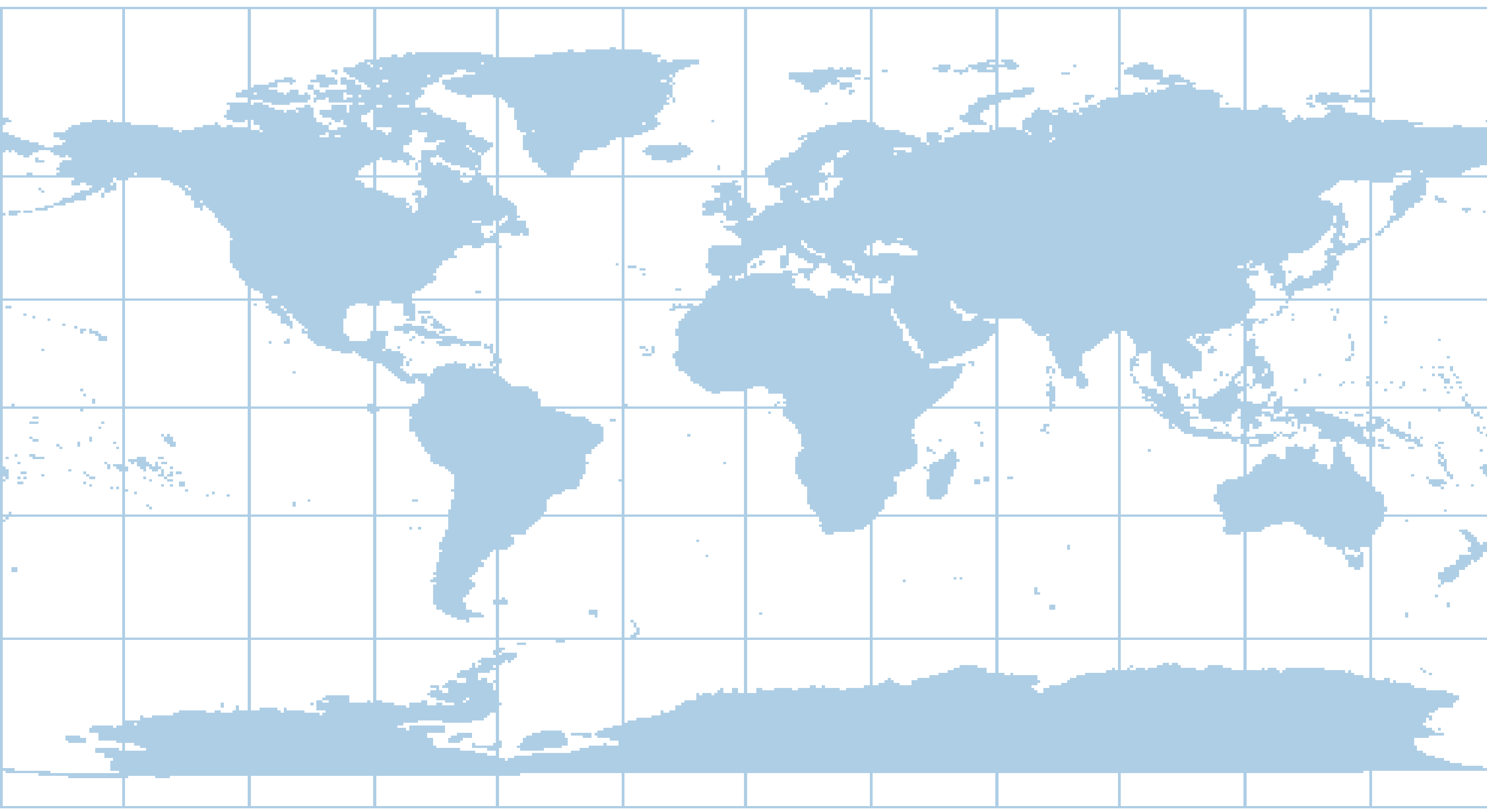
Department of Economic and Social Affairs

World Economic and Social Survey 2007

Development in an Ageing World

Overview



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Overview

Ageing will have a profound impact on societies and will need to occupy the increasing attention of policymakers in the twenty-first century. In the developed world, and also in many parts of the developing world, the share of older persons in the population is rising rapidly. Ageing is a reflection of the success of the process of human development, as it is the result of lower mortality (combined with reduced fertility) and longer longevity. Ageing provides new opportunities, associated with the active participation of older generations in both the economy and society at large. In those countries, primarily in the developing world, that still have a growing youth bulge, there is a window of opportunity for economic development. Population ageing also poses important challenges, especially those related to the financial viability of pension systems, the costs of health-care systems, and the full integration of older people as active agents of societal development.

The *World Economic and Social Survey 2007* analyses the challenges and opportunities associated with ageing populations and aims to facilitate discussions in furthering the Madrid International Plan of Action on Ageing, adopted by consensus by the Second World Assembly on ageing on 12 April 2002. The Madrid Plan provides the framework to incorporate the discussion of population ageing into the international debate on development and the implementation of national policies to respond to the challenge of building societies for all ages. The Plan gives priority to ensuring that ageing is made an integral part of the international development agenda; to advancing health and well-being into old age; and to creating enabling and supportive environments for older persons.

An ageing world population

The age distribution of the world's population is undergoing a profound transformation. As mortality and fertility have fallen, the age distribution has been shifting gradually to older ages. All regions of the world are experiencing this change.

Increasing life expectancy and reduced lifetime fertility are the key factors driving the "demographic transition". At the global level, life expectancy rose from 47 years in 1950-1955 to 65 years in 2000-2005 and is expected to reach 75 years in 2045-2050. In the period from 1950-1955 to 2000-2005, total fertility fell from 5.0 to 2.6 children per woman and it is expected to continue falling to reach 2.0 children per woman in 2045-2050. In several parts of the world, and not just in the developed countries but also in many developing ones, the figure for lifetime fertility is now less than 2 children per woman and is thus below the level required for population replacement over the long run.

The demographic transition involves three stages. During the first, there is a rejuvenation of the age distribution as the proportion of children rises because of increased survival at younger ages. During the second, owing to fertility reductions, there is the beginning of a decline in the proportion of children accompanied by a rise in the proportions of adults of working age. During the third stage—usually reached after lengthy periods of fertility and mortality decline—the proportions of both children and adults of working age decline and only the proportion of older persons rises.

The bulge in the working-age population during the second stage of the transition is temporary (lasting, typically, about 50 years). Yet, the time period is long enough to have significant implications for the countries concerned. In theory, this demographic bonus provides a window of opportunity for accelerated economic development. However, reaping its potential benefits depends on the generation of productive employment and opportunities for investment, and ultimately on the existence of social and political conditions that can provide an environment for sustainable growth and development.

