

**ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA**

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**SECOND ISSUE**

**THE DEMOGRAPHIC WINDOW: AN OPPORTUNITY  
FOR DEVELOPMENT IN THE ARAB COUNTRIES**

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## Executive summary

The *Population and Development Report*, a series of analytical reports published biennially by ESCWA aims to enhance knowledge about the vital relationship between population and development issues and to generate awareness in advance of the challenges presented by population dynamics and demographic change. The report forms part of the programme of work of the ESCWA Population and Development Team for the 2004-2005 biennium, which seeks to draw attention to the need for a development strategy based on the principle of integration of the underlying factors and basic components of development.

This report is based, from a theoretical point of view, on recent assumptions to the effect that the timing of a demographic impact plays a major role in the development process, because it is bound up with the human lifecycle and the impact therefore differs in terms of the changing age structure of the population. Within a specific time span, the impact may be positive or negative, depending on the relationship between growth in the working-age population and growth in the dependent population. Thus, in the event of an increase in the dependency ratio and a decline in the ratio of the working-age population, there is a pronounced negative impact, because the level of savings declines as a consequence of the rise in the number of dependants and the resulting costs due to the increased volume of consumption and the decline in average per capita income growth. In the event of an increase in the working-age population, on the other hand, and a decline in the dependency ratio, the resulting decline in fertility rates has a marked positive impact in terms of increased savings and investment. The projected fertility decline, coinciding with the decrease in the dependent population, may create the potential for average per capita income growth extending over a period of 25 years, especially given that historical experience has shown that where that process is accompanied by a slow growth in the elderly population, a number of countries experience—at different points in time but only for a specific period—a demographic window of opportunity.

Given that the Arab countries are experiencing a marked population increase that is working its way through the different age groups, leading to a decline in the ratio of the first age group (0-14), an expansion in the ratio of the second (15-64) and a very slight increase in the ratio of the last (elderly) population group, such change in the age structure of the population may offer a favourable opportunity for economic growth in the short and medium term if appropriate policies are adopted. The projected structural trends in the region's population may provide a favourable opportunity for increased savings and investment by virtue of the decline in dependency ratios, accompanied by a drop in fertility rates. The opportunity may be lost, on the other hand, if the savings and investment fail to lead to an increase in economic growth rates and in productive employment opportunities. The impact on development may be positive if it coincides with appropriate policies targeting younger age groups and the working-age population, and the impact may be negative if decision makers are unable to plan for it in advance, creating propitious circumstances and an appropriate political environment in order to take advantage of the opportunity. The negative consequences that threaten to ensue include increased unemployment and a growing demand for international migration.<sup>1</sup>

In the light of those assumptions, the report seeks to enhance strategic awareness among Governments and international organizations of the importance of the correlation between population and development. It affirms the need to adopt strategic positions aimed at taking population into account as a quantitative and qualitative variable that influences and is influenced by economic, social, political and environmental variables, in order to improve the decision-making process and to formulate integrated policies designed to achieve the objectives adopted by Governments at international conferences, as well as the Millennium Development Goals (MDGs); and to ensure that the decisions taken are more responsive to real circumstances, especially since demographic change and its strategic role in the development process is predictable, and fertility rates are no longer a quantitative demographic issue but a social variable with macro, micro and family-related dimensions.

Given the acknowledged existence of a reciprocal relationship between demographic change and economic growth, with each influencing and being influenced by the other in the formulation of development

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<sup>1</sup> Batoool Shakoori, "Macroeconomic aspects linking poverty, development and population", paper presented to the Arab Population Forum. E/ESCWA/SDD/2004/WG.1/11.

policies, and in the light of the main assumptions underlying the studies and research that formed the basis for the Programme of Action adopted by the International Conference on Population and Development (ICPD) held in Cairo in 1994, the principles set forth in the Millennium Declaration, and the assumptions to the effect that the relationship between population, sustained economic growth and poverty is interactive, this report will seek to review demographic change reflected in dependency ratios and working-age population growth rates, on the one hand, and economic performance reflected in demand for labour and the capacity of labour markets to absorb the increase in job opportunities, on the other. It should be noted that this report will focus on one of the basic means of access to the “demographic bonus”, using its methodology to study indicators of demographic transition in conjunction with a study of labour markets. It is based on an analysis of past trends in the performance of Arab labour markets and an examination of the capacity of those markets to absorb the economically active population by age group and gender during the period 1995-2000, the aim being to develop recommendations that may assist in the pursuit of rational policies conducive to an increase in employment rates and enhancement of performance.

While noting the weak absorptive capacity of labour markets in the Arab region, reflected in high unemployment rates and declining productivity rates, this report expects a gradual change to occur in those trends concurrently with demographic change, leading in turn to an increase in savings and investment, which will lay the basis for the creation of new employment opportunities that will absorb both newcomers to the labour market and the unemployed. But that relaxation of conditions hinges on the rationality of policies, the efficiency of institutions and the flexibility of labour markets. Part One of the report reviews theories and assumptions that seek to explain the process of demographic transition and its stages in both developed and developing countries, including the Arab region. Part One also undertakes a detailed analysis of trends in basic demographic indicators in the Arab countries from 1980 and projections for the period up to 2020. Part Two of the report addresses the consequences of demographic transition, the most important being the growth in the working-age population and the decline in overall dependency ratios, indicating that a so-called demographic bonus or window of opportunity may occur, thereby yielding substantial economic benefits provided that there is a responsive political and economic environment. In addition, Part Two reviews the characteristics of employment in the Arab countries from the standpoint of the existing correlation between demographic transition and economic growth, and takes a look at the principal shortcomings in Arab labour markets. It also examines the current absorptive capacity of the Arab labour market and projections up to the year 2020, on the basis of three different scenarios of working-age population growth.

The report notes the emergence of a problem that demands attention, namely, the fact that conversion of the demographic burden stemming from population growth into a “demographic bonus” depends on the ability of countries to increase the ratio of participation in economic activity of persons of working age, i.e. to increase the absorptive capacity of labour markets. However, the existing indicators for most labour markets in the Arab region show that those markets suffer from high unemployment rates, except for markets in the Gulf Cooperation Council (GCC) countries apart from Oman, and that they are also characterized by low participation ratios (absorptive capacity) compared with other countries in the world.

To address that problem, the report seeks to develop a vision based on the experience of some Arab and developing countries and a strategic framework based on the view that the key to enhancement of the absorptive capacity of labour markets lies in the pursuit of economic growth strategies based on labour intensity rather than capital intensity. The report also stresses the importance of formulating multidimensional policies and strategies that provide ideal options for addressing the declining productivity syndrome by increasing employment opportunities. Such strategies, while seeking to achieve high employment rates, can also ensure high rates of productivity. The report proposes an approach based on small labour-intensive and capital-light industries in order to take advantage of the demographic transition, since this approach assists in raising participation rates and creating real employment opportunities for new job seekers.

In accordance with the foregoing and in the light of practical experience in some developing countries, particularly in East Asia, the report stresses the need to secure political support and recognition of the demographic bonus as a development project conducive to the elimination of poverty, given the cardinal importance of population and its effective role in achieving MDGs and in ensuring full employment

combined with rising productivity as well as the enhancement of human resources, and as a project designed to ensure that advantage is taken of the opportunities offered by the demographic window. Political support for this project will enable Governments and international organizations to achieve the objectives adopted by the ICPD as well as the MDGs, because it is an approach that utilizes demographic change to enhance economic performance and achieve greater social justice. Moreover, the approach, while seeking to ensure high economic growth rates, also endeavours to give priority to human beings in the productive process and to treat them as both the means and the end of that process.

## Introduction

The relationship between population growth, economic growth and poverty is an issue that has long engrossed researchers and macroeconomic analysts. Some researchers consider that population growth is a stimulating factor that has a positive impact on national income growth rates; population growth is accompanied by an increase in the knowledge stock as a result of the technological progress generated by increased demand for goods and services. Others view population growth as a factor that adversely affects economic growth. A rising population growth rate impedes national income growth and leads to the depletion of material, natural and economic resources. A third school of thought emerged alongside those different opinions as to the nature of the relationship between population growth and economic growth, which held that population growth was a neutral factor in economic growth and was determined outside standard growth models. The inferences drawn from those different points of view entailed consequences, the last and most serious of which in terms of its implications for population work was the view that population growth is a neutral factor in economic growth, because those inferences have been used in recent decades to justify neutrality of population growth and hence a tendency to underestimate the mutual influence of population growth and economic growth. As a result, in many countries population issues have not been given the priority they deserve in the formulation of integrated policies. It is noteworthy that the conflicts between the different schools of thought and their inability to provide conclusive evidence of the validity of their assumptions have been attributable to a tendency to focus on aggregate population size and growth, and to attach insufficient importance to changing trends in the age structure of the population and their impact on economic growth and the development process as a whole.

The different views of the nature of the relationship between population growth and economic growth were discussed in many of the studies undertaken in preparation for the International Conference on Population and Development (ICPD) held in Cairo in 1994. The qualitative turning point that helped to settle the argument came in 1999 during the preparations for the twenty-first Special Session of the General Assembly, which was convened in order to undertake an overall review and appraisal of the implementation of the ICPD Programme of Action. The research papers prepared for that event concluded that greater commitment to the Cairo Programme of Action was of the utmost importance and that it was vital for the developing countries to challenge hypotheses to the effect that demographic factors were neutral. It emerged that the tendency to underestimate the importance of the interrelationship between population and development encouraged and continues to encourage decision makers to adopt non-integrated policies that neglect demographic change and promote economic growth as the sole option for development.

The qualitative turning point was the important conclusion reached by those studies, which has major implications for population work in the developing countries, especially the Arab countries, to the effect that most writings by proponents of the above-mentioned views are theoretically unsound, inasmuch as most overlooked the extremely important role played by population dynamics, particularly age structure and its development, as well as the relationship of the latter to savings and investment rates and economic growth. Each age group is characterized by different behaviour and requirements, which also entail different economic outcomes. In order to meet the needs of children and adolescents, increased investment in health and education is required. Young people who have recently become part of the working-age population are a fundamental component of the labour supply and a basic source of increased savings. With increasing age, there is a greater need for improved health care and pension insurance for the elderly.

In the light of the research findings, most approaches that belittled the influence of population on the development process were refuted in both theory and practice by means of the evidence stemming from international experience, especially in the countries of East Asia. Comparative studies show that population change reflected in growth in the working-age population accounted for 40 per cent of economic growth in those countries between 1980 and 1990. It may broadly be concluded in that regard that economic growth is slow where the growth in the working-age population is lower than overall population growth, and that economic growth improves where growth in the working-age population exceeds overall population growth.

