

# Demographic Profile of the Arab Countries

## **Analysis of the Ageing Phenomenon**



**ESCWA**

United Nations Economic and Social Commission for Western Asia

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## 1. The background

The Madrid International Plan of Action on Ageing (MIPAA) drawn up at the Second World Assembly on Ageing in 2002 outlined a global agenda to deal with the issues of elderly populations. The Plan of Action on Ageing called for a new approach to policies and programmes for older persons in the wake of the demographic changes experienced in countries all over the world. Many regions of the world have witnessed a rapid increase in life expectancy and as a result a phenomenal growth of their populations during the second half of the last century. The increase has been greatest and most rapid in developing countries where the older population is expected to quadruple during the next 50 years.<sup>1</sup> The challenges facing the governments of these countries to meet the basic needs of older persons such as social security, health and well-being and ensuring supportive environments as envisaged in the Plan of Action, will be evident in the years to come. Therefore, taking note of demographic conditions and the status of ageing is an integral part of the Plan of Action. Its need has been acknowledged worldwide as a prerequisite to put the Plan of Action on Ageing into action.

Like other United Nations regional commissions in the world, the United Nations Economic and Social Commission for Western Asia (ESCWA) also took the initiative to call for an Arab Preparatory Meeting in Beirut on 5-8 February 2002 before the Second World Assembly on Ageing in Madrid, to prepare ‘The Arab Plan of Action on Ageing (APAA) to the Year 2012’.<sup>2</sup>

The present report has been prepared to analyse the ageing phenomenon in the context of the demographic changes in the region, and to consider its implications on the development process in the context of MIPAA.

## 2. The rationale

The sharp reductions in mortality rates witnessed during the late 1980s in most Arab countries have resulted in the increase of the absolute number of elderly people – defined as persons aged 65 years and above. However, leaving aside a few Arab countries, the fertility decline in the majority of the countries has been slow and therefore, the process of ageing in the region is in its early stages. Nevertheless, with the fast decline in mortality, the old age dependency burden will increase. The interplay of emigration from working age populations with the ongoing fertility and mortality transition may further accelerate population ageing<sup>3</sup> and so the old age dependency ratio.<sup>4</sup> The increase in the latter will have an adverse effect on the gross domestic product (GDP) of a country and therefore on per capita GDP, and

may decrease the savings ratio which in turn may slow down economic growth. In addition, the increase in the absolute population aged 65 years and above will be a major challenge for the Governments of Arab countries to cope with the socio-economic and health consequences and demand for social security.

This report aims to give a comprehensive demographic profile of the 22 members of the League of Arab States and to examine the current trends of ageing and its variations in these countries throughout 1980-2025. Further, it focuses on the course of fertility and mortality transition and its effects on the population ageing phenomenon. The report also gives trends in net migration rates and attempts to study the effects of immigration and emigration on ageing populations. The impact of age-structural transition on economic growth has been discussed using Potential Support Ratio (PSR). The implications of this age-structural transition are also discussed with special reference to MIPAA and the concept of exclusion, particularly the gender dimension of exclusion.

### 3. Data and methods

The present report uses data from the most recent revision of World Population Prospects 2010<sup>5</sup> – the official United Nations population estimates and projections released on 3 May 2011. To study the trends of fertility, mortality and migration and analyse the phenomenon of ageing in 22 Arab countries, medium variants of population estimates and projections have been used. Past and future trends and future prospects of population ageing in the Arab countries are discussed in the sections to follow. The scope of the report is, however, limited to presentations of demographic profiles and micro and macro analyses of data on population ageing among 22 Arab countries during 1980-2025.

## 4. Demographic profile of Arab countries

### 4.1 Population scenario - Arab region

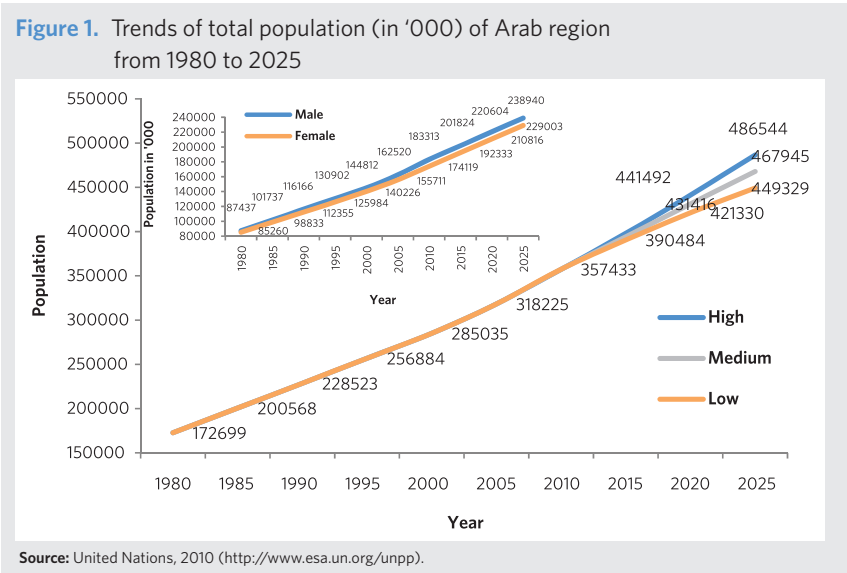
#### *(a) Absolute size of Arab population*

The population of Arab countries rose from 172.7 million in 1980 to 357.4 million in 2010 and is expected to reach 467.9 million in 2025, according to medium variant population projections. As per low and high variants of population projections, the population of the region may attain 449.3

million and 486.5 million marks in 2025, respectively. A breakdown of population by sex shows that the number of males increased from 87.4 million in 1980 to 183.3 million in 2010. Their population is expected to attain 238.9 million in 2025. Likewise, the female population of 85.3 million recorded in 1980 rose to 174.1 million in 2010 and is expected to reach 229.0 million in 2025 (see figure 1).

### (b) Growth rate of Arab population

The growth rate (Exponential) of total population of the region recorded a downward trend during the period 1980-2000 from 3 per cent in



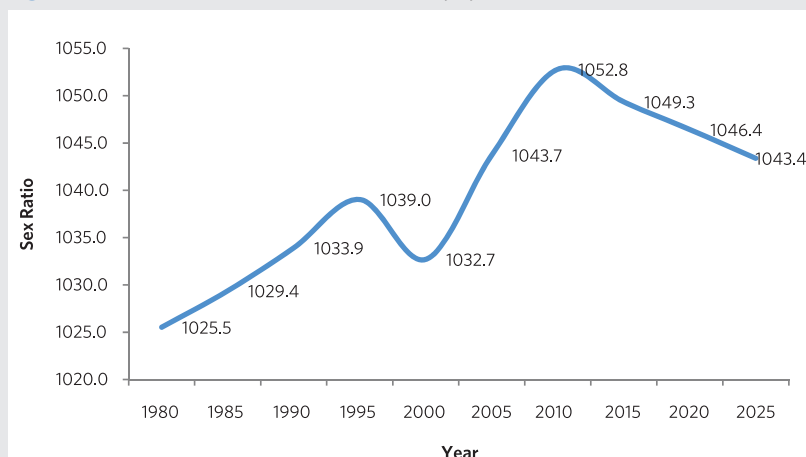
1980-1985 to 2.1 per cent in 1995-2000. Later, however, it increased to 2.2 per cent during 2000-2005 and to 2.3 per cent in 2005-2010 (see annex table 2). The increase in the growth rate of the population during 2000-2010 may be due to return migration of native Arabs from the United States of America after the attack on the World Trade Center in New York on 11 September 2001. This phenomenon seemed to have lasted only for a short period. The growth rate is expected to show a monotonically declining trend during 2010-2025 with an average growth rate of 1.6 per cent during 2021-2025. Overall, the patterns of growth rates for males and females during 1980-2025 were similar to that of the total population. However, the growth rate for males recorded a slightly larger increase than that of females during 2000-2010 (see figure 2).

### *(c) Sex ratio and age-specific sex ratios*

Figure 3 shows trends in the sex ratios of the total Arab population from 1980 to 2025. The figure reveals that the sex ratio had recorded an increase from 1025.5 males per 1,000 females in 1980 to 1,039 in 1995. Thereafter, it had recorded a decline by nearly 6 points during the period 1995-2000. Later, the sex ratio continued to rise from about 1,033 males per 1,000 females in 2000 to 1,053 males per 1,000 females in 2010. This may again be due to relatively more return migration of males than that for females from the United States and other Western countries after the September 11 incident. Later, the sex ratio is expected to decline during the period 2010-2025.

The age-specific sex ratios of the total Arab population have been presented for 1980, 2010 and 2025 in figure 4. A look at the figure suggests that the patterns of age-specific sex ratios in 1980, 2010 and 2025 are

**Figure 3.** Trends in sex ratios\* of total Arab population, 1980-2025



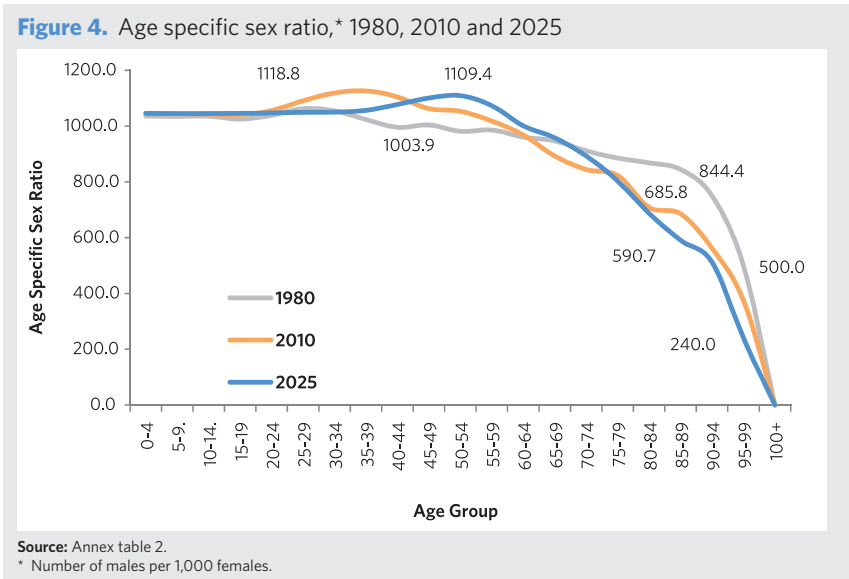
Source: Annex table 1.

\* Number of males per 1,000 females.

nearly same up to the age below 25 years. Later, however, the age patterns of sex ratios show significant changes particularly after 70 years of age. The sex ratio became more favourable in case of females in older ages. Also, the age-specific sex ratios revealed that the number of females at a given age seems to have increased from 1980 to 2025. For instance, the sex ratios for the age group 80-84 years recorded in 1980, 2010 and 2025 found 868, 709 and 687 males per 1,000 females, respectively (see annex table 3). The trend in age-specific sex ratios suggests that with the increase of age, the proportion of female survivors increases, and also at a given age a sharp decrease in the proportion of males has been noticed with the passage of time.

## 4.2 Population scenario - Arab countries

The Arab countries largely differ in their population size and growth rates. Figure 5 presents 22 Arab countries arranged in descending order of magnitude of their populations as expected in 2025 and also shows their populations in 1980. According to United Nations (2010) medium variant population projections, Egypt will have the largest population – a little more than 100 million in the region in 2025 followed by the Sudan (60.8 million), Iraq (48.9 million) and Algeria (42.0 million). Three Arab countries, namely Yemen, Morocco and Saudi Arabia are likely to have populations of slightly more than 36 million. The Syrian Arab Republic, Somalia and Tunisia may have populations of 26.0 million, 14.2 million and 11.9 million, in 2025, respectively. The rest of the 12 countries are likely to have populations less than 10.0 million ranging from 9.9 million in the United Arab Emirates to 1.0 million in Comoros.

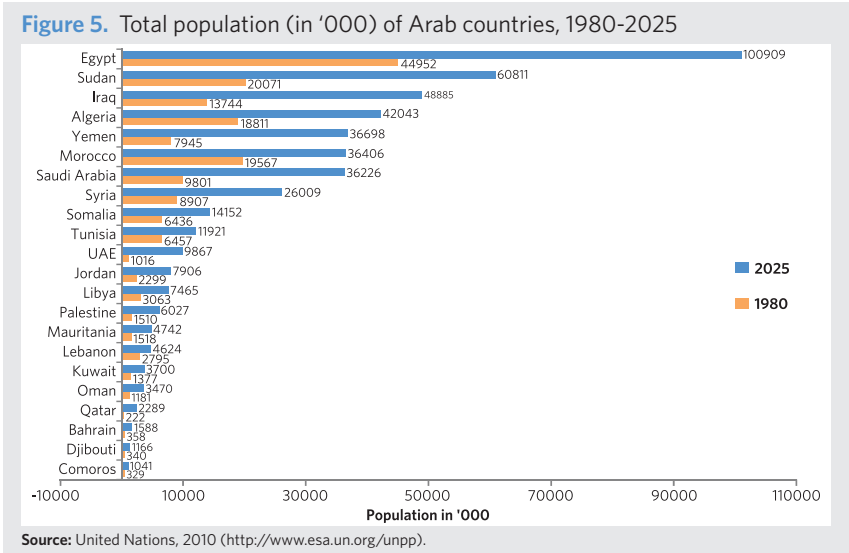




A comparison of population figures at two points of time shows interesting population dynamics of the Arab countries. The populations of Qatar and the United Arab Emirates are expected to rise at the highest average annual growth rate (exponential) of slightly more than 5.0 per cent during 1980-2025. Other countries that are likely to gain in their populations during this period, at a relatively fast pace (growth rate around 3.3 per cent) are Yemen, Bahrain and Palestine. The countries which may witness average annual growth rates between 2.5 per cent and 2.9 per cent during 1980-2025 are Saudi Arabia, Iraq, Djibouti, Jordan, Comoros, Mauritania and the Sudan. The countries which are likely to grow at an annual average growth rate between less than 2.5 per cent and 2.0 per cent during 1980-2025 are Oman, Kuwait and Libya. Among the remaining countries which may have average annual growth rates between less than 2.0 per cent and 1.0 per cent are Algeria (1.8 per cent), Egypt (1.8 per cent), Somalia (1.7 per cent), Morocco (1.4 per cent), Tunisia (1.4 per cent) and Lebanon (1.1 per cent).

