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Chapter 7

Demographic dynamics and the international development strategy beyond 2015

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7.1 INTRODUCTION

The repercussions of demographic dynamics for development are considerable. Whereas countries find themselves at different stages of their demographic transition, the world population as a whole is ageing and becoming increasingly urban. Demographic trends cannot be easily reversed as they have built-in momentum, but they can be largely anticipated. The topic is obviously complex and vast, and cannot possibly be covered by a single chapter. Thus, this chapter will discuss some of the major impacts of demographic change on economic growth through its implications for labour supply, consumption, saving and investment patterns. But while demographic dynamics affect growth, economic growth has implications for the support of dependent populations as well. Economic growth is needed to support an appropriate distribution of consumption between active and inactive populations in order to avoid a high incidence of poverty among the inactive population. The question of support of dependent populations is relevant to the fulfillment of both the current and future international development agenda and related goals. Both the old and the very young represent a considerable share of the poor, even though not all of those in their working years are productively engaged and rewarded accordingly.

The chapter is organized as follows. Section two provides a brief overview of anticipated demographic trends for the period 2010-2050. The subsequent sections analyze the implications of demographic changes for economic growth. Challenges confronting countries with growing populations and labour force are addressed in section three, while those of countries with declining working populations are taken in section four. Issues of distribution and the provision of support for dependent populations are taken in section five and section six concludes.

7.2 DEMOGRAPHIC TRENDS

The global population reached the 7 billion mark in 2011, and is projected to grow to about 9.3 billion by 2050. Overall, fertility will continue to decline, from about 2.5 children per woman presently to 2.17 children per woman, closely approaching the “replacement level” of fertility (2.1 children per woman) in 2050. The increase in world population is taking place in developing countries (see table 7.1), particularly in low-income and some middle-income countries. In sharp contrast, in many developed countries but also in some developing countries population numbers are stable or in some cases even declining. The development implications, especially in a horizon to 2050, are consequently diverse.

The size of world population is also influenced by trends in longevity. Worldwide, life expectancy at birth is expected to continue to rise, from about 68 years presently to nearly 76 years by 2050. However, many developing countries continue to have very high rates of morbidity and mortality, especially among children. With persistent communicable diseases and a growing burden of non-communicable diseases and injuries, most developing countries are facing a double burden of disease which is hindering development efforts.

Changes in demographic dynamics have led to a major transformation of the age structure of the world population. The world is getting older. Worldwide, the share of children (ages 0 to 14) is expected to decline from 26.8 per cent in 2010 to 20.5 per cent in 2050. However, many developing countries still have young populations, owing to their relatively high fertility. Meanwhile, the share of persons aged 65 and above will jump from 7.6 per cent to 16.2 per cent from 2010 to 2050, respectively (see table 7.1). While population ageing is more advanced in the developed economies, most of the increase in older populations will take place in developing

Table 7.1
Population by broad age group, 1970 -2050

Age group	Population (thousands)				Percentages			
	1970	2010	2025	2050	1970	2010	2025	2050
World								
0-14	1 384 365	1 846 675	1 914 241	1 907 753	37.5	26.8	23.9	20.5
15-64	2 114 175	4 524 850	5 248 599	5 887 808	57.2	65.6	65.6	63.3
65+	197 646	524 364	840 138	1 510 567	5.3	7.6	10.5	16.2
total	3 696 186	6 895 889	8 002 978	9 306 128	100.0	100.0	100.0	100.0
Developed countries								
0-14	261 713	203 946	213 449	218 179	26.0	16.5	16.6	16.6
15-64	645 084	834 910	806 671	756 340	64.1	67.6	62.7	57.7
65+	99 625	197 044	266 619	337 213	9.9	15.9	20.7	25.7
total	1 006 421	1 235 900	1 286 739	1 311 731	100.0	100.0	100.0	100.0
Developing countries								
0-14	1 122 653	1 642 729	1 700 792	1 689 574	41.7	29.0	25.3	21.1
15-64	1 469 092	3 689 940	4 441 928	5 131 468	54.6	65.2	66.1	64.2
65+	98 021	327 321	573 519	1 173 355	3.6	5.8	8.5	14.7
total	2 689 765	5 659 989	6 716 239	7 994 397	100.0	100.0	100.0	100.0
Least developed countries								
0-14	137 763	334 007	409 641	504 276	44.2	40.1	35.8	29.2
15-64	164 869	469 955	688 653	1 100 620	52.8	56.5	60.2	63.7
65+	9 398	28 368	46 051	121 572	3.0	3.4	4.0	7.0
total	312 030	832 330	1 144 344	1 726 468	100.0	100.0	100.0	100.0

Source: UN/DESA, World Population Prospects. The 2010 Revision.

countries. Already some 63 per cent of the world's older population lives in developing countries. The process of population ageing in these countries—in particular the middle-income countries—is taking place at a much faster rate and at lower levels of income when compared with past trends in developed countries. Developing countries are getting older before getting richer. Moreover, the old population is getting increasingly older. In 2010, there were some 72 million people aged 80 and above, or 17 per cent of the world population aged 65 and above. By 2050 their numbers will reach 402 million, or 27 per cent of the older population.

At the global level, the population of working age (ages 15 to 64) is expected to grow from the current 4.6 billion to 5.9 billion in 2050, but in relative terms, its share will decline from the current 65.6 per cent to 63.3 per cent. This age group encompasses the majority of workers and

the evolution of the working-age population (WAP) gives an indication of the dynamics underlying the future supply of labour and the potential for economic growth. The increase in the global labour force will take place in the developing countries, and it will be particularly high in the least developed countries (LDCs). In general, the population of working age is expected to decline for the developed countries as a whole during the period 2010-2050, particularly in Europe and Japan. Additionally, at the global level, the working age population itself has begun to age in recent years. By 2025, the number of older working-age people (aged 50-64) will outpace the young working-age population (aged 15 to 24) and reach 25 per cent of the WAP by 2050. Older persons in the WAP will gradually become more predominant in the labour force of the future, which may bring implications for productivity growth.

Diverging demographic dynamics and persisting economic inequalities imply that pressures for international migration will continue (see chapter 11). Since 1960s, the developed regions have been net gainers of emigrants from the developing regions. Annual net migratory flows to developed countries reached 3.4 million migrants during the period 2000-2010 but are anticipated to decline to 1.9 million per year by 2040-2050 (United Nations, 2011). Thus, while the projections presented here already take international migration into account, the feasibility of increasing migratory flows to offset anticipated demographic trends comes to the fore. However, as discussed below, international migration cannot provide a definitive solution to the challenges of shrinking and ageing populations and of unemployment in poor countries.

Demographic dynamics and dependency ratios: key challenges ahead

The age structure of the population is reflected in dependency ratios, defined as the ratio of the dependent populations (children aged 0 to 14 and older people, at 65 and above) to the working age population (ages 15 to 64). Trends in total dependency vary across countries, conditional on the changes in child dependency (reflecting different stages in the fertility transition) and on longevity.

