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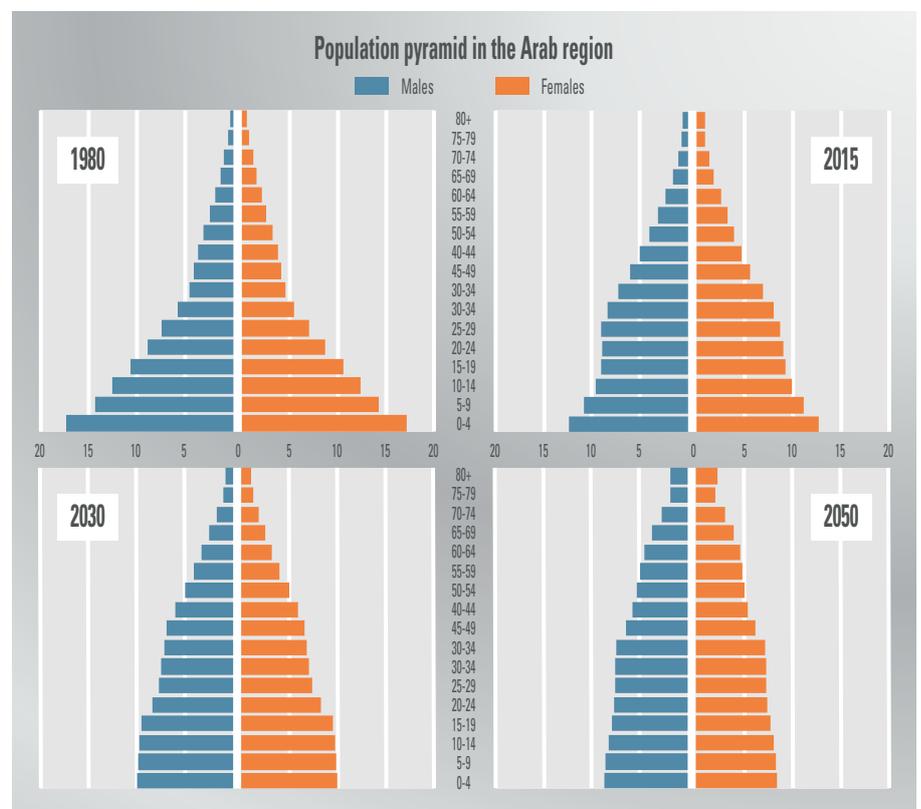
# Harnessing the Demographic Dividend

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## 1. The demographic transition and the demographic dividend

The demographic transition is a change in patterns of population growth, from high rates of fertility and mortality to low ones. In the early phase of this transition, infant and child mortality start to decline, which increases the number of surviving children. In the intermediate phase, fertility starts to decline, the size of the working age population (15-64 years old) increases and the size of the dependent population decreases. Fertility declines concurrent with slow growth of the population of older persons create a demographic window of opportunity in a country for a limited period, during which the proportion of children is below 30 per cent and the proportion of older persons is below 15 per cent. This allows for a favourable dependency ratio,<sup>1</sup> and fewer investments are needed to satisfy the requirements of dependent population groups. Consequently, more resources are available for investment in human capital (health and education), physical capital, and economic and social development, which produces the demographic dividend. In the final phase of the demographic transition, both mortality and fertility reach low levels.

Three key mechanisms support the realization of the demographic dividend, namely labour supply,



savings and human capital.<sup>2</sup> Since the working age population forms the largest proportion of the overall population during the intermediate phase of the transition, labour supply is abundant. It is even more so with the increased participation of women in the labour market, because of reduced fertility and family sizes. Smaller family sizes also have an impact on the level of household savings, which may increase due to greater availability of resources within a household. Savings also increase when the largest proportion of the population is of working age, the prime age during which savings occur. The increase of savings fosters investment. As to human capital, the tendency is for parents to invest more in their children's health and education, owing to their lower numbers and higher life expectancy. Productivity will increase with a more educated and healthy workforce, and so will income, due to the positive correlation between education and wages.<sup>3</sup>

The demographic dividend can last five decades or more. However, reaping the benefits of the dividend is not automatic. It depends on various factors, including the speed of fertility decline, and the levels of employment and productivity. Policymakers should provide the right environment

in areas including governance, infrastructure, labour and trade policy so that a country benefits from the window of opportunity created by the change in the age structure of the population.