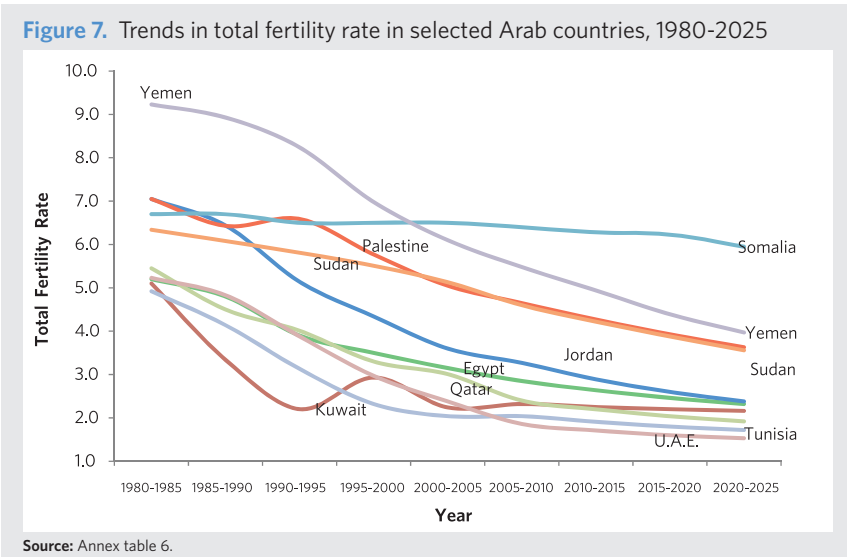
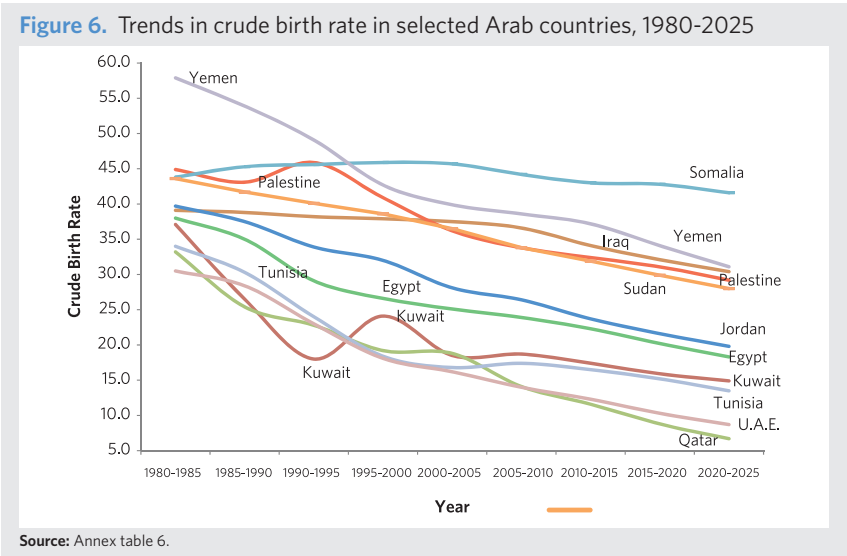
### 4.3 Fertility transition

Figures 6 and 7 show fertility transition in selected Arab countries through trends in crude birth rate (CBR) and total fertility rate (TFR) during 1980-2025. Only those countries showing extreme values of CBR and TFR during 1980-2025 have been used to depict the trends in the figures. The trends in CBR and TFR of rest of the countries are likely to be contained within the trends of the countries with extremes. Figure 6 shows that the CBR for all the countries is declining but at different paces. The CBR for Algeria, Comoros, Djibouti, Libya, Mauritania, Palestinian, Oman, Saudi Arabia, Somalia, the Sudan, the Syrian Arab Republic and Yemen



was higher than 40 per 1,000 population during 1980-1985. Among these countries the highest drop of CBR was about 30 points for Oman in 2005-2010. Algeria, Libya, Saudi Arabia, the Syrian Arab Republic and Yemen witnessed a decrease in CBR of 20 points up to 2010. Somalia had the smallest decline (only by 1 point) in CBR during this period. The Arab countries which may experience CBR of 15 (or even less) per 1,000 population in 2020-2025 include Algeria, Bahrain, Kuwait, Lebanon, Oman, Qatar, Tunisia and the United Arab Emirates.

Generally, the pattern of fertility transition in Arab countries shown by TFR is similar to that observed from CBR in figure 6. The initial level of

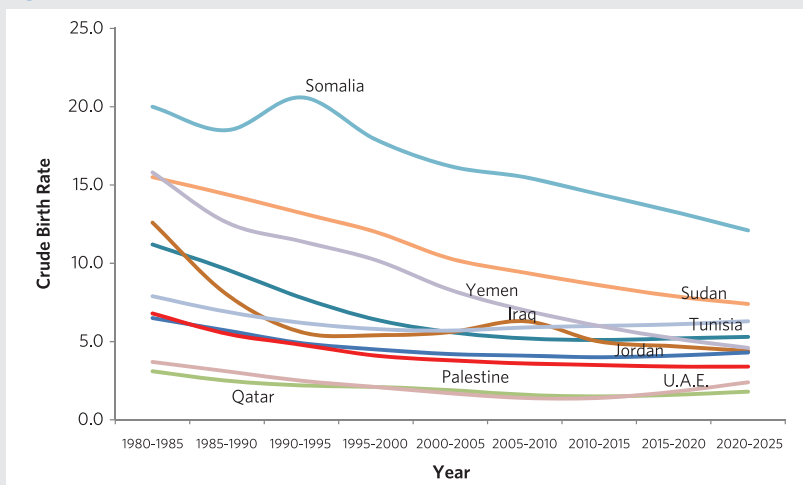


fertility in 1980-1985 was much higher in Yemen, Somalia, Palestine, Iraq and the Sudan. Excluding Somalia, the other four high fertility countries showed an appreciable decline in their fertility during 1980-2010. Though fertility levels are declining they may remain high in 2025. Nevertheless, half of the Arab countries are expected to achieve near replacement or below replacement level of fertility<sup>6</sup> in 2025, as revealed by TFR. The list of countries which are expected to attain replacement or near replacement level of fertility in the period 2020-2025 includes: Egypt, Jordan, Kuwait, Saudi Arabia and the Syrian Arab Republic. Arab countries which are likely to reach even below replacement level of fertility are Algeria, Bahrain, Lebanon, Libya, Morocco, Oman, Qatar, Tunisia and the United Arab Emirates (see figure 7).

## 4.4 Mortality transition

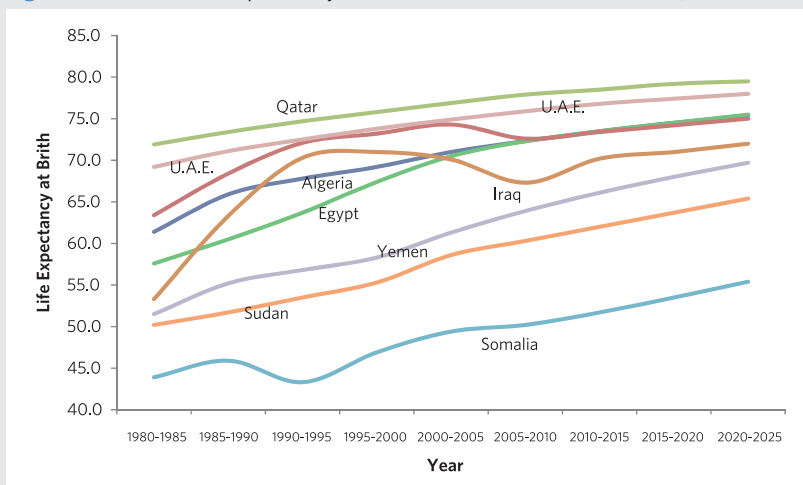
There has been a phenomenal decline in the level of mortality in the Arab region during the second half of the last century. Figure 8 presents the trends in crude death rate (CDR) from 1980 to 2025. Even during 1980-1985, the CDR was lower than 5 per 1,000 population in Bahrain (4.1), Kuwait (3.4), Qatar (3.1) and the United Arab Emirates (3.7). Countries with a CDR of more than 5 but less than 10 per 1,000 population were Algeria (9.9), Jordan (6.5), Lebanon (7.6), Palestine (6.8), Oman (8.4), Saudi Arabia (7.5), Tunisia (7.9) and the Syrian Arab Republic (6.7). The countries which had a CDR more than 10 per 1,000 population during this period were Comoros (14.3), Djibouti (15.5), Egypt (11.2), Iraq (12.6), Libya (10.9), Mauritania (12.4), Morocco (10.7), Somalia (20.0), the Sudan (15.5) and Yemen (15.8) (see annex table 5). During the period 2020-2025, with the exception of Somalia, all other Arab countries are expected to have

**Figure 8.** Trends in crude death rate in selected Arab countries, 1980-2025



Source: Annex table 6.

**Figure 9.** Trends in life expectancy at birth in selected Arab countries, 1980-2025



Source: Annex table 6.

a CDR far below 10 per 1,000 population in which Qatar may attain the lowest (1.8) CDR in the region. However, the pace of mortality decline in these Arab countries was low compared to the fertility witnessed in the previous section. This may be because the mortality level had already reached a much lower level in 1980-1985 in the majority of Arab countries.

Figure 9 gives the trends in life expectancy at birth ( $e_0$ ) in selected Arab countries. As in the case of the fertility transition (see figures 6 and 7), in figures 8 and 9 only those countries which had extreme values of CDR and  $e_0$  have been shown in the graph. As can be seen from the figure, all the Arab countries show increasing trends in  $e_0$  during the period 1980-2025. However, the pace of increase in  $e_0$  did differ from country to country. Half of the Arab countries are likely to have an  $e_0$  75 years or more in 2025. Algeria (75.4), Bahrain (76.5), Egypt (75.5), Kuwait (75.8), Libya (76.9), Oman (75.0), Qatar (79.5), Saudi Arabia (75.9), Tunisia (76.5), United Arab Emirates (78.0) and the Syrian Arab Republic (77.6). The Arab countries which are likely to have the lowest and highest  $e_0$  are Somalia (55.4) and Qatar (79.9), respectively (see table 6).

#### 4.5 Difference between life expectancies for males and females of selected Arab countries, 1980-1985 to 2020-2025

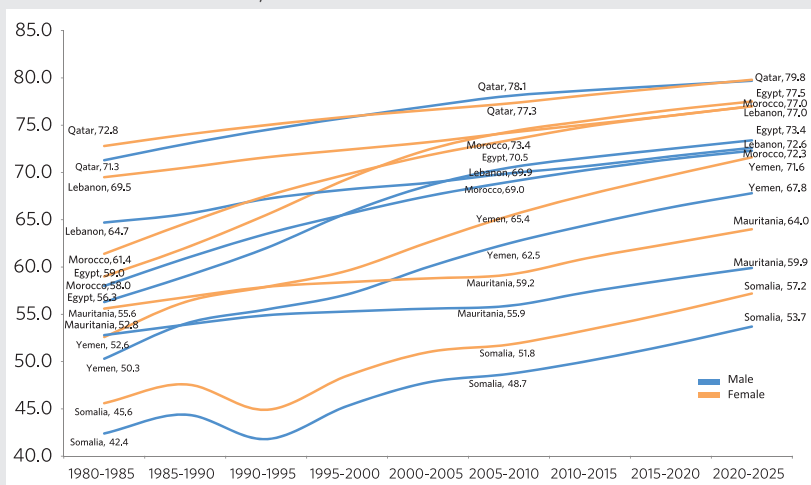
Figure 10 gives trends in life expectancies for males and females of seven selected Arab countries. The choice of these countries was governed by their extreme values of  $e_0$  in 2025. The seven selected countries are Qatar, Egypt, Lebanon, Morocco, Yemen, Mauritania and Somalia. The last three belong to the set of countries which have the lowest  $e_0$ , whereas the first

four come from the set of Arab countries having high  $e_0^0$ . Each of the two sets of the countries represents Arab countries with extreme values of  $e_0^0$ . The rest of the Arab countries may have  $e_0^0$  values somewhere in between.

As can be seen from annex table 6, the highest values of  $e_0^0$  in the region for both males and females in 1980-1985 and 2020-2025 are for Qatar; whereas the lowest values of  $e_0^0$  during the above periods are for Somalia. The values of  $e_0^0$  for males and females recorded for Qatar in 1980-1985 were 71.3 years and 72.8 years, respectively. The respective values for males and females rose to 78.1 years and 77.3 years in 2005-2010 and are expected to reach 79.7 years for males and 79.8 years for females in 2020-2025. Qatar is the country in the Arab region in which the difference between the  $e_0^0$  's for females and males is expected to be the least (0.1 year). Also, the life expectancy at birth for males in Qatar was slightly higher than that for females until 2015-2020.

Among the other selected countries the difference between the  $e_0^0$  for females and males in 2020-2025 is expected to be 3.5 years for Somalia, 4.1 years for Mauritania, 3.8 years for Yemen, 4.7 years for Morocco, 4.4 years for Lebanon and 4.1 years for Egypt (see figure 10). Interestingly, with the exception of Qatar, in the rest of the 21 Arab countries the  $e_0^0$  for females was higher than that for males. Further, the pace of improvement in  $e_0^0$  for females in some countries was also higher than that for males. However, the pace of increase in  $e_0^0$  was higher initially for the countries which had relatively lower values of  $e_0^0$ . The difference in the values of  $e_0^0$  's for females and males are expected to be as high as 5 years for Iraq and Libya in 2020-2025 (see annex table 6).

**Figure 10.** Trends in life expectancy at birth  $e_0^0$  for males and females in selected Arab countries, 1980-1985 to 2020-2025



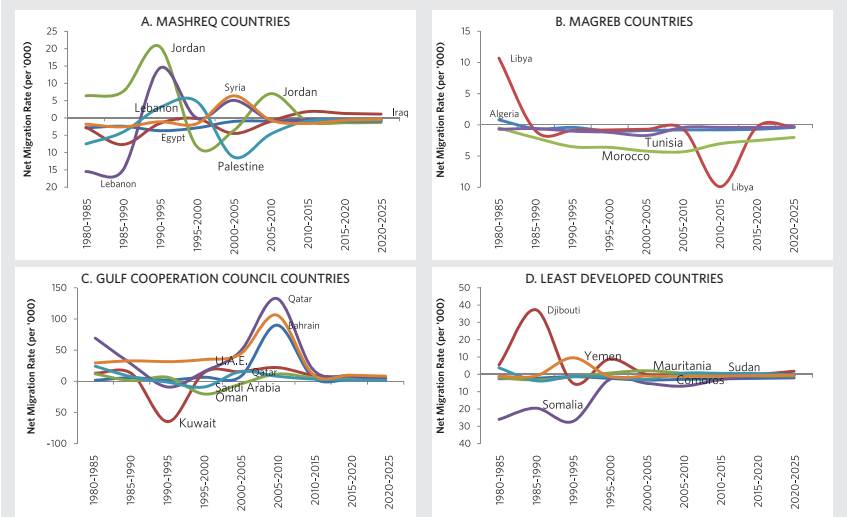
Source: Annex table 6.

### 4.6 Net migration rate:7 direction, magnitude and economic development

For the purpose of analysis, the 22 Arab countries have been classified in four groups mainly on the basis of their geographical proximity and economic and social characteristics. The four groups with the names of their constituent countries are given in annex table 7. The net migration rate can be taken as a proxy to ascertain the level of economic development of the country. Usually labour exporting countries are economically less developed as they cannot provide employment and/or better wages to their unskilled/semiskilled/skilled populations. A negative sign of NMR shows out migrating countries and its magnitude may be assumed as a substitute for the measure of the level of economic development. Figures 11A, 11B, 11C and 11D present trends of NMR during 1980-2025, of countries classified under four groups, namely: ‘Mashreq’, ‘Maghreb’ ‘Gulf Cooperation Council (GCC)’ and ‘Least developed countries’, respectively.

Figure 11A shows trends of NMR of six Arab countries, namely Egypt, Iraq, Jordan, Lebanon, Palestine and the Syrian Arab Republic. As can be seen from the figure, net out migration was high and fluctuated between 139 per 1,000 population to 189 per 1,000 population during 1980-2000. Later, however, it showed a downwards trend. The emigration rate in Egypt is likely to drop to 53 persons per 1,000 in 2020-2025. It appears that the economy of Egypt is on the path of recovery. Iraq also had labour exporting country till 2010 but is expected to take its expatriates back during 2010-2025. Lebanon had an emigration rate of 44 per 1,000 population during

Figure 11. Trends of net migration in Arab countries, 1980-2025



Source: Annex table 7.