The demographic transition starts with a reduction of mortality, in particular for children. Population growth accelerates and the proportion of children in the population increases, leading to an increase in total dependency ratio. Eventually, longer survival rates among children contribute to a reduction in fertility and to a slowdown in population growth.

Thus, the proportion of the working age group in the population increases, while the long-term increase of the old-age population has not yet started. During this period, dependency ratios decline and may provide a potential boost for income growth, a demographic dividend, if the larger labour force is productively employed. In time, sustained fertility declines, accompanied by increased longevity, lead not only to a lower proportion of children but also to a shrinking share of adults of working age in total population and to higher dependency rates—this time due to old age factors.

At the global level, dependency ratios are still falling, reflecting the decline in the child dependency ratio in developing countries. But the global total dependency ratio is projected to reach a plateau very soon, around 2025. It will then begin a gradual but persistent rise. The old age dependency ratio is expected to increase everywhere (see table 7.2). For the majority of the developed countries, such an increase will be accompanied by rising child dependency ratios as well. But trends are also somewhat different within these two main groups of countries.

Table 7.2
Dependency ratios, 1970-2050

	1970	2010	2025	2050
World				
Child dependency	65	41	36	32
Old Age dependency	9	12	16	26
Total dependency	75	52	52	58
Developed countries				
Child dependency	41	24	26	29
Old Age dependency	15	24	33	45
Total dependency	56	48	60	73
Developing countries				
Child dependency	76	45	38	33
Old Age dependency	7	9	13	23
Total dependency	83	53	51	56
Least developed countries				
Child dependency	84	71	59	46
Old Age dependency	6	6	7	11
Total dependency	89	77	66	57

Source: UN/DESA, World Population Prospects. The 2010 Revision.

Note: The ratios presented in this table are multiplied by 10. Based on medium variant projections after 2010.

Among developing countries, in one group of countries—largely in sub-Saharan Africa, Central America, South Asian and parts of Western Asia (see table 7.3)—the total dependency ratio will continue to drop during the period 2010-2050 as the decline in child dependency more than offsets the increase in old age dependency. The population of working age in this group of countries is increasing both in numbers and as a share of the total population. This situation can provide a significant boost for the growth of income per capita as resources previously employed in the support of dependent children can be released for investment and growth once enabling policies are in place. At the same time, these are low and lower-middle income countries, some of which are challenged by structural and financial constraints and confront low and/or stagnant productivity growth, severely under-developed human resources, youth unemployment and under employment and economic activities which are predominantly informal. They may not be able to benefit from the demographic dividend if policies are not adjusted accordingly, in line with what will be suggested in the sections below.

Other developing countries (mostly middle-income countries in South America, parts of Western Asia and North Africa) and also some developed countries (largely the Anglophone countries) will experience an increase in their overall dependency ratios due to the increased old-age dependency while their labour force is still growing (albeit at declining and slower rates). This group of countries will have to continue to expand productive employment opportunities and, at the same time to provide for their larger and increasing dependent, older population, by introducing or reforming existing formal support systems and reinforcing informal support mechanisms. However, a growing labour force—*ceteris paribus*—should facilitate this adjustment process.

Finally, most developed countries but also a few developing countries will confront higher a dependency ratio with a shrinking labour force. For these countries, sustaining and increasing productivity levels by a graying and smaller labour force is a major challenge ahead. Nonetheless, the challenge is less pressing for developed than for developing countries. Given the level of resources at their disposal, developed economies are better placed to address the task at hand. In fact, what matters most is not the number of workers, but total output, which is determined by the number of workers and their productivity (Lee and Mason, 2011). Currently, societies with low fertility spend much more on health and education per child than countries with higher fertility, which means that the developed economies are also

Table 7.3
Trends in Dependency Ratio, 2010-250

A. Countries with a decline in dependency ratios (child effects)	
Afghanistan	Madagascar
Angola	Malaysia
Bangladesh	Malawi
Belize	Mali
Benin	Mauritania
Bhutan	Micronesia (Fed. States of)
Bolivia (Plurinational State of)	Mozambique
Botswana	Namibia
Burkina Faso	Nepal
Burundi	Nicaragua
Cambodia	Niger
Cameroon	Nigeria
Cape Verde	Occupied Palestinian Territory
Central African Republic	Pakistan
Chad	Papua New Guinea
Comoros	Paraguay
Congo	Peru
Côte d'Ivoire	Philippines
Democratic Republic of the Congo	Rwanda
Djibouti	Samoa
Dominican Republic	Sao Tome and Principe
Ecuador	Saudi Arabia
Egypt	Senegal
El Salvador	Sierra Leone
Equatorial Guinea	Solomon Islands
Eritrea	Somalia
Ethiopia	South Africa
French Guiana	Sudan
Gabon	Suriname
Gambia	Swaziland
Ghana	Syrian Arab Republic
Guatemala	Tajikistan
Guinea	Timor-Leste
Guinea-Bissau	Togo
Guyana	Tonga
Haiti	Turkmenistan

(cont'd)

Table 7.3 (cont'd)	
Honduras	Uganda
India	United Republic of Tanzania
Iraq	Uzbekistan
Jordan	Vanuatu
Kenya	Venezuela
Lao People's Democratic Republic	Yemen
Lesotho	Zambia
Liberia	Zimbabwe
B. Increase in dependency ratio (old age effects)	
B1. Countries with growing WAP	
<i>Developing countries</i>	
Algeria	Lebanon
Argentina	Libya
Azerbaijan	Macedonia
Brazil	Maldives
Brunei	Mexico
Chile	Mongolia
Colombia	Morocco
Costa Rica	Myanmar
Korea, PDR	Oman
Fiji	Panama
Georgia	Qatar
Grenada	St Lucia
Guadeloupe	St Vincent and the Granadines
Indonesia	Sri Lanka
Iran	Tunisia
Israel	Turkey
Kuwait	Uruguay
Kyrgyzstan	VietNam
<i>Developed countries</i>	
Australia	New Zealand
Canada	Norway
Iceland	Sweden
Ireland	United Kingdom
Luxembourg	United States
B.2 Countries with shrinking WAP	
<i>Developing countries</i>	
Armenia	Jamaica
Aruba	Korea, Rep

(cont'd)

Table 7.3 (cont'd)	
Barbados	Mauritius
China	Singapore
Cuba	Thailand
Hong Kong, SAR	Trinidad and Tobago
<i>Developed countries</i>	
Albania	Latvia
Austria	Lithuania
Belgium	Malta
Belarus	Poland
Croatia	Montenegro
Bosnia	Portugal
Bulgaria	Romania
Denmark	Russian Federation
Estonia	Serbia
France	Slovakia
Germany	Slovenia
Greece	Spain
Hungary	Switzerland
Italy	Ukraine
Japan	

Source: UN/DESA, World Population Prospects. The 2010 Revision

Note: Countries in italics are LDCs

those with the highest levels of human capital, and consequently are better equipped to sustain and expand productivity.