In the light of the above conclusions, the ICPD Programme of Action affirmed that the relationship between population, development and poverty is mutual and interactive. In chapter III, concerning interrelationships between population, sustained economic growth and sustainable development, it states that: "The everyday activities of all human beings, communities and countries are interrelated with

population change, patterns and levels of use of natural resources, the state of the environment, and the pace and quality of economic and social development. There is general agreement that persistent widespread poverty as well as serious social and gender inequities have significant influences on, and are in turn influenced by, demographic parameters such as population growth, structure and distribution. There is also general agreement that unsustainable consumption and production patterns are contributing to the unsustainable use of natural resources and environmental degradation as well as to the reinforcement of social inequities and of poverty with the above-mentioned consequences for demographic parameters”.<sup>2</sup>

The present report is based on recent assumptions to the effect that the timing of a demographic impact plays a major role in the development process, because it is bound up with the human lifecycle and the impact therefore differs in terms of the changing age structure of the population. Within a specific time span, the impact may be positive or negative depending on the relationship between growth in the working-age population and growth in the dependent population. Thus, in the event of an increase in the dependency ratio and a decline in the ratio of the working-age population, there is a pronounced negative impact, because the level of savings declines as a consequence of the rise in the number of dependants and the resulting costs due to the increased volume of consumption and the decline in average per capita income growth. In the event of an increase in the working-age population, on the other hand, and a decline in the dependency ratio, the resulting decline in fertility rates has a marked positive impact in terms of increased savings and investment. The projected fertility decline, coinciding with the decrease in the dependent population, may create the potential for average per capita income growth extending over a period of 25 years, especially since historical experience has shown that where that process is accompanied by a slow growth in the elderly population, a number of countries experience, at different points in time but only for a specific period, a demographic window of opportunity. As the Arab countries are experiencing a marked population increase, and this increase is working its way through the different age groups, leading to a decline in the ratio of the first age group (0-14), an expansion in the ratio of the second (15-64) and a very slight increase in the ratio of the last elderly population group, this change in the age structure of the population may offer a favourable opportunity for economic growth in the short and medium term if appropriate policies are adopted. The projected structural trends in the region’s population may provide a favourable opportunity for increased savings and investment by virtue of the decline in dependency ratios accompanied by a drop in fertility rates. The opportunity may be lost, on the other hand, if the savings and investment fail to lead to an increase in economic growth rates and in productive employment opportunities. The impact on development may be positive if it coincides with appropriate policies targeting younger age groups and the working-age population, and the impact may be negative if decision makers are unable to plan for it in advance, creating propitious circumstances and an appropriate political environment in order to take advantage of the opportunity. The negative consequences that threaten to ensue include increased unemployment and a growing demand for international migration.<sup>3</sup>

In the light of those assumptions, the report seeks to enhance strategic awareness among Governments and international organizations of the importance of the correlation between population and development. It affirms the need to adopt strategic positions aimed at taking population into account as a quantitative and qualitative variable that influences and is influenced by economic, social, political and environmental variables, in order to improve the decision-making process and to formulate integrated policies designed to achieve the objectives adopted by Governments at international conferences, as well as the Millennium Development Goals (MDGs), and to ensure that the decisions taken are more responsive to real circumstances, especially since demographic change and its strategic role in the development process is predictable, and fertility rates are no longer a quantitative demographic issue but a social variable with macro, micro and family-related dimensions. That being the case and in the light of the practical experience of some developing countries, this report alerts Arab Governments to the importance of developing a strategic vision for dealing with future demographic change, its relationship to economic growth, and the resulting productive job opportunities that can assist in improving average per capital income and eliminating poverty.

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<sup>2</sup> United Nations, *Report of the International Conference on Population and Development* (Cairo, 5-13 September 1994). A/CONF.171/13/Rev.1, paragraph 3.1, p. 18.

<sup>3</sup> Batool Shakoori, “Macroeconomic Aspects Linking Poverty, Development and Population”, paper presented to the Arab Population Forum. E/ESCWA/SDD/2004/WG.1/11.

Given the acknowledged existence of a reciprocal relationship between demographic change and economic growth, with each influencing and being influenced by the other in the formulation of development policies, and in the light of the main assumptions underlying the studies and research that formed the basis for the ICPD Programme of Action, the resolutions adopted by the United Nations General Assembly twenty-first special session in 1999 and the principles set forth in the Millennium Declaration, and the assumptions to the effect that the relationship between population, sustained economic growth and poverty is interactive, this report will seek to review demographic change reflected in dependency ratios and working-age population growth rates, on the one hand, and economic performance reflected in demand for labour and the capacity of labour markets to absorb the increase in job opportunities, on the other. It should be noted that this report will focus on one of the basic means of access to the “demographic bonus”, using its methodology to study indicators of demographic transition in conjunction with a study of labour markets. It is based on an analysis of past trends in the performance of Arab labour markets and an examination of these markets’ capacity to absorb the economically active population by age group and gender during the period 1995-2000, the aim being to develop recommendations that may assist in the pursuit of rational policies conducive to an increase in employment rates and enhancement of performance.

In the light of the foregoing, the report is divided into the following:

(a) Part One:

- I. The demographic transition in the world and the Arab region
- II. Trends in basic demographic indicators
- III. Results of the demographic transition

(b) Part Two:

- I. Demographic change and economic growth
- II. Demographic change and labour markets in the Arab countries
- III. General framework for maximizing the benefits of the demographic window

Part One of the report reviews theories and assumptions that seek to explain the process of demographic transition and its stages in both developed and developing countries, including the Arab region. Part One also undertakes a detailed analysis of trends in basic demographic indicators in the Arab countries from 1980 and projections for the period up to 2020. Part Two of the report addresses the consequences of demographic transition, the most important being the growth in the working-age population and the decline in overall dependency ratios, indicating that a so-called demographic bonus or window of opportunity may occur, yielding substantial economic benefits provided that there is a responsive political and economic environment. In addition, Part Two reviews the characteristics of employment in the Arab countries from the standpoint of the existing correlation between demographic transition and economic growth, and takes a look at the principal shortcomings in Arab labour markets. It also examines the current absorptive capacity of the Arab labour market and projections up to the year 2020, on the basis of three different scenarios of working-age population growth.

This second issue in the *Population and Development Report* series, entitled “The demographic window of opportunity for development in the Arab countries”, is appearing two years after publication of the first issue, entitled “Water scarcity in the Arab world”, which examined the question of population growth in the light of the severity of freshwater shortages in the region, the impact of such shortages on the population, and the challenges that Arab countries face in meeting a growing demand for safe water.



## **PART ONE**



## I. THE DEMOGRAPHIC TRANSITION IN THE WORLD AND THE ARAB REGION

A study of changes in crude death and birth rates in the industrialized countries during the past two centuries led researchers to develop a theoretical model known as the “demographic transition theory” whose purpose was to explain the historical development of population. According to this theory, societies historically pass through a number of demographic stages, which in most cases amount to three. The first, which precedes the demographic transition, is known as the traditional demographic regime and is characterized by high death and birth rates leading to very slow population growth. This is followed by a transitional stage known as the demographic transition stage, which is characterized initially by a decline in the mortality rate and a continuously high birth rate; soon afterwards, when society experiences a period of marked population growth, a downturn occurs in the birth rate. The third stage is known as the modern demographic regime and is characterized by very low death and birth rates.

To what extent does the general framework of the demographic transition model match the stages actually recorded in the history of world population development?

### A. STAGES OF WORLD POPULATION DEVELOPMENT

Despite considerable divergences, the general characteristics of the traditional demographic regime were predominant in the past, in every century and among all peoples. For hundreds of thousands of years, the world’s population consisted solely of natural groupings. This regime reflected a state of stagnation determined by the immutability of the environment and people’s inability to secure the resources corresponding to their reproductive capacity.

The regime was characterized by very high death rates ranging from 35 to 40 per thousand. Life expectancy at birth ranged from 30 to 33 years. The high death rates were related to the many disasters which, owing to their frequency and severity, claimed the lives of a large proportion of the population. Chief among these disasters were famine, epidemics and war.

Notwithstanding these disasters and the fear of death that accompanied them, an attachment to life is nonetheless discernible in the high birth rates ranging from 40 to 45 per thousand. A comparison between death rates and fertility under this regime shows that a basic characteristic of the latter was its stability, whereas death rates tended to increase markedly at regular intervals. But the fertility referred to here bears little relationship to physiological fertility, i.e. the physiological ability to procreate. Contrary to a belief held by some, large families were extremely rare, since each woman gave birth to 5 or 6 children, compared with the 12 to 16 children that might be expected in families that were, for the most part, unaware of or failed to exercise deliberate control over their fertility. So-called natural fertility was in fact limited, albeit indirectly, by habit, tradition, custom and religious practices. For instance, the virtually universal practice of breastfeeding, and its extension for long periods on account of the scarcity of baby food, prolonged the interval between pregnancies or childbirth. Moreover, customs tending to delay marriage to a late age account for low fertility rates of four or five children per woman in many traditional societies in Western Europe. The variations in high fertility rates discernible between societies and periods of time suggest that fertility was adjusted to social and economic circumstances and environmental pressures, with the possible absence of any deliberate control of family size by most couples.

Lastly, demographic development under the traditional demographic regime may be summarized as a stable situation under constant threat from, and wholly subject to, fluctuations in a single variable, namely, the death rate. On the other hand, the demographic situation does not seem to be affected by these unregulated fluctuations owing to ease of compensation.

In the mid-eighteenth century, Europe began to experience a far-reaching change in demographic forces. This change led to an increasingly sharp break with the traditional demographic regime, and laid the basis for a major population and economic take-off. Around 1740 a double revolution occurred, first in England and then in the rest of Europe, that distinguished the second half of the century from the first. Its benefits were confined for a long period to less than one third of the world population.

The first development was a steady and more or less regular decline in the death rate, which fell from 38.5 per thousand in 1740 to 27.1 per thousand in 1880 and 18 per thousand in 1900. This led to a rise in life expectancy at birth from roughly 26 years in 1727 to about 33 years in 1796, about 38 years in 1820, 52 years at the end of the nineteenth century and 57 years at the time of the Second World War. Secondly, demographic development was not subject to the various disasters that had affected population dynamics in the past. The eighteenth century was an age of scientific and medical discovery, and this had a major impact on knowledge of some causes of death and on epidemic and disease control. The medical revolution was accompanied by an agricultural revolution that led to a transformation of the means and methods of agricultural production and hence to an increase in the capacity to produce food and other basic necessities. The agricultural revolution was the basic and necessary precondition for the industrial revolution, which had the greatest impact in terms of increased production and development of means of transport. This combination of factors made it possible to solve the “population - resources” problem, so that population growth accompanied and rapidly exceeded economic growth.

Fertility remained in its natural state, that is to say very high, which gave rise to rapid population growth. However, the fertility rate began to fall at the end of the nineteenth century, decades after the decline in death rates, so that the average number of children per woman reached two children by the beginning of the third decade of the last century. This number represents the replacement rate because a total fertility rate equivalent to two children is sufficient—in a situation in which the death rate is low—to ensure that children replace their parents in the following generation.

At the beginning of the nineteenth century, two thirds of the world population were not directly affected by this demographic movement. Africa, Asia and the bulk of Latin America remained under the traditional demographic regime, characterized by high death and fertility rates, and technological progress was negligible. From 1920 onwards, this demographic regime gradually began to disintegrate thanks to the use of medical supplies imported from the developed countries, and the societies concerned embarked, to varying degrees, on the first stage of demographic transition, which had begun in Europe 150 years previously. Death rates declined while fertility rates remained stable, leading to rapid population growth.

At the end of the 1960s and the beginning of the 1970s, fertility rates began to drop in some countries of East Asia and in the world’s small island societies. By the early 1990s, the decline in fertility had spread to virtually all parts of the world, including regions with very high fertility rates, as well as South Asia and sub-Saharan African countries, while the developed countries had reached the third stage of the transition, in which death rates are more or less equivalent to birth rates (see reference 1).

## B. THE DEMOGRAPHIC TRANSITION IN EUROPE

There was no major dispute among researchers regarding the decline in the death rate because it was clearly related to economic development and modernization. However, many studies noted that the trend in the death rate was attributable to many different factors and that researchers had so far been unable to identify the precise role of each one, for instance the decline in epidemics, famine and disease, scientific discoveries, progress in medicine, the spread of health care and improvements in nutrition.