1980-90. However, the trend of migration witnessed a reversal during 1995-2005. This reflects the period of civil war from 1975-1990 and the post-war period covering 1990-2005 of reconstruction. During this period, the return of a section of population took place who had emigrated earlier due to civil war in the country. Jordan had been a population receiving country during 1980-1995 but in 1995-2000 it had net out migration rate of 38 per 1,000 population. Among Mashreq countries, excluding Iraq, the rest of the five Arab countries are expected to witness net out migration rate. The Syrian Arab Republic may have a net out migration rate of 35 persons per 1,000 population per year.

All the four Maghreb countries (bar Algeria and Libya during 1980-1985) had negative NMR and are likely to witness a net out migration rate throughout the study period. Among the four countries of this group, the net out migration rate was high for Morocco which moved between 100 and 135 persons per 1,000 population per year during 1995-2010. Algeria also showed a high net out migration rate up to 2010 and is likely to experience the same up to 2025. Though Libya and Tunisia were out migrating countries, the NMR is not so high. It is expected to be 4 persons per 1,000 population during 2010-2025.

The six GCC countries presented some interesting trends of NMR. Except for Kuwait for the period 1990-1995, Oman for the periods 1995-2000 and 2000-2005, Qatar for the period 1990-1995, and Saudi Arabia for periods 1990-1995 and 1995-2000 during which NMR was negative, the NMR was positive in the rest of the countries and periods. The patterns of NMR clearly show that almost all the six GCC countries had a large number of immigrants every year during the period 1980-2010 and the same trend is likely to continue up to 2020-2025. Among high popular countries of destination were the United Arab Emirates, Saudi Arabia, Kuwait and Qatar. The high rate of immigration in these countries reflects their vibrant economies. These are the richest countries with the highest per capita GDP among all Arab countries.

The next cluster of six countries, namely Comoros, Djibouti, Mauritania, Somalia, the Sudan, and Yemen designated as 'least developed countries' had the least per capita GDP in the entire Arab world. Nearly all the countries of this group have had negative NMR implying that these were labour exporting countries. Among these six countries, Somalia had heavy net out migration till 2010. However, its NMR is likely to decline during 2010-2025. The NMR for Somalia went from 166 persons per 1,000 population per year in 1980-1985 to 126 in 1985-1990 to 179 in 1990-1995 and thereafter showed a downwards trend. A heavy net out migration was seen in the Sudan during the 15-year period 1985-2000. However in the other periods under study, the Sudan had positive NMR implying that the country was economically prepared

to accommodate immigrants. Excluding the period 1990-1995, Yemen had negative NMR in rest of the periods. Though Comoros and Mauritania had negative NMR, the rate was very small. Djibouti had no net out migration during 2000-2005 and is expected to remain in the same country up to the end of period under study. Comoros, Djibouti and Mauritania are among the least developed countries. It seems that these countries had per capita GDP below the threshold level required for international migration. The overall scenario of the six countries of this group suggests poor economic conditions of their citizens.

## 5. Analysis of the ageing phenomenon

The phenomenon of ageing will be studied in next two sections to discuss demographic ageing and individual ageing. The former refers to its ageing of populations in an aggregate sense, in which the age-sex structure of a population represented by age-sex pyramid undergoes a change due to fertility and mortality transitions and changes in migration flows. Individual ageing, on the other hand, is solely influenced by a reduction in mortality. Demographic ageing and individual ageing are macro and micro level concepts of ageing,<sup>8</sup> respectively.

### 5.1 Individual ageing

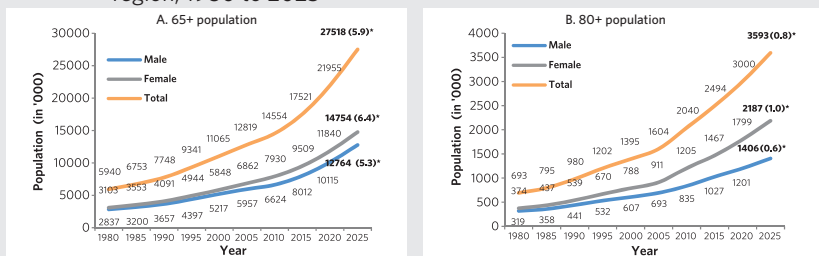
Individual ageing, which is also called micro ageing is solely induced by a reduction in mortality as evidenced by an increase in life expectancy at birth ( $e_0^0$ ). The increase in life expectancy at birth has a differential effect on the different age-segments of the population. It heavily reduces infant and child mortality and old-age mortality. The decrease in 65+ mortality results in the swelling of numbers in old-age groups due to increased longevity. This phenomenon is called individual ageing and its magnitude is determined by either absolute numbers or by percentage shares of old (65+) and oldest-old (80+) in total population.

#### *(a) Absolute size of 65+ and 80+ populations by sex in Arab region*

From a welfare policy perspective for the elderly, it is important to know the expected size of old and the oldest populations of the future. Panels A and B of figure 12 present trends in absolute size of male, female and total populations (in thousands) aged 65+ and 80+ in the Arab region during 1980-2025, respectively. The patterns of growth of both 65+ and 80+ populations show a linear trend during 1980-2005. However, after 2005 the trend of both 65+ and 80+ populations demonstrated a curvilinear



**Figure 12.** Absolute size of 65+ and 80+ populations (in '000) by sex – Arab region, 1980 to 2025



Source: Annex table 4.

\* Values given in parentheses for the year 2025 show percentages to the respective total populations in the Arab region.

growth pattern, suggesting that the ageing was slow during the period 1980-2005 but accelerated afterwards.

The trend presented in panel A of figure 12 suggests that the old age (65+) population of the Arab region, which was 5.9 million in 1980, rose to 14.6 million in 2010. It is likely to increase to 27.5 million in 2025. Notably, the increase in the elderly population in last 30 years was around 8 million, but in next 15 years nearly 13 million people will be added to the 65+ population. Therefore, the expected share of elderly in the total population of the Arab region is estimated to be nearly 6 per cent by 2025. A sex breakdown shows similar trends of growth of the elderly of both sexes with a slightly higher speed of ageing of females than of males from the beginning of the new millennium. The percentages of elderly males and females in their respective total populations of the region are expected to be 5.9 per cent and 6.4 per cent in 2025, respectively.

The oldest old (80+) population has also been growing at a faster rate. Initially, the growth rate was slow but after 2010 the 80+ population is expected to increase at a much faster rate. For instance, the population aged 80+ grew from 693,000 in 1980 to 2,040,000 in 2010 – an increase of 1,347,000 in the last 30 years. The total increase of the oldest old (80+) population is expected to be 1,553,000 in the next 15 years. The percentage share of 80+ populations in the total population of males is expected to be 0.8 per cent in 2025 (see annex table 4).

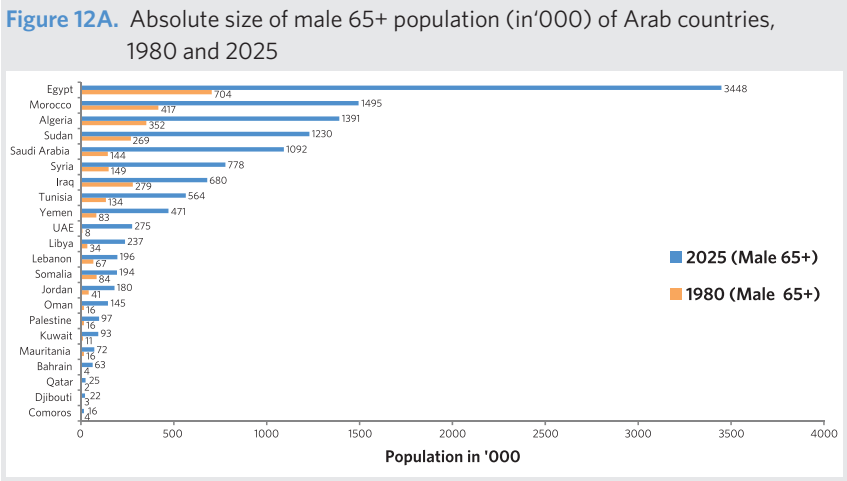
As observed in case of 65+ populations, females aged 80+ are also expected to grow relatively at a faster rate than males. The percentages of 80+ males and females to their respective total populations of males and females in the Arab region are expected to be 0.6 per cent and 1.0 per cent.

### *(b) Absolute size of 65+ population by sex in Arab countries, 1980 and 2025*

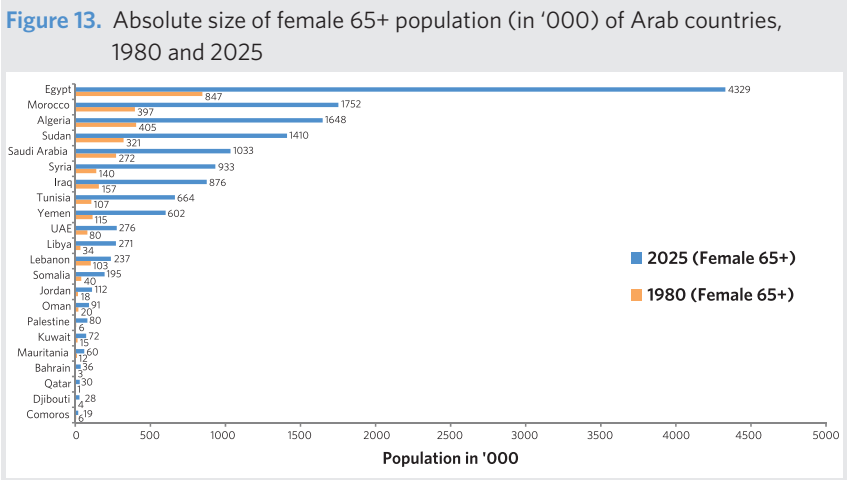
Figure 12A presents the 22 Arab countries arranged in descending order of magnitude of absolute size of male populations (in '000) aged 65+ as

expected in 2025. The figure also gives the size of 65+ male populations (in '000) in 1980. Egypt is expected to have the largest 65+ male population (3.4 m), followed by Morocco (1.5 m), Algeria (1.4 m), the Sudan (1.2 m) and Saudi Arabia (1.0 m). The list of Arab countries which may have a 65+ male population between 0.8 million and 0.5 million in 2025 includes the Syrian Arab Republic, Iraq, Tunisia and Yemen. The old age population of the rest of the countries may not assume an alarming size in 2025. In the entire Arab region, the 65+ population of Egypt is expected to record phenomenal growth during 1980-2025.

Similar observations can be made for the absolute size of the 65+ female populations of 22 Arab countries listed in descending order of magnitude of size of their 65+ female populations in 2025 (see figure 13).



Source: Annex table 5.



Source: Annex table 5.

As expected, Egypt will have the largest (4.3 m) 65+ female population in the region in 2025 followed by Morocco (1.8 m), Algeria (1.6 m) and the Sudan (1.4 m). Overall, the ranking of countries by the size of 65+ female populations is similar to that obtained for 65+ male populations in figure 12. Nevertheless, a few countries are expected to occupy different positions in the hierarchy of the magnitude of the size of 65+ female populations. For instance, in figure 12 for 65+ males, Saudi Arabia was in fifth position. However, in figure 13 this position has been occupied by Iraq. This change of positions suggests that the 65+ female population of Iraq is expected to grow at a faster pace than that of 65+ female population of Saudi Arabia. In rest of the Arab countries the 65+ female population will be less than one million in 2025. Interestingly, Bahrain, Kuwait, Oman, Saudi Arabia and the United Arab Emirates, females aged 65+ are expected to outnumber males in 2025.

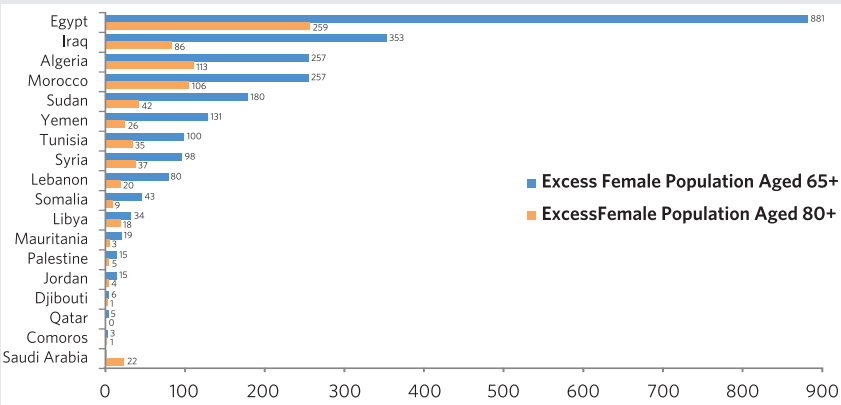
### *(c) Excess of females over males aged 65+ and 80+ in Arab countries in 2025*

Table 1 presents the expected absolute size of 65+ and 80+ male and female populations (in '000) in Arab countries in 2025. The table also gives the likely excess of females over males in Arab countries in 2025. The absolute size of excess of females over males aged 65+ is expected to be 2.5 million in the region in 2011; whereas the excess of females over males aged 80+ is likely to be around 0.8 million in the region. The marital status of single females will either be 'unmarried', widow or divorcee. It may be mentioned that due to the differential pace of increase in life expectancy at birth, the gulf between  $e_0$ 's for females and males is likely to increase which may result in an escalation of the number of single 65+ females in the population in the future. The swelling numbers of single/widow/divorcee among 65+ females will put an additional burden on the governments of the region to meet the challenges of providing social security and health needs.

Table 1 gives the expected excess of female populations over males (in '000) aged 65+ and 80+ for 17 Arab countries in 2025. Among Arab countries, Egypt may have the largest absolute size of excess of both 65+ and 80+ females over male populations of respective age-groups in 2025. Their absolute sizes are expected to reach 0.9 million and 0.3 million respectively at the end of 2025.

The next six Arab countries placed in hierarchy of the magnitude of excess female populations aged 65+ over males in the same age groups in 2025 are Iraq (0.4m), Algeria (0.3m), Morocco (0.3m), the Sudan (0.2m), Yemen (0.13m) and Tunisia (0.1m). Each of the remaining countries will have a less than 0.1m population of excess 65+ females in 2025 (see figure 14). These aged single females constitute a vulnerable group in society, which besides socio-economic hardships may face a number of health problems.

**Figure 14.** Excess female populations (in '000) over males aged 65+ and 80+ in Arab countries in 2025



Source: table 1.