Ultimately, low fertility rates reduce the rate of growth of the labour

force, unless substantial numbers of migrants join that labour force. Decreases in old-age mortality and the ageing of the previous large birth cohorts increase the growth of the older persons' population. This causes per capita income to grow more slowly and the demographic window of opportunity to close.<sup>4</sup>

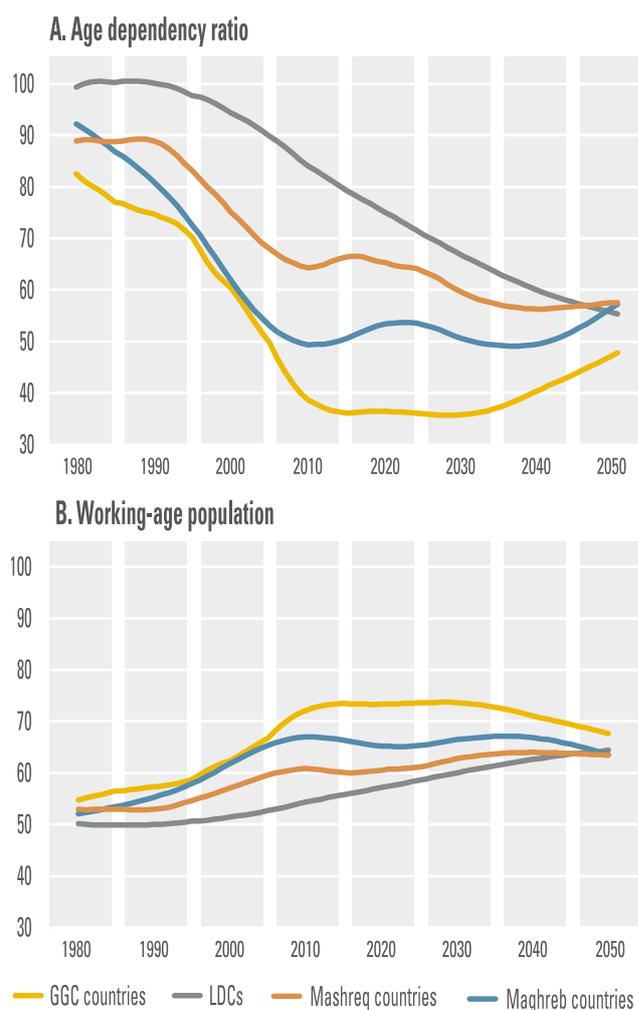
## 2. The demographic window of opportunity in Arab countries

Arab countries are at different phases of the demographic transition and consequently have different time spans for the demographic window of opportunity. Most of them started to witness declines in the dependency ratio between the mid-1970s and the early 1980s, with the share of the working-age population (persons aged 15-64 years) increasing around the same period. The four Arab subregions<sup>5</sup> generally all show decreasing dependency ratios and increasing working-age population proportions between 1980 and 2040 (see figure).

There are different methodologies for the estimation of the size of the demographic dividend, but they are all based on the extent to which individuals produce and consume at each age, in other words on economic dependency over the life course. Whereas some methodologies rely exclusively on demographic data, others use crude weights to calculate the dependency ratio in order to account for the changing levels of economic dependency, or consumption and production behaviours of people of different ages. Estimates of the effective number of producers and consumers are generated. The support ratio, i.e. the number of producers to the number of consumers by country, is then calculated. It increases during the period of the dividend.<sup>6</sup>

The crude weights methodology was used to calculate the size of the demographic dividend and determine the year of opening and closing of the demographic window of opportunity for Arab countries (see table). Age-specific data on production and consumption were derived from the National Transfer Accounts project,<sup>7</sup> which provides information on 23 non-Arab countries divided into high-income and non-

**Age dependency ratio (A) and share of the working-age population (B) in Arab subregions, 1980-2050 (percentage)**



**Source:** United Nations Department of Economic and Social Affairs, World Population Prospects: The 2015 Revision (New York, 2015, DVD Edition).



### Time span of the demographic window of opportunity in selected Arab countries

| Country              | Demographic window opening year | Demographic window closing year |
|----------------------|---------------------------------|---------------------------------|
| Tunisia              | 1981                            | 2019                            |
| Algeria              | 1981                            | 2021                            |
| Morocco              | 1981                            | 2025                            |
| Lebanon              | 1981                            | 2028                            |
| Djibouti             | 1981                            | 2046                            |
| Jordan               | 1981                            | Beyond 2050                     |
| Libya                | 1982                            | 2025                            |
| State of Palestine   | 1982                            | Beyond 2050                     |
| Egypt                | 1983                            | Beyond 2050                     |
| Mauritania           | 1983                            | Beyond 2050                     |
| Syrian Arab Republic | 1983                            | Beyond 2050                     |
| Sudan                | 1984                            | Beyond 2050                     |
| Comoros              | 1989                            | Beyond 2050                     |
| Iraq                 | 1991                            | Beyond 2050                     |
| Yemen                | 1991                            | Beyond 2050                     |
| Somalia              | 2013                            | Beyond 2050                     |