7.3 ADDRESSING THE CHALLENGES IN COUNTRIES WITH YOUNG AND GROWING POPULATIONS

Changes in the size and in age structure of the population present a challenge for output growth and its distribution between the economically active and the dependent populations. The WAP in the first group of developing countries mentioned above amounted to some 1.7 billion people in 2010. It will grow to 3.3 billion by 2050. Based on current trends, at least 70 per cent of them will participate in the labour market. This implies that some 1.1 billion new jobs will need to be created from now to 2050 just to accommodate the increase in the labour force. And if poverty is to be reduced, the nature of jobs created needs to change.

Currently, a large proportion of the labour force of these countries is engaged in the informal sector and in low-productivity agriculture. Nearly 75 per cent of those employed in South Asia and sub-Saharan Africa—two of the regions that comprise many of the countries in this group—were own account workers and contributing family workers, often earning low incomes and comprising a disproportionately large share of the working poor (less than \$1.25 per day). In fact, the share of the working poor in total employment was 43.5 per cent in South Asia and 58.5 per cent in Sub-Saharan Africa in 2009 (ILO, 2011). Thus, the quality of employment needs to be urgently improved, which requires continuous increase in levels of productivity. Relying on subsistence agriculture and the urban informal sector as the employers of last resort for an increasing labour force will simply not do for these countries.

Economic growth is a pre-requisite for employment generation, but growth per se does not guarantee that jobs are created rapidly enough to absorb the new entrants to the labour force and reduce existing level of unemployment and underemployment. Most of these countries experienced fast rates of growth in the first decade of the 2000s and yet the labour intensity of GDP growth was clearly not enough. The pattern of growth must be labour absorptive, which largely depends on productive specialization and on the quality of labour resources available in the economy (United Nations, 1997).

As further discussed in chapter 8, the neglect of agriculture—the largest employer in many poor countries—in the past decades has to be reversed. Moreover, with the ongoing feminization of agriculture, increased agricultural productivity also depends on removing specific constraints that women encounter as producers. Reducing the productivity gap between male and female farmers would significantly contribute to higher agricultural output (Agarwal, 2011).

A growing farm sector can increase the demand for the non-agricultural sector (often micro and small enterprises, which are important sources of employment in rural areas) and provide inputs to other sectors of the economy therefore reducing demand constraints and promoting dynamic linkages. But the challenges are great here as well. Although offering an important potential for job creation, these firms face large structural challenges, including lack of access to electricity, finance and transportation infrastructure, which require structural solutions (ADB/OECD/UNDP/UNECA, 2012). They usually cater to the low-income sectors, supplying goods and services produced using simple or outdated technologies; many

fail to forge productive linkages with the more dynamic sectors of the economy; most remain confined to one single entrepreneur, not an optimal size in many instances, and frequently have a very short life span (United Nations, 1997).

Strategies to increase productivity in agriculture and strengthen the rural non-agricultural sector need to include measures that enhance the quality of the human capital in a way that is consistent with the needs of these economies (see chapter 8). Three main challenges are noteworthy. First is the supply of basic education to a large, if not growing, number of children. As can be seen in table 7.1, there will be 504 million children (0 to 14) in the LDCs by 2050, compared to the current 334 million. Yet, increasing enrolment is not enough; the quality of the education needs to be urgently improved. Moreover, barriers to secondary education need to be removed as primary education does not equip the individual with the skills needed to tap the opportunities of the labour market, especially if agro-processing and manufacturing activities are to be pursued and eventually upgraded. Second, post-primary education, particularly of technical and vocational type, is often missing or insufficiently developed (CDP, 2011). In this regard, the particular needs of the rural economy and of the informal sector should not be neglected (ADB/OECD/UNDP/UNECA, 2012). Third, skills mismatches need to be avoided and the education system needs to be geared to produce graduates with the range and levels of skills the market needs. At the same time, poor countries experiencing rapid population growth are constrained in their capacity to expand public services that are fundamental for increased labour productivity and growth and therefore, improved welfare. The international cooperation has an important role to play in supporting these countries efforts while innovative forms of partnerships between the public and private sector need to be explored to remove these constraints.

While the increase in the older population cannot be avoided, some of the long-term pressures coming from population growth can. Young workers (15-24) anticipated to join labour markets in 2050 will only be born by 2025-2035. The already significant increase in children and young people projected for the next 40 years in the LDCs, for instance, assumes a drop in fertility from 4.41 children per woman in 2005-2010 to 2.76 in 2045-2050. Lower fertility rates are associated with greater human capital investment per capita, with positive implications for productivity growth and development. But extending primary and secondary education does not guarantee, by itself, a reduction of fertility. It needs to be complemented

by interventions in the area of family planning, reproductive health and by the promotion of the necessary adjustments in cultural and societal practices.

In a number of developing countries women marry very young, a significant proportion of them before age 15, including in countries where the minimum legal age at marriage with parental consent is 16 to 18 years (United Nations, 2012). Adolescent birth rates are high and increase with the percentage of women married at young age, with ensuing negative consequences for the completion of education and better integration of young women and men into the labour market. A substantial proportion of young women have expressed unmet need for family planning, particularly in the marginalized segments of the population. As a result, more than 6 million unwanted pregnancies take place in developing countries annually (United Nations, 2012). Access to family planning services for young men and women should be promoted, and reproductive health should be included in primary care and with universal access.

Increasing the legal age of marriage and better enforcement of existing laws may help but are not sufficient to counter early marriage in societies where it is seen as beneficial or an accepted and encouraged practice. Thus, there is also need for culturally sensitive programmes that promote marriage at later ages and discourage dowry practices.

Early marriage is also associated with low levels of education. The higher the level of illiteracy among women aged 15-24, the higher the propensity to marry young (United Nations, 2012). The propensity is also higher among those with no education and primary education in comparison with women with secondary education. In this regard, removing barriers of access to education by girls and increasing family incentives to send them to school are crucial.

7.4 COUNTRIES WITH SMALLER LABOUR FORCES: ENLARGING THE POOL OF WORKERS

The rate of growth of GDP per capita can be expressed in terms of the growth of employment (often proxied by the growth of the population of working age) plus the growth in labour productivity. Thus, a contracting population of working age (or one that grows at declining rates) would lead to lower output growth, if labour productivity cannot be raised sufficiently to offset that contraction (or decline).

A number of policy options can be explored. Enhanced labour force participation, migration, outsourcing, and, as suggested above, increased labour productivity are among the possible responses. Despite some recovery in a few developed countries (Belgium, Denmark, Italy, Spain and Sweden, among others), it is highly unlikely that fertility will recover to replacement levels in the near future.