**Table 1.** Excess of female populations over males (in '000) aged 65+ and 80+, Arab countries, 2025

Country	Male 65+	Female 65+	Difference (F-M)	Male 80+	Female 80+	Difference (F-M)
Algeria	1 391	1 648	257	154	267	113
Comoros	16	19	3	1	2	1
Djibouti	22	28	6	2	3	1
Egypt	3 448	4 329	881	396	655	259
Iraq	680	1 033	353	70	156	86
Jordan	180	195	15	31	35	4
Lebanon	196	276	80	27	47	20
Libya	237	271	34	34	52	18
Mauritania	72	91	19	5	8	3
Morocco	1 495	1 752	257	155	261	106
Palestine	97	112	15	12	17	5
Qatar	25	30	5	3	3	0
Saudi Arabia	1 092	933	-159	108	130	22
Somalia	194	237	43	18	27	9
The Sudan	1 230	1 410	180	142	184	42
Tunisia	564	664	100	72	107	35
Syrian Arab Republic	778	876	98	99	136	37
Yemen	471	602	131	51	77	26
Total	12 188	14 506	2 477*	1 380	2 167	787

\* Excluding figure for Saudi Arabia. Also, four GCC countries namely Bahrain, Kuwait, Oman and the United Arab Emirates, which had both 65+ and 80+ male populations more than corresponding female populations have not been included in the table.

## 5.2 Demographic ageing

As stated earlier, the phenomenon of demographic ageing is the outcome of the interplay between fertility and mortality during the course of demographic transition from high fertility and high mortality to low fertility and low mortality. The emigration of working age populations and return migrations (immigration) in old age populations may further accelerate demographic ageing.

The future prospects of population ageing in 22 Arab countries have been ascertained by computing three indices of ageing, namely: (i) The old-age dependency ratio; (ii) the oldest-old dependency ratio; and (iii) the ageing index, using the data on medium variant population projections of the United Nations (2010). The values of these indices have been computed for 1980 and 2025 and are presented in annex table 8. Based on each of the above three indices of ageing in 2020, all the Arab countries have been arranged in descending order of their magnitudes. The relative positions of 22 Arab countries in the hierarchy based on old age dependency, oldest old dependency and index of ageing have been presented in figures 15, 16 and 17, respectively. The first two consecutive sets of seven countries each and the set of last eight countries have been termed 'Fast', 'Medium' and 'Slow' ageing countries, respectively. Table 1 gives the list of Arab countries falling in the categories of 'Fast', 'Medium', and 'Slow' ageing countries based on each of the above three measures of ageing.

### *(a) Old age dependency ratio*

The old age dependency ratio is defined as the number of persons aged 65 years and above per 100 persons of age 15 to 64 years. It measures the dependency burden the economically active population has to bear for the old population. Figure 15 presents the Arab countries in descending order of magnitude of old age dependency burden as expected in 2025. The figure also gives old age dependency ratios as observed in 1980. As the figure shows, a wide difference is expected to emerge in the old age dependency burden among the Arab countries in 2025. The ratio is expected to vary between a minimum of 2.9 per cent for Qatar and maximum of 15.0 per cent for Tunisia. The relative positions of countries falling in 'Fast', 'Medium' and 'Slow' aging categories are given in table 1. Though some of the countries of the first group are not expected to show an appreciable decline in their fertility and mortality levels by 2025, they have been classified among the fast ageing countries. In these countries, old age dependency burdens may increase due to heavy emigration rates in the working age segments of the population (see annex table 7). Likewise, although the six GCC countries are expected to experience steep declines in mortality and fertility they have been classified either among a medium

category of ageing or slow ageing countries in 2025. None of the GCC countries fell in the fast category of ageing in 2025. This phenomenon is due to the heavy immigration of the working-age, economically active population in the country (see annex table 7). Therefore, net migration plays a crucial role in either increasing or decreasing the old age dependency burden and the impact on the speed of demographic ageing.

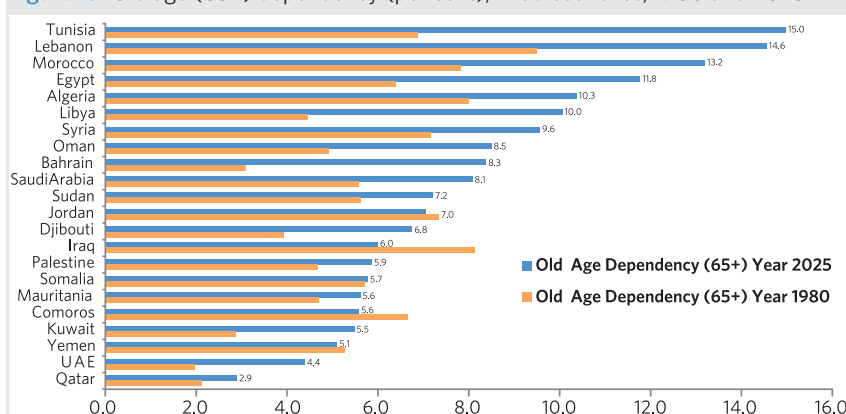
### *(b) Oldest old dependency ratio*

The oldest old dependency ratio is defined as the percentage of persons aged 80 years and above to populations in the economically active aged 15-64 years. As can be seen from figure 16, the oldest age dependency burden is expected to be high in Lebanon, Tunisia, Libya, Morocco, Egypt and Algeria. The rest of the Arab countries are not expected to have large variations in the dependency burden of 80+ populations in 2025. The list of Arab countries classified into fast, medium and slow ageing categories based on the numerical values of oldest old age dependency ratios has been given in column three of table 1.

### *(c) Ageing index*

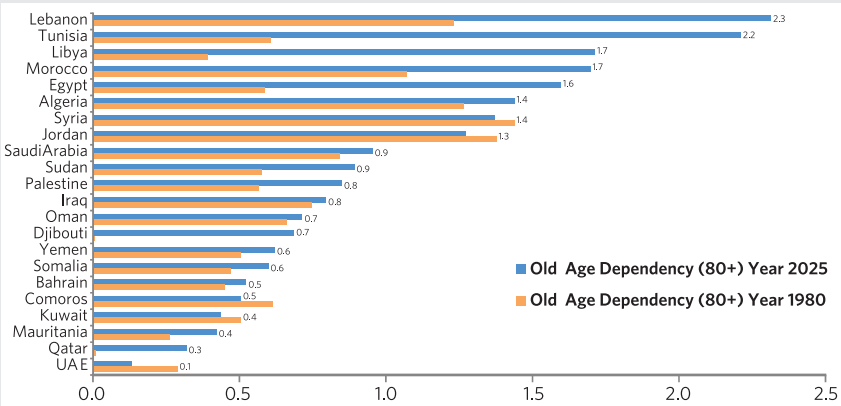
The ageing index is defined as the number of persons aged 65 years and above per 100 persons of ages under 15 years. Unlike the previous two indices of ageing discussed above, the index of ageing is least affected by net in/out migration in the country by people in the ages 25-64 years. Thus, it solely depends on fertility and mortality levels of the country. Figure 17 shows the Arab countries arranged in descending order of magnitude of the index. The names of the countries listed as ‘Fast’, ‘Medium’ and ‘Slow’ ageing countries are given in column four of table 1. Since the migration component has little or no effect on ageing indices of the countries, two

**Figure 15.** Old age (65+) dependency (per cent), Arab countries, 1980 and 2025



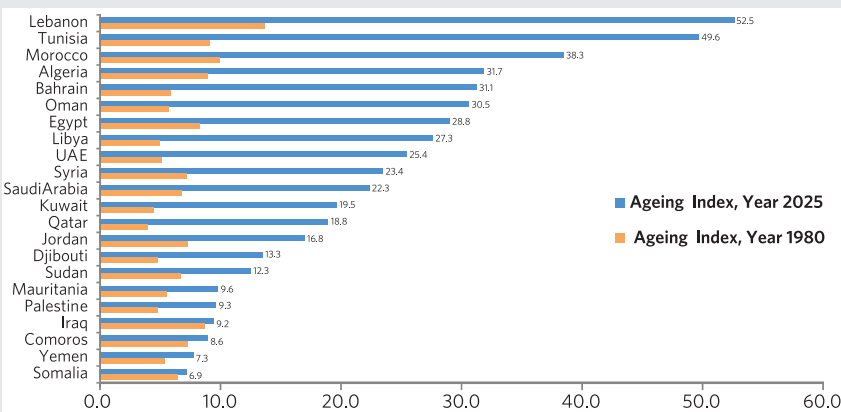
Source: Annex table 8.

**Figure 16.** Oldest old (80+) age dependency (per cent), Arab countries, 1980 and 2025



Source: Annex table 8.

**Figure 17.** Ageing index (per cent), Arab countries, 1980 and 2025



Source: Annex table 8.

**Table 2.** Classification of Arab countries as fast, medium and slow ageing countries in 2025

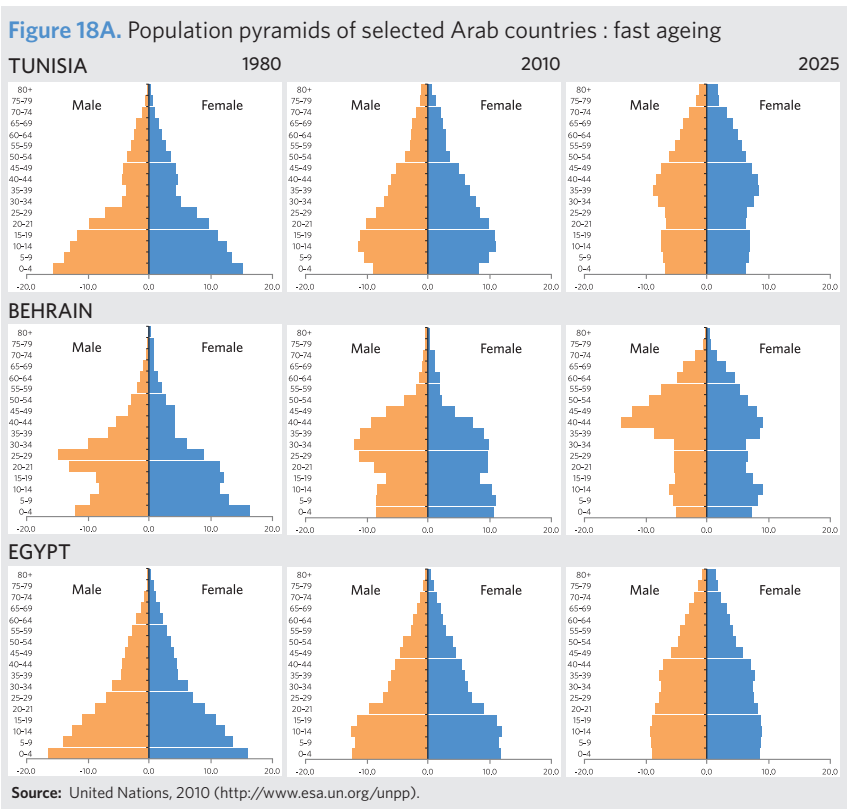
Speed of ageing	Classification based on		
	Old-age dependency ratio	Oldest old age dependency ratio	Index of ageing
Fast	Algeria, Egypt, Tunisia, Lebanon, Libya, Morocco, and Syrian Arab Republic	Algeria, Egypt, Lebanon, Libya, Morocco, Syrian Arab Republic and Tunisia	Algeria, Bahrain, Egypt, Lebanon, Libya, Morocco, Oman and Tunisia
Medium	Bahrain, Djibouti, Iraq, Jordan, Oman, Saudi Arabia, and the Sudan	Djibouti, Jordan, Iraq, Oman, Palestine, Saudi Arabia and the Sudan	Djibouti, Jordan, Kuwait, Qatar, Saudi Arabia, Syrian Arab Republic and United Arab Emirates
Slow	Comoros, Kuwait, Mauritania, Palestine, Qatar, Somalia, United Arab Emirates and Yemen	Bahrain, Comoros, Kuwait, Mauritania, Qatar, Somalia, Yemen and United Arab Emirates	Comoros, Iraq, Mauritania, Palestine, Somalia, the Sudan and Yemen

Arab countries of GCC countries, namely Bahrain and Oman have been classified as fast ageing countries. The rest of the four GCC countries have now fallen in the medium ageing group of countries.

### 5.3 Population Pyramids

To have insights into trends of population age-sex structures of countries with varying speed of ageing in the past and future possibilities, population pyramids have been presented of three countries from each of the sets of fast, medium and slow ageing countries shown in column 4 of table 2, to look into the change in the past and also to study the prospects of population ageing. The population pyramids for each of the countries are presented for the years 1980, 2010 and 2025. The population pyramids for fast, medium and slow ageing countries are given in figures 18A, 18B and 18C, respectively.

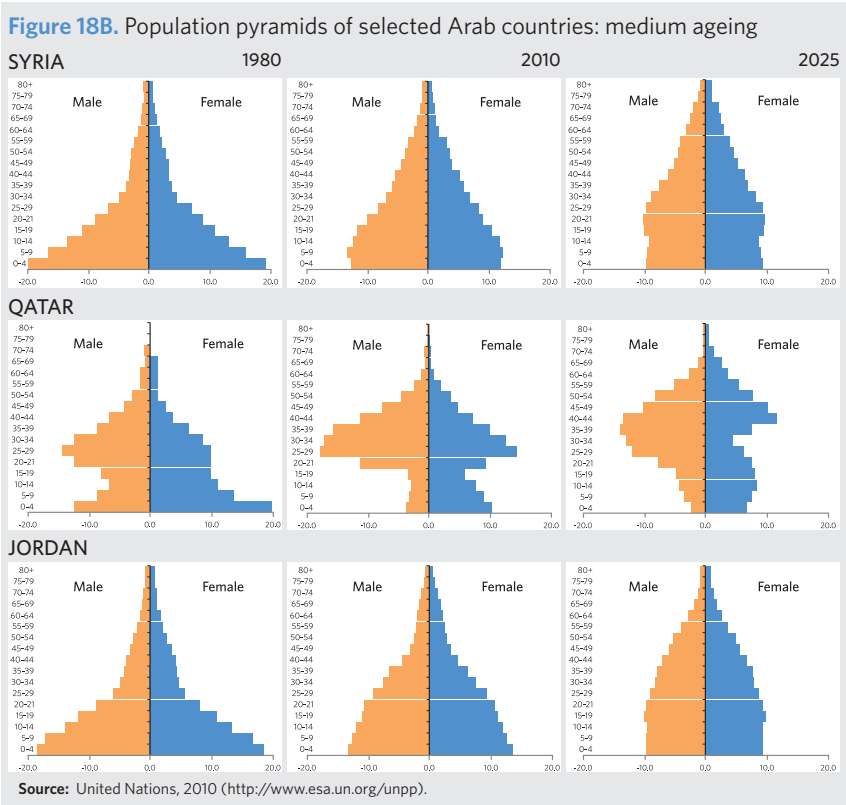
As can be seen from figure 18A, the population pyramids of fast ageing countries show moderate change in their age-sex structures from 1980-2010 but are likely to pick-up momentum during 2010-2025. Initially the base of the pyramids of Tunisia, Bahrain and Egypt – representative of group of





fast ageing countries, was broad but is expected to narrow by 2025 due to fertility decline. Another striking difference in the population age structures is the increase of population in old and oldest old (80+) populations on account of a rapid decline in mortality. A slight bulging of populations in the economically active age groups can also be observed in the case of the population pyramids of fast ageing countries such as Tunisia, Bahrain and Egypt in 2025. The age-sex structures of most of the fast ageing countries are likely to become cylindrical in shape in 2025. Dents seen in Bahrain's population pyramids may be due to age-sex selective net in/out migrations.