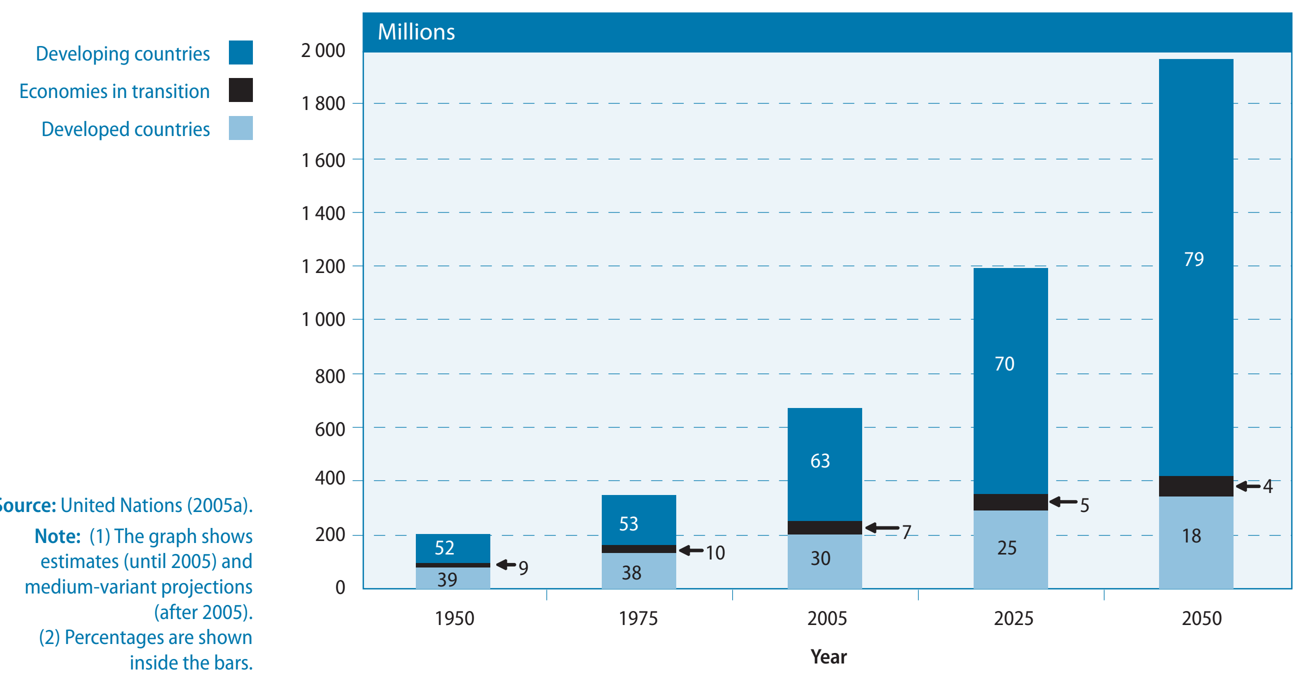
During the third stage, the rapid ageing of the population may pose particular challenges for public policy, as major adjustments in a variety of spheres are required to cope with a declining labour force and an increasing demand for health care and old-age support.

Accelerated population ageing in developing countries

Developed economies in general are in the third stage of the demographic transition and their age structure is considerably older than that of the developing countries. In countries with economies in transition, the age structure is generally younger than that of the developed countries but still significantly older than that of the developing countries.

Most of the developing countries are in the second stage of the demographic transition. Yet, the majority of the world's older persons live in developing countries and by 2050, 79 per cent of the population aged 60 years or over, amounting to nearly 1.6 billion people, will reside in those countries (figure O.1). Furthermore, those countries that have experienced fairly rapid fertility reductions, particularly in East Asia and the Pacific and Latin America and the Caribbean, will experience a process of population ageing that will be more rapid than that undergone in the past by today's developed countries. Most African countries, in contrast, have only recently embarked on the second stage of the demographic transition and the region's population is expected to remain relatively young well into the twenty-first century.

Figure O.1.
Size and distribution of world population aged 60 years or over by groups of countries, 1950, 1975, 2005, 2025 and 2050



Source: United Nations (2005a).
Note: (1) The graph shows estimates (until 2005) and medium-variant projections (after 2005).
(2) Percentages are shown inside the bars.

Gender differences at older ages

Because women usually live longer than men, they significantly outnumber men at older ages. Consequently, the proportion of women in the older population tends to rise substantially with advancing age. In 2005 for the world as a whole, women outnumbered men by almost 4 to 3 at ages 65 and over and by almost 2 to 1 at ages 80 and over. However, owing in part to an anticipated reduction in the female advantage in developed countries, the difference between the number of men and women at older ages is expected to decline somewhat by 2050 in these countries. In the developing countries, in contrast, the imbalance between numbers of older men and older women will increase further because of the still widening sex differences in life expectancy.

Increasing dependency ratios

One consequence of ageing in most societies is that the number of people who work and generate an income declines relative to those who do not work and depend on incomes generated by others. Dependency ratios compare the size of some group within a population that is considered to be economically dependent (typically, children under age 15 and older persons over age 65) to another group that is considered economically active. Because of data limitations, dependency ratios are usually calculated based solely on age ranges.

Between 1975 and 2005, the total dependency ratio for the world as a whole declined from 74 to 55 dependants per 100 persons of working age owing to a major reduction in child dependency. The downward trend is expected to come to a halt in the coming decade and then reverse. The total dependency ratio is projected to be 53 in 2025 and to reach 57 dependants per 100 persons of working age by 2050 owing entirely to rising dependency at older ages.

In developed countries, the total dependency ratio is estimated to have reached a historically low level in 2005; and a steadily increasing path for the total dependency ratio is projected for those countries as a group in the future because of a continually rising old-age dependency ratio (see figure O.2a). The trends in dependency ratios in the countries with economies in transition are similar to those in the developed countries.

For the developing countries, both the historical experience and the future prospects are quite different. Between 1950 and 1975, their total dependency ratio was much higher than that of developed groups of countries owing mostly to a very high level of child dependency (figure O.2b). Since around 1975, however, child and total dependency ratios in the developing countries have been declining, and total dependency is expected to continue declining until 2025, only to rise thereafter because of the projected rapid rise in old-age dependency.

Population ageing is inevitable

A substantial degree of population ageing is expected over the next few decades in all regions of the world. Policy interventions intended to encourage childbearing in low-fertility countries, even if effective, are unlikely to substantially alter this expectation. Also, although a large rise in the number of international migrants could alter trends in the working-age population in industrialized countries, no plausible assumptions about future international migration levels would have more than a moderate impact on the expected degree of population ageing in these countries.

As the coming changes in population age structure are well understood, they can be largely anticipated. Ideally, policy responses should be put in place ahead of time to ease adaptation to these long-term demographic changes. Even if population ageing is inevitable, its consequences depend on the measures developed to address the challenges it poses.