Turning to migration, the impact of international migration on volume of workers and on fertility rate although positive in the short-term, it is unsustainable in the long-term. It has been estimated that to offset the projected decline of population in Europe, annual net migratory inflows (1.8 million) would need to be twice as high as what was observed in 1995-2000 for the next 40 years. Levels of migration would need to be even higher to offset the projected decline in working age population for Japan and several European countries. For Europe, the total number of immigrants needed for the period 1995-2050 would amount to 235 million people, four times the migration experienced in the last 50 years. If such flows were to occur, post-1995 immigrants and their descendants would come to represent (an implausibly) large share of the total population in 2050; between 30 and 39 per cent in the case of Japan, Germany and Italy (United Nations, 2000). It is far from clear whether social, political and cultural conditions in these countries can accommodate such a large influx of migrants. Naturally, migration will help to offset some of the pressure and will continue to respond to trends in both developing and developed countries. There is already a noticeable rise in the number of female migrants as new jobs are created in the “care economy” (Alonso 2012), while the need for increased participation of females in labour markets discussed below will contribute to add pressures to female migratory flows. But international migration even if it helps to ease the adjustment in the short term will not solve for the problem of shrinking labour force in these economies in the long term.

Increasing participation rates

Output is generated by those who are de facto working; participation rates matter. Thus, relatively low participation rates among certain groups offer a potential to be explored. Overall, participation rates are higher in developing than in developed countries. This is probably due to the higher participation rates at relatively younger ages (aged 15-24) in developing countries, particularly in low-income countries, as well as to the relatively lower participation rates among older workers (aged 55-64) in developed

countries owing to early retirement. Among those aged 65 and older, participation rates are, on average, twice as high in developing than in developed countries owing to the limited old-age pension coverage and lack of alternative earnings options. Male participation rates are higher than female across the regions. In some instances, the gender gap in participation rate can be quite substantial (see tables 7.4a and 7.4b). For a few countries, projected increases in participation rates among those aged 15 to 64 years will not be enough to ensure a growing labour force for the period 2010-2020. Increasing participation rates among women, older workers as well as among those aged 65 and above can partially offset declining labour force trends.

Female participation rates

The gender gap continues to be significant in the labour market. In the developed countries, it reaches a peak at around 24 percentage points for the 30-39 age group, which reflects the decline in female participation rates as they temporarily withdraw from the labour market probably owing to childbearing and child-rearing. As in United Nations (2007) a decomposition exercise was conducted to assess the possible implications of increased female participation on the size of the labour force and on the rate of growth of the developed economies. The exercise was based on the accounting identity discussed in the introduction to this section, with the growth rate of labour productivity assumed to be constant at 2 per cent per year over the period 2010-2050. Female participation rates were assumed to converge to male participation rates by 2020 and remain at that level for the remainder of the period. Results were compared with a baseline where female participation rates in the more advanced economies retained their anticipated trajectory, that is to say, they would increase from 65.9 per cent in 2010 to 67.5 per cent in 2020, and remain at that level after 2020. Results are presented on table 7.5 below.

The sharp rise in female participation rates (independently of its actual feasibility in such a relatively short period of time) would more than offset the anticipated decline in labour force during the period 2010-2020. Moreover, it would lead to an increase in the annual rate of growth of per capita GDP by 0.74 percentage points over the baseline. With no additional surges in the female participation rate during the subsequent period (2020-2050), the increased female labour force boosts the annual rate of growth of per capita GDP by 0.25 per cent over the baseline—a much smaller but not a negligible effect. It is also interesting to note that where the shock to the

Table 7.4a

Labour force participation rates at ages 15-64, 2000-2020

Percentage									
	Labour force participation rates of population at ages 15-64 (%)								
	Total			Male			Female		
Major area, region or country	2000	2010	2020	2000	2010	2020	2000	2010	2020
World (total)	70.3	69.9	69.8	83.6	82.6	82.7	56.7	56.8	56.6
Africa	67.7	68.8	70.0	81.5	81.6	81.8	54.1	56.2	58.2
Eastern Africa	83.3	84.1	84.5	88.6	87.9	88.0	78.1	80.3	81.1
Middle Africa	73.2	73.3	74.2	86.4	85.4	85.2	60.3	61.4	63.3
Northern Africa	53.6	54.4	54.7	78.8	79.5	79.6	28.2	29.3	29.8
Southern Africa	56.4	60.2	62.1	64.5	67.9	70.1	48.6	52.7	54.0
Western Africa	64.1	64.7	65.5	78.8	78.1	77.5	49.6	51.3	53.4
Asia	71.1	69.5	69.0	85.6	83.9	83.9	55.8	54.5	53.2
Eastern Asia	81.4	78.6	78.1	87.6	84.4	84.4	74.8	72.5	71.4
South-Central Asia	61.4	61.9	62.5	84.6	84.2	84.7	36.7	38.3	39.1
South-Eastern Asia	72.6	72.1	72.2	85.3	84.4	84.3	60.1	59.9	60.1
Western Asia	53.8	53.2	52.3	77.5	76.3	75.1	28.1	28.1	27.7
Europe	68.7	70.9	71.9	76.1	76.9	77.2	61.5	65.0	66.6
Eastern Europe	68.0	68.6	69.8	73.1	73.4	74.1	63.1	64.1	65.8
Northern Europe	75.2	76.1	77.2	81.5	81.5	82.1	68.9	70.8	72.1
Southern Europe	63.4	67.8	67.7	75.7	77.3	76.4	51.1	58.1	58.7
Western Europe	70.9	74.7	75.7	78.5	80.0	79.9	63.1	69.4	71.4
Latin America and the Caribbean	66.7	69.2	70.0	83.6	82.8	82.3	50.2	55.9	58.0
Caribbean	64.8	66.3	67.4	79.7	79.0	79.3	50.2	53.8	55.6
Central America	63.4	65.2	66.7	85.6	83.9	83.7	41.9	47.3	50.5
South America	68.1	70.9	71.5	83.3	82.9	82.0	53.3	59.3	61.1
North America	76.8	74.6	74.8	83.3	80.3	79.9	70.4	68.8	69.6
Oceania	73.1	75.3	75.9	80.8	81.2	81.1	65.3	69.3	70.6
Memo items:									
More developed regions	71.3	72.3	73.1	79.1	78.7	78.8	63.7	65.9	67.5
Less developed regions	70.1	69.3	69.2	84.8	83.4	83.4	54.8	54.7	54.4
Least developed countries	74.8	75.1	75.7	86.5	85.0	84.6	63.3	65.4	66.9

Source: ILO, LABORSTA. Economically Active Population Estimates and Projections: 1980-2020 (EAPEP), table E5 (http://laborsta.ilo.org/applv8/data/EAPEP/eaep_e.html).