The medium ageing countries differ from the fast ageing countries mainly with respect to their base and old age populations. Fertility in this group of countries though showed some decline but is likely to continue to be high during 2010-2025. Similar to fast ageing countries, the age-sex structures of Arab countries belonging to the group of medium ageing countries are expected to take shape of a cylindrical structure in early ages. A small bulge in the middle age groups is also notable in some countries. The age-sex pyramid of Qatar has a typical structure. Unlike other medium ageing countries, it had a narrow population base in 2010 signifying low fertility, and a large bulge in male population of working age groups

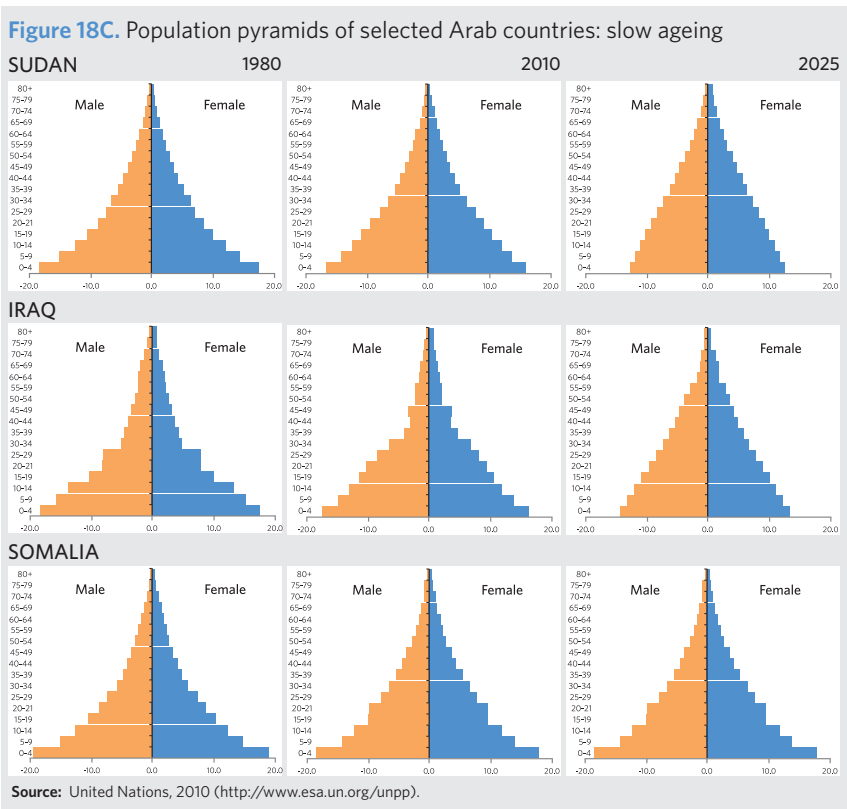


indicating a heavy immigration of young males. The impact of in/out migrations in selective age-sex groups of populations is clearly seen in the population pyramid of Qatar.

The set of eight Arab countries classified as slow ageing countries shows a typical age-sex structure of their populations. The populations of these countries like those shown for the Sudan, Iraq and Somalia in figure 18C, are expected to have a broad-based age-sex pyramids with their populations tapering off gradually with the increase in age. However, the populations of slow ageing countries are likely to have increased old age population by 2025 due to a decline in mortality.

### 5.4 Age-structural transition<sup>9</sup>

As has been observed in previous sections, demographic transition is underway in the populations of all the Arab countries at varying speeds. The transition in both fertility and mortality is causing changes in the age-sex structures of these populations.<sup>10</sup> The trajectory of age-structural transition is determined by the level and pace of declining mortality and fertility rates.<sup>11</sup> Although the interplay of fertility and mortality is the main



cause of change in age-sex structures of these populations, migration has also been responsible for shaping the population pyramids particularly of the six GCC countries where immigration has been age-sex selective in working age groups. Figure 19 shows age-sex structural transitions in the population during 1980-2025 of three Arab countries, namely Morocco, Kuwait and Palestine, selected as representatives of the fast, medium and slow ageing countries, respectively. It can be seen from the figure that all the fast, medium and slow ageing countries (as revealed by their representative countries) are expected to undergo significant changes in the age-structures of their populations during 1980-2025.

As expected, the pace of change in the share of percentages of populations in four age segments, namely, 0-4, 5-14, 15-64 and 65+ is different in case of fast, medium and slow ageing countries. These age segments are well-matched with different vital stages of the life cycle. For instance, a change in the percentage share of the 0-14 age population gives the changes in child population; whereas the percentage change in 0-4 age group necessarily indicates recent fertility change. The child population 0-14 is dependent on adults for their consumption; whereas, the youth population 15-24 has different needs and consumption patterns than other age groups.<sup>12</sup> The next age segment (25-64) represents a primarily economically active population which earns for its own family consumption and saves money for future consumption. Older persons (65+) depend on the population in working age groups to meet their consumption needs.

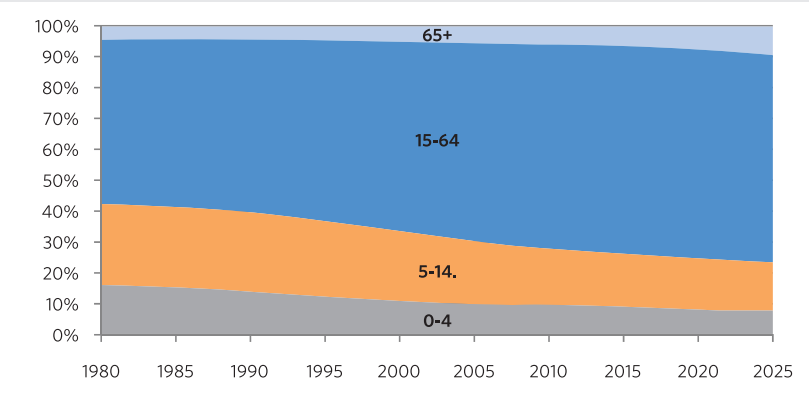
Figure 19 presents a comparison of age-structural changes during 1980-2025 among fast, medium and slow ageing countries through their selected representative countries – Morocco, Kuwait and Palestine, respectively. In the case of Morocco, the percentage of population in the 0-4 age group is expected to drop from 16.0 in 1980 to 7.4 percentage points in 2025 recording a fall of 8.6 percentage points. The falls in percentages of populations in the 0-4 age groups of Kuwait and Palestine during 1980-2025 are expected to be 8.4 and 6.4 percentage points, respectively (see annex table 9). These observations suggest that the pace of the decline in fertility is expected to be in accordance with the speed of ageing of these countries.

The share of population in 5-14 age groups in case of Morocco is expected to drop by 10.6 percentage points from 26.5 per cent in 1980 to 15.9 per cent in 2025. The decreases in the shares of populations in this age segment during 45-year period are expected to be of the order of 10.6 and 6.2 percentage points in case of Kuwait and Palestine, respectively (see annex table 9).

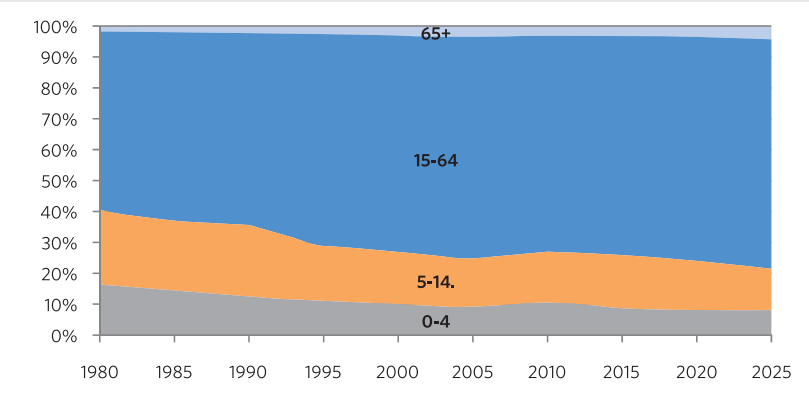
For Morocco the increase in the percentage share of its working age population (in 15-64 ages) is likely to be 14.8 percentage points during

**Figure 19.** Age structural transition of the population of selected fast, medium and slow ageing Arab countries, 1980-2025

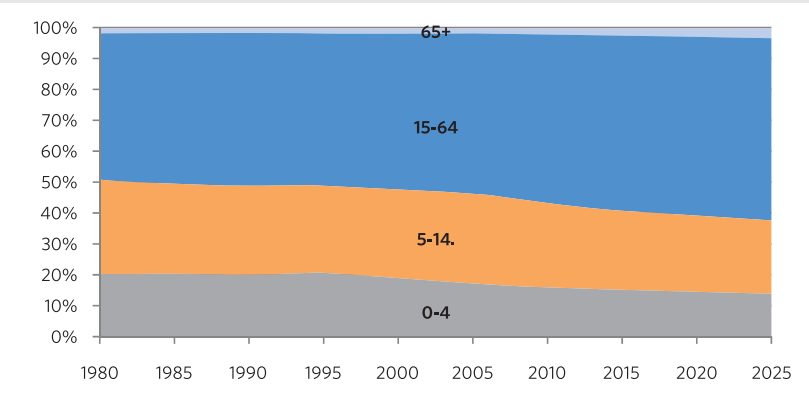
**Fast Ageing: Morocco**



**Medium Ageing: Kuwait**



**Slow Ageing: Palestine**



Source: Annex table 9.

1980-2025. However, Kuwait being a medium ageing country, the increase in its 15-64 population is likely to be 16.6 percentage points – larger than that of Morocco. This may be due to expected large scale immigration to Kuwait during the period 1980-2025. As pointed out earlier, the GCC countries are likely to receive large numbers of immigrants in working age groups during the period under study. The share of population in the 15-64 age segments of the slow population ageing country – Palestine – may increase by 11.3 percentage points in 2025 (see annex table 9).

Among the three representative countries selected, the speed of ageing is expected to be highest in Morocco, followed by Kuwait and Palestine. The increases in percentage points in the shares of populations in old ages (65+) in these three countries are likely to be by 4.2, 2.4 and 1.3 percentage points in 2025. The above observations suggest that though age-structural transition is taking place in all the Arab countries, the pace of change is moderate in fast and medium countries and low in slow ageing countries of the region. However, population ageing may accelerate after 2025, particularly in those countries which are currently classified as fast and medium ageing countries.

## 6. Demographic dividend and potential support ratio

Addressing to the question “What is the demographic dividend?”, Lee and Mason (2006) explains:

*“At an early stage of this (demographic) transition, fertility rates fall resulting in fewer children to feed. During this period, the labor force temporarily grows more rapidly than the population dependent on it, freeing up resources for investing in economic development and family welfare. Other things being equal, per capita income grows more rapidly too – That’s the first dividend.”*

The period of demographic dividend is short lived – maybe for five decades or more and is conducive to economic growth. However, the demographic dividend is not automatic. In order to reap its maximum benefits, governments have to plan much in advance to provide employment to all the new entrants<sup>13</sup> to the working age group segments. Therefore for planning purposes, it is imperative for planners and policymakers to know in advance the timing of the first demographic dividend. For this purpose, demographic or economic<sup>14</sup> dependency ratios can be used.

Recently, Miller (2008) has shown near equivalence between demographic and economic dependency and preferred the latter over the former. However, he suggested a modified demographic dependency ratio

which exactly fit (age-averaged) economic dependency. To find the size and timing of first demographic dividend we use Potential Support Ratio (PSR) which in fact, is the reciprocal of the modified demographic dependency ratio and is defined as:

$$PSR = \frac{W_{25-64}}{(0.9 * D_{0-24} + D_{65+})}$$

Where,

$W_{25-64}$  is the working population in the age group 25-64,

$D_{0-24}$  and  $D_{65+}$  are dependent persons in age groups 0-24 and 65+, respectively.

The PSRs have been computed for all the 22 Arab countries from 1980 to 2025 at 5-year intervals from the medium variant population projections given in United Nations (2010). The trends in these ratios are presented separately for Mashreq countries, Maghreb countries, GCC countries and the least developed countries, in figure 20. Exact values of the ratios have been given in annex table 10.

A numerical value of PSR greater than one implies that production exceeds the consumption and the surplus available can be used for economic growth and development of the country. Also, the time (year) at which the PSR trajectory crosses the line shown parallel to x-axis at its value one in the figure, marks the beginning of the period of demographic dividend. The amount by which the value of PSR is found more than one at a point of time, gives the size of demographic dividend available at that time in terms of percent total production of goods and services exceeded consumption levels.

## 6.1 Expected year of opening of window of economic opportunity and the anticipated percentage increase in GDP

The trends of PSRs for Arab countries from 1980 to 2025 are presented in four panels of figure 20. In addition, table 3 gives the expected year of opening of a window of economic opportunity for countries of four Arab regions, namely: (i) Mashreq countries; (ii) Maghreb countries; (iii) GCC countries; and (iv) least developed countries. As can be observed from panel A of the figure, among the six Mashreq countries, Lebanon is the only country to reach the beginning of the period of demographic dividend in 2010; Egypt and Jordan are expected to open their window of economic opportunity from 2025 only. The size of demographic dividend for Lebanon was recorded at 9 per cent, in 2010 and the country is expected to reap the economic benefits of 22 per cent, 31 per cent and 40 per cent in 2015, 2020 and 2025, respectively.

Out of four Maghreb countries, only three, namely Algeria, Morocco and Tunisia are expected to open a window of economic opportunity in 2015. Libya may see its demographic window open only in 2025. The size of the demographic dividend expected in 2025 may be 31 per cent for Algeria, 18 per cent for Morocco, 11 per cent for Tunisia and 9 per cent for Libya (see panel B of annex table 10).

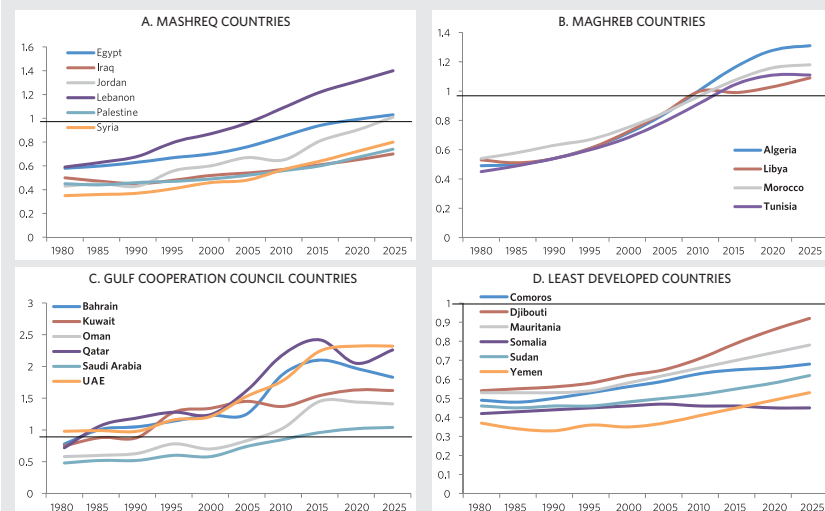
Among the six GCC countries, Bahrain and Qatar were the first in the whole Arab region to open their window of economic opportunity as early as in 1985. Later, values of PSR became greater than one for Kuwait and the United Arab Emirates in 1995 and for Oman in 2010. The period of demographic dividend for Saudi Arabia is expected to start from 2020. All GCC countries are likely to reap economic benefits in 2025. The total

**Table 3.** Expected year of opening of demographic window

A. Mashreq countries		B. Maghreb countries		C. GCC countries		D. Least developed countries	
Country	Expected year of opening demographic window (Year)	Country	Expected year of opening demographic window (year)	Country	Expected year of opening of demographic window (Year)	Country	Expected year of opening of demographic window (Year)
Egypt	2020	Algeria	2015	Bahrain	1985	Comoros	2025
Iraq	---	Libya	2025	Kuwait	1995	Djibouti	Soon after 2025
Jordan	2025	Morocco	2015	Oman	2010	Mauritania	Much later 2025
Lebanon	2010	Tunisia	2015	Qatar	1985	Somalia	Much later 2025
Palestine	----			Saudi Arabia	2020	The Sudan	Much later 2025
Syrian Arab Republic	----			United Arab Emirates	1995	Yemen	Much later 2025

Source: Annex table 10.