Figure O.2a.
Child and old-age dependency ratios, 1950-2050, developed countries

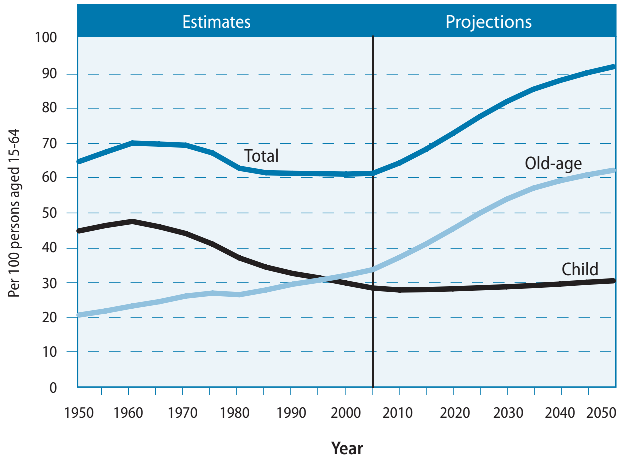
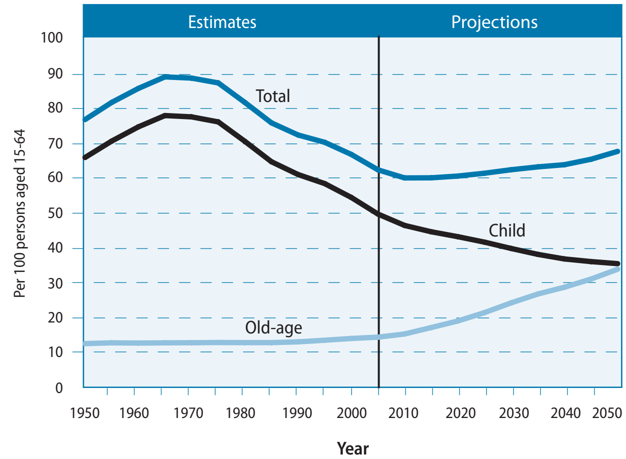


Figure O.2b.
Child and old-age dependency ratios, 1950-2050, developing countries



Source: UN/DESA.

Note: Child and old-age dependency ratios refer to the populations aged 0-14 and 65 years or over, respectively, as ratios of the working-age population aged 15-64 years. The total dependency ratio is the sum of the two.

However, ensuring that the growing numbers of older persons have adequate support during old age, access to decent employment should they need or wish to remain economically active, and appropriate health care is likely to prove challenging. Unless economic growth can be accelerated in a sustained manner, ageing will impose heavier demands on the working-age population (in the form of higher taxes and other contributions) in order that a stable transfer of resources to the older age groups may be maintained.

Ageing and changing living environments

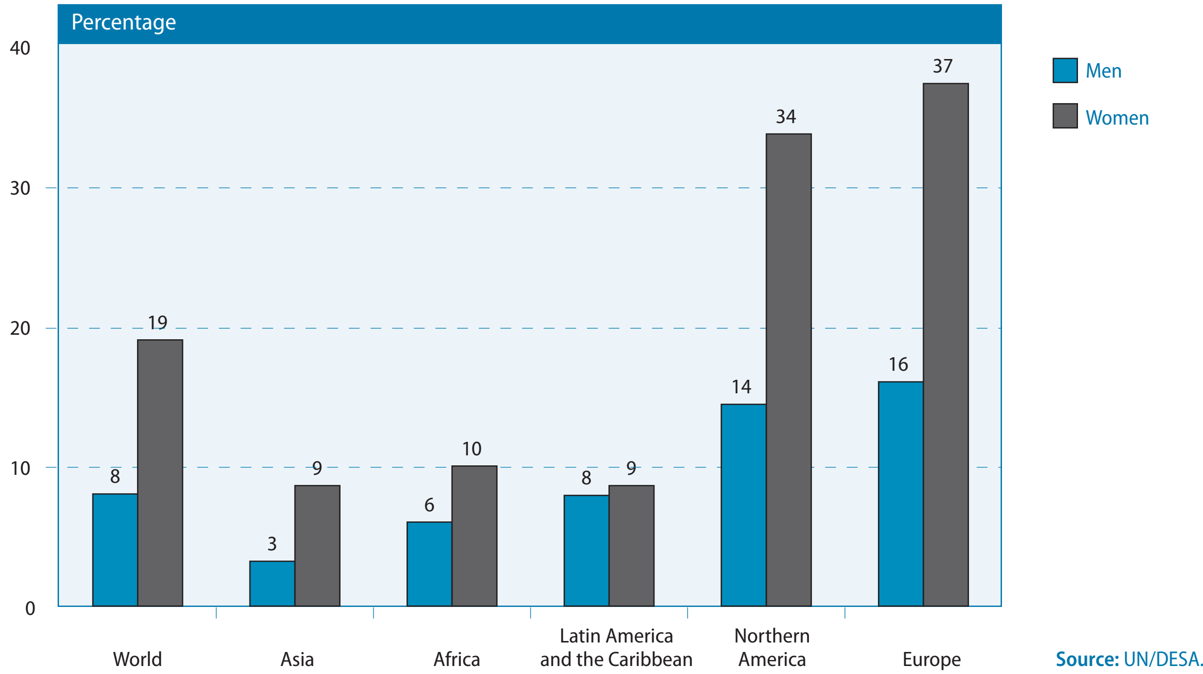
The social environment within which people grow older is rapidly changing. The size of families is decreasing, the role of extended families is diminishing, and perceptions in respect of intergenerational support and caring for older persons are rapidly changing.

Changing living arrangements

One out of 7, or 90 million older people, live alone worldwide and this ratio has increased in the majority of countries over the past decade. While the average rate of change is rather modest, this trend is likely to continue and will have important social consequences, especially for older women, who are more likely to live alone (figure O.3). Solitary living, which may result in increasing isolation, makes caregiving by family members more difficult to arrange; it also increases the need for additional support services so as to enable older persons to remain in their own home. Developing countries may have difficulty providing such services.

In developing countries, the large majority of older persons live with their adult children. This is the case for about three quarters of those aged 60 years or over in Asia and Africa and for two thirds of those aged 60 years or over in Latin America. The proportion of older persons living alone is still relatively low, at less than 10 per cent, but it is increasing in most (though not all) developing countries.

Figure O.3.
Proportion of population aged 60 years or over living alone, by region and sex, 2005



Source: UN/DESA.

The implications of these changes in family composition and living arrangements for support and care for older persons depend on the context. In countries where older people have limited access to formal mechanisms of social protection, they will need to rely on the family and the local community. However, these informal protection mechanisms have been under increasing stress recently, owing not only to such factors as the indicated demographic trends and growing participation of women in the labour force, but also to shifts in perceptions about caring for parents and older persons in general.

Changes in the living arrangements of older people have important policy implications in both developing and developed countries. Developed countries need to expand the supply of formal long-term care for older persons, including institutional living, as well as to develop alternative services to allow older persons to age in their home if they so desire (see also below). Developing countries confront even bigger challenges as they still need to provide basic infrastructure (water, sanitation, etc.) and social services to older people in addition to providing increased formal long-term care and developing new forms of informal care.

Participation and empowerment of older persons

As older persons continue to constitute an ever-greater proportion of the total population, they have the potential to be more influential in society. Empowerment and political participation of older people vary greatly across countries: There are countries where older people carry great social and political weight, mostly associated with the important concentration of economic resources and a tradition of political participation; in many other countries, however, older people are not organized and experience great difficulty in voicing their concerns and incorporating them in the public debate and the policy agenda.