Table 7.4b
Labour force participation rates at ages 65+, 2000-2020

Percentage									
	Labour force participation rates of population at ages 65+ (%)								
	Total			Male			Female		
Major area, region or country	2000	2010	2020	2000	2010	2020	2000	2010	2020
World (total)	19.0	19.5	19.9	30.0	29.2	28.6	10.5	11.8	12.8
Africa	40.5	39.7	38.7	54.1	53.0	50.8	29.3	28.9	29.0
Eastern Africa	59.2	61.3	61.4	73.7	76.3	76.4	47.3	49.1	49.7
Middle Africa	51.3	50.4	50.1	63.0	62.3	61.7	42.1	40.9	40.8
Northern Africa	20.3	18.1	16.8	35.8	32.1	28.4	6.8	6.2	6.8
Southern Africa	14.2	7.2	5.7	20.7	10.5	7.2	10.0	5.2	4.7
Western Africa	45.0	44.6	44.3	57.6	57.4	56.1	34.2	33.6	34.3
Asia	23.0	21.3	20.4	36.7	32.8	30.2	11.2	11.4	11.9
Eastern Asia	20.2	19.7	19.1	32.2	30.0	27.6	10.1	10.8	11.7
South-Central Asia	23.0	17.3	15.5	40.1	31.7	28.0	6.7	4.6	4.6
South-Eastern Asia	36.3	39.7	39.8	49.3	51.2	50.0	26.0	30.7	31.7
Western Asia	20.8	14.6	13.9	33.2	24.0	22.5	10.8	7.2	6.8
Europe	6.7	6.8	7.1	9.4	9.1	9.3	5.0	5.3	5.7
Eastern Europe	11.4	10.6	10.6	15.9	13.5	13.2	9.0	9.1	9.1
Northern Europe	5.9	8.5	9.8	8.8	12.2	13.3	3.8	5.7	7.1
Southern Europe	4.8	4.6	4.5	7.5	7.2	6.8	2.9	2.7	2.7
Western Europe	2.3	3.5	4.1	3.7	5.1	5.7	1.3	2.3	2.8
Latin America and the Caribbean	25.7	30.7	32.2	41.1	45.3	46.6	13.6	19.2	20.8
Caribbean	19.3	18.3	17.4	28.3	25.9	23.5	11.6	12.0	12.4
Central America	30.5	28.6	26.4	50.1	44.5	38.8	14.7	15.1	15.8
South America	25.0	33.0	36.0	39.9	48.2	52.3	13.5	21.4	23.5
North America	12.2	16.9	19.0	16.9	21.5	23.5	8.8	13.3	15.4
Oceania	8.8	13.0	15.1	13.3	18.2	20.0	5.1	8.7	10.9
Memo items:									
More developed regions	10.0	11.0	11.9	14.6	15.1	15.7	7.0	8.2	9.1
Less developed regions	25.3	24.7	23.9	39.2	36.8	34.6	13.2	14.3	14.9
Least developed countries	49.2	46.2	45.7	65.3	61.0	60.3	35.3	33.9	33.7

Source: ILO, LABORSTA. Economically Active Population Estimates and Projections: 1980-2020 (EAPEP), table E5 (http://laborsta.ilo.org/applv8/data/EAPEP/eaep_e.html).

Table 7.5

Developed economies: increased female participation rates and growth of per capita GDP, 2010-2050

Average annual rate of growth, percentage change				
Baseline	GDP per capita	Employment	Productivity	Population
2010-2020	1.66	-0.10	2.00	0.24
2020-2050	1.78	-0.25	2.00	-0.03
Simulation	GDP per capita	Employment	Productivity	Population
2010-2020	2.40	0.64	2.00	0.24
2020-2050	2.02	-0.01	2.00	-0.03

Source: Author's calculations based on UN/DESA, World Population Prospects Database (2010 Revision).

Note: Annual rate of growth of per capita GDP = Employment growth + Labour productivity – Population Growth. Baseline: Male and female participation rates projected as in table 7.4a and remain at 2020 level until 2050; Simulation.

female participation rate imposed over a much longer period of time—for example, if female participation rates converged to the male ones only by the end of the period (2050), the impact of such increase would be almost negligible at 0.08 per cent per year during the period 2010-2050, compared to the baseline. This is not only because the increase in female participation would have been slower, but it would also relate to a smaller population, given expected population decline. This suggests some urgency in boosting female participation rates: the benefits (in terms of faster rates of output growth) would be greater the sooner the increase.

Naturally, these are very crude results, based on a simple accounting identity. They say nothing about whether there will be jobs available for these additional workers. Moreover, both population and labour policies would need to be better coordinated and supplemented by other interventions to facilitate and support parents in reconciling their family and their workplace obligations. Additionally, gender wage gaps need to be closed and women need to have greater access to decent employment opportunities.

In developing countries, women are overrepresented in vulnerable employment. They work as unpaid family workers and own-account workers, usually in the informal sector and in low productivity activities. Furthermore, unemployment is higher among females than males in several developing regions (ILO, 2011a). Besides removing cultural and societal constraints to women's effective participation in the labour market, increasing women's access to education and enhancing female's educational attainment have been correlated with increased female participation and higher productivity outcomes.

Older workers and working beyond retirement age

Projected declines of the labour force can also be partially offset by increasing the participation of older workers (United Nations, 2007). But to sustain current rates of GDP growth, increased participation of older workers will not be enough; productivity also needs to be maintained at older ages (see below). Increased participation rates among older persons are facilitated by structural changes taking place in the economy. It is far easier to remain active in older age in the services sector than, say, in mining or agriculture. Additionally, there has been progress in closing loopholes in the legislation that unintentionally encouraged early retirement, the statutory retirement age was raised in many countries, while the overall health status of the older population has improved over the past years thus enabling longer participation in the labour market.

Nonetheless, the effective retirement age continues to be below the statutory pensionable age for the average of the OECD countries, which calls for further reforms in this area.² Yet, fine tuning access to pensions and solving problems related to the design of pension schemes addresses only part of the problem. Other factors (besides individual preferences) underline decisions to retire. The overall tax policy (if heavily tilted towards labour earnings), poor working conditions, cultural norms and negative attitudes towards older workers, ill health, and low job satisfaction are also relevant factors. Another important factor is access to training and updating of skills—often less among older than younger workers (United Nations, 2007). As skills become obsolete, employability is reduced, which calls for constant upgrading and investment in human capital. Additionally, changes in working environment are necessary to retain such older workers. Such changes should encompass both possible reallocation of older workers to positions that are compatible with their age and skills and also the introduction of technologies and processes that facilitate their work.

7.5 THE CHANGES IN THE AGE STRUCTURE OF THE POPULATION: IMPLICATIONS FOR GROWTH

Ageing and productivity growth

In view of the anticipated demographic changes, it is important to have a rough idea of the scale of productivity increases that will be required to offset the increase in the dependent populations (both children and the

aged). Figure 7.1 plots the projected annual rate of change in the potential dependency ratio (defined as the ratio of the population of working age population to the dependent population) for the period 2010-2050 to the observed annual rate of growth of labour productivity in the period 1990-2008 (GDP per person engaged, calculated at constant 1990 PPP exchange rates).³ The idea behind this exercise is that the increase in dependents per worker needs to be compensated by a comparable increase in labour productivity to maintain the status quo level of consumption per capita.

The good news is that among the 83 countries—largely middle-income developing countries and developed countries—considered in figure 7.1, only 23 countries—those located above the diagonal line on the graph—would need to accelerate productivity growth. Additionally, the increase in productivity seems to be reasonable at 1.5 per cent or below for the majority of the countries in the sample, with several of them already performing above that level. Naturally, for some countries 1.5 per cent implies achieving higher productivity growth than in the past, which can be challenging.