**Figure 20.** Trends of potential support ratio of Arab counties, 1980-2025



Source: Annex table 10.

production of goods and services is expected to exceed consumption levels in 2025, (given in order of magnitude), by 132 per cent in the United Arab Emirates, 126 per cent in Qatar, 83 per cent in Bahrain, 62 per cent in Kuwait, 41 per cent in Oman and 4 per cent in Saudi Arabia (see panel C of annex table 10).

As expected, all the six least developed countries will have a PSR value of less than one in 2025. The trajectory of all the six countries will cross the line  $PSR = 1$  between 2025 and 2050. However, Djibouti may open its window of economic opportunity soon after 2025, relatively much earlier than rest of the five least developed countries (see panel D of figure 20).

## 7. Dynamics of exclusion of older persons and the gender dimension

The interplay of several factors results in the exclusion of older persons from social, cultural and economic as well as public and political life. Many older persons are unable to participate in the development process and unable to benefit from its returns. The main excluding factor is old age, to which can be added other factors of vulnerability (such as widowhood, poor living conditions, illiteracy, ill health, disability, among others).

Older persons are often viewed as dependents and as a burden on the population in working ages. The media often reflects and perpetuates this negative image of ageing and portrays older persons as both vulnerable and passive recipients of welfare services. In fact, the media contributed to the exclusion of older persons during the recent Arab uprising that took place in several Arab countries. During its coverage of the events related to the Arab uprising, the media focused on the younger population groups, while neglecting the role of older people in this movement, even though they may have made many sacrifices. In other words, the media did not shed light on the important contributions of older persons in the social, cultural, economic and political domains. It did not adequately transmit the voices of older persons who had long been calling for change, reform and democracy and who had long resisted oppressive and totalitarian policies. The media should have called for the integration of older persons into decision-making processes at all levels and should have encouraged their participation in the labour force and in public life in order to benefit from their life-long experiences in community development, emphasizing the importance of family cohesion and strengthening solidarity and communication between generations.

The Madrid International Plan of Action on Ageing (MIPAA) cites “Images of Ageing” as one of the issues within Priority Direction III on



“Ensuring enabling and supportive environments”. It specifies that “a positive view of ageing is an integral aspect of the International Plan of Action on Ageing, 2002”. In fact, the “recognition of the authority, wisdom, dignity and restraint that comes with a lifetime of experience has been a normal feature of the respect accorded to the old throughout history. These values are often neglected in some societies and older persons are disproportionately portrayed as a drain on the economy, with their escalating need for health and support services. Although healthy ageing is naturally an increasingly important issue for older persons, public focus on the scale and cost of health care, pensions and other services have sometimes fostered a negative image of ageing. Images of older persons as attractive, diverse and creative individuals making vital contributions should compete for public attention. Older women are particularly affected by misleading and negative stereotypes: instead of being portrayed in ways that reflect their contributions, strengths, resourcefulness and humanity, they are often depicted as weak and dependent. This reinforces exclusionary practices at the local and national levels” (MIPAA, paragraph 112).

Older persons living in rural areas are often “left behind” as their family members have moved to urban areas for work or education. Older persons living in urban areas also suffer because “the urban setting is generally less conducive to sustaining the traditional extended family network and reciprocity system than are rural areas. Older migrants from rural to urban areas in developing countries often face loss of social networks and suffer from the lack of a supporting infrastructure in cities, which can lead to their marginalization and exclusion, in particular if they are ill or disabled.” (MIPAA, paragraph 31).

In this context, the Madrid International Plan of Action on Ageing (MIPAA) is based on four basic pillars:

The first pillar – Development – focuses on securing an adequate income for the elderly, ensuring social protection and poverty prevention, as well as ensuring a favourable environment for their active participation in society and in the development process and strengthening intergenerational solidarity.

The second pillar – Health and well-being – focuses on improving access to health-care services and improving the quality of life, which requires training care providers and health professionals.

The third pillar – Enabling and supportive environments – focuses on supporting caregivers, as well as working to change the family structure and living environment in order to ensure a decent life for the elderly.

The fourth pillar – Mainstreaming the issues of older persons into development planning – focuses on building national capacity in the formulation, implementation, monitoring and evaluation of policies integrating the issues of older persons in development planning.

The gender dimension also serves as an excluding factor for older women in the traditional Arab male-dominated culture. The Arab Plan of Action on Ageing (APAA) provided a detailed and clear analysis of what we might call the “feminization of ageing”. In fact, various studies have shown that older women in the Arab region are a highly marginalized group vulnerable to many kinds of oppression. Prevailing socio-cultural norms and traditions discourage the participation of young women in economic life, limiting them to their reproductive role as mothers and housewives. This results in a low percentage of women who are involved in paid employment during their working ages and therefore a low percentage of older women who benefit from health or social insurance. As a result, older women often do not receive the same opportunities for access to health care as is the case for men or younger women. In fact, many older women do not obtain appropriate medical care for cataracts and do not receive appropriate eye care because their family members cannot afford the costs of required tests, drugs and surgery. This increases the number of blind and deaf women as compared with older men.

In this context, the Madrid Political Declaration stated in Article 8: “We recognize the need to mainstream a gender perspective into all policies and programmes to take account of the needs and experiences of older women and men”.

The Madrid International Plan of Action also states that “older women outnumber older men, increasingly so as age increases. The situation of older women everywhere must be a priority for policy action. Recognizing the differential impact of ageing on women and men is integral to ensuring full equality between women and men and to the development of effective and efficient measures to address the issue. It is therefore critical to ensure the integration of a gender perspective into all policies, programmes and legislation”. (MIPAA, paragraph 8).

## 8. Conclusions and recommendations

The demographic transition is underway in all the 22 Arab countries but with varying speeds in different countries. With the exception of Somalia, all countries of the region have witnessed steep declines in their mortality levels in the past. Except Qatar, the pace of increase in life expectancy at birth has been relatively higher for females in the rest of the 21 Arab

countries. Life expectancy of females has been more than that of males in almost all the countries of the Arab region during the period 1980-1985 to 2020-2025. The difference in the two life expectancies has resulted in a higher number of 65+ females in the region. In a majority of Arab countries, women are expected to outnumber men in old ages in 2025. The excess of 65+ females over 65+ males has been estimated about 2.5 million in 2025 and is likely to increase in the future.

The gender dimension of ageing is an issue of priority for policymakers. Older women represent a significantly disadvantaged group. A considerable proportion of older women are single women, most of them may be widows. Egypt will have nearly 0.9 million single 65+ women followed by Iraq (0.4m), Algeria (0.3m), Morocco (0.4m) and the Sudan (0.2m). These countries and a few more will have a heavy burden on the economies to meet the increasing demand of services for the swelling number of elderly single/widow women. Furthermore, the financial situation of these older women is often poor, which may lead them to work, sometimes under conditions of hardship in the informal sector, in order to fulfil their basic needs. This vulnerability of women is aggravated by the male-dominated culture where gender discrimination can be seen in many aspects, mainly in the area of health. In fact, health problems in old age are often the result of poor health care in earlier periods of life leading to complications that accumulate and aggravate later in life.

Some Arab countries have undertaken specific interventions in relation to older women, particularly those who have no one to take care of them. For example, Jordan has initiated programmes that seek to empower older women. On the other hand, in Saudi Arabia, the Government provides financial help for older widowed and divorced women, as well as free health care in public hospitals. Also, in the case of Bahrain, these older women are offered financial help and are admitted to nursing homes or given appropriate home care.

The gender dimension of ageing should be considered in the formulation, implementation, monitoring and evaluation of national policies for older persons. Countries should plan in advance to construct old age homes<sup>15</sup> for women and develop their system of health care as well as system of economic and social security.<sup>16</sup> These services are all the more needed by an urban women where family support to elderly is dwindling due to break up of joint family system and increase in individualism in urban society. Countries should also ensure the availability of accurate, reliable, timely and comparable data on older persons, disaggregated by gender, in order to reveal the specific needs and challenges faced by older women in particular. They should also adopt a life-course approach which considers that investment in the individuals in early age enables them to avoid several challenges and complications faced in older age.

Another issue of priority for policymakers is the importance of adopting a development approach, in addition to the traditional welfare approach which focuses on providing services to the most vulnerable sections of the society. This development approach will enable older persons to participate in the development process and to benefit from its returns. In this context, it is important to refer to the important role that older persons played in the current Arab uprising, despite the fact that the media tended in general to ignore their role. In fact, during its coverage of the events related to the Arab uprising, the media focused on the younger groups, while neglecting the role of older people in this movement. It is thus important for countries to ensure that the media raises awareness of the contributions of older persons who called for change, reform and democracy, on the social, cultural, economic and political levels. Media channels should provide a positive image of older people as active agents in the development process. They should also emphasize the importance of family cohesion as well as solidarity and communication between generations.

On the other hand, with regard to fertility, a number of countries had attained replacement or near replacement levels of fertility in 2010 and are likely to reach even below replacement fertility level in 2025. The analyses of net migration rates revealed that with the exception of the GCC countries, almost all the Arab countries had been out-migrating countries and are likely to experience their labour emigrating to countries with better employment prospects and higher wages. Continuous out-migration of youths may eventually deplete the size of the available population in working age groups. Further, decline in fertility reduces the growth of the labour force, while continuing improvements in old-age mortality would accelerate the growth of the elderly population (Lee and Mason, 2006). The interplay of fertility decline even to below replacement levels, improvements in old-age mortality and emigration may result in high dependency ratios in some Arab countries. This in turn would lower the saving rates and would have adverse affects on the growth of the economy of these countries. Further, notwithstanding the process of ageing being slow in most of the countries of Arab region up to 2025, the Governments of these countries may face challenges to meet increased demands in health and social sectors due to continuously swelling numbers of elderly populations.

As is well known, demographic transition and epidemiological transition go hand in hand. With the ageing of populations, the pattern of diseases is likely to change. The incidence and prevalence of old age diseases like hypertension, diabetes, cancer, Parkinson, renal and cardiovascular diseases are likely to assume alarming proportions in the fast ageing countries by 2025; whereas the medium ageing Arab countries<sup>17</sup> may face such challenges during 2025-2050. The fast ageing countries should plan to meet health needs due to burden of old age diseases likely to fall during next 15 years.

During the course of demographic transition, every country gets a one-time economic opportunity – called the demographic dividend – which is not automatic. Continuous efforts need to be made to reap the maximum benefits from the period of economic opportunity. Lessons are to be learned from the success story of East Asian countries which reveals that the open trade during the period of demographic dividend through manipulations of the labour market that can accommodate the large supply of labour force helped stimulate high economic growth.<sup>18</sup> Some of the GCC countries had presented a unique example to mitigate the ill effects of ageing and the resulting increased dependency burden by importing skilled/semi-skilled labour and employing them in productive sectors of economy. The age structures of the populations of these countries are found to be bulging in ages 25-64. The maximum benefit of the period of economic opportunity is likely to be reaped by Qatar, the United Arab Emirates, Bahrain, Kuwait and Oman in 2025 where the size of the demographic dividend as measured by the difference between total production of goods and services between consumption levels is expected to range from a minimum of 40 per cent for Oman to a maximum of 130 per cent for Qatar and the United Arab Emirates (see annex table 10).

Therefore as a policy measure, other Arab countries can use their demographic dependency ratios as the demographic barometers of a country and make efforts to attract their young expatriates in phases, to absorb them in productive sector of economy. Perhaps this strategy may offset the adverse effects of the slowing down of labour supply due to continued decline in fertility and the increase in old age dependency ratio on account of falling mortality levels, on the national economy. The decision about the size of the labour force to be imported during a given period of time has to be governed by two parameters: (i) critical value<sup>19</sup> of the dependency ratio and (ii) the number of the immigrants which the country can gainfully employ during the period. Such exercises can be repeated by a country as and when the dependency ratio exceeds its critical value.

Arab countries should plan in advance to reap the maximum benefits of the period of demographic dividends. This needs long-term planning to create employment opportunities in order to absorb the population in the economically active age groups to achieve full employment in the country. Lessons may be taken from the success story of East Asian countries to make economic miracles happen in the Arab region.

With the life expectancy at birth reaching nearly 80 years in Arab region, a retirement age set at 65 years of age is quite low. Many people are healthy and capable of doing even physical work at this age. Therefore, the retirement age may be raised to 70 years. However, if the increase in retirement age in government jobs is not immediately possible, opportunities for work according to ones capabilities may be created in the

informal sector of the economy. The aim should be to bring elderly persons in the main stream of the society so that they also consider themselves economically independent and an integral part of the humanity. Non-governmental organizations can potentially play a vital role in the success of such plans for senior citizens.

As discussed earlier, due to increasing difference in life expectancies at birth of males and females in the region, a rapid growth of single females in the 65+ and even 80+ ages is imminent. Their absolute size is expected to be very large by 2025 in a few countries, such as Egypt, Iraq, Morocco, Algeria, Tunisia and Lebanon. To have a sustainable solution to the problem and to give a dignified life to elderly women a long-term three point plan may be implemented: (i) Invest in the education of girls including professional or job oriented education; (ii) the reservation of jobs for women in both public and private sectors; and (iii) In some services like teaching, women may be allowed to work beyond the formal age of retirement so long as their work is found to be excellent.

The above recommendations, if implemented in a timely fashion, will go long way towards overcoming the problems of elderly men and women which are likely to be faced by a number of Arab countries, particularly those which are presently found in fast and medium ageing countries. Governments of these countries have to draw effective plans for their senior citizens to give them a decent quality of life so that they live happily with dignity in society.

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## Annex

**Annex table 1.** Male, female and total population of Arab countries and sex ratio, 1980-2025

Year	Male	Female	Total	Sex ratio
1980	87 437	85 260	172 697	1025.5
1985	101 737	98 833	200 570	1029.4
1990	116 166	112 355	228 521	1033.9
1995	130 902	125 984	256 886	1039.0
2000	144 812	140 226	285 038	1032.7
2005	162 520	155 711	318 231	1043.7
2010	183 313	174 119	357 432	1052.8
2015	201 824	192 333	394 157	1049.3
2020	220 604	210 816	431 420	1046.4
2025	238 940	229 003	467 943	1043.4

Source: United Nations, 2010 (<http://www.esa.un.org/unpp>).

\* Number of males per 1,000 females.

**Annex table2.** Growth rates (exponential) of male, female and total populations of Arab countries, 1980-2025

Year	Male	Female	Total
1980-85	3.03	2.95	2.99
1985-90	2.65	2.56	2.61
1990-95	2.39	2.29	2.34
1995-00	2.02	2.14	2.08
2000-05	2.31	2.09	2.20
2005-10	2.41	2.23	2.32
2010-15	1.92	1.99	1.96
2015-20	1.78	1.84	1.81
2020-25	1.60	1.65	1.63

Source: Computed from annex table 1.