The core issue around which demographic thinking revolved during the second half of the last century was the attempt to explain the drop in the fertility rate by reference to the decline in the death rate and social and economic changes that converted rural agricultural societies into industrial societies.

Following preliminary work by Adolph Landry (1909, 1934), Warren Thompson (1929) and Kingsley Davis (1940), the demographic transition theory as such first emerged with the work of Frank Notestein (1953), who articulated it clearly and identified the causal variable. He linked high fertility with the high death rate under the old demographic regime, taking the view that societies had focused in the past on the family and were organized in such a way as to impose high procreative responsibilities on couples. This was also encouraged by religion and popular beliefs. Societies’ health aspirations contributed to a decline in the death rate, while the drop in fertility led to the gradual dying out of old-style institutions and the emergence of a new pattern of family size. A number of factors related to modernization were involved in the evolution of this new family model. Birth control, which was first practised by the higher social strata, spread

subsequently to all social groups. Differences in the timing of this process results in different types of societies in demographic terms.

Coale and Hoover (1958) adopted a different approach, which broadly notes that agricultural societies with limited income are characterized by high death and birth rates, and that whenever the economy evolves from its traditional forms into a more advanced monetary and specialized economy, the death rate begins to decline. This gradual decline continues with the improvement in medical organization, knowledge and care, and is followed in due course by a gradual slow decline in the birth rate. When the death rate reaches a more or less stable level, below which any further decline is difficult, the birth rate moves quite close to the death rate or eventually reaches a more or less equivalent level. This situation gives rise to a gradually accelerating decline and to the emergence of the small family size norm (reference 2).

A great deal was written subsequently about the demographic transition and the stages it comprises. Opinions differed about the change factor, which was designated, inter alia, as “modernization”, “economic and social development”, “progress”, “industrialization”, “urbanization”, “economic growth” and “the spread of education”. These general terms designate to some extent a set of economic and social changes that were related to the industrial revolution. The difficulty here lies not so much in the terminology used as in whether or not these factors actually have an impact in practice. Is the demographic transition a process involving an adjustment to new socio-economic circumstances due to developments in sectoral structure as the industrial sector takes first place in terms of national income and capital formation? Or is it rather a process involving the spread of a new type of behaviour vis-à-vis the family and the availability to couples of new methods of controlling the number of offspring they have?

From the theoretical point of view, “modernization” stands out as an explanatory factor for the decline in fertility, although the latter occurred in Europe in a highly differentiated social, economic and demographic context. Economic development seems to qualify here as a sufficient but not a necessary cause or a prerequisite for the decline in fertility. For example, there was a sharp drop in birth rates in some European countries where the urbanization rate was not high, infant mortality rates were high and the proportion of the population in industrial employment was low.

During the period from the mid-1940s to the late 1960s, when the phenomenon of population growth attracted world attention, the concept of modernization assumed greater importance among researchers following extensive studies covering many regions, time periods and situations. Demographic transition analysis changed from mere description of the stages of the transition to the establishment of a connection with the processes of development and modernization. It emerged from this analysis that the decline in fertility becomes more deeply entrenched wherever the importance of the extended family wanes as a result of industrialization and the spread of urban lifestyles that discourage the creation of large families. Such families were preferred in the past because of the family’s need for a large number of workers as security and old-age insurance for parents. But economic development itself, which tends to lower the death rate, turns society into a modern industrialized State, in which education reduces the value of children by withdrawing them from the labour force, and people are aware that the drop in infant mortality rates means that there is no need for more births to ensure that at least a certain proportion of infants survive. Moreover, as a result of changes in social institutions, the goal of a large family recedes and the idea of deliberate control of fertility gradually gains ground (reference 2).

Essays by Kingsley Davis (1963) and Ansley Coale (1974) represented an important development in the basic content of the theory. Davis endeavoured through his “theory of change and response in modern demographic history” to broaden the theoretical framework to cover not only the decline in fertility among couples but also voluntary methods used by societies to respond to population pressure (due to the drop in mortality rates) in a situation characterized by the existence of scope for social and economic mobility. Although lower death rates and modernization contribute to lower fertility among couples (through increased use of contraceptives and rising abortion rates), Davis notes that the postponement of marriage as well as high celibacy and emigration rates are all factors involved in the process of demographic adjustment to population pressures. The timing, inception and pattern of the decline in fertility varies from one society to another depending on the relative quantity of these responses (reference 1).

Coale, in his comments on different patterns of fertility decline in Europe in the late nineteenth and early twentieth centuries, takes the view that fertility is not affected solely by social and economic change but also by a society's culture. In his list of conditions for fertility decline, Coale includes the following three conditions: 1. fertility must form part of couples' calculus of conscious choice; 2. its reduction must be associated with some advantage; and 3. effective contraceptive techniques must be available. Transition theory focuses on the second condition, i.e. there must be some social and economic benefit motivating couples to have fewer children, and the change affecting reproductive motivation must be related to industrialization, urbanization and other changes that affect social institutions and lead to a reduction in the economic benefit associated with having children and a rise in the cost.

While the first and the third conditions seem clear to demographers, Coale means by conscious choice the need for the idea of family planning to enjoy social legitimacy before couples challenge traditional values that encourage large families. This assumption is based on Lesthaeghe and Wilson (1986), who consider that secularism was an important determinant, after economic factors, of the timing of fertility decline in parts of Europe (reference 1).

In the 1970s and 1980s, two trends in demographic research challenged the predominance of the demographic transition theory. The first was based on the findings of the Princeton project on fertility in Europe, which showed a weak correlation between the pattern of fertility decline in Europe's provinces and regions and social and economic variables. Thus, types and patterns of fertility decline seemed more similar in regions with shared languages and culture than in those with comparable social and economic circumstances.

However, one of the most important findings was that fertility decline was accompanied in virtually all European countries by a rise in the level of education, which contributed to a change in attitudes to reproduction and reproductive behaviour. Furthermore, developments in the status of women and the spread of ideas supporting their advancement had a major impact on fertility decline. As a result, some thinkers took the view that the impact of cultural factors in the broad sense of the term played an important role in spreading new attitudes regarding family size. It follows that fertility decline in European countries was related to the spread of a new mentality rather than to a process of adjustment to new socio-economic conditions. It would be wrong, however, to rule out the possibility of adjustment of the fertility rate to a steadily declining mortality rate, although this seems difficult to verify.

The second challenge came from the results of a world productivity survey (late 1970s and early 1980s), which covered a number of developing countries. This challenge will be discussed in the next section since it has a bearing on fertility trends in the developing countries.

### C. THE DEMOGRAPHIC TRANSITION IN THE DEVELOPING COUNTRIES

The results demonstrated the existence of a correlation in the expected direction between the fertility rate and many social and economic variables, including the level of education of women and place of residence (rural/urban). In many cases, however, the correlation was weak and there were quite a number of exceptions. This led to a questioning of the soundness of the empirical basis of the theory, and an attempt was made to develop an alternative theoretical model or framework, known as the cultural theory which related fertility to culture and custom (John Cleland and Chris Wilson, 1987). According to the cultural theory, cultural values affect fertility in the long term, and social and economic changes slowly and partially undermine this impact (reference 1).

John Cleland (1982), in his theory of the inter-generational wealth flow process, takes the view that mass education and the influence of Western values (disseminated by the mass media and films) contributed to the spread of the idea of small family size and were conducive to a lessening of the economic value of children and a weakening of the incentive to produce a large number of offspring. In addition, Richard Easterlin (1978, 1983) sought to develop a socio-economic approach to fertility change through his model of the demand for and the supply of children, including the costs of fertility control (reference 3).

In the early 1990s, Jean-Claude Chesnais, in the context of his discussion of theories and practices of economic development and their possible influence on fertility decline, noted that “the evolution of fertility in the developing world passes through different stages. A general change is discernible around 1970, about half a century after the turning-point in Europe. The countries most committed to reducing fertility are also the countries most open to foreign influence. It should be noted that the decline in fertility in some of these countries occurred at a time when the Western world was again experiencing a sudden decline. The mechanical—temporal context of this decline indicates the existence or a mechanism of dissemination. Moreover, as in the case of other phenomena, demographic developments become universal” (reference 4).

Comparing the demographic changes that have occurred in the Arab countries since the middle of the twentieth century with those that occurred in the industrialized countries previously, the following questions arise: To what extent is the demographic transition theory applicable to the Arab world? And what factors can account for the demographic changes that have occurred since the middle of the last century?

#### D. THE DEMOGRAPHIC TRANSITION IN THE ARAB COUNTRIES

The population of the Arab world increased from roughly 36 million at the beginning of the twentieth century to about 80 million in the middle of the century and about 307 million in mid-2003. This figure is expected to increase to over 400 million by 2020. While the annual average growth rate peaked at some 3 per cent in the 1980s, it fell back to 2.6 per cent during the period 1990-1995, and is projected to drop to less than 1.9 per cent over the next two decades (reference 5). The cause of this decline is the continuous fall in mortality rates and expectations of a more pronounced decline in fertility rates.

These changes clearly fall within the context of the demographic transition that marked the modern world, a transition which, first, was characterized by the time lag between the decline in death rates and in fertility rates; and, second, was due to the development process and the simultaneous socio-economic changes that occurred in the developed countries. But the demographic transition in the Arab region has distinctive characteristics, since it occurred at an unusual stage of socio-economic development, the stage that shaped the region’s history during the last quarter of the twentieth century. The characteristics of this transition may be summarized as follows:

(a) *First characteristic*: This is the connection with the demographic situation prior to the transitional stage, since the scanty data available for the Arab region show that death and birth rates were higher during that stage than in the Western countries;

(b) *Second characteristic*: This is the delayed and accelerated nature of the transition. Death rates began to decline at different times, in most cases after the First World War but in some cases after the Second World War, and the decline was generally abrupt;

(c) *Third characteristic*: This pertains to the pattern of demographic growth, i.e. the growth rates recorded were two or three times as high as those recorded in Western countries during the transitional stage;

(d) *Fourth characteristic*: This is linked to the fact that the demographic transition in the Arab countries did not fit into a context of comprehensive and global development, i.e. overall levels of economic, social and cultural development, but was the result of an improvement in general health conditions, a decline in infant and child mortality rates, and progress in medicine in Western countries during the twentieth century.

To shed light on the pattern of the demographic transition in the Arab world, trends in mortality and fertility rates must be examined: thus, there was a rise in birth rates which tended to decelerate slowly from the 1950s to the early 1980s concurrently with a regular and rapid decline in the death rate. The rate of natural increase reached levels that were among the highest in the world during this period and then began to fall. While the data show a clear correlation between the decline in the mortality rate, on the one hand, and the decline in birth rates and rates of natural increase, on the other, for the developing countries as a whole, the correlation seems weak in the case of the Arab world (reference 7). The fertility rate remained high for a long period despite the increase in socio-economic indicators, except in Lebanon and Tunisia where the

transition occurred early, and the general belief until the mid-1980s among eminent researchers such as Kirk, Caldwell, Cleland, Wilson, Lutz and Nagy that it could not decline (reference 6). One of the essays on the connection between this special context in the Arab world and the socio-economic development pattern in the Arabian Gulf countries which benefited most Arab countries, demonstrated that the rapid rise in oil earnings resulting from the sudden major increases in revenue generated a growing demand for children as the economic burden they represented became acceptable. Moreover, the improvement in health conditions made it easier to fulfil this demand in practice. At the same time, the rise in levels of education, which has a negative increase on this increased demand for children, occurred at a relatively slow pace, and as a result there was a marked increase in fertility rates, especially in the populations of the Arabian Gulf countries but also in those of neighbouring countries. With the spread of education, particularly among women, the demand for babies slackened off and fertility rates declined in all Arab countries (reference 8). While some researchers stress the role of the economic factor in fertility decline and view economic change as an important factor in the acceleration of the demographic transition in the Arab region (references 6 and 7), others consider that the different dynamics of change and different experiences in the Arab countries point to the need to exercise caution in basing approaches to the demographic transition in the Arab region on Western experience (reference 9).