Figure 7.1

Selected countries: observed and required average annual rate of growth of labour productivity, 1990-2008 and 2010-2050

Source: Author's calculations based on ILO, Key Indicators of the Labour Market (KILM) database; and, UN-DESA, Population Prospects: 2010 Revision on-line database.

The not-so-good news is that these levels would only allow for the maintenance of the status quo; higher rates of growth of labour productivity are required if the level of welfare is to increase. Moreover, it is not clear whether countries can maintain such levels of productivity growth for extended periods, particularly in view of the potential impacts the change in the age structure of their labour force may have for the growth of productivity.

Freyer (2007) shows that changes in the workforce demographics have a strong significant correlation with the growth rate of productivity. He argues that an increase in the proportion of workers aged 40 to 49 seem to be positively associated with productivity growth: a 5 per cent increase in the size of this cohort over a ten-year period is associated with a 1 to 2 per cent higher productivity growth per year during the decade. Werdning (2007) confirms the presence of an inverted U-shaped relationship between the share of workers in different age groups and productivity which works through the total factor productivity (TFP) channel. Age-related contributions peak for workers aged 40-49. However, as younger workers are still in the process of accumulating human capital and skills while older workers have lower final educational attainment than their successors, cohort effects in human capital accumulation may contribute to this pattern.

The relationship between age and productivity is a complex one. Sharpe (2011) argues that the impact of ageing on productivity depends on the particular combination of cognitive and non-cognitive abilities required to perform a given task. Moreover, changes in organizational structure, more effective use of ICT in specific occupations and better access to knowledge, education and training throughout work have also been identified as ways to maintain and improve productivity life (ECE, 2006; Black and Lynch, 2004). Garibaldi and others (2010) quoted in Sharp (2011, p.87) argue that "The net effect of age-specific productivity determinants depends on how individual skills are used in the work process, how the work is organized, and how the individual interacts with other workers and firm-level factors such as technology and capital levels." Moreover, age productivity profiles may change over time based on technological advancements and structural changes within an economy (ECE, 2006 and Nishimura and others, 2002) rendering some skills relevant to specific occupations more or less obsolete in the domestic labour market. Thus, the importance of investment in human capital is central and cannot be overemphasized. This also holds true for developing countries, with younger and supposedly more

creative working population and thus facing greater potential for faster productivity growth.

Overall, concerns that an aged and relatively smaller working population will lead to marked declines in economic growth seem to be exaggerated. While productivity growth remains central, levels required seem to be compatible with past experience as indicated in figure 7.1. The challenge is thus to maintain such productivity growth for prolonged periods through constant updating of skills and necessary adjustments in the work environment, including in organizational approaches.

Consumption, savings and investment

Changes in the age structure of the population have implications for economic growth beyond the labour market channel. Economic growth is affected by consumption, investment and saving decisions. Not only *what* one consumes changes according to age, reflecting evolving tastes and preferences over the life cycle but *how much* one consumes may change as well thus affecting economic growth.

Insights from the economic theory on consumption (and saving patterns) and its relationship with ageing is derived from the life-cycle model and based on the consumption smoothing hypothesis. The model indicates a constant trajectory of consumption and a hump-shaped saving pattern. During their working years, individuals produce more than they consume, and save. This surplus is used to provide for their dependent children or to finance retirement. Outside their working years, individuals tend to dissave. However, available evidence is not conclusive. Consumption does not necessarily follow a relatively constant trajectory across the life cycle, and savings do not necessarily fall as one ages.

Looking at consumption, results from National Transfer Account (NTA) project indicates there is a great deal of variation of in the level of aggregate consumption across ages. In some economies, aggregate consumption peaks at relatively young ages, while in other economies the peak takes place at much older ages (after 65).⁴ Cross-country differences in part reflect diversity in the relevance of public consumption for aggregate consumption. The distributive or the consumption equalization role of public consumption is quite evident, particularly in the developed economies. These economies tend to have a higher share of public consumption in total consumption than the developing economies. Public consumption is the highest for the children in all countries (largely due to education), the smallest for

the average individual of working age but increases at older ages in some countries (Tung, 2011).

Turning to private consumption, average child (aged 0 to 19) consumption is the lowest among the three age groups considered (the other two groups are aged 20-64 and 65+) in all 23 economies, while an average older person consumes the most in only 8 out of the 23 economies. Private consumption declines for those aged 65+ in 15 countries. In general, the age profile of private consumption shows a great deal of heterogeneity. Overall, the level of consumption patterns seem to be country rather than age-driven, reflecting societal preferences, level the overall rate of income growth, the investment effort/drive in the economy and distributive or transfer mechanisms.

Age influences consumption patterns. However, several structural factors besides age— such as income, price movements, preferences, societal and technological change— underline these patterns. But if there are no strong cohort effects, it can be argued that spending on basic goods (such as food or clothing) will decline as societies age (and income rises). In particular, consumption of (non-tradable) services such as housing-related services, energy and health may increase. Health-care expenditures will likely rise as a result of increased prevalence of illness and disabilities that tend to occur more often later in life. But little can be anticipated in terms of how fast the demand for health services will increase.

At the global level, changes in the structure of production in economies with an ageing population will spill over to the rest of the world via trade. The implications for export-led growth in developing countries will depend not only on the magnitude of the change in the demand for tradable goods but also on the changes in production patterns taking place in developed economies. This global structural shift however is guided by the skill structure employed in different industrial sectors (Fehr and others, 2010). As production of tradable goods is transferred from developed to developing countries, the latter may see faster economic growth and a boost to the rise of income with positive feedback for the emergence of their own domestic market and continued growth in the future. This seems to have been the case in the last two decades, in particular for the developing economies in Asia. A structural shift in consumption towards services, i.e. non-tradable goods, in the developed countries could translate in a lower external demand for tradable goods. At the same time, many services are increasingly becoming tradable. The presence of India in the global information technology sector is a case in point.

Turning to savings, the life cycle model anticipates that countries with high child or old-age dependency ratios would have relatively low savings rates, while countries whose age structure is dominated by those in their working years would exhibit higher savings ratios. Nonetheless, not always do countries with the highest old age dependency ratios have the lowest saving ratios. Overall, cross-national differences in savings and investment seem to reflect differences in a wide range of factors.

Other factors influence savings besides demographics, particularly in the short term. In the long term, however, it is not possible rule out that demographic features influence savings. On the basis of information on 85 developing and developed countries during the period 1960-2004, Bosworth (2006) finds a strong correlation of demographic structure with both saving and investment; reductions in child and old-age dependency increase savings and investment, but changes in old-age dependency have larger effects. In sum, the significance of demographic effects varies across regions and is overall empirically small.

Savings patterns are also influenced by the design of pension schemes whose sustainability has been increasingly questioned owing to changing demographics (and poor design). Pension deficits impact on the public deficit with its potential negative consequences on macroeconomic stability and growth. Reforms have been advocated to restore the financial sustainability of such schemes and to increase the overall level of savings in the economy. Yet, while the need for reforms is recognized, pension reforms per se do not solve the demographic problem.