**Annex table 3.** Age-specific sex ratios of total Arab population, 1980-2025

Age group	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
0-4	1035.9	1038.1	1039.6	1041.6	1043.0	1045.0	1045.9	1045.7	1045.6	1045.6
5-9	1034.5	1035.6	1041.2	1038.1	1041.1	1043.1	1045.4	1046.8	1045.4	1044.9
10-14	1035.5	1034.1	1033.8	1041.8	1037.8	1040.4	1043.0	1045.9	1046.9	1045.2
15-19	1024.7	1033.0	1031.2	1031.8	1031.6	1033.8	1041.3	1040.6	1046.1	1046.0
20-24	1038.6	1023.6	1057.5	1030.4	1039.2	1037.1	1055.7	1039.1	1046.0	1047.0
25-29	1062.6	1054.9	1053.4	1081.3	1073.8	1076.2	1091.1	1056.8	1049.3	1049.7
30-34	1054.5	1080.1	1065.3	1080.3	1056.8	1092.7	1118.8	1086.7	1059.9	1050.2
35-39	1023.4	1071.8	1077.5	1079.7	1041.9	1090.9	1126.9	1110.1	1080.8	1056.6
40-44	995.5	1032.3	1058.0	1085.0	1070.3	1085.2	1104.3	1125.2	1103.8	1077.8
45-49	1003.9	986.7	1016.5	1050.0	1027.1	1074.9	1062.7	1106.5	1118.6	1101.0
50-54	981.1	994.2	970.6	1006.4	1012.9	1054.8	1053.5	1054.9	1092.0	1109.4
55-59	985.9	962.7	986.1	961.2	967.5	999.8	1018.3	1032.8	1030.2	1073.3
60-64	960.6	958.4	946.0	983.1	911.2	949.6	968.4	989.1	998.0	1001.1
65-69	946.8	928.6	935.2	929.5	947.3	897.8	892.8	929.6	945.5	958.3
70-74	911.3	913.3	892.9	901.2	893.0	899.7	844.6	842.8	875.5	892.9
75-79	885.2	872.0	859.5	850.6	858.4	833.5	823.1	780.2	774.4	803.5
80-84	868.2	838.8	837.7	811.8	793.3	793.3	708.5	745.9	697.3	687.4
85-89	844.4	800.0	771.7	784.1	733.7	713.7	685.8	620.5	644.2	590.7
90-94	750.0	708.3	750.0	617.6	702.1	603.8	562.5	581.4	495.9	512.5
95-99	500.0	500.0	1000.0	666.7	400.0	571.4	375.0	363.6	466.7	240.0
100+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Computed from United Nations, 2010 (<http://www.esa.un.org/unpp>).

**ANNEX TABLE 4.** Total male and female populations (in '000) aged 65+ and 80+, Arab region, 1980 to 2025

Year	Males		Total male	Females		Total female
	65+	80+	Population	65+	80+	Population
1980	2837 (3.2)	319 (0.4)	87 437	3103 (3.6)	374 (0.4)	85 260
1985	3200 (3.1)	358 (0.4)	101 737	3553 (3.6)	437 (0.4)	98 833
1990	3657 (3.1)	441 (0.4)	116 166	4091 (3.6)	539 (0.5)	112 355
1995	4397 (3.4)	532 (0.4)	130 902	4944 (3.9)	670 (0.5)	125 984
2000	5217 (3.6)	607 (0.4)	144 812	5848 (4.2)	788 (0.6)	140 226
2005	5957 (3.7)	693 (0.4)	162 520	6862 (4.4)	911 (0.6)	155 711
2010	6624 (3.6)	835 (0.5)	183 313	7930 (4.6)	1205 (0.7)	174 119
2015	8012 (4.0)	1027 (0.5)	201 824	9509 (4.9)	1467 (0.8)	192 333
2020	10115 (4.6)	1201 (0.5)	220 604	11840 (5.6)	1799 (0.9)	210 816
2025	12764 (5.3)	1406 (0.6)	238 940	14754 (6.4)	2187 (1.0)	229 003

Source: Computed from United Nations, 2010 (<http://www.esa.un.org/unpp>).

**Annex table 5.** Populations (in '000) aged 65+ and 80+, Arab countries, 1980 and 2025

Arab countries	1980		2025		1980		2025	
	Male				Female			
	65+	80+	65+	80+	65+	80+	65+	80+
Algeria	352	50	391 1	154	405	68	648 1	267
Bahrain	4	0	63	3	3	0	36	3
Comoros	4	0	16	1	6	0	19	2
Djibouti	3	0	22	2	4	0	28	3
Egypt	704	61	448 3	396	847	80	329 4	655
Iraq	279	26	680	70	272	24	033 1	156
Jordan	41	8	180	31	40	8	195	35
Kuwait	11	1	93	7	12	3	60	5
Lebanon	67	7	196	27	80	11	276	47
Libya	34	3	237	34	34	3	271	52
Mauritania	16	1	72	5	20	1	91	8
Morocco	417	54	495 1	155	397	54	752 1	261
Palestine	16	2	97	12	18	3	112	17
Oman	16	3	145	9	15	2	72	9
Qatar	2	0	25	3	1	0	30	3
Saudi Arabia	144	22	092 1	108	140	20	933	130
Somalia	84	6	194	18	103	9	237	27
Sudan	269	25	230 1	142	321	35	410 1	184
Tunisia	134	11	564	72	107	10	664	107
United Arab Emirates	8	1	275	7	6	1	80	3
Syrian Arab Republic	149	32	778	99	157	30	876	136
Yemen	83	6	471	51	115	12	602	77
Total	2 837	319	12 764	1 406	3 103	374	14 754	2 187

**Annex table 6.** CBR, CDR, TFR and life expectancy at birth, Arab countries, 1980-1985 to 2020-2025

Country	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
	CBR								
Algeria	41.2	34.8	28.7	21.6	20.7	20.8	19.2	17.0	14.6
Bahrain	32.9	31.3	26.3	23.1	21.1	20.7	17.9	14.6	12.2
Comoros	48.6	39.6	36.6	38.6	40.2	39.0	35.7	32.5	30.6
Djibouti	44.0	43.1	40.1	34.4	31.2	29.4	28.4	26.9	24.8
Egypt	38.0	35.0	29.1	26.6	25.1	23.9	22.3	20.2	18.3
Iraq	39.1	38.8	38.2	37.9	37.5	36.6	34.1	32.1	30.4
Jordan	39.7	37.5	33.9	32.0	28.1	26.4	23.7	21.6	19.8
Kuwait	37.1	26.5	18.0	24.1	18.5	18.7	17.4	15.9	14.9
Lebanon	29.5	26.7	24.8	22.6	17.7	15.9	14.9	13.9	12.9
Libya	45.6	29.9	24.7	23.0	24.3	24.0	21.7	18.5	15.3
Mauritania	42.6	41.3	40.0	38.2	36.6	34.8	32.7	30.6	28.6
Morocco	37.3	32.0	27.3	23.4	20.9	20.2	18.7	17.2	15.5
Palestine	44.9	43.1	45.9	40.9	36.2	33.8	32.4	31.1	29.2
Oman	48.9	43.3	33.1	26.7	21.5	19.1	16.9	14.7	12.5
Qatar	33.2	25.4	22.8	19.2	18.8	14.1	11.6	8.8	6.7
Saudi Arabia	42.7	38.3	33.5	29.7	24.7	22.1	21.4	19.9	17.6
Somalia	43.8	45.3	45.6	45.9	45.7	44.2	43.0	42.8	41.6
Sudan	43.6	41.7	40.1	38.6	36.5	33.8	31.9	29.9	28.0
Tunisia	34.0	30.3	24.0	18.4	16.8	17.4	16.5	15.2	13.5
United Arab Emirates	30.5	28.4	23.0	18.1	16.2	14.0	12.3	10.3	8.7
Syrian Arab Republic	42.8	38.4	33.3	29.7	26.2	23.9	21.9	20.7	19.6
Yemen	57.9	53.9	49.1	42.7	39.9	38.6	37.2	34.1	31.1

Country	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
	CDR								
Algeria	9.9	7.2	6.0	5.4	5.0	4.9	4.9	4.9	5.1
Bahrain	4.1	3.6	3.3	3.2	3.0	2.8	2.8	3.1	3.8
Comoros	14.3	12.1	11.0	10.6	10.1	9.4	8.2	7.3	6.7
Djibouti	15.5	14.5	13.4	12.2	11.3	10.5	9.9	9.2	8.6
Egypt	11.2	9.6	7.8	6.4	5.6	5.2	5.1	5.2	5.3
Iraq	12.6	8.0	5.6	5.4	5.6	6.3	5.0	4.7	4.4
Jordan	6.5	5.7	4.9	4.5	4.2	4.1	4.0	4.1	4.3
Kuwait	3.4	2.8	2.7	3.0	3.1	3.1	3.0	3.1	3.3
Lebanon	7.6	7.3	7.1	7.1	6.9	6.9	7.0	7.1	7.3
Libya	10.9	5.3	4.5	4.0	4.0	4.0	4.1	4.3	4.5
Mauritania	12.4	11.6	11.0	10.6	10.3	10.1	9.2	8.6	8.1
Morocco	10.7	8.7	7.2	6.4	6.0	5.8	5.8	5.9	6.1
Palestine	6.8	5.5	4.8	4.1	3.8	3.6	3.5	3.4	3.4
Oman	8.4	5.7	4.0	3.4	3.1	3.7	3.9	4.2	4.7
Qatar	3.1	2.5	2.2	2.1	1.9	1.6	1.5	1.6	1.8
Saudi Arabia	7.5	5.8	4.9	4.5	4.1	3.8	3.7	3.7	3.8
Somalia	20.0	18.5	20.6	17.9	16.2	15.5	14.4	13.3	12.1
Sudan	15.5	14.4	13.2	12.0	10.3	9.4	8.6	7.9	7.4
Tunisia	7.9	6.9	6.2	5.8	5.7	5.9	6.0	6.1	6.3
United Arab Emirates	3.7	3.1	2.5	2.1	1.7	1.4	1.4	1.8	2.4
Syrian Arab Republic	6.7	5.3	4.3	3.8	3.6	3.5	3.6	3.6	3.8
Yemen	15.8	12.6	11.4	10.2	8.3	7.0	6.0	5.2	4.6

Annex table 6 (continued)

Country	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
	TFR								
Algeria	6.5	5.3	4.1	2.9	2.5	2.4	2.1	2.0	1.8
Bahrain	4.6	4.1	3.4	2.9	2.6	2.6	2.4	2.3	2.1
Comoros	7.1	6.0	5.3	5.3	5.3	5.1	4.7	4.4	4.1
Djibouti	6.6	6.4	5.9	5.1	4.5	4.0	3.6	3.3	3.0
Egypt	5.2	4.8	3.9	3.5	3.2	2.9	2.6	2.5	2.3
Iraq	6.4	6.2	5.8	5.4	5.1	4.9	4.5	4.2	4.0
Jordan	7.1	6.4	5.1	4.3	3.6	3.3	2.9	2.6	2.4
Kuwait	5.1	3.3	2.2	2.9	2.2	2.3	2.3	2.2	2.2
Lebanon	3.9	3.3	3.0	2.7	2.1	1.9	1.8	1.7	1.6
Libya	7.2	5.7	4.1	3.3	3.0	2.7	2.4	2.2	2.0
Mauritania	6.3	6.1	5.8	5.4	5.0	4.7	4.4	4.0	3.7
Morocco	5.4	4.5	3.7	3.0	2.5	2.4	2.2	2.0	1.9
Palestine	7.1	6.4	6.6	5.8	5.1	4.7	4.3	3.9	3.6
Oman	8.3	7.9	6.3	4.5	3.0	2.5	2.2	1.9	1.7
Qatar	5.5	4.5	4.0	3.3	3.0	2.4	2.2	2.0	1.9
Saudi Arabia	7.0	6.2	5.5	4.5	3.5	3.0	2.6	2.4	2.2
Somalia	6.7	6.7	6.5	6.5	6.5	6.4	6.3	6.2	6.0
Sudan	6.3	6.1	5.8	5.5	5.1	4.6	4.2	3.9	3.6
Tunisia	4.9	4.1	3.1	2.3	2.0	2.0	1.9	1.8	1.7
United Arab Emirates	5.2	4.8	3.9	3.0	2.4	1.9	1.7	1.6	1.5
Syrian Arab Republic	6.8	5.9	4.8	4.0	3.4	3.1	2.8	2.5	2.3
Yemen	9.2	8.9	8.2	7.0	6.1	5.5	4.9	4.4	4.0

Source: United Nations, 2010 (<http://www.esa.un.org/unpp>).

**Annex table 6** (continued). Life expectancy at birth for males, females and total for Arab countries, 1980-1985 to 2020-2025