Some researchers believed that the combination of high earnings with high fertility levels in some countries of the Arabian Gulf, including Saudi Arabia and Kuwait, could be taken as evidence of the clash between cultural values and fertility decline. However, they seem to have overlooked the unusual pattern of development in those countries. Their experience does not reflect the problem of the relationship between population and resources because State insurance alleviates the burden represented by large numbers of children (family, health, education and employment benefits). These factors are compounded by the low level of participation by women in economic activities, their role being limited to looking after their families. On the other hand, recent changes in fertility rates may be due to economic difficulties (the decline in oil prices and the cost of the Gulf War) and the pronounced rise in levels of education, especially among women.

The countries that experienced an early change in fertility, such as Lebanon and Tunisia, are characterized by scarce resources that are not commensurate with population size, and the overt or covert adoption of family planning policies.

Fertility change in the other Arab countries seems to have been due to development or lack of development: greater aspirations, fewer opportunities and a different understanding of the concept of a "decent life". All these factors were conducive to change in the case of well-off sectors of the population, while the other sectors carried on the struggle for survival and the creation of new families (references 9 and 10).

But whatever differences have been discernible in the dynamics of change and however varied experiences have been, the demographic transition has clearly occurred in the Arab world and has spread to all countries, making considerable headway in some, while drawing to a close in others, as the analysis in the following chapters will show the following question therefore arises: What demographic changes are expected as a result of the demographic transition in the Arab world and what repercussions and challenges will they entail in the next two decades?

## II. TRENDS IN BASIC DEMOGRAPHIC INDICATORS

The population of the Arab world stood at some 307 million in mid-2003, that is to say 4.9 per cent of the world population. The most populous Arab countries are in Africa and they are led by Egypt, whose population accounts for roughly one-quarter of the total population of the Arab world and which will remain well ahead during the next two decades. It is followed a long way behind by Algeria, Morocco and Sudan, each of which accounts for between 10 and 11 per cent of the total population. The annual population growth rate is very high, estimated at some 2.3 per cent for the period 2000-2005, compared with 2.2 per cent for the world as a whole, with the highest rate recorded in Somalia, at 4.2 per cent, and the lowest in Tunisia, at 1.1 per cent. The infant mortality rate during this period has been estimated at 43.7 per thousand live births, ranging from 117.7 in Somalia to 10.8 in Kuwait; while life expectancy at birth reached 66.7 years for the two sexes combined, varying from 76.6 in Kuwait to 47.9 in Somalia. The total fertility rate is estimated at 4.1 children per woman, with the highest rate in Somalia, at 7.3, and the lowest in Tunisia, at 2.0 (see table 1).

### A. TRENDS IN DEMOGRAPHIC INDICATORS DURING THE PERIOD 1980-2000

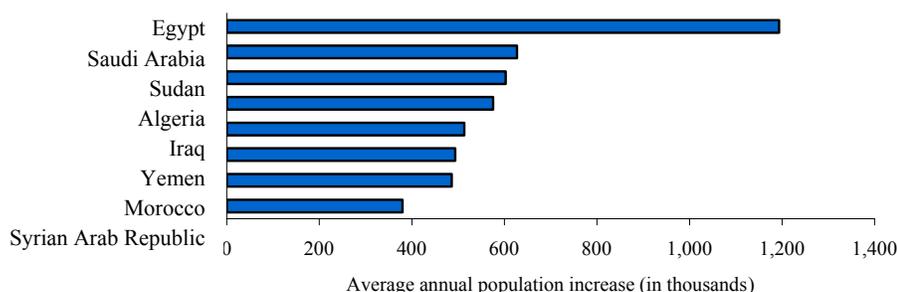
#### 1. Population size

The population of the Arab world increased from roughly 170 million in 1980 (3.8 per cent of the total world population) to roughly 287 million in 2000 (4.7 per cent of the total world population), on the basis of the medium variant, i.e. an absolute increase of almost 117 million. Population size differed sharply between countries: in 2000, Egypt's population numbered 28 million (23.6 per cent), followed by Sudan with 31.4 million (11 per cent), Algeria with 30.2 million (10.6 per cent), Morocco with 29.1 million (10 per cent), Iraq with 23.2 million (8 per cent), United Arab Emirates with 22.1 million (7.7 per cent) and Yemen with 18.0 million (6.3 per cent). The smallest countries Bahrain, Comoros, Djibouti and Qatar each accounted for some 0.2 per cent (see table 2).

#### 2. General population growth

The annual population growth rate of the Arab world amounted to 2.6 per cent during the past two decades, compared with 1.6 per cent for the world as a whole. The population growth rate varied considerably between countries. During the period 1980-2000, the rate was highest in the Gulf countries such as the United Arab Emirates (5.11 per cent), Qatar (4.65 per cent) and Saudi Arabia (4.18 per cent); followed by Jordan (4.08 per cent), Yemen (3.97 per cent) and Palestine (3.85 per cent). The lowest rates were recorded in Lebanon (1.32 per cent), Somalia (1.48 per cent) and Tunisia (1.93 per cent). The increase in the population growth rate during the period 1980-2000 resulted in a rise of some 117 million in the total population of the region. In other words, the population rose by approximately 5,8 million each year (see table 2). Egypt ranked first in terms of annual growth, with an increase of 1.2 million and a 20.4 per cent share of the annual increase in the Arab world as a whole. Saudi Arabia and Sudan came second and third, with rates of 10.7 and 10.3 per cent, respectively; followed by Algeria (9.8 per cent), Iraq (8.8 per cent) and Yemen (8.5 per cent) (see figure I).

**Figure I. Top contributors to population increase in the Arab world during the period 1980-2000**



Source: United Nations, World Population Prospects, 2002 revision.

### 3. *Rate of natural population increase*

Although the Arab world's rates of natural population increase were among the highest in the world during the 1980s, they subsequently declined as a result of the fall in both crude death and crude birth rates. It should be noted in this regard that the former dropped at a faster pace, and that it was the slow decline in the latter and its continuously high level during the 1980s that led to the peak in rates of natural increase. The rate of natural increase dropped from 29.3 per thousand during the period 1980-1985 to 23.1 per thousand during the period 1995-2000 for the Arab world as a whole. The highest rate of 36.8 per thousand was recorded during the latter period by Palestine, followed by Yemen (35.5 per thousand) and Somalia (32.2 per thousand); and the lowest rate was recorded by Tunisia (13.2 per thousand), followed by Lebanon (15.0 per thousand) and the United Arab Emirates (16.7 per thousand) (see table 3).

### 4. *Deaths*

The death rate declined sharply in the Arab world during the past two decades. This decline was essentially due to the fall in the infant mortality rate, which dropped from some 74.4 per thousand during the period 1980-1985 to 49.8 per thousand during the period 1995-2000. With the exception of Iraq, where the rate increased from 73.8 to 94.8 per thousand during that period, the infant mortality rate declined in all countries, reaching its lowest levels in Kuwait (12.3 per thousand), the United Arab Emirates (15.7 per thousand) and Qatar (15.8 per thousand). However, these rates were still higher than those recorded in the developed countries (8 per thousand). During the period 1980-2000, the greatest absolute decline occurred in Egypt (from 107.5 to 49 per thousand), followed by Yemen (from 125.9 to 80 per thousand), Morocco (from 95.9 to 52.2 per thousand), Oman (from 58.3 to 22.6 per thousand) and Algeria (from 88.0 to 53.5 per thousand) (see table 4).

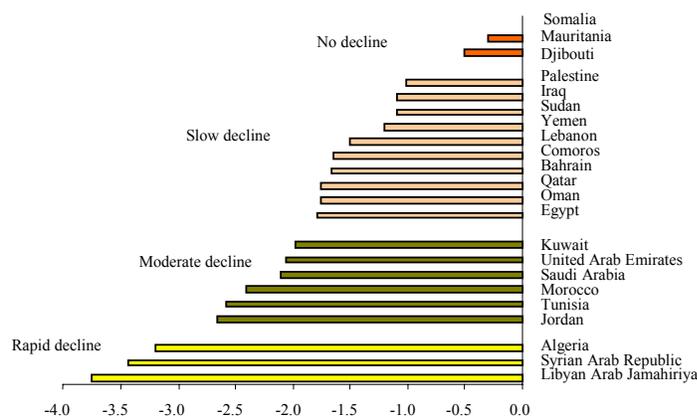
As a result of the decline in the death rate, the Arab world made tangible progress in terms of average life expectancy. During the period 1980-1985, life expectancy at birth was 58.0 years for males and 61.3 years for females. By the period 1995-2000, an additional 5.8 years had been added to the life expectancy of both males and females, with life expectancy at birth rising at country level by 10.5 years in Egypt, 9.4 years in Libyan Arab Jamahiriya, 8.9 years in Yemen and Oman, 8.3 years in Saudi Arabia and Morocco, 8 years in Syrian Arab Republic and 7.4 years in Algeria. Life expectancy at birth declined in Iraq by 3.6 years during the same period. During the period 1995-2000, the gap between the highest life expectancy at birth in Kuwait (75.7 years) and the lowest in Somalia (44.8 years) amounted to 30.9 years, thereby reflecting a major difference between countries in terms of social and health conditions (see table 5).

### 5. *Fertility*

The total fertility rate in the Arab world as a whole declined from 6 children per woman during the period 1980-1985 to 4.4 during the period 1995-2000, which represents a fall in the average number of children per women of roughly 27 per cent between the two periods (see table 6). However, the rate remained above the replacement level of 2.1 children per woman and also exceeded the world rate of some 2.83. Moreover, the overall decline masked variations between one country and another. The following patterns of fertility decline are discernible during the period 1980-2000:

- (a) A rapid decline, i.e. the total fertility rate falls by more than 3 children per woman: in Algeria, Libyan Arab Jamahiriya and the Syrian Arab Republic;
- (b) A moderate decline, i.e. the rate falls by two or more children: in Jordan, Kuwait, Morocco, Saudi Arabia, Tunisia and United Arab Emirates;
- (c) A slow decline, i.e. by one child or more: in Bahrain, Comoros, Egypt, Iraq, Lebanon, Oman, Palestine, Qatar, Sudan and Yemen;
- (d) No decline: in Djibouti, Mauritania and Somalia.

**Figure II. Patterns of decline in the total fertility rate in the Arab world during the period 1980-2000**



Source: United Nations, World Population Prospects, 2002 revision.

(a) *Proximate determinants of fertility*

Before the World Fertility Survey was first conducted in 1972, there were no comprehensive and comparable data on fertility available in the Arab world. The Survey that was then carried out in some Arab countries provided information about individual changes in fertility. Such information was also provided by demographic and health statistics and surveys undertaken in the context of the Child Health Survey in the Gulf Cooperation Council countries, the Pan Arab Maternal and Child Health Survey and the Pan Arab Family Health Survey. All these surveys revealed the existence of a correlation between the fertility rate and the following factors: place of residence (urban/rural); level of education of women, especially beyond the primary level; and women's participation in economic activity. It should be noted that these factors operate through three direct or proximate determinants: two determinants lead to a decline in the fertility rate, namely, late age at first marriage and contraceptive use; and a third determinant leads to an increase in the rate, namely, a reduction in the duration of breastfeeding. The impact of the first two determinants is substantially greater than the impact of the third.