Source: ESCWA, "Demographic profile of the Arab region: realizing the demographic dividend", E/ESCWA/SDD/2016/Technical Paper.3.

high-income countries based on the classification of the World Bank. Age-specific averages of production and consumption profiles were calculated for the two country groups, then used as weights applied to population data for the period 1980-2050 to calculate the effective number of producers and consumers in Arab countries.<sup>8</sup> Support ratios were finally calculated for each country over the same period to determine the

time when these ratios will start to increase (opening year of the demographic dividend) and the duration over which these ratios will continue to grow.

Results for GCC countries are not included in the below table, because the large and fluctuating numbers of labour migrants affect population estimates and the reliability of support ratio growth

rates. This makes it difficult to determine opening and closing years for the demographic window of opportunity. Moreover, substantial proportions of the income of labour migrants in GCC countries are remitted to their countries of origin, where most of those migrants will eventually retire.

The results should be analysed with care, as they are based on production and consumption patterns of non-Arab countries. They could be overestimates, because actual income profiles by age may in fact be relatively lower in Arab countries. Accuracy would largely increase if country-specific data could be used.

### 3. Creating a favourable policy environment

Changes in the age structure of a country's population do not automatically produce the demographic dividend: a favourable policy environment should be created for it to materialize. The types of policies, tools and initiatives needed to realize the demographic dividend depend on the stage of transition that the country is in. Timing is of utmost importance, given that the window of opportunity is limited.

The extent to which the dividend materializes depends on the productivity of young adults, which is related to schooling, childbearing decisions and family size, and employment. Policies and laws are needed to promote investment in human capital, namely in education and

health care; meet family planning needs; prevent early marriage; ensure opportunities for decent jobs; increase employers' investment in training; reduce barriers for first-time job seekers and young parents; promote equal access to employment for men and women; and support the participation of young people in public life. Building efficient infrastructure and governance systems and formulating sound labour market policies are also key.<sup>9</sup> According to the **Arab Human Development Report 2016, the Arab region "needs to create more than 60 million new jobs in the next decade to absorb the large number of workforce entrants and stabilize youth unemployment"**,<sup>10</sup> and so be in position to benefit from the demographic dividend.

#### Reaping the benefits of the demographic dividend: lessons learned

Experiences of countries that have successfully managed to realize their demographic dividends show that the reduction in fertility levels, which drive the speed of the demographic transition, and the creation of an enabling policy environment conducive to economic development are both essential to the process. The former is a precondition for effecting a change in a country's population pyramid, whereby the working-age group forms the largest proportion of a population. This change in the age structure of the population can also be achieved through social and economic advancement, but at a much slower pace. Therefore, adopting voluntary family planning policies and programmes, raising awareness about contraceptive methods and ensuring access to contraception are essential to accelerate progress towards a favourable age structure. Failure to speed up the demographic transition would delay the potential demographic dividend and affect its magnitude.

Determining the social and economic policy mix that can bring about increases in per capita income and sustained economic growth is also an important lever for reaping the benefits of the demographic dividend. The choice of policies generally depends on the specific circumstances of countries and the stage of the transition they are in. However the following measures are key: facilitating the participation of women in the labour force; creating enough decent job opportunities; enhancing labour market efficiency; investing in human capital to improve skills and boost productivity; and ensuring a well-functioning financial market that enables increased investment and savings.

The critical factor is to improve education and job opportunities for young adults. Failure to create a conducive environment for youth employment would, in the best case scenario, lead to missed opportunities in terms of realizing the demographic dividend and, in the worst, to increased levels of unemployment that would ultimately contribute to social and political instability.

**Source:** ESCWA, "Demographic profile of the Arab region: realizing the demographic dividend", E/ESCWA/SDD/2016/Technical Paper.3.



Enhanced coordination between government entities throughout the processes of policy formulation and implementation is important to ensure integration and sustainability. Advance planning is also important to realize the demographic dividend. For instance, investing early on in education, health and employment programmes will ensure that young people have the right set of skills and training to join and compete in the labour market. Otherwise, their well-being would be compromised, and that would have a negative impact on the realization of the demographic dividend. Similarly, improving access to family planning services with a view to meeting the needs for contraception steps up the decline in fertility rates, reduces the child dependency ratio by reducing growth in the number of children, and enhances maternal health. This is important as the pace of fertility decline determines whether or not a window of opportunity opens up for the demographic dividend, by altering the shape of the population pyramid and creating a favourable youth bulge.<sup>11</sup>

Integrated development planning and implementation are at the core of the 2030 Agenda for Sustainable Development, adopted by the United Nations in September 2015. The 2030 Agenda tackles most of the above-mentioned issues and can thus provide a framework for reaping the benefits of the demographic dividend.