Country	1985-1980			1990-1985			1995-1990			2000-1995			2005-2000			2010-2005			2015-2010			2020-2015			2025-2020		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Algeria	61.4	60.2	62.6	65.9	64.7	67.1	67.8	66.6	69.1	69.2	67.9	70.4	71.0	69.7	72.2	72.3	70.9	73.7	73.5	71.9	75.0	74.5	72.8	76.1	75.4	73.7	77.1
Bahrain	70.5	69.3	72.3	71.9	70.8	73.3	72.7	71.7	73.9	73.4	72.6	74.5	74.0	73.3	74.9	74.6	74.0	75.4	75.3	74.7	76.1	75.8	75.3	76.7	76.5	75.9	77.4
Comoros	53.0	51.0	55.0	55.0	53.0	57.0	56.1	54.3	58.0	57.3	55.7	59.0	58.5	57.0	60.0	59.7	58.3	61.0	61.7	60.3	63.2	63.5	62.0	65.1	65.2	63.6	66.9
Djibouti	49.2	47.8	50.7	50.7	49.2	52.2	52.0	50.6	53.5	53.3	51.8	54.8	54.6	53.2	56.0	56.6	55.2	58.0	58.5	57.0	60.0	60.6	58.9	62.3	62.4	60.6	64.2
Egypt	57.6	56.3	59.0	60.5	59.0	62.0	63.7	62.0	65.5	67.4	65.7	69.3	70.5	68.6	72.4	72.3	70.5	74.3	73.5	71.6	75.5	74.5	72.5	76.6	75.5	73.4	77.5
Iraq	53.3	44.5	65.2	63.3	56.8	70.7	70.3	67.6	73.2	71.0	68.3	73.7	70.1	67.6	72.6	67.3	63.4	71.7	70.2	67.6	72.2	75.2	74.2	72.7	75.8	74.8	73.3
Jordan	68.0	66.8	69.4	69.7	68.6	71.0	70.9	69.8	72.2	71.7	70.6	72.9	72.3	71.2	73.6	72.9	71.7	74.3	73.6	72.2	75.2	74.0	72.7	75.8	74.8	73.3	76.4
Kuwait	70.9	69.8	72.6	72.1	71.1	73.5	72.8	72.0	74.1	73.3	72.6	74.5	73.7	73.1	74.9	74.2	73.5	75.2	74.8	74.0	75.9	75.3	74.5	76.5	75.8	74.9	77.1
Lebanon	67.0	64.7	69.5	68.0	65.6	70.5	69.4	67.2	71.6	70.3	68.2	72.4	71.0	68.9	73.2	72.0	69.9	74.2	72.9	70.7	75.1	73.9	71.7	76.0	74.9	72.6	77.0
Libya	62.4	60.6	64.2	66.4	64.5	68.9	69.0	66.9	71.7	71.6	69.3	74.5	72.8	70.5	75.7	74.0	71.7	76.9	75.1	72.7	77.9	76.0	73.6	78.7	76.9	74.4	79.4
Mauritania	54.2	52.8	55.6	55.4	53.9	56.8	56.5	54.9	57.9	56.9	55.3	58.4	57.2	55.6	58.8	57.5	55.9	59.2	59.2	57.4	61.0	60.6	58.7	62.5	62.0	59.9	64.0
Morocco	59.7	58.0	61.4	62.7	60.9	64.6	65.5	63.5	67.5	67.7	65.6	69.8	69.6	67.5	71.8	71.2	69.0	73.4	72.5	70.3	74.9	73.7	71.4	76.0	74.7	72.3	77.0
Palestine	64.4	62.8	66.1	67.1	65.5	68.7	68.9	67.3	70.4	70.4	68.9	71.9	71.3	69.8	72.9	72.2	70.6	73.8	73.1	71.5	74.8	73.9	72.3	75.7	74.7	73.0	76.4
Oman	63.4	62.1	64.7	68.4	67.2	69.8	72.1	71.1	73.4	73.2	72.4	74.5	74.3	73.6	75.2	72.6	70.9	74.8	73.4	71.4	76.4	74.2	72.7	77.4	75.0	73.6	78.3
Qatar	71.9	71.3	72.8	73.4	73.0	74.0	74.7	74.5	75.0	75.8	75.8	75.9	76.9	77.0	76.6	77.9	78.1	77.3	78.5	78.7	78.2	79.2	79.2	79.0	79.5	79.7	79.8
Saudi Arabia	64.2	63.3	65.4	67.3	66.3	68.6	69.6	68.6	71.1	70.7	69.6	72.4	71.9	70.7	73.4	73.1	72.2	74.4	74.2	73.2	75.6	75.1	74.0	76.6	75.9	74.8	77.6
Somalia	43.9	42.4	45.6	45.9	44.4	47.6	43.3	41.8	44.9	46.9	45.3	48.5	49.4	47.8	51.0	50.2	48.7	51.8	51.7	50.1	53.4	53.5	51.8	55.2	55.4	53.7	57.2
Sudan	50.2	48.8	51.7	51.7	50.2	53.2	53.5	52.0	55.1	55.3	53.7	57.0	58.6	57.2	60.1	60.3	58.6	62.0	62.0	60.2	63.8	63.7	61.9	65.7	65.4	63.5	67.4
Tunisia	64.1	62.7	65.7	67.0	65.3	68.8	70.1	68.3	72.1	72.0	70.1	74.0	73.0	71.1	75.1	73.9	71.9	76.0	74.8	72.6	77.1	75.6	73.4	77.9	76.5	74.2	78.8
United Arab Emirates	69.2	68.1	71.3	71.1	70.0	72.9	72.5	71.6	74.1	73.8	72.9	75.2	74.9	74.2	76.2	75.9	75.3	77.0	76.8	76.0	78.0	77.4	76.6	78.8	78.0	77.3	79.6
Syrian Arab Republic	67.5	65.9	69.2	70.0	68.5	71.4	72.0	70.8	73.4	73.5	72.2	74.8	74.5	73.1	75.9	75.3	73.9	76.9	76.1	74.5	77.7	76.8	75.2	78.6	77.6	75.9	79.3
Yemen	51.5	50.3	52.6	55.2	54.0	56.3	56.8	55.5	57.9	58.3	57.1	59.6	61.3	60.0	62.6	63.9	62.5	65.4	66.1	64.5	67.7	68.0	66.3	69.7	69.7	67.8	71.6

Source: United Nations, 2010 (<http://www.esa.un.org/unpp>).

**Annex table 7.** Trends in net migration rates in Arab countries, 1980-1985 to 2020-2025

Country	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	2020-2025
Mashreq countries									
Egypt	-139	-130	-222	-189	-74	-69	-43	-53	-53
Iraq	-40	-126	-31	-4	-116	-30	63	50	50
Jordan	16	24	80	-38	-19	41	-6	-10	-10
Lebanon	-44	-44	46	0	20	-3	-3	-4	-4
Palestine	-12	-8	7	14	-38	-18	-4	-4	-4
Syrian Arab Republic	-17	-29	-14	-26	110	-11	-35	-16	-10
Maghreb countries									
Algeria	17	-14	-10	-28	-28	-28	-28	-28	-18
Libya	37	-4	-4	-4	-4	-4	-64	-2	-2
Morocco	-10	-50	-90	-100	-123	-135	-99	-87	-71
Tunisia	-5	-5	-9	-11	-16	-4	-4	-4	-4
Gulf Cooperation Council countries									
Bahrain	1	3	1	4	5	90	8	4	3
Kuwait	21	24	-120	25	32	56	28	20	20
Oman	16	2	13	-46	-10	31	17	13	10
Qatar	20	12	-4	9	34	171	36	18	7
Saudi Arabia	278	108	-24	-175	345	211	106	79	59
United Arab Emirates	35	52	66	94	156	615	87	86	79
Least developed countries									
Comoros	-1	-1	-1	-1	-2	-2	-2	-2	-2
Djibouti	2	18	-3	6	0	0	0	0	2
Mauritania	-3	-6	-3	2	6	2	-4	-4	-4
Somalia	-166	-126	-179	-20	-40	-60	-30	-10	-5
Sudan	83	-92	-34	-45	-106	27	27	27	-14
Yemen	-10	-10	130	-20	-20	-27	-27	-20	-20

Sources: United Nations, 2010 (<http://www.esa.un.org/unpp>).

**Annex table 8.** Measures of ageing: Arab countries, 1980-2025

Country	1980				2025			
	Old age (65+)	Dependency (per cent)		Ageing index	Old age (65+)	Dependency (per cent)		Ageing index
		Oldest old age (80+)				Oldest old age (80+)		
Algeria	8.0	1.3		8.8	10.3	1.4		31.7
Bahrain	3.1	0.4		5.7	8.3	0.5		31.1
Comoros	6.7	0.6		7.2	5.6	0.5		8.6
Djibouti	3.9	0.0		4.5	6.8	0.7		13.3
Egypt	6.4	0.6		8.1	11.8	1.6		28.8
Iraq	8.1	0.7		8.6	6.0	0.8		9.2
Jordan	7.3	1.4		7.1	7.0	1.3		16.8
Kuwait	2.9	0.5		4.2	5.5	0.4		19.5
Lebanon	9.5	1.2		13.4	14.6	2.3		52.5
Libya	4.4	0.4		4.8	10.0	1.7		27.3
Mauritania	4.7	0.3		5.3	5.6	0.4		9.6
Morocco	7.8	1.1		9.8	13.2	1.7		38.3
Palestine	4.7	0.6		4.5	5.9	0.8		9.3
Oman	4.9	0.7		5.6	8.5	0.7		30.5
Qatar	2.1	0.0		4.1	2.9	0.3		18.8
Saudi Arabia	5.6	0.8		6.5	8.1	0.9		22.3
Somalia	5.7	0.5		6.3	5.7	0.6		6.9
Sudan	5.6	0.6		6.6	7.2	0.9		12.3
Tunisia	6.9	0.6		8.9	15.0	2.2		49.6
United Arab Emirates	2.0	0.3		4.9	4.4	0.1		25.4
Syrian Arab Republic	7.2	1.4		7.0	9.6	1.4		23.4
Yemen	5.2	0.5		5.1	5.1	0.6		7.3

Source: Computed from United Nations, 2010 (<http://www.esa.un.org/unpp>).



**Annex table 9.** Age structural transition of the population of selected fast, medium and slow ageing Arab countries, 1980-2025

Age Group	Year							Change in per cent points during 2025-1980		
	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
<b>Fast ageing: Morocco</b>										
0-4	3124 (16.0)*	3487 (15.6)	3440 (13.9)	3289 (12.2)	3074 (10.7)	2955 (9.7)	3022 (9.5)	2966 (8.8)	2871 (8.2)	2711 (7.4)*
5-14	5188 (26.5)	5777 (25.9)	6404 (25.8)	6750 (25.1)	6589 (22.9)	6253 (20.6)	5927 (18.6)	5883 (17.5)	5910 (16.8)	5772 (15.9)
15-64	10440 (53.4)	12133 (54.4)	13991 (56.5)	15776 (58.4)	17776 (61.7)	19584 (64.4)	21247 (66.5)	22690 (67.6)	23789 (67.8)	24675 (67.8)
65+	815 (4.2)	891 (4.0)	946 (3.8)	1174 (4.4)	1353 (4.7)	1600 (5.3)	1755 (5.5)	2030 (6.0)	2507 (7.1)	3248 (8.9)
Total	19567 (100.0)	22288 (100)	24781 (100)	26929 (100)	28792 (100)	30392 (100)	31951 (100)	33569 (100)	35077 (100)	36406 (100)
<b>Medium ageing: Kuwait</b>										
0-4	214 (15.5)	247 (14.2)	251 (12.0)	167 (10.3)	184 (9.5)	193 (8.5)	281 (10.3)	252 (8.2)	256 (7.5)	263 (7.1)
5-14	337 (24.5)	395 (22.7)	493 (23.6)	298 (18.3)	333 (17.1)	355 (15.7)	449 (16.4)	538 (17.4)	541 (15.9)	515 (13.9)
15-64	804 (58.3)	1076 (61.8)	1313 (62.9)	1128 (69.3)	1365 (70.3)	1640 (72.4)	1938 (70.8)	2211 (71.6)	2499 (73.7)	2770 (74.9)
65+	23 (1.7)	24 (1.4)	32 (1.5)	34 (2.1)	60 (3.1)	76 (3.4)	69 (2.5)	85 (2.8)	97 (2.9)	152 (4.1)
Total	1378 (100)	1742 (100)	2089 (100)	1627 (100)	1942 (100)	2264 (100)	2737 (100)	3086 (100)	3393 (100)	3700 (100)
<b>Slow ageing: Palestine</b>										
0-4	300 (19.9)	339 (19.3)	392 (18.8)	521 (20.1)	581 (18.2)	578 (16.3)	620 (15.3)	688 (14.8)	759 (14.3)	812 (13.5)
5-14	453 (30.0)	571 (29.6)	609 (29.3)	728 (28.0)	934 (29.2)	1048 (29.5)	1097 (27.2)	1174 (25.3)	1296 (24.4)	1435 (23.8)
15-64	723 (47.9)	861 (49.0)	1037 (49.8)	1292 (49.8)	1611 (50.4)	1837 (51.7)	2211 (54.7)	2644 (56.9)	3092 (58.2)	3570 (59.2)
65+	34 (2.3)	37 (2.1)	44 (2.1)	55 (2.1)	73 (2.3)	90 (2.5)	112 (2.8)	141 (3.0)	170 (3.2)	209 (3.5)
Total	1510 (100)	1758 (100)	2082 (100)	2596 (100)	3199 (100)	3553 (100)	4040 (100)	4647 (100)	5317 (100)	6026 (100)

Source: Computed from United Nations, 2010 (<http://www.esa.un.org/unpp>).

\* Percentages are given in parentheses.

**Annex table 10.** Potential support ratios of Arab countries, 1980-2025

Country	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
<b>Mashreq countries</b>										
Egypt	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0
Iraq	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7
Jordan	0.4	0.5	0.4	0.6	0.6	0.7	0.7	0.8	0.9	1.0
Lebanon	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
Palestine	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7
Syrian Arab Republic	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.8
<b>Maghreb countries</b>										
Algeria	0.5	0.5	0.5	0.6	0.7	0.8	1.0	1.2	1.3	1.3
Libya	0.5	0.5	0.5	0.6	0.7	0.9	1.0	1.0	1.0	1.1
Morocco	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2
Tunisia	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.1	1.1	1.1
<b>Gulf Cooperation Council countries</b>										
Bahrain	0.8	1.0	1.1	1.1	1.2	1.3	1.9	2.1	2.0	1.8
Kuwait	0.8	0.9	0.9	1.3	1.3	1.5	1.4	1.5	1.6	1.6
Oman	0.6	0.6	0.6	0.8	0.7	0.8	1.0	1.5	1.4	1.4
Qatar	0.7	1.1	1.2	1.3	1.2	1.6	2.2	2.4	2.1	2.3
Saudi Arabia	0.5	0.5	0.5	0.6	0.6	0.7	0.9	1.0	1.0	1.0
United Arab Emirates	1.0	1.0	1.0	1.2	1.2	1.5	1.8	2.2	2.3	2.3
<b>Least developed countries</b>										
Comoros	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Djibouti	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9
Mauritania	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.8
Somalia	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sudan	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Yemen	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5

Source: Computed from United Nations, 2010 (<http://www.esa.un.org/unpp>).

## Endnotes

1. United Nations (2002). **Report of the Second World Assembly on Ageing, Madrid, 8-12 April 2002.** *United Nations, New York.*
2. Economic and Social Commission for Western Asia (ESCWA) (2002). **The Arab Plan of Action on Ageing to the Year 2012, Beirut, 7 February 2002,** *E/ESCWA/SD/2002/WG.1/8.*
3. Saxena, Prem C. (2008). **Ageing and Age-structural Transition in the Arab Countries: Regional Variations, Socioeconomic Consequences and Social Security,** *GENUS, 64 (1&2): 37-74.*
4. Though the pace of fertility decline in most of the Arab countries has been slow the total dependency burden may continue to rise due to fast swelling numbers of 65+ populations.
5. United Nations (2010). **World Population Prospects – The 2010 Revision, Department of Economic and Social Affairs, Population Division, New York.** *Data downloaded from <http://esa.un.org/unpd/wpp/index.htm>.*
6. A value of total fertility rate (TFR) as 2.2 (more than 2.0 is to compensate for child mortality) is considered as replacement level of fertility, which is the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility schedule through her lifetime, and she were to survive from birth through the end of her reproductive life.
7. ESCWA (2009). **Age-Structural Transitions in Arab Countries: Policy Implications for Development, Policy Brief, Issue No. 2.** *ESCWA, Beirut, Lebanon.*
8. Age-structural transition means a change in the percentage share of populations in age groups from 0-4 to 80+, as a result of demographic transition.
9. Tabbarah R. (2002). **Demographic Trends in of Ageing in the Arab Countries,** *E/ESCWA/SD/2002/WG.I-I/3, ESCWA.*
10. For detailed discussion see Pool et al. (Eds.) (2006). **Age Structural Transition: Challenges for Development,** *CICRED, Paris.*
11. Ibid., 8.
12. New entrants are those who reach to working age group through age transition and also those who come as immigrants.
13. Economic dependency is defined as the difference between consumption and labour earnings.
14. It may be mentioned here that old-age homes are not a permanent solution to the swelling numbers of elderly males and single females.

15. Ibid., 3.
16. See list of fast and medium ageing countries in fourth column of table 2.
17. Bloom D.E. and J.G. Williamson (1998) “**Demographic Transition and Economic Miracles**” In **Emerging Asia**, *World Bank Economic Review*, 12: 419-56, and Navaneetham K. (2004), *Age Structural Transition and Economic Growth: Evidence from South and Southeast Asia*, *Asian Profile*, Vol. 32 No. 3.
18. The critical value of the dependency ratio is to be fixed by the country depending upon its resources and other economic parameters.



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