(b) *Age at first marriage*

Marriage is the only context for procreation in Arab societies. It follows that fertility and marriage are correlated phenomena, and the changes affecting marriage during the past two decades have undoubtedly had repercussions on fertility rates.

Age at first marriage is a major indicator of a woman's first exposure to the possibility of pregnancy and, together with a number of other factors that interact with biological fertility, it determines a woman's fertility in the final analysis. Research has revealed a close correlation between early marriage, early reproduction and high fertility. Likewise, delayed marriage reduces the number of years in which reproduction is possible and may, other things being equal, reduce the fertility rate.

The data in table 7 show that the average age at first marriage (average number of years lived in the single state at marriage) rose in all countries for which information was available. An inverse relationship is discernible between the fertility rate and the age at first marriage: the former drops concurrently with a rise in the latter. Within the limits of the available data, a marked increase in the average age at marriage is discernible in Kuwait, Qatar, Mauritania and Oman, followed by the Syrian Arab Republic and Saudi Arabia.

(c) *Contraceptive use*

The number of women using contraceptives increased during the 1980s and 1990s in most Arab countries. However, the most important development consisted in the increased use of modern techniques in view of their effectiveness and their impact on the level of fertility.

The data in table 8 show that the proportion using contraceptives, particularly modern techniques, increased in all countries for which data are available for the periods mentioned.

Generally speaking, there seems to be an inverse relationship between the fertility rate and the proportion of women using contraceptives (in particular those using modern techniques): the former declines concurrently with a rise in the latter. In countries where the proportion using modern contraceptive methods increases by 30 per cent, the total fertility rate approaches 3 children or fewer, while in countries where the rate declines by 30 per cent, the rate ranges from 3 to 7 children per woman.

(d) *Breastfeeding*

In most Arab countries, the average duration of breastfeeding exceeds one year. That is the period during which a woman is protected from becoming pregnant. In countries where contraception is not widely practised, the continuation of breastfeeding for a long period serves as an indirect form of contraception. The data in table 9 show that the duration of breastfeeding varies from country to country: more than a year and a half in Mauritania and Sudan; more than a year in Algeria, Egypt, Oman, Saudi Arabia, Syrian Arab Republic, Tunisia and Yemen; and less than a year in Bahrain, Kuwait, Lebanon, Libyan Arab Jamahiriya, Qatar and United Arab Emirates.

The impact of breastfeeding on the fertility rate in the Arab countries seems to be less pronounced than that of the age at first marriage and contraceptive use. This may be seen from table 9, since it is assumed that, other things being equal, the fertility rate is lower where the duration of breastfeeding is longer. However, in some countries for which data are available, the fertility rate declined concurrently with an increase or a reduction in the average duration of breastfeeding. Moreover, research has shown that the impact of breastfeeding on the fertility rate is greater than the impact of age at first marriage and contraceptive use in societies characterized by high fertility rates.

B. MEASUREMENT OF THE IMPACT OF PROXIMATE DETERMINANTS OF FERTILITY  
ON THE DECLINE IN THE FERTILITY RATE IN SOME ARAB COUNTRIES

The Bongaarts model measures the impact of direct or proximate determinants of fertility on fertility decline. As mentioned above, the proximate determinants are biological and behavioural changes that have an immediate effect on fertility and are influenced by economic, social and environmental factors. There are many such determinants, but Bongaarts reduces them to four basic determinants, namely: marriage, breastfeeding, contraceptive use and induced abortion. The impact of these four determinants may be measured by means of four indices with values ranging between 0 and 1. As the value of the index approaches 1, its effect on fertility declines.

Table 10 shows data for four Arab countries, namely, Egypt, Lebanon, Morocco and Yemen, resulting from the application of the Bongaarts model and the values of indices of proximate determinants at two different times.

The factor that had the greatest impact on fertility decline in Egypt during the period 1988-1995 was contraceptive use (decline in the contraceptive index from 0.69 to 0.50), followed by late marriage (decline in the marriage index from 0.64 to 0.60) and breastfeeding. It should be noted that late marriage was the most important factor in 1988.

In Morocco, the factor that had the greatest impact on fertility decline during the period 1987-1995 was late marriage (decline in the index from 0.75 to 0.51), followed by contraceptive use (decline in the index from 0.69 to 0.46), breastfeeding and induced abortion. In 1987, the most influential factor was

contraceptive use. It should be noted that the use of an indirect method to estimate the induced abortion index led to an estimated index of 0.97 in 1987 and 0.86 in 1992, which points to an increase in its impact over time. However, its effect remained limited compared with that of late age at marriage and contraceptive use.

Late marriage was the most influential factor in fertility decline in Lebanon. The marriage index showed a marked decline during the period 1987-1996 (from 0.58 to 0.39), followed by contraceptive use (decline in the index from 0.69 to 0.46) and breastfeeding. It is well known that Lebanon represents a unique case among the Arab countries in terms of early fertility decline.

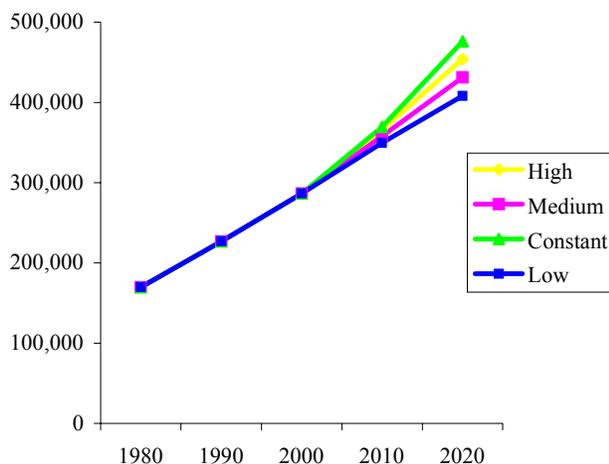
The main factor in fertility decline in Yemen during the period 1992-1997 was breastfeeding, following by the marriage and contraceptive indices. The impact of breastfeeding was important in both of the years mentioned. However, the decline in the index for that factor was not as great as for the contraceptive index during the period 1992-1997. The latter dropped from 0.93 to 0.71, thereby constituting an important factor in fertility decline during that period.

### C. DEMOGRAPHIC INDICATORS DURING THE PERIOD 2000-2020

#### 1. Population size

According to the United Nations 2002 revision of population prospects, the population of the Arab world is projected to increase from some 287 million in 2000 to approximately 454 million in 2020 on the basis of the high variant, to 408 million on the basis of the low variant, to 476 million on the basis of the constant variant or to 431 million on the basis of the medium variant (5.7 per cent of the world population) (see figure III). This translates into an absolute increase of some 145 million, which exceeds that recorded for the period 1980-2000 by almost 28 million. The following variations in population size are projected for the Arab countries on the basis of the medium variant: in 2020, Egypt will remain ahead with a population of 97 million (22.4 per cent), followed by Sudan with 44.5 million (10.3 per cent), Algeria with 40.5 million (9.4 per cent), Morocco with 38.7 million (9 per cent), Yemen with 36.5 million (8.5 per cent) and Saudi Arabia with 36.3 million (8.4 per cent). The relative population size of the smallest countries, namely, Bahrain, Comoros, Djibouti and Qatar is projected to remain the same, with some 0.2 per cent of the total population of the Arab region (see table 11).

**Figure III. Development of the population of the Arab world by variant during the period 2000-2020**



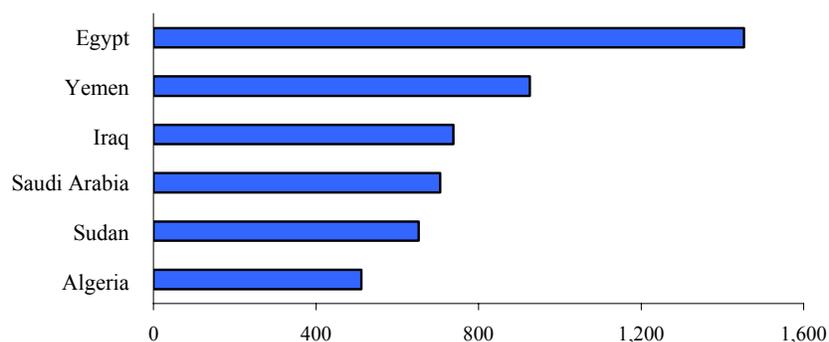
Source: United Nations, World Population Prospects, 2002 revision.

## 2. General population growth

The rate of growth of the population of the Arab world will tend to decline during the next two decades and is projected to amount to approximately 2.04 per cent during the period 2000-2020, compared with 2.61 per cent during the previous 20 years. This decline will affect all Arab countries to a different extent, except for Somalia, where the rate will increase from 1.49 to 3.60 per cent, and Mauritania, where it will increase from 2.49 to 2.63 per cent. A slight decline will be recorded in Kuwait and Yemen. During the period 2000-2020, the highest annual growth rates will be recorded in Somalia (3.60 per cent), Yemen (3.54 per cent), Palestine (3.21 per cent), Mauritania (2.63 per cent), Oman (2.56 per cent), and Comoros, Iraq and Saudi Arabia (2.46 per cent). The lowest rates will be recorded in Tunisia (1 per cent), Lebanon (1.17 per cent), Qatar (1.29 per cent) and Morocco (1.43 per cent) (see table 2).

In spite of the decline in the annual growth rate, the population of the region will grow by some 145 million, or by approximately 7.2 million a year. Egypt will rank first in terms of the annual increase in population, with 1.5 million more inhabitants or a 20.1 per cent share of the increase, followed by Yemen in second place (12.8 per cent), Iraq (10.2 per cent), Saudi Arabia (9.7 per cent), Sudan (9 per cent) and Algeria (7.1 per cent) (see figure IV).

**Figure IV. Top contributors to population increase in the Arab world during the period 2000-2020**



Source: United Nations, World Population Prospects, 2002 revision.

## 3. Natural population increase

In the context of the decline in the rate of natural population increase recorded by the Arab region from the 1980s onwards, a continued rapid decrease is projected over the next two decades owing to the accelerating decline in the death and birth rates. The rate is projected to drop from 22.5 per thousand during the period 1995-2000 to 21.4 during the period 2005-2010, and 17.9 per thousand during the period 2015-2020 on the basis of the medium variant. This decline will affect all countries to a varying extent, with a projected rate of natural population increase during the period 2015-2020 ranging from highs of 35.5 per thousand in Yemen and 32.4 per thousand in Oman, to lows of 9.6 per thousand in Tunisia, 9.7 per thousand in Lebanon, and 9.9 per thousand in the Qatar and the United Arab Emirates (see table 3).