International and national non-governmental organizations have been actively promoting the organization of older persons as a mechanism through which to influence the design and implementation of policies that affect them. As literacy and continuing education, including information about human rights, constitute important elements of empowerment, efforts to organize older persons should be coupled with larger programmes encompassing these elements.

Fighting neglect and abuse

Although abusive behaviour is difficult to measure, existing reports of neglect and abuse of older persons should be reasons for concern. Elder abuse has been signalled within the family, in community contexts, and in centres for institutional care for older persons, in developed and developing countries alike. Risk factors often relate to a lack of resources for care, poor training and education of caregivers, job-related stress in institutional care facilities, existence of negative stereotypes of older persons in society, and conditions of poverty in general.

Guaranteeing and protecting their human rights as defined by the Universal Declaration of Human Rights (General Assembly resolution 217 A (III)) is an important means of reducing the risk of abuse of older persons and of empowering them. Complementary legislation may be needed in some countries to improve the legal framework in order to protect the rights of older persons, prevent abuse and neglect, and bolster their opportunities for participating in all aspects of social life. A better legal framework will not suffice, however. In addition, societies will need to find adequate mechanisms through which to prevent age discrimination in labour markets, ensure intergenerational solidarity through adequate old-age income security systems, and mobilize the resources needed to provide adequate health and long-term care.

Policy responses to cases of neglect and abuse should ensure that persons in such situations have a window of access to reliable information and effective mechanisms for denouncing such cases. In addition, Governments should pursue the development of national training and education initiatives to promote positive images of older people and to build adequate skills among the individuals who are taking care of older persons.

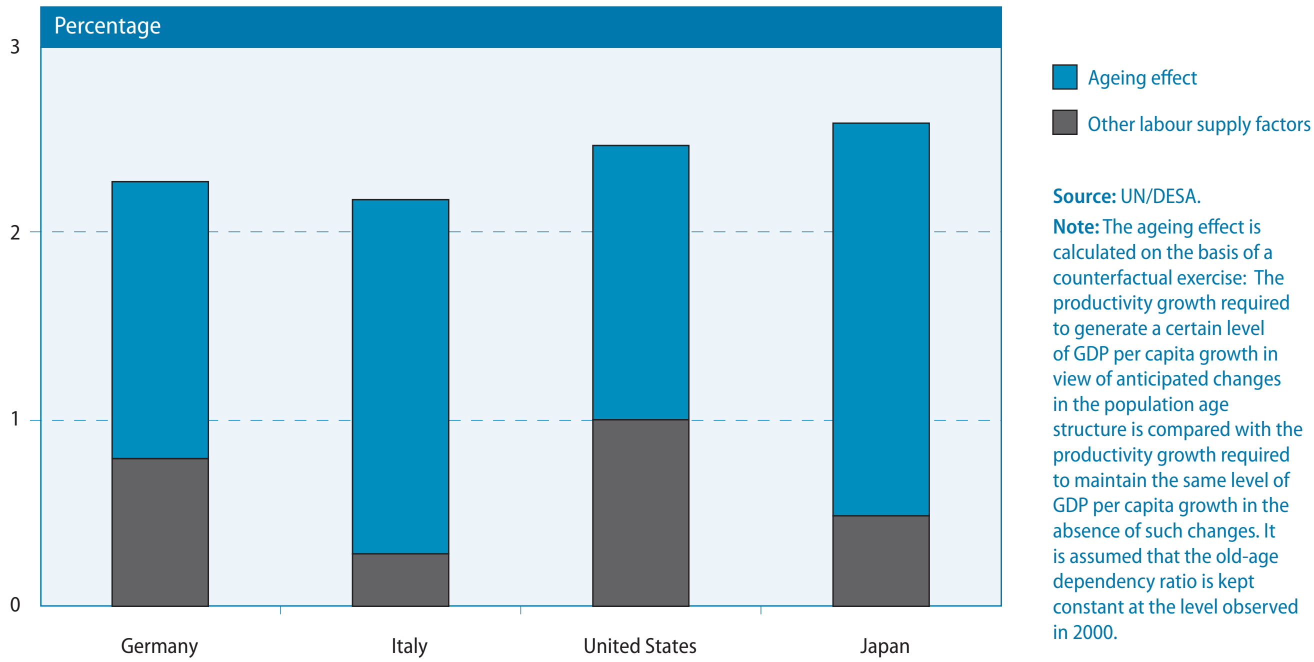
Ageing, labour supply and productivity growth

With population ageing, the share of the population of working age will shrink and the labour force itself grows older. This holds especially for the countries, mostly developed, with low fertility rates. In contrast, countries with relatively high fertility levels (primarily low-income economies) will continue to experience strong labour-force growth until 2050, which may open a window of opportunity for accelerated economic growth.

Growth implications of advanced population ageing

Population ageing could become a drag on economic growth unless the decline in labour-force growth can be arrested or greater efforts are made to increase labour productivity. In most contexts, increases in labour productivity would be required to complement measures that contributed to stemming the fall in labour supply. For instance, all other things being equal, to offset the negative impact of a smaller labour force, Japan would have to ensure a labour productivity growth of 2.6 per cent per year in order to sustain a per capita income growth of 2 per cent annually during the next 50 years. More than 80 per cent of the required labour productivity growth would be needed to overcome the growth impact of population ageing (see figure O.4). The same holds, though to a lesser degree, for other countries with ageing populations like Italy and Germany, and also for the United States of America. However, the required productivity growth in all these cases seems within reach by historical standards.

Figure O.4.
Impact of population ageing on required annual average rate of labour-productivity growth, Germany, Italy, United States of America and Japan, 2000-2050



Source: UN/DESA.
Note: The ageing effect is calculated on the basis of a counterfactual exercise: The productivity growth required to generate a certain level of GDP per capita growth in view of anticipated changes in the population age structure is compared with the productivity growth required to maintain the same level of GDP per capita growth in the absence of such changes. It is assumed that the old-age dependency ratio is kept constant at the level observed in 2000.

The *Survey* concludes that measures stimulating productivity growth may have to carry the most weight in terms of attempting to overcome the possible negative consequences of population ageing on economic growth. Other measures directly influencing labour supply have been proposed, however, some of which appear to be more effective than others.

International migration is often mentioned as a possible tool with which to ensure an adequate supply of workers in developed countries but it is not expected that any country would admit the massive numbers of migrants needed to stop population ageing. For instance, to offset the increase in the old-age dependency ratio, the European Union would require a steady net inflow of 13 million immigrants per year in the next 50 years, while Japan and the United States would each have to absorb 10 million migrants per year. All these cases would entail a manyfold increase in present levels of immigration.

The outsourcing of employment to offshore locations is another possibility, but it would fail to address the challenge of mounting old-age dependency ratios. While off-shoring does alleviate labour shortages by shifting production to workers abroad, it will not reduce pressures on old-age pension systems because employment, and therefore the contributory base of such systems, would not expand.