## 4. The second demographic dividend

Countries at the late phase of the demographic transition, characterized by ageing of the population, have the opportunity to benefit from a second dividend. Higher longevity prospects provide an incentive for older persons to accumulate assets and increase investments, which leads to a more rapid growth in per capita income. Additionally, the period of solid economic growth following the first dividend can also help to increase levels of savings and living standards. However, the extent to which the second dividend materializes also depends on a country's advance planning and preparedness, and on the extent of support it extends to its older population.<sup>12</sup>

Older persons in developing countries mostly rely on family and government support, and on assets

accrued throughout their working life. Provision of support by families, as well as by governments through pension systems, becomes problematic as ageing progresses and more resources are required. To tackle this challenge and benefit from the second dividend, advance planning is essential, and could take place as early as during the intermediate phase of the transition. Policies should be put in place to encourage future retirees to accumulate capital and save for their retirement, otherwise they will be left with inadequate economic support and driven towards dependence on government and family transfers. Strong, reliable and accessible financial systems should be established to encourage asset accumulation by workers, facilitating their financial independence as they get older. This will help to

increase capital availability, productivity and per capita income. The second dividend can last longer

and be even larger than the first, which closes with unfavorable age structure.

## 5. The way forward

Given the differences in the socioeconomic and demographic characteristics and circumstances of Arab countries, a country-level analysis is required to provide specific recommendations on the way forward. Nevertheless, Arab countries that still have high fertility levels would be well-advised to accelerate the transition process, as the size of the potential demographic dividend depends on the speed of the demographic transition. They should all ensure that decent work opportunities are created, and that young persons have access to quality education and acquire the needed skills to increase their employability and productivity.

Realizing the demographic dividend will help Arab countries to achieve the 2030 Agenda. Governments around the world have re-emphasized the importance of

population to sustainable development in that context. Issues pertaining to health and well-being, particularly sexual and reproductive health, gender equality and women empowerment, inclusive and equitable education, full and productive employment and decent work, poverty reduction, and inclusive economic growth have all been underlined in the Sustainable Development Goals (SDGs). Direct and indirect references were also made to different population groups, such as children, youth, older persons, women, persons with disabilities and migrants. It is thus recommended that work towards reaping the benefits of the demographic dividend be done in the framework of the 2030 Agenda, by including this objective in the plans of action or national development plans for the implementation of the Agenda.

## Endnotes

1. The total dependency ratio is the ratio of the sum of the population aged 0-14 and that aged 65+ to the population aged 15-64 (see <https://esa.un.org/unpd/wpp/General/GlossaryDemographicTerms.aspx>).
2. David Bloom, David Canning and Jaypee Sevilla, **The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change (Santa Monica, CA, Arlington, VA and Pittsburgh, PA, RAND, 2003)**.
3. Further details on the subject matter, methodology and calculations can be found in ESCWA, "Demographic profile of the Arab region: realizing the demographic dividend" (E/ESCWA/SDD/2016/Technical Paper.3).
4. Ronald Lee and Andrew Mason, "What is the demographic dividend?", **Finance and Development, vol. 43, No. 3 (September 2006)**.
5. The Arab region can be divided into four subregions according to socioeconomic and geographical criteria: Arab least developed countries (LDCs), namely the Comoros, Djibouti, Mauritania, Somalia, the Sudan and Yemen; Gulf Cooperation Council (GCC) countries, namely Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates; Maghreb countries, namely Algeria, Libya, Morocco and Tunisia; and Mashreq countries, namely Egypt, Iraq, Jordan, Lebanon, the State of Palestine and the Syrian Arab Republic.
6. E/ESCWA/SDD/2016/Technical Paper.3.; and Lee and Mason, "What is the demographic dividend?".
7. See <http://www.ntaccounts.org>.
8. Weights for high-income countries were applied to GCC countries only.
9. Lee and Mason, "What is the demographic dividend?"; and The Gates Institute, "A primer on the demographic dividend", 8 September 2011, available from <https://www.k4health.org/sites/default/files/Demographic%20Dividend%20Primer%20090811.pdf>.
10. United Nations Development Programme (UNDP), **Arab Human Development Report 2016: Youth and the Prospects for Human Development in a Changing Reality (New York, 2016)**.
11. Lee and Mason, "What is the demographic dividend?"; and The Gates Institute, "A primer on the demographic dividend".
12. Lee and Mason, "What is the demographic dividend?".