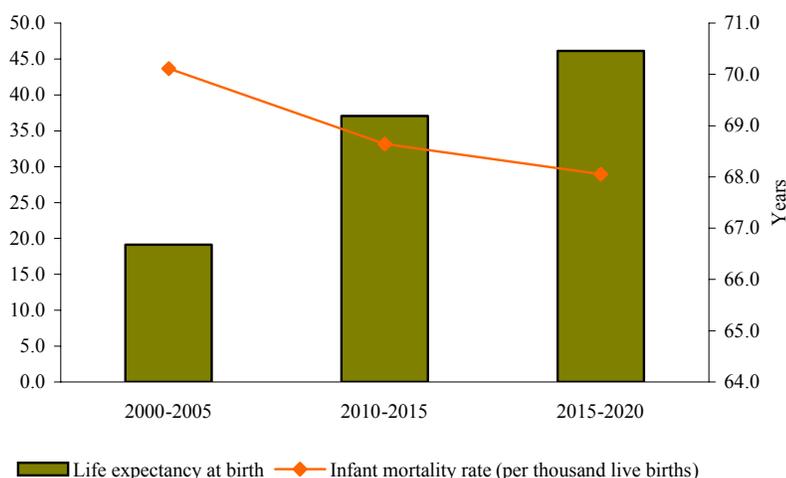
## 4. Mortality rates

The fall in the mortality rate in the Arab world is projected to continue at a steady and rapid pace during the next two decades. The infant mortality rate will decline from some 43.7 per thousand during the period 2000-2005 to 33.1 during the period 2010-2015, and 28.9 during the period 2015-2020 (see figure V). The decline is expected to affect all Arab countries, with the rate reaching its lowest level during the periods 2010-2015 and 2015-2020, respectively, in Kuwait (declining from 10.8 to 9.2 and 8.8), Qatar (from 12.3 to 9.9 and 8.8), United Arab Emirates (from 13.6 to 10.4 and 9.5) and Bahrain (from 14.2 to 10.9 and 9.6). The largest absolute decline during the periods 2000-2015 and 2015-2020 is expected to occur, respectively, in

Iraq (from 83.3 to 49.4 and 37.8), Somalia (from 117.7 to 94.5 and 85.9), Yemen (from 70.6 to 52.9 and 44.6), Comoros (from 67.0 to 49.6 and 42.3), Djibouti (from 102.4 to 85.4 and 76.8), Mauritania (from 96.7 to 79.7 and 71.7) and Sudan (from 77.0 to 61.7 and 54.4). The rates for the latter countries, however, will remain above the world rate, which will reach 46 and 42 per thousand during the periods 2010-2015 and 2015-2020, respectively (see table 4).

Average life expectancy in the Arab world will continue to rise. Comparing the period 2000-2005 with the periods 2010-2015 and 2015-2020, life expectancy at birth is projected to increase from 65.1 to 67.6 and 68.9 years, respectively for males, and from 68.5 to 71.1 and 72.4 years, respectively for females (see figure V). Thus, males will gain 2.5 and 3.7 years, respectively, and females will gain 2.6 and 3.9 years, respectively. Iraq will rank first in terms of the number of years gained by the two sexes combined (6.2 and 8.6); followed by Somalia (5.1 and 7.1); and Comoros, Mauritania and Yemen (4 and 6 years). During the periods 2010-2015 and 2015-2020, there will continue to be marked differences in life expectancy among Arab countries, with the difference between the highest life expectancy in Kuwait (77.9 and 81.1 years, respectively) and the lowest life expectancy in Djibouti (46.2 and 48.6 years, respectively) amounting to 31.7 and 32.5 years. In the countries where life expectancy is lowest, however, the figures will range from 46.2 and 48.3 in Djibouti to 64.8 and 66.6 in Comoros (see table 5). These rates remain below those for the Arab world as a whole, namely, 69.2 for the period 2010-2015 and 70.5 for the period 2015-2020.

**Figure V. Infant mortality rate and life expectancy at birth (both sexes) in the Arab world during the period 2000-2020**



Source: United Nations, World Population Prospects, 2002 revision.

### 5. Fertility

While the decline in the fertility rate in the Arab world is expected to continue for the next two decades, it will remain above the replacement rate: the total fertility rate is projected to drop from 4.1 during the period 2000-2005 to 3.4 during the period 2010-2015 and to 3.1 during the period 2015-2020. However, the rate will vary from one country to another during the latter two periods, ranging from lows in Tunisia (1.9), Lebanon (2 and 1.9), Morocco (2.4 and 2.3), Bahrain (2.2 and 2.0) and United Arab Emirates (2.3 and 2.2); to highs in Somalia (6.6 and 6.1), Yemen (6.3 and 6.0), Djibouti (4.8 and 4.2) and Sudan (3.4 and 3.1) (see table 6).

The Programme of Action of the 1994 Cairo Conference established basic objectives, chief among which was the achievement of equilibrium between population, sustained economic growth and sustainable development. To that end, a zero population growth rate is necessary and hence the Arab countries must lower their fertility rate from its present level of close on 4.1 to the replacement rate which is equivalent to

2.1 children. According to the United Nations 2002 annual revision of population prospects, however, the pattern of fertility decline will vary among the Arab countries. The following trends are discernible in respect of the prospective date of attainment of the replacement rate:

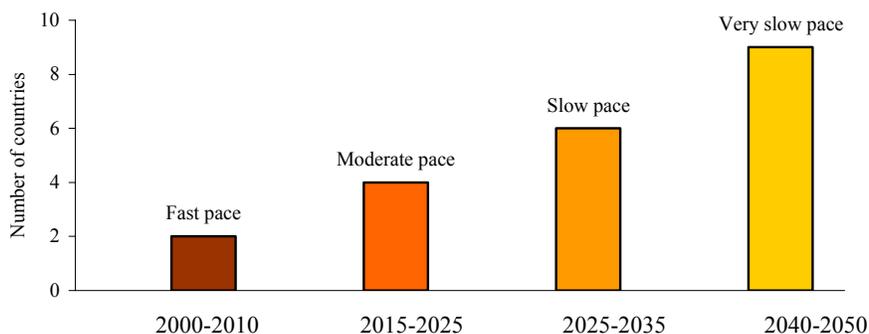
(a) Fast pace: attainment of the replacement rate during the period 2000-2005 (Tunisia) and 2005-2010 (Lebanon);

(b) Moderate pace: attainment of the replacement rate during the period 2015-2020 (Algeria and Bahrain) and 2020-2025 (Libyan Arab Jamahiriya and the United Arab Emirates);

(c) Slow pace: attainment of the replacement rate during the period 2025-2030 (Kuwait, Morocco and Qatar) and 2030-2035 (Egypt, Jordan and the Syrian Arab Republic);

(d) Very slow pace: attainment of the replacement rate during the period 2040-2045 (Iraq and Saudi Arabia), 2045-2050 (Sudan) and shortly after 2050 (Comoros, Djibouti, Mauritania, Oman, Somalia and Yemen).

**Figure VI. Distribution of Arab countries by period of attainment of the replacement rate**



Source: United Nations, World Population Prospects, 2002 revision.

It should be noted that attainment of a total fertility rate equivalent to the replacement rate in the Arab world as a whole will be difficult for two reasons: first, because of the time difference between the decline in the fertility rate and the drop in the rate of natural increase, since the reproductive momentum generated by previous generations adds to population growth; and second, because of the continuous population growth in the Arab world for a period following that in which the total fertility rate reaches the replacement rate, since existing population momentum creates a time lag between attainment of the replacement rate and the lowering of the rate of natural population increase. The possibility of attaining the replacement rate in the Arab world by 2015 must therefore be ruled out in the light of the 2002 United Nations annual revision of population prospects, which projects a total fertility rate of almost 3.1 in 2015, a rate that exceeds the replacement level.

According to the trends in basic demographic indicators for the past two decades and the projections for the coming two decades, the 1980s were characterized by important achievements in the area of health that were reflected in a rise in life expectancy at birth, while the 1990s and the early years of the present decade have been characterized by a marked decline in the fertility rate that is projected to continue during the coming decades. The most important consequence of these changes has been the impact of the decline in mortality and fertility rates on the age structure of the population.

There is a direct correlation between fertility decline and the change in age structure. The decline in fertility leads to a drop in the ratio of the child population (under 15 years) in the population, and this in turn leads to a rise in the ratio of other age groups. A rapid decline in the fertility rate is also related to an

acceleration in the ageing of the population (an increase in the ratio of the elderly population), because it means that fewer successive birth cohorts enter the age structure, and this in turn increases the proportion of adults and older people in the total population.

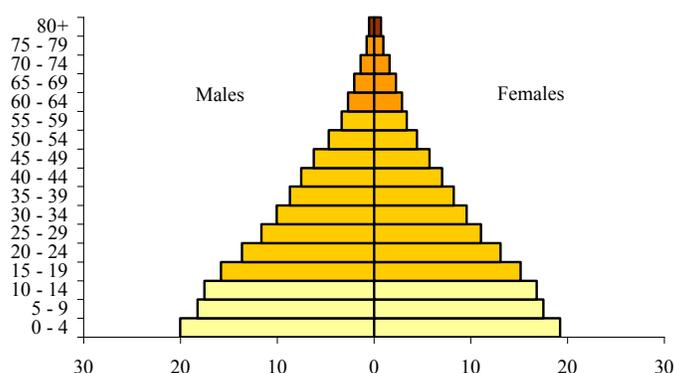
The impact of the decline in the death rate on the age structure is related to the age pattern that accompanies such a decline. Despite the fact that benefits in terms of life opportunities during the early stages of the decline in the death rate extend to all age groups, they are more important for children and women of child-bearing age and therefore contribute to the youthfulness of the population. However, with medical progress, the improvement in public health services and the achievement of high levels of health among young people, the benefits are extended to older age groups and contribute to the survival of larger proportions of elderly age cohorts. It follows that, while fertility decline determines the pattern of population ageing, the scale of the decline in death rates may lessen the impact of fertility on ageing during specific periods of time inasmuch as it accelerates other aspects relating to the age pattern that accompanies this decline.

The combination of high fertility rates with continually declining death rates has contributed to the youthfulness of the population of the Arab world. However, given the variety of demographic experience of Arab countries and the recent marked decline in fertility, different age structure patterns may be discernible in the next two decades. The rapid demographic transition experienced recently by some Arab countries has generated momentum towards ageing, and this may accelerate population ageing throughout the Arab world (reference 11).

### III. RESULTS OF THE DEMOGRAPHIC TRANSITION

In the past, demographic balance hinged on high fertility and death rates. This pattern changed following the rapid decline in infant mortality rates and the increase in life expectancy, which brought about a change in the age structure of the population that led in turn to an increase in the ratio of the economically active population (aged 15 to 64). Moreover, the continuously high fertility rate for several decades led to an unprecedented increase in the child population (aged 0 to 14), as reflected in the age pyramid of the population of the Arab world (see figure VII). The structure of the population by broad age group, however, reflects the interaction of high fertility and declining death rates, since large numbers of women of child-bearing age from previous generations produced and continue to produce large birth cohorts.

**Figure VII. The population pyramid in the Arab world in 2002**



Source: United Nations, World Population Prospects, 2002 revision.

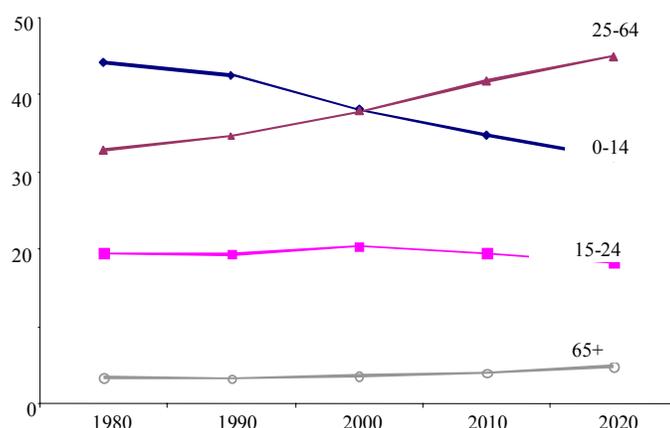
#### A. TRENDS IN THE AGE STRUCTURE OF THE POPULATION

Despite the increase in the child population (aged 0 to 14) in absolute terms from 75 million in 1980 to 109 million in 2000 and the projected increase to 138 million in 2020 on the basis of the medium variant (see table 12), the ratio of this group to the total population declined from 44.2 per cent in 1980 to 38.1 per cent in 2000 and is projected to decline further to 31.9 per cent in 2020 (see table 13). The youthful age structure of the Arab world, with more than one-third of the population under 15 years of age, has generated unanticipated population growth. The 15 to 23 age group, which represents the transition from childhood to adulthood in most societies and which numbered some 33 million in 1980 in the Arab world, leapt to 58 million in 2000, and is projected to reach 78 million in 2020 on the basis of the medium variant (see table 12). While the ratio of this group to the total population has remained stable during the past two decades (at some 19.5 per cent), the ratio is projected to decline from 20.4 per cent in 2000 to 18.2 per cent in 2020 (see table 13).