The analysis of the *Survey* suggests that the greatest potential for counteracting the projected changes in labour-force growth lies in raising the participation rates of women and older workers. Indeed, many countries still possess considerable scope for enacting measures aiming at increasing the participation rate of older workers—typically those aged 55-64—by bringing the effective retirement age more closely in line with the statutory retirement age.

There are also a range of options with respect to removing disincentives to prolonged employment, such as altering workplace practices to better accommodate the needs of workers as they age; improving working conditions to sustain working capacity over the life course; countering age-based discrimination; and promoting positive images of older workers. Older workers will also be in a better position to extend their working lives if they are given the opportunity to engage in lifelong learning and on-the-job training initiatives.

Such measures are expected to increase economic growth in ageing countries, though the impact may not be very large. The *Survey* analysis indicates that in the case of Germany, for instance, output per capita would increase from 1.7 to 1.8 per cent per year between 2000 and 2050 if the participation rates of those aged 55-64 increased to the same level as those in the working ages from 15 to 54. The effects would be similar in other countries with advanced population ageing.

More generally however, worries that ageing populations and workforces will lead to acute declines in economic growth appear largely unfounded. According to United Nations projections, if productivity improvements continue as expected into the near future, it would seem that employment-related challenges posed by population ageing are surmountable.

A demographic window of opportunity?

Countries with growing and still relatively young labour forces may be able to accelerate growth. However, in order to reap this demographic dividend their Governments will need to deal with a different set of issues. Rather than be concerned about impending labour shortages, they should remain focused on creating decent employment opportunities, especially for the growing numbers of young people expected to enter the workforce. Boosting employment rates in the formal economy will help to raise tax revenues and set the stage for expanding social protection schemes where they are currently underdeveloped, thereby enabling older workers to retire with financial security.

Productivity growth is also important, of course, in developing economies with a labour surplus and large informal labour markets, as it will not only support an expanding older population, but also raise overall living standards and reduce poverty.

Ageing, consumption and growth

By many accounts, population ageing is expected to have implications for patterns of consumption, investment and savings. Understanding whether population ageing will affect these aggregates, and if so how, is crucial to anticipating how economic growth and development may unfold in the future. Although there are some clear notions about this relationship in economic theory, in reality it is rather difficult to predict how ageing will influence future consumption and growth patterns.

Changing consumption patterns

A popular notion in economic theory is that consumption and savings patterns change during people's lifetimes. One notion is that needs and tastes change over the life cycle. It has indeed been established that older people tend to spend a higher share of their incomes on housing and social services compared with younger population cohorts. Based on current consumption trends among those aged 65 years or over residing in developed countries, it is possible to anticipate that the demand for health and long-term care expenditures will likely rise, whereas housing and energy expenditures will increase as a result of more time spent at home by the retired population. Conversely, expenditures on entertainment and transportation may decline, while the share of consumption of basic goods such as food and clothing will remain relatively constant. Population ageing could thus lead to substantial changes in the composition of the demand for goods and services.

A closer look at existing trends, however, suggests that the changes in consumption patterns owing to population ageing vary across countries, and that these changes occur slowly over time. Furthermore, levels of consumption are more closely related to income than to the demographic structure. This complex reality makes it difficult to predict future trends in consumption, as the degree of income growth for older persons in the coming decades is difficult to predict.

Savings and ageing

A second theoretical notion is illustrated by the life-cycle model of savings, which posits that, during their working years, individuals produce more than they can consume, thus generating a surplus that can be used to provide for their dependent children and/or saved to secure an income after retirement. In this view, economies with high levels of child dependency are expected to have relatively low national saving rates. In contrast, economies with large shares of working-age population can potentially grow faster both because this demographic structure generates a larger aggregate life-cycle surplus and because savings rates are expected to be higher as individuals save in anticipation of their retirement. Also, if individuals perceive that their life expectancy is increasing, they may be inclined to increase savings during their working years in order to finance a longer retirement.

Again, although ageing may exert an influence, many other factors play a role in determining savings behaviour and the level of savings in the economy. These factors include the level and distribution of income in the economy, the value of assets that people hold and their distribution, perceptions about the future, tax rates, existing pensions systems, and the provisions for care of older persons in the case of chronic illness. Moreover, the life-cycle hypothesis applies to household or personal savings which will be affected by the design of pension systems, but such effects may be small relative to the impact that pension schemes may have on the savings patterns of Governments and enterprises.

What is clear, though, is that an increasing share of household savings flows into pension funds and other financial investment plans for retirement. Institutional investors, which typically manage such savings, have already become the main players in financial markets. These investors manage not only large amounts of household savings from developed countries, but also, increasingly, savings from developing countries where the importance of privately managed capitalized pension systems has grown (see below). Institutional investors can play an important role in deepening financial markets and providing additional liquidity for long-term investment projects. At the same time, however, institutional investors largely operate outside of financial market regulation and supervision mechanisms that apply more generally to the banking system. If unchecked, the financial market operations of pension funds could thus be a source of financial instability. Also, as increasing financial investments are intermediated outside of the banking system, the control of monetary authorities over credit growth tends to weaken the effectiveness of monetary policies. Improved (possibly international) regulatory measures are needed to avert possible destabilizing effects on financial markets of the operations of large pension funds and to prevent the income security of older persons from being jeopardized.

Ensuring old-age income security

Living standards often decline for people at older ages. Reduced economic opportunities and deteriorating health status frequently increase vulnerability to poverty as people age. Such conditions vary greatly, however, across contexts and groups of older persons. Livelihood strategies tend to differ accordingly. In developed economies, pensions are the main source of livelihood and protection in old age, while in developing countries few older persons have access to pensions and must therefore rely on other sources of income. In fact, 80 per cent of the world's population are not sufficiently protected in old age against health, disability and income risks. This would mean that in developing countries alone about 342 million older persons currently lack adequate income security. That number would rise to 1.2 billion by 2050, if the coverage of current mechanisms designed to provide old-age income security is not expanded. The demographic transition poses an enormous challenge with respect to ensuring the availability and sustainability of pensions and other systems providing economic security for an ever-increasing number of older persons in both developed and developing countries. The *Survey* concludes that the right approach would render this challenge far from insurmountable.

Poverty and old age

Empirical evidence suggests that older persons living in countries with comprehensive formal pension systems and public transfer schemes are less likely to fall into poverty than younger cohorts in the same population. In countries with limited coverage of pension systems, old-age poverty tends to parallel the national average.

Of course, the probability of being poor at older ages does not depend only on the coverage of pension schemes. Generally, the degree of poverty among older persons varies with educational attainment, gender and living arrangements. Better education lowers the likelihood of falling into poverty in old age. Older women find themselves in poverty more often than do older men.

In the absence of formal pension coverage, the majority of persons in developing countries face considerable income insecurity during old age. For the unprotected—often small farmers, rural labourers and informal sector workers—the notion of retirement does not exist. Not having held formal jobs, they do not qualify for a pension; and if they have been unable to accumulate enough assets, they must continue to rely on their own work. The situation can be rather precarious for the very old (those aged 80 years or over) who may not be as fit to work as their younger counterparts. Those, in particular, who were already poor during their prime working years are likely to remain poor in old age. Those who are above the poverty line but unable to build up precautionary savings to finance consumption in old age also face the risk of poverty as they grow old.