Pension schemes are essentially a tool for redistributing present output between those who are working and those who are not working. Whether fully funded, pay as you go, privately or publicly managed or a combination of these elements, and whether one, two or multiple pillars, the essence remains that consumption of workers and retirees must first be produced. And any pension-related “asset” acquired by today’s working population is in the end a claim on future output. Hence, *output growth* is central in the discussion on sustainability of pension schemes. In this regard, a pension reform can only increase savings if consumption decreases—either of the current working through increased taxations or the retired populations through reduced benefits or both. And savings may only increase economic growth if properly and effectively invested.

Everything being equal, however, one may expect that savings will decline in those economies where an increasing share of income needs to

be transferred to those who are inactive (and whose share in the population is increasing) so that their consumption needs can be met. The impact is anticipated to take place gradually and be small (United Nations, 2007), while financial markets have an important role to play in accommodating the change. In this sense, “the kind of policies that are appropriate to reduce frictions and instability is a highly policy-relevant research area for global population aging.” (Borsch-Supan, 2008: 75). In a world currently plagued by a deep financial crisis, these observations could not have been timelier.

7.6 AVOIDING POVERTY AMONG THE DEPENDENT POPULATIONS

The eradication of poverty will remain a major objective of the international development strategy beyond 2015. Poverty has a strong correlation with income security, the individual's ability to generate income and the capacity of the economy to employ productively and remunerate that individual accordingly. The risk of poverty is often higher among children and the old than it is among the working-age population. As seen above, the individual's earning capacity changes over the life cycle which makes him/her more vulnerable to poverty. The very young cannot and should not work. They need to be provided for while developing the skills necessary to be used later when they will join the labour force. Living standards often deteriorate for people at older ages due to reduced employment opportunities and deteriorating health status.

The provision of long-term care is a source of concern in view of the specific demands related to the care of persons with irreversible health conditions and the ongoing changes in the traditional family structure and the role of women in modern societies. But improvements in the overall health status of older populations can work as mitigating factor and should guide policy action. In developing countries, addressing the high prevalence of infectious diseases is still necessary while attention is also required to be given to preventive care and education to ensure increased longevity is accompanied by a healthy life expectancy. For instance, the use of tobacco and the excessive consumption of alcohol, which result in poor health in later life, are still prevalent, particularly in developing countries. In fact, few developing countries have implemented prevention programmes to encourage healthy lifestyle choices that would mitigate chronic diseases or delay their onset.

Currently older persons comprise 20 per cent of the dependent populations in developing countries; by 2050 they will represent 47 per cent. For the non-working, dependent populations, income security is provided through intergenerational transfers using both formal (public pensions and other sorts of public transfers, occupational pensions, family allowances, private pension schemes etc.) and informal mechanisms (through the family and the community). In developed countries, income security in old age is largely provided by formal pension systems and former accumulation of assets. In many developing countries, pension coverage is limited (largely due to employment in informal sector) and income security still depends on one's own work and/or informal transfer mechanisms. Worldwide, nearly 40 per cent of the population of working age is legally covered by contributory old-age schemes. Differences across countries remain considerable, largely reflecting differences in resource constraints. In Africa less than one third of the working age population is covered by legislation; effective coverage is even much lower at 5 per cent of the working age population.

In view of the strong correlation between income per capita and pension coverage, it was expected that with faster economic growth, coverage would increase in developing countries. This has not been the case. The economic growth in the recent decades has been accompanied by limited generation of wage employment in the formal sector. Additionally, pension reforms introduced in the late 1980s and early 1990s did not deliver expected results in terms of greater coverage.

The impact of old-age pensions on poverty reduction can be considerable; poverty among older people would be more common and with larger gaps in the absence of pensions. For instance, the U.S. Bureau of Census (2010) indicates that the (absolute) poverty rate among the aged (9 per cent) is below the national average (15.1 per cent) and significantly lower than among children (22 per cent). There is, however, wide variety of incidence of poverty among the old in the industrialized countries, which is largely explained by the level at which safety net retirement benefits are set. Among pensioners, poverty has a strong gender connotation: it tends to be higher among women than among men. This is due to women's shorter, intermittent participation or even lack of participation in labour markets, lower earnings and longer longevity. The share of older women living alone is higher than men's, which does not allow them to benefit from economies of scale in consumption, or shared incomes, as those living in extended households (United Nations, 2007). Increased female participation in the labour markets should offset some of the risks of poverty in old age for

women, but as long as women have shorter working lives and lower salaries, the risk of poverty in old age is greater for women than for men.

Pension reforms: ensuring sustainability, avoiding poverty in old age

The reform of pension systems has been the focus of intense debate. While financial sustainability is indeed an important consideration, it should not be the only objective to be pursued. There would be little use for a transfer scheme that is financially sustainable but fails to deliver a minimum amount of benefits and does not ensure economic security. Burtless (2005) argues that pension reforms adopted in some developed countries in recent years will lead to much smaller wage replacement ratios in the future which can make poverty a larger problem for the elderly in these countries. Similarly, the privatization of pension schemes—which still requires a great deal of public involvement in guaranteeing and supervising the system—in some developing countries has shifted economic risks to the pensioner, do not offer sufficient social insurance for idiosyncratic risks (such as unemployment or disease) and may imply insufficient income during retirement.

Pension reforms also need to ensure accessibility, affordability and equity, offer the appropriate incentives and not intensify existing inequalities. There is no one-size-fits-all. Pension systems and their reforms largely depend on country contexts and reflect societal preferences in terms of redistribution of resources within and among generations. In this regard, pension systems could be approached as composite of several modules or pillars, each addressing specific needs and characteristics of different segments of the labour market. In countries with large formal labour markets, income security can be provided by a single basic public pillar, financed by earnings-related contributions. A solidarity mechanism should be built in to provide workers with unstable or insufficient earnings with minimum benefits. In countries with large informal markets or dual-labour markets, two public pillars could be considered: one non-contributory, offering a minimum floor, and the other earnings related. In all cases, individuals with capacity to make provisions for their own old-age income security to complement income to be received from the public schemes should be encouraged to do so (United Nations, 2007).

Additional challenges for developing countries

Informal mechanisms, while playing an important role in certain contexts, have been under increasing pressure due to repeated adverse shocks,

the reduced size of families, migration and changes in attitudes. More importantly, such mechanisms operate on a small scale, cannot diversify risks efficiently and are often unreliable. Therefore, for developing countries, where informal mechanisms are more frequent, the challenge is not only to ensure the sustainability of existing old-age pension systems but also to increase coverage.

Even when benefits are modest, old-age pensions can contribute to reducing the intensity of poverty and strengthening livelihood strategies (United Nations, 2007). Accordingly, in view of the difficulties in expanding employment-related old-age pensions, a few developing countries have introduced universal non-contributory old-age pensions (e.g. Botswana, Mauritius, Namibia, Nepal and Samoa). There is wide variety in these arrangements; qualifying age ranges from 60 in Namibia and Mauritius to 75 in Nepal, while pension benefits range from 10 to 26 per cent of per capita GDP (Willmore, 2006). In these countries, the introduction of non-contributory programmes providing minimum support has helped to reduce disparities of access to old-age benefits.