The biggest population increase occurred in the economically active population (aged 25 to 64). This group increased from some 55.9 million in 1980 to 108.7 million in 2000 and is projected to reach 194 million in 2020. The ratio of this group rose from 32.9 per cent in 1980 to 37.9 per cent in 2000 and is projected to attain 45 per cent in 2020 (see tables 12 and 13).

Although population ageing has not been viewed as a priority issue in the Arab world, the number of elderly people (aged 65 and over) doubled from 5.7 million in 1980 to 10.4 million in 2000 and is projected to increase further to 21.3 million by 2020. However, the projected population structure trends indicate that the ratio of the elderly population will not exceed 5 per cent by 2020. Where the process of decline in the fertility rate is just beginning, as in the Arab world, the process of ageing is also at an early stage. However, given the rapid demographic changes occurring in the Arab region, it would be wrong to underestimate the challenges that the increase in the absolute number of elderly persons will entail (see tables 12 and 13 and figure VIII).

**Figure VIII. Population distribution by broad age group**



Source: United Nations, World Population Prospects, 2002 revision.

A comparison of the growth rates of different age groups illustrates the population increase that will affect these groups. While the growth rate in the child population (aged 0 to 14) was lower than the annual population growth rate in the Arab world during the period 1980-2000, the growth rates in the youth population, the economically active population and the elderly population exceeded the annual population growth rate (2.8, 3.3 and 3.0 per cent, respectively, compared with 2.6 per cent). The growth rate in the economically active and elderly populations (2.9 and 3.6 per cent) is projected to exceed the population growth rate (2.04 per cent) during the period 2000-2020 in the Arab region as a whole and in all individual countries, ranging from a high of 4 per cent in Yemen to a low of 1.6 per cent in the United Arab Emirates for the 25 to 64 age group, and from a high of 10.4 per cent in the United Arab Emirates to a low of 2.1 per cent in Lebanon for the elderly population (aged 65 and over) (see table 14).<sup>4</sup>

In the light of this analysis, the following country patterns are discernible from the projected trends in the age structure of the population for the year 2020:

(a) *Young countries*: The ratio of the child population ranges from 29 to 47 per cent and of the elderly population from 2 to 5 per cent in the case of Comoros, Djibouti, Iraq, Jordan, Mauritania, Oman, Palestine, Saudi Arabia, Somalia, Sudan and Syrian Arab Republic;

(b) *Transitional countries*: The ratio of the child population ranges from 20 to 30 per cent and of the elderly population from 5 to 7 per cent in the case of Algeria, Egypt, Kuwait, Libyan Arab Jamahiriya and Morocco;

(c) *Countries in which ageing has begun*: The ratio of the elderly population exceeds 7 per cent and the ratio of the child population ranges from 20 to 23 per cent in the case of Bahrain, Lebanon, Qatar, Tunisia and United Arab Emirates.

#### B. TRENDS IN DEPENDENCY RATIOS

The increase in the economically active population is of special importance in the Arab region. This population comprises the following three groups that have a special impact on economic development:

(a) The population group of reproductive age who ensure demographic momentum;

<sup>4</sup> The population growth rates for the Gulf Cooperation Council countries were calculated on the basis of the total population because of the lack of detailed data providing a breakdown for nationals and non-nationals.

(b) The economically active group who increases the number of newcomers in the labour market and who may create imbalances whereby supply exceeds demand;

(c) The group that contributes through early marriage and a high fertility rate to increased population growth, and generates greater demand for secondary and higher education.

Recent studies have found, however, that the conjunction of an increase in the last group with a declining dependency ratio accelerates macroeconomic performance. The projected decline in fertility, combined with a smaller number of dependants, may enhance prospects for economic growth.

Historical experience has shown that where the process of fertility decline is accompanied by a slow growth in the elderly population, a number of countries in the Arab region experience—at different points in time but for a specific period—what is known as a “demographic bonus” conducive to an increase in individual savings and investment. This opportunity will permit a decline in the dependency ratio since the number of child dependants (aged 0 to 14) will drop at a faster pace than the increase in the ratio of adult dependants. In other words, the total dependency ratio, which reflects the ratio of non-economically active to active individuals, will decline during a specific period of time. This special situation is likely to reduce the burden of dependency represented by both children and adults, thereby providing scope for additional investment in economic and social development.

The total dependency ratio in the Arab world declined from 90.9 in 1980 to 71.5 in 2000, and this decline is projected to continue, reaching 58.4 in 2020. The decline affected all Arab countries without exception. While in 2000 the highest ratio was recorded in Yemen (106.2) and the lowest ratios were recorded in Kuwait (38.7), the United Arab Emirates (38.9), Qatar (39.9) and Bahrain (37.5), this gap is projected to narrow by 2020, with the highest ratio being recorded in Somalia (98.0), followed by Yemen (95.7); and the lowest in Kuwait (35.5), followed by the United Arab Emirates (37.6) and Bahrain (37.7) owing to the high ratio of the economically active population in the countries of the Arabian Gulf (see table 15).

The child dependency ratio also declined sharply in the Arab region from 84.5 in 1980 to 65.3 in 2000 and is projected to fall to 50.6 in 2020. This trend affected all countries. In 2000, the highest ratio was recorded in Yemen (101.2), followed by Somalia (96.0); and the lowest in Kuwait (36.9), followed by the United Arab Emirates (37.2) and Qatar (37.8). According to the projections for 2020, the highest ratio will be recorded in Somalia (93.3), followed by Yemen (91.2); and the lowest ratios will be recorded in the United Arab Emirates (27.6), Kuwait (28.2) and Qatar (29.2).

The decline in the total dependency ratio and the child dependency ratio was accompanied by a relatively stable adult dependency ratio during the period 1980-2000 in the Arab world as a whole. It takes some time for the decline in the fertility rate to lead to an increase in the ratio of the elderly population and hence in the adult dependency ratio, especially in the countries with high fertility rates. Clearly, therefore, a rise in the adult dependency ratio may be expected during the period 2000-2020, with the highest ratio being recorded in Tunisia (11.3), Qatar (10.6) and Lebanon (10.6), i.e. the countries that are moving rapidly towards attainment of the replacement rate; and the lowest ratios in Yemen (4.5), Comoros (5.4), Palestine (5.6) and Oman (5.9), i.e. the countries that are moving very slowly towards attainment of the replacement rate (see table 15).

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## **PART TWO**



## I. DEMOGRAPHIC CHANGE AND ECONOMIC GROWTH

### A. SCHOOLS OF THOUGHT ON POPULATION GROWTH AND ECONOMIC GROWTH

Many researchers have examined the relationship between economic growth and population growth. While the methodology applied has varied, three schools of thought with regard to that relationship may be discerned in such studies (reference 1), as set forth below:

#### 1. *First school of thought: critical of the idea that population growth contributes to economic growth*

Proponents of this school of thought believe that population growth is the result of the human desire to procreate and multiply. The population therefore increases while natural resources, capital and cumulative knowledge remain constant or, because of their very nature, grow more slowly than the population. In consequence, the most effective and productive individuals are employed, while the vast majority of the population is unable to rise above an acceptable standard of living. Some of the adherents of this school and, in particular, its originator, Malthus, believe that constant income growth is unattainable; technological progress and discoveries can only bring short-term increases in income; and increasing population growth puts pressure on available resources (reference 1).

This school of thought rapidly became discredited because of the steady growth that took place in the population and economies of Europe over the three centuries since Malthus propounded his principles: as a result of technological progress and growth, European countries were in fact beset by the problem of falling population, which led some of them to adopt special programmes designed to attract a skilled foreign labour force and foreign direct investment (FDI). However, the fact that developed countries show little interest in this school of thought does not imply that it has become completely obsolete: certain developing countries continue to find it useful.

#### 2. *Second school of thought: supportive of the idea that population growth contributes to economic growth*

Proponents of this school of thought consider that population growth stimulates economic growth by means of a number of variables, including the following:

(a) Rapid population growth and increased population density help to stimulate technological development and institutional innovation;

(b) A country's ability to benefit from economies of scale is commensurate with the size of its population;

(c) The greater its population, the more likely it is that a country will be favoured with large numbers of innovators, geniuses and exceptionally gifted individuals who are able to bring about desirable change.

#### 3. *Third school of thought: independent of the impact of population (neutrality)*

One set of studies on growth models demonstrates that, if all other factors are constant, population growth has no significant impact on economic growth. The basic assumption on which the Solow growth model rests is that population behaviour and technology are variables that operate outside the model, and technical change and savings increase income in the long term. Increased income therefore has no effect on population growth, and countries with large populations need to amass more capital in order to improve conditions for their populations (reference 2).

As a consequence of the theories that have been developed by proponents of this school over the past decades, population studies have been neglected by both developing countries and international organizations, on the basis that the impact of demographic factors on economic growth is unclear in the literature of development economics. However, what has been ascertained by a set of recent studies is that

dependence on percentage changes in population has diminished the importance of population growth in comparative studies. At the same time, one set of studies has introduced amendments to the variable that represents population, by adding a variable that represents the age distribution of the population and, in particular, the group that is entering the labour market or is expected to enter it in the near future. Outcomes were indeed contradictory, confirming that an increase in the economically active population can strengthen economic growth (reference 3).

Population studies show that demographic transition begins with a reduction in both mortality and dependency rates as the result of improvements in social and health conditions, improved levels of female participation in the labour force and increased numbers of years of education for all and for females in particular.

With respect to the rapid growth that has taken place in the so-called “Asian miracle” countries, certain studies have noted that the working sector of the population grew more rapidly between 1960 and 1999 than did the number of dependants, which is linked to the increased per capita productivity in East Asian countries, and that such growth is not fortuitous, but steady. That transition was accompanied by change in a set of social, economic and political indicators and a set of general policies that empowered the Asian tigers to reap the fruits of demographic transition (reference 4).

Certain comparative studies demonstrate that the effect of population growth on economic growth may be described as transitional or temporary insofar as it operates and may have a positive impact in various ways on the growth of the two population groups of providers and dependants. Those results indicate that the demographic cycle will at some point move in the opposite direction with respect to the growth of the dependants group, at the expense of other groups, putting pressure on the economies of those countries that are unable to provide employment because of the increase in the number of dependants.

Some studies voice apprehensions of another sort that are linked to the increase in the expected average age at the time of the demographic transition and the concomitant pressure on social security accounts, together with the increased number of dependants in the population as a result of the increase in the number of ageing persons. However, such apprehensions are not entirely well-founded, because sophisticated health services have made it possible for many of those who have reached retirement age to continue working, producing and achieving great results at the economic level (reference 5). Nevertheless, many studies have continued to express fear of the risks of slow economic growth, reduced levels of innovation and creativity, instability in financial markets and difficulties in meeting social security payments (reference 6). Notwithstanding such fears, there is no doubt that the growth of the dependent population is high, which makes a reduction in the population growth rate necessary if that level is to be curtailed, thereby making it possible to increase savings and, in consequence, investment, and to provide corresponding employment opportunities for youth (reference 7).