Often, older persons may count on the support of the family and the community to survive or to complement their income needs. In this regard, older persons who are single, widowed or childless (particularly women) face an even higher risk of destitution. Reliance on family networks may not fully protect older persons against poverty, as these networks are themselves income-constrained. The challenges of providing adequate old-age income security naturally are much larger in circumstances of widespread poverty.

Providing better income security through broad and multi-layered approaches

Privately or publicly administered pension systems are the main policy instruments used to address poverty and vulnerability in old age. Ideally, they should ensure income security during old age for all and they need to provide benefits that place recipients above the socially acceptable minimum living standards.

However, pension coverage is limited in most developing countries. In developed countries, well-regulated labour markets have made it possible for employment-based contributory pension schemes to cover almost the entire population. Those not entitled to contributory pensions are normally supported through non-contributory old-age support schemes.

Yet, the sustainability of existing pension systems is being questioned in developing and developed countries alike. Increased longevity, faulty programme design, mismanagement, insufficient economic growth and inadequate employment-generation have undermined the financial viability of these systems in some contexts. Increasing old-age dependency rates will place further pressure on both formal and informal support systems, if economic growth (and the generation of decent jobs) cannot be accelerated and sustained.

Issues of accessibility, affordability and sustainability are at the core of old-age pension system design and reform. Ultimately, the design of old-age income security systems is country-specific and needs to reflect societal choices and preferences. A multilayered approach to developing pension systems, building on existing practice in many countries, seems desirable as regards achieving affordable, financially viable and equitable systems of old-age income security.

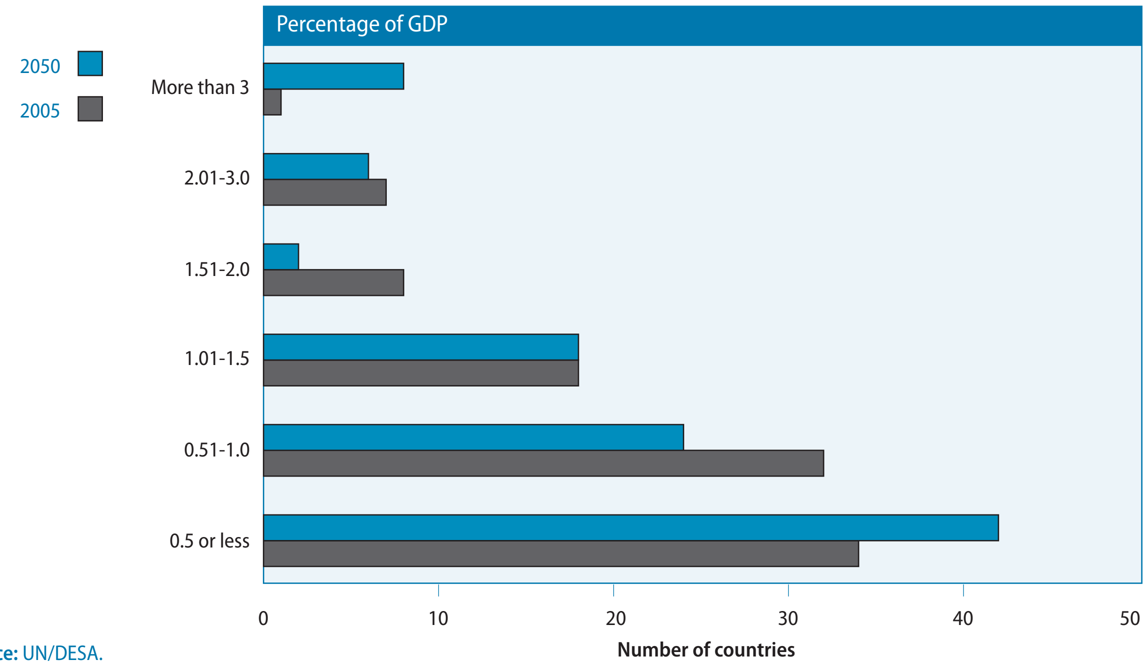
Ensuring universal access to old-age pensions

As a matter of overarching principle, all pension systems should aim at providing, minimally, some form of basic income security to all persons in old age. This objective could be achieved by creating, or expanding where it already exists, a basic pillar providing a minimum pension benefit. Such a universal social insurance mechanism could be contribution-based or non-contribution-based, depending on the context. In countries where formal employment is dominant, a single basic pillar may be sufficient to provide income security in old age, and its financing could be based on earnings-related contributions, as is the case in most developed countries. In countries with a dominant informal sector or with both informal and formal labour-market segments, the basic social pension scheme could have two components: an essentially non-contributory scheme offering minimum benefits financed from taxation and, where feasible, with some solidarity contributions made by those who can afford to contribute; and an entirely contributory scheme.

In most contexts, basic non-contributory pension schemes seem affordable, even in low-income countries. A simple numerical exercise under reasonable assumptions suggests that abolishing extreme poverty in old age by providing a basic universal pension equivalent to $1 per day to all over age 60 would cost less than 1 per cent of gross domestic product (GDP) per annum in 66 out of 100 developing countries (see figure O.5). The costs of a basic pension scheme for such countries, despite rapidly ageing populations, are projected to be relatively modest by 2050.

However, the affordability of such pension schemes depends as much on the political priority given to ensuring a minimum income security in old age, as on the pace of economic growth. Moreover, particularly in low-income countries, there may be competing demands on

Figure O.5.
Simulated costs for developing countries of universal social pensions designed to keep older persons out of extreme poverty, 2005 and 2050



Source: UN/DESA.

scarce government resources: For example, in Cameroon, Guatemala, India, Nepal and Pakistan, the cost of a universal basic pension scheme as outlined above represents as much as 10 per cent of total tax revenue. In Bangladesh, Burundi, Côte d'Ivoire and Myanmar, it is equivalent to the public-health budget. How to finance a basic pension scheme may therefore need to be determined in close coordination with the resource allocation process (including the use of development assistance) for other social programmes.

Sustaining pensions systems

Much of the debate on pension systems concentrates on the financial sustainability of alternative schemes, in particular upon the two types of financing mechanisms. One is a "pay-as-you-go" (PAYG) scheme, where contributions paid by the current generation of workers are disbursed as benefits to retirees. The other is a fully funded scheme under which benefits are financed by the principal and return on previously invested contributions. In the pension reform debates, the sustainability of pay-as-you-go schemes has been often questioned, as higher old-age dependency rates imply that fewer workers pay in relative to the number of beneficiaries.

Reforms of contributory pension systems have taken two directions: strengthening existing systems by changing underlying parameters (*parametric* reforms) and radically changing system design (*structural* reforms).