But, as far as the dependent populations are concerned, the challenge confronting developing countries under the demographic point of view is not confined to the aged. Poverty among children is a severe problem in developing countries. For instance, in Latin America, the incidence of poverty is higher among children than among the aged in all 17 countries for which there is information available (see figure 7.2). On the other hand, the evidence seems to be less conclusive in Africa. In only 6 out of 15 African economies, the poverty head count for children is higher than for older persons, while the incidence of poverty in households where older persons were living with children (usually their grandchildren) is higher than the national average (Kakwani and Subbarao, 2005).

With their populations aged 0-14 still growing or remaining relatively stable in several developing regions during the next 15 years, children remain the most numerous vulnerable age group in all developing regions during the period 2010-2025. Addressing poverty among children should receive renewed attention by policymakers. There is urgent need to develop additional mechanisms and interventions to address children poverty—which is probably highly correlated with female poverty—while, at the same time, to introduce sustainable income support mechanisms for older persons.

Not excluding the preceding need, there are a number of synergies between providing income security for older persons and outcomes for children as well as for other family members. In Brazil and South Africa, for

Figure 7.2

**Latin America: Poverty rate among children (0-14)
and older people (65+), 2007-2009**

Source: ECLAC.

instance, earnings from pensions and work from older persons are important sources of income in households that include them (Lloyd-Sherlock, 2006). Hermalin and others (2005) indicate that the levels of childcare provided by grandparents to co-resident and non-co-resident grandchildren are significant sources of support in Thailand, Taiwan Province of China, and the Philippines. In this regard, over the past years a new generation of social assistance schemes have emerged providing minimum income support not only to older persons but also working age individuals, children and their families. These cash transfer systems follow a wide variety of approaches: some are means tested, others are not; some are conditional. What is interesting to note is the fact that these programmes seem to be quite affordable. Often these programmes cover a rather large number of people (as in the case of Brazil and Pakistan) but cost just a small fraction of the GDP: between 0.3 and 0.5 per cent (ILO, 2010). The experiences of these (and other) countries demonstrate that countries at relatively lower levels of income⁵ can afford to offer some form of social protection to their populations once there is political willingness to create the necessary fiscal space.

7.7 CONCLUDING REMARKS

Economic growth is central for improving the welfare of populations worldwide. But population dynamics affect growth as well. However, these can be fully anticipated and policies—such as those discussed in this chapter and elsewhere in this volume—can be adopted to offset negative effects and harness potential positive impacts. But, however important—and without minimizing its importance for the design of future development strategies—demographics is one of the many factors affecting growth and its overall impact is more nuanced than implied by some analyses.

While the world population is ageing everywhere and will continue to grow on average, trends are diverse across countries. Some countries, largely the developed economies and also some developing countries, will experience a decline in their working-age population, while in other countries, mostly developing countries, the labour force is still increasing. Given the magnitude of projected trends, international migration, while offsetting some of the pressures, offers no solution to the demographic challenge in the long term. Thus, the former group of countries needs to adopt strategies to sustain and/or raise the productivity of their declining and graying labour forces; the latter needs to embark in growth patterns that are labour intensive, but that offer possibilities for dynamic structural change and productivity increases in view of the significant welfare gaps their populations suffer. Structural impediments confronting these economies need to be addressed and the international cooperation has an important role to play in this direction.

Both approaches require significant investments in education, skill formation and updating; for the former group of developed economies so as to increase productivity and avoid the obsolescence of skills of an older labour force. It is not efficient to increase labour force participation at older ages without addressing the potential decline in productivity of older workers. Interventions must also be accompanied by the necessary adjustments in the institutional framework (to support longer labour force participation), in the work environment and how work is organized. While higher participation rates at older ages can offset some of the decline of the labour force and contribute to the sustainability of transfer systems, there are obvious limits to the feasibility of this alternative. For developing countries, investment in human capital is needed to enlarge people's choices and to prepare the vast numbers of unskilled and uneducated workers for the needs of labour market. The correlation between higher levels of education and lower fertility is also noted.

Similarly, in both groups of countries there is need to recognize the important contribution women can make to overcome the demographic challenge. In the case of countries with fast-growing populations, further declines in fertility are contingent on increased access to family planning and modern contraceptives as well as on changes of attitudes towards early marriage. Increased female labour force participation can offset the anticipated decline in labour force if promoted fast enough, but it requires additional measures to facilitate the reconciliation of parents' family and work obligations. Addressing the severe gender gap in the labour markets in terms of opportunities, including access to education and training, and remuneration is also called for, both in developed and in developing countries. Removing obstacles to increased productivity by female farmers is central for enhanced food security and faster output growth in agriculture.

Worldwide, dependency ratios are still declining but expected to rise from around 2025 onwards. Dependent populations need to be provided for. Old-age pensions and social pensions play an important role in reducing the incidence and the intensity of poverty. But if poverty is to be avoided at older ages, the sustainability and adequacy of support systems must be ensured. In countries where old age pensions are norm, that requires closing existing loopholes, extending mandatory retirement age where applicable and guaranteeing a minimum, socially acceptable, level of benefits, and offering adequate risk pooling so that idiosyncratic risks are genuinely diversified and not shouldered by the individual. Pension reforms, however, do not solve for the demographic challenge; output growth is key, which further highlights the importance of the recommendations presented throughout this volume. For developing countries, with large segments of the population without access to formal protection mechanisms, coverage needs to increase. Recent experience has demonstrated that the expansion of coverage, including the provision of universal benefits, can be affordable even in developing countries. Fiscal space requires political will.

NOTES

- 1 Secretary, United Nations Committee for Development Policy. This chapter relies heavily on research undertaken at the United Nations Department of Economic and Social Affairs under the context of the *World Economic and Social Survey 2007: Development in an Ageing World*. I am grateful for the valuable contributions received from Jorge Bravo and Igor Ribeiro and for the comments and suggestions by Jose Antonio Alonso, Sakiko Fukuda-Parr, Frances Stewart and Rob Vos. The usual caveats apply.
- 2 OECD. Ageing and Employment Policies - Statistics on average effective age of retirement. Available at <http://www.oecd.org/dataoecd/3/1/39371913.xls>, accessed on 14 November 2011.
- 3 The period 1990-2008 was selected—instead of a longer period—in order to increase the size of the sample. Similarly, output per person engaged was used instead of output per hour worker due to wider country coverage.
- 4 Recently published results from the National Transfer Account (NTA) project provide individuals' consumption age profiles from age 0 to age 90+ for 23 developing and developed countries. The NTA framework considers both private and public consumption; both are further disaggregated into education, health care and other consumption. Consumption age profiles are mean values normalized by the mean labour income of ages 30-49 in each economy. For details consult the website of the National Transfer Accounts at <http://www.ntaccounts.org/web/nta/show/Methodology>.
- 5 The ILO (2010b) indicates that currently there are some 30 developing countries with a minimum social security packages based on social transfer programmes.

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