set of indicators for assessing the financial, physical and social situation of older people and the age-friendliness of various environments. We should then use the media to hold key stakeholders (individuals, governments, business and civil society) accountable for progress in this realm. Besides the WHO's guidelines on age-friendly cities, this would include studies on the quality of life, health status, economic and physical security, and vulnerability to crime. It would help policy-makers determine whether older people are falling through the cracks – such as not tapping available medical benefits – when simple measures (such as free bus passes, transportation to clinics, or help in filling out forms) might solve the problem.
- Taking advantage of new technology. It is vital that that we tap new technology to improve the quality and accessibility of healthcare for older people. In developed countries, "smart homes" integrate a range of monitoring and supportive devices to help people age in place more effectively (for example, wireless sensors connected to small computers can detect functional decline). Social robots can assist in vital activities, such as reminding people about eating and taking medicine. And telemedicine enables a patient to connect with clinicians to better manage chronic diseases at home rather than in a hospital.

The supreme goal is to make sure we understand and tackle tomorrow's challenges, not yesterday's, and in the process, ensure that generations reaching older ages now and in the future are allowed to experience and express their full potential.

### Box 3: Opportunities arising from a longer, healthier life

A longer and more flexible working life. During a period when the number of people of traditional working age is shrinking, mature-age workers become a valuable resource, so much so that the balance will change in favour of practices that promote higher levels of labour force participation among older individuals.

Volunteering and community contributions. While research on the uptake of voluntary activities is mixed, there is little doubt that many older adults make a valuable contribution through voluntary community engagement. This may take the form of civic engagement, from education and healthcare to the environment and homelessness.

Enhanced social skills. Research shows that many older adults are better at interpersonal communication and less prone to immediate emotional reactions than persons of a younger age. This is a set of “people skills” that would be particularly valuable for a service-based economy.

Redesigned environments. Creating age-friendly environments not only enhances the social participation of older adults and other groups, but it also stimulates business innovation in designing the built environment. New building and retrofitting gives rise to employment opportunities in construction, transport and related industries.

New markets, new consumers. It is estimated that people over the age of 60 hold more than 50% of the wealth in developed societies, with a similar trend occurring in emerging countries. This means that the considerable potential of the “silver market” is only just beginning to be tapped.

Intergenerational transfers. Contrary to the view that older generations are a burden on younger ones, most transfers run down the generational tree rather than up it, when viewed across the life course. Parents and grandparents give their children the best start in life they can. Older taxpayers show no indication of refusing to pay for large infrastructural projects for which they may never reap the full personal benefit. It may be more accurate to talk about generational altruism rather than generational burdens.

Caring and family cohesion. Older people, particularly women, engage in unpaid care work. This contribution not only frees up others in the workforce, such as their adult children, it currently saves their national economies considerable costs. When a shrinking population of working age is combined with increased female participation, certain sectors – such as the aged-care workforce – will come under particular strain unless these skills are recognized.

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