Parametric reforms have been implemented in virtually every pay-as-you-go scheme and are much more widespread than structural reforms. Countries have introduced measures on both the revenue and the expenditure sides to ensure the affordability and sustainability of such schemes. In particular, measures are increasingly being adopted to raise the effective retirement age. In the United States, it is to increase to 67 by 2027 and in France, the number of contribution years is to increase in line with increases in life expectancy from 2009. In addition, countries are considering removing the fiscal incentives for early retirement that are embedded in their pension systems. These measures aim at addressing the problem presented by longer years of retirement resulting from both increased longevity and a shorter working life. In most countries, delaying retirement and staying longer in the workforce can go a long way towards keeping pay-as-you-go systems viable.

Other countries have focused on structural reform of their pension schemes. In the 1980s and 1990s, several countries introduced structural reforms in their systems offering a basic pension and moved from pay-as-you-go scheme with defined benefits to a fully funded defined-contribution system. The United Kingdom of Great Britain and Northern Ireland, for instance, did so partially in 1980. Chile took a more radical approach by replacing its publicly administered pay-as-you-go system with defined benefits with a mandatory privately managed fully funded scheme, and several Latin American countries have followed suit. Under a fully funded scheme, the payout at old age depends on the amount of the contributions made and the returns on the investment of those contributions. Because of the capitalization of pension contributions, it was believed that the system would stimulate national savings and, through this, overall economic growth.

Although fully funded schemes have been presented as being more viable and may have led to deeper financial markets, there is no evidence that their introduction has indeed led to higher savings and growth. While fully-funded systems with individual capitalization can be financially sustainable in principle, the transformation of a pay-as-you-go system into a fully-funded system has negative implications for public finances as the pension obligations contracted under the old system still have to be honoured, while pension contributions are being channelled to the new system. Although the large share of Treasury bonds in the portfolio of pension funds largely provides the financing for these fiscal costs, the effect is not neutral in macroeconomic terms, as the rising public sector debt may affect interest rates, increasing in turn the fiscal costs of the transition as well as having implications for private investment. Moreover, under a fully funded scheme introduced as a single-pillar pension system, economic risks are shifted entirely to the pensioners; and, inasmuch as it depends on the rates of return on pension investments, full income security during old age is not guaranteed. Equally important, these schemes are not immune to the pressures exerted by a rising share of the non-working population.

In fact, many reforms have overlooked the fact that regardless of the type of financing mechanism, all schemes face a similar sustainability problem. Any pension-related "asset" acquired by today's working population—either a financial asset, in the case of a fully funded system, or a promise by the public sector through a pay-as-you-go scheme—constitutes a claim on future output. Hence, under both types of scheme a redistribution of income between the retired and the active populations has to take place. With increasing old-age dependency ratios, this implies that in order to provide the same amount of old-age income security, either greater pension contributions will have to be drawn from the working population or output growth will have to increase.

Overall, however, demographic dynamics do not pose an insoluble problem for old-age pension schemes. Pension systems should be tailored to specific country contexts, but built up or reformed based on broad principles, of which financial sustainability is but one. Intergenerational solidarity and adequacy of benefits with respect to providing sufficient income security for all should be other guiding principles. In fact, more recently, pension reform processes have been moving away from a narrow focus on fully funded schemes as the centrepiece of national income-security systems. Recent reforms recognize the need to have a multilayered approach, which has as its basis a social pension scheme to ensure universal coverage and to directly address problems of poverty in old age.

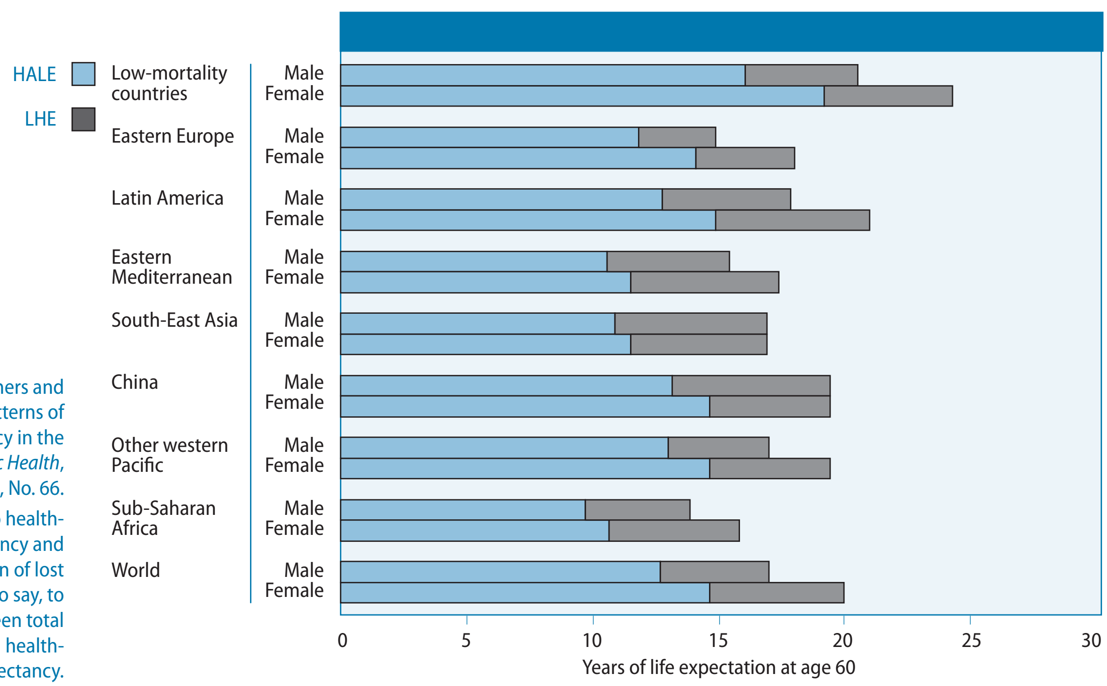
Advancing health and long-term care into old age

Ageing and the epidemiological transition

Population ageing is accompanied by an epidemiological transition, that is to say, a shift from the predominance of infectious diseases and high maternal and child mortality to that of non-communicable diseases, especially chronic ones. Demographic changes and the epidemiological transition are closely related. As fertility and the prevalence of infectious causes of death decline, the average age of the population increases. At the same time, the lifespan of those who have survived childhood illnesses continues to expand over time. Eventually, there will be more older persons in the population who are more susceptible to chronic diseases than younger ones. With the increase in the number of older persons, the prevalence of non-communicable diseases likely increases as well. Hence, ageing accelerates the epidemiological transition.

Both transitions are well advanced in developed countries and are now also under way in developing countries. Increased longevity is a result of improved nutrition, sanitation and hygiene, knowledge of health conditions, and the rapid spread of medical knowledge and its application in health-care practices. In the developed countries, increased longevity has been accompanied by a "compression of morbidity", that is to say, although people live longer, they do not spend more years in poor health. In the developing countries, the demographic and epidemiological transitions are taking place at a much faster pace than was the case in the developed countries, and at comparatively lower levels of income and with much less extensive social welfare provisions in place. This explains why a compression of morbidity has not been observed in those countries as yet. In consequence, people in developing countries, who have shorter life expectancy than those in developed ones, are more likely to spend a greater fraction of their life in poor health (see figure O.6).

Figure O.6.
Life expectancy at age 60: years in good and in poor health, by region and sex, 2002



Source: C.D. Mathers and others, "Global patterns of healthy life expectancy in the year 2002", *BMC Public Health*, vol. 4, No. 66.

Note: HALE refers to health-adjusted life expectancy and LHE to the expectation of lost healthy years, that is to say, to the difference between total life expectancy and health-adjusted life expectancy.

Ageing is in most cases not the major factor that is driving up health costs

Population ageing poses challenges to national health-care systems. For developed countries, there are concerns about rising health costs and maintaining adequate levels and quality of health and long-term care for an ageing population. The challenge for many developing countries is larger, as they may face a double health-cost burden. On the one hand, those countries still have to resolve many basic health issues affecting important parts of their populations, including lack of access to safe drinking water and sanitation, malnutrition, limited access to reproductive health education and health services and lack of coverage by immunization programmes. On the other hand, rapid population ageing and the related increase in the demand for health-care services put additional pressure on available health resources.

The challenge of adapting existing health and long-term care systems to ongoing demographic and epidemiological changes is large, but certainly not insurmountable. The analysis in the present report shows that population ageing contributes to rising health-care costs, but that in most contexts it does not appear to be the most important "cost-driver".

Health costs are difficult to project over long periods of time. One common approach (the actuarial method) measures the impact of demographic change on the basis of existing trends in health costs. In contrast, the epidemiological method also accounts for expected changes in disease patterns. It is applied less frequently because of data limitations. Despite the differences in approach, both methods conclude that in most cases ageing by itself does not appear to be the main driver of increased health costs: The demographic impact on health spending over the next 50 years or so would account for no more than a few percentage points of GDP.

This having been said, the same studies invariably show that health-care expenditures are likely to continue increasing as a share of GDP. Other factors turn out to be more important in driving up the cost of health care, such as changes in health-seeking behaviour by individuals, rising wage costs of medical personnel, inefficiencies in the delivery of health services, introduction of new medical technologies, and increases in the price of pharmaceuticals and health insurance policies.

Challenges to health and long-term care systems

Population ageing is most likely to affect health-care systems in two other ways. First, the increase in the total number of cases of chronic illness and the larger number of persons with disabilities will require new skills from health-care professionals and workers. This poses an enormous challenge for developing countries with rapidly ageing populations. At present, per capita health expenditures on older persons tend to be relatively low in developing countries (certainly compared with developed countries) and typically not very different from average spending on other age groups of their societies (which is not the case in developed countries). This state of affairs partly reflects the shortage of nursing, palliative care and more intensive medical treatments which are typically widely available for older persons in developed countries.

Second, there arises the concern over how to provide long-term care for those whose health conditions are irreversible. The challenge is to find solutions that preserve the dignity and independence of those who need care by allowing them to stay in a familiar environment. The traditional family structure and the role of women—usually the main providers of informal care to older persons—are changing and the number of children per family is declining in most parts of the world. It will thus become increasingly difficult for many developing countries to maintain the current forms of informal long-term care arrangements.

Adapting health policies

Population ageing will definitely influence health-care expenditures, but need not consume unsustainably large shares of national income in the future. The composition of health-care spending may need to undergo substantial changes with increasing importance being given to medical and long-term care services. In addition, however, policymakers in developed and developing countries alike should consider focused interventions in preventive health care and education, such as discouraging smoking and excessive alcohol intake and encouraging physical exercise to reduce obesity. These measures could help to reduce the risks of developing chronic illnesses such as cancer, diabetes and cardiovascular diseases later in life. Another priority should be rehabilitative treatment of chronic illness. The rising health-care costs associated with population ageing can be contained by such interventions, as they help to delay the progression towards disease and disability.

Adequacy of health-care personnel

One of the pressing issues in developing and developed countries alike is that of the availability of qualified medical personnel. In developing countries, especially low-income ones, shortages of qualified health workers are already noticeable and will worsen as the double disease burden becomes more pressing; these countries will also require more professional health workers for chronic diseases. In developed countries as well, there is a growing demand for specialized personnel in hospitals and long-term care facilities associated with a growing older population.

This has already led to a substantial brain drain of skilled medical staff from the developing countries. For example, many nurses trained in the Caribbean have left that region for Canada, the United States and the United Kingdom and, as a result, an average vacancy rate of 42.4 per cent has been observed in eight of the Caribbean countries for which data are available. Addressing the needs of countries with a double health burden will require policies designed to increase the resources available for the training of medical personnel and incentives devised to attract more workers to professions in health and long-term care, in line with the demands created by population ageing.

Increased need for home-based long-term care

In developed countries, long-term care needs mainly result from population ageing. Greater emphasis is now being put on home-based care service as part of a *continuum* of different types and levels of care, as called for by the Madrid International Plan of Action on Ageing. Home-based health care is being encouraged through the provision of several financial incentives and various health-care and welfare services.

In developing countries, in contrast, population ageing is but one of the factors creating increased needs for long-term care. The declining importance of the extended family in many developing countries is making it more and more difficult for this form of informal care to be relied upon exclusively. The speed of this change varies from country to country, but many Governments will need to consider policies facilitating the creation of more formal long-term care arrangements as an extension of the existing family- or community-based care for older persons.

Moving Forward

The *Survey* discusses the challenges posed by rapid population ageing and by changes in living arrangements with respect to promoting economic growth, ensuring income security for all at older ages, and advancing health and well-being into old age. The *Survey* emphasizes that these challenges are large but that they can be overcome through well-focused policies and without excessive strain on available resources. A basic principle for such policies is the full recognition of the potential contributions to society that older persons can make.

Although the Madrid International Plan of Action on Ageing provides a framework for incorporating the discussion of population ageing into the international debate on development and the implementation of national policies to promote the development of societies for all ages, it is still necessary for Governments and the international community to redouble efforts to mainstream ageing into the international development agenda.

In countries lacking basic pension systems, poverty among older persons tends to be higher than among other age groups and hence policies aiming at improving old-age income security should feature poverty reduction strategies. Employment policies should pay more attention to improving the working conditions and job opportunities of older workers, so as not only to improve opportunities for the full participation of older persons in society but also to foster the sustainability of pension systems. Health policies will have to address more explicitly the double burden many developing countries are shouldering: these countries are still facing the challenge of reaching the Millennium Development Goals of reducing maternal and child mortality while at the same time readjusting their health-care systems to meet the needs of a growing older population.

Abuse of older persons and age-based discrimination are problems experienced in many countries. Action is required to redress these negative trends and promote the empowerment of older persons which is essential to ensuring their full participation in society as affirmed by the Madrid Plan of Action.

Mainstreaming ageing into the global development agenda is crucial to the realization of the objectives identified in the Madrid Plan of Action. Creating, as envisaged, "a society for all ages" requires not only a strong global partnership to advance the commitments endorsed in that agenda, but also a stronger national partnership among all levels of government, civil society, the private sector and organizations for older persons aimed at translating the Plan of Action into practical action.