The economies of the Arab countries fall into two groups, the first of which includes those with relatively large populations and low incomes, while the second comprises those with small populations and high income levels. While most countries of the Gulf Cooperation Council (GCC) fall into the second category, the high level of per capita income in those countries is not so much attributable to the small population base, as to the petroleum resources that constitute their major source of income. While there are grounds for great hope with respect to the economies of the Arab world, they also give rise to numerous apprehensions. The Arab world has the basic requirements with respect to location, energy supply, diversity of climate and supply of production inputs, all of which could comprise a reliable basis for the economy if used in an integrated manner, and could make those economies competitive with such rising global economies as those of China and the countries of East Asia. However, the impact of political factors on the Arab region has reduced the possibilities for the advancement desired.

#### B. DEMOGRAPHIC CHANGE AND ECONOMIC GROWTH: THE EXPERIENCES OF EAST ASIAN COUNTRIES

Experience subsequent to the International Conference on Population and Development (ICPD) has demonstrated well-laid strategy and profound understanding of the importance of the human being and his

capacity for creating value-added. As grasp of the importance of the human being increases, the role played in the production process by other factors, including land, labour and capital, is no longer accorded the importance it previously enjoyed: information technology (IT), intelligence or human perception, and levels of knowledge have become the basic components of production.<sup>5</sup> In that context, the countries of East Asia provide a contemporary model which is appropriate to the rapid changes that are taking place in all fields, and a model that may be followed by developing countries that wish to achieve steady economic growth focused on the human being.

Analysis of the experience of the East Asian countries has established that, with respect to economic growth strategies, interest in demographic change and qualitative population issues in the early stages has greatly assisted in reducing poverty levels in those countries. The East Asian countries realized that, in the fight against poverty, it was not possible to depend on spontaneous economic growth, particularly in view of the fact that other, international experiments in the past had amply illustrated that wealth is concentrated in and reproduced by a very small sector of society, namely, the State or the private sector, which becomes clear over several generations in the absence of appropriate policies. Those countries also realized that the process of amassing capital, while important for the reproduction and distribution of wealth to the sectors that take care of the human being, is of greater importance and has a more positive impact if countries are able to provide a flexible and democratic education system, in which case there is no contradiction between the principle of justice and the principle of equality. After the Second World War, those countries were able to adopt the sophisticated medical technology developed in the West, which enabled them to reduce comparatively rapidly mortality rates and increase life expectancy at birth, followed by a swift reduction in fertility rates. Those changes were largely responsible for increasing the proportion of the population that was of working age and reducing the number of dependants. The complementary effect of the demographic and economic changes reduced the economic burden on providers and raised per capita income growth. Simultaneously, the East Asian countries directed a large proportion of their investment towards increasing their reserves of human capital through increased investment in health, education and modern communications. When the achievements of those countries are compared with those of other countries, it may be noted that the proportion of the population in East Asian countries that is living on less than \$1 per day was reduced by 37 per cent between 1987 and 1998.

The reduction in the levels of income poverty in East Asian countries may be attributed to the steady economic growth achieved by those countries which, between 1965 and 1990, raised the per capita share of national income by an annual rate of 6 per cent. Many analysts believe that the increased economic growth has been realized as a result of the change in the ratio of workers to dependants: over 25 years, the number of the former has risen while the number of the latter has fallen. Concomitant with the decrease in the dependency rate was an improvement in the quality of education systems and their greater flexibility in responding to local and global changes: those systems provided a qualified work force that enabled products to be competitive with other products on the world market, and led to greater access to world markets and greater capacity for increased production. It should be noted that the 2.4 per cent growth in the size of the population of working age was four times greater than the growth of the dependent population during the same period.<sup>6</sup> At the same time as the change in population structure was contributing to increased economic growth, increased GDP also helped to reduce the population and the dependency rate. The reduction in that rate provided an appropriate opportunity to increase levels of national savings. Between 50 and 70 per cent of the economic growth of those countries may be attributed to favourable demographic changes.<sup>7</sup>

From the foregoing we may note that the nature of the relationship between demographic changes and economic growth is one of cause and effect, which may be classified as a system insofar as there are inputs and outputs that alternate their roles over time. The historical evidence drawn from the experiences of Western industrialized countries demonstrates that technological progress and the development of the industrial sector are two factors that instigate economic growth and increase national income, which in turn,

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<sup>5</sup> ESCWA, *Sustainable human development under globalization: the Arab challenge*. E/ESCWA/SD/1995/5.

<sup>6</sup> David E. Bloom, David Canning and Jaypee Sevilla, *Economic growth and the demographic transition*, Working Paper 8685, National Bureau of Economic Research (NBER), 2001.

<sup>7</sup> Ibid.

in accordance with four main developmental stages, make national income an inducement to reduce fertility to levels appropriate with income growth, and the development of the production structure and the hegemony of the industrial sector. The expansion of that sector and its ability to absorb the population of working age were at the time an inducement to transfer the labour force from other economic sectors and, in particular, agriculture, which led to changes in reproductive patterns and behaviour. The contemporary experience of East Asian countries has provided completely different evidence, because the demographic changes were not so much the outcome of economic growth as a cause of increased capital accumulation, given the increase in the population of working age and the reduction in the dependency ratio. Improvements in health and education in those countries led to the creation of a reserve of human capital that could respond immediately to modern production patterns and techniques, and use its knowledge to create value-added.

The experience of the East Asian countries was not so much the starting point for a new outlook as an affirmation of suppositions and views that were prevalent in the first half of the twentieth century, which held that the process of reducing fertility levels involved continuous changes in the age structure of the population. When fertility levels are high, the sector of the population that is aged less than 15 years, namely between 0 and 14, is relatively high in comparison with the number of adults in the labour market. When fertility levels are low, the proportion of the working population aged between 15 and 64 is much higher than that first, non-working sector. Because economic behaviour varies according to the stage of life a person has reached, it follows that the age structure of the population has a major impact on economic performance: a large proportion of income is expended on consumer costs when fertility levels are high, the base of the population age pyramid expands and the number of children aged between 0 and 14 increases. As the base of the population age pyramid expands, the dependency burden increases and consumption increases at the expense of savings. The dependency burden in countries with high fertility levels is estimated to be 95 persons of dependent age per 100 persons of working age. That situation is reversed in countries where fertility rates are declining, with 65 dependants for every 100 persons of working age.

A large proportion of national income may be allocated to consumption in a variety of forms. When investment is funded by private savings, large families find it difficult to increase their savings, leading to a reduction in overall savings and, consequently, a reduction in levels of investment. When the large family is poor and is not a source of savings, high fertility levels lead to social pressure to increase each family's share of national income and permit it to maintain a certain level of consumption. When the State finances investment through public savings, high fertility levels lead to increased outlay and slow down rates of investment. What the experience of East Asian countries has added to the analytical tools is the reciprocal impact of the demographic dimension and its speed, represented in the fact that a fall in the number of dependants leads to an increase in savings and investment, particularly in health and education, which in turn leads to lower fertility rates. What was at one time a cause can become an effect as the result of reciprocal input. When the population of working age increases and the dependency rate decreases, the positive impact of a fall in fertility rates becomes clear in increased levels of per capita share of production inputs and increased per capita income.

This phenomenon is known as the "demographic dividend" or "demographic gift": lower fertility levels lead to lower levels of poverty, because it becomes possible to distribute the additional income from increased savings and investment to a larger group of beneficiaries. However, such a demographic dividend is not inevitable, but must be actively sought. It does not guarantee increased economic growth unless accompanied by sound economic policies that aim to convert savings into investment and other complementary strategies that identify the appropriate level of technology, namely, concentrated capital or a concentrated labour force: such strategies are dependent on the nature of local and international conditions. Those strategies must also be pursued in tandem with comparable education and health policies that are concerned with the quality of the population and, in particular, empower the population of working age to gain the skills and knowledge that will qualify them to enter the labour market and obtain productive work.

### C. DEMOGRAPHIC CHANGE AND ECONOMIC GROWTH: THE ARAB COUNTRIES

In the Arab countries after the Second World War, the population grew, and at the same time the size of the labour force increased, as did urbanization and the migration of the rural population to the cities, while the food security crisis worsened. Policymakers paid little attention to the growth of the population. The

economies of the Arab region underwent rapid structural change, while the growth of per capita share of GDP outstripped the average for such growth in all other developing countries. The role of the State as both employer and consumer expanded, while the oil boom promoted a greater interchange of manpower and capital within the region.

However, with the economic downturn in the region caused by the global collapse in oil prices in the mid-1980s and the Gulf war of 1990, economic growth declined and the real value of salaries fell. Employment levels doubled in a large number of countries. Notwithstanding the achievement of a certain amount of stability, and progress in the reform and financial liberalization process, structural reform remained slow and the public sector continued to predominate. With respect to labour markets, most countries of the region suffer from high levels of unemployment and inertia with respect to job creation, caused by deficiencies in labour markets and State legitimacy as the principal employer in urban centres.

It is expected that, with the downturn in levels of fertility that has been awaited, the effects of which began to be felt in the early 1990s, levels of growth throughout the Arab world will slow to some 2 per cent between the time of writing and 2015. A much more important development than the population growth rate is the change in the age structure of the population and its consequences for the overall economy. While in the past that structure was distinguished by the predominance of the 0-14 years age group, the scales have gradually tipped towards adults of economically active age, the percentage of which in the overall population is expected to rise perceptibly. It will therefore be incumbent upon labour markets to adjust to increasing numbers of persons seeking work for the first time, in addition to the unemployed and those seeking employment.

Against that background, the major challenge is to accelerate economic growth by rapid accumulation and increased effectiveness, and to address the need to absorb huge numbers of workers into jobs that guarantee steady growth in real salaries. However, it would appear, in contrast, that the current demographic trends constitute an obstacle to efforts to restrain demographic growth and create employment opportunities by placing additional pressures on salaries, employment markets and social security systems. Nevertheless, opportunities do exist for reform, overall integration and sustainable improvement in the economic level (reference 8).

Merrick, in a review of the demographic challenges and their repercussions on economic growth in the countries of the Middle East and North Africa, underlines the variety of demographic situations obtained in those countries, foremost among which is population size. While in Egypt the population exceeds 70 million, other countries, including Bahrain and Qatar, have very small populations. The economies of those countries also vary widely. The facts indicate that birth rates have fallen perceptibly over the past decade, having been extremely high in 1980, with fertility rates of five children or more in most countries. The increase in fertility rates constitutes one of the reasons for the current growth in the regional labour force. However, the latest data indicate that fertility rates are falling noticeably in a not insignificant number of countries and, in particular, in Algeria and Egypt. As a consequence, population growth rates are slowing.

As a result of the high levels of fertility in the past, the population continues to hold significant potential for growth. The population born in the 1980s will soon become of an age to be economically active and reproductive. That population will have larger numbers of children in the forthcoming two or three decades. Serious attention should therefore be paid to the age structure of the population in the Arab countries when social and economic policies are being formulated.

Merrick believes that the distribution of the population throughout the Arab region is also very important. While the population is spread over a wide geographical area, it is concentrated along river courses and plains, which are regions that are subject to a great deal of environmental pressure. Economic, social and environmental policies must therefore take the challenges of those issues into account (reference 9).

Bloom addresses the relationship between rapid population growth and economic growth. He believes that the population situation promises opportunities for economic growth in the Arab region, and that the evidence that rapid population growth leads inevitably to higher unemployment rates, poverty and human

misery is unconvincing. On the contrary, academic research has shown that after the various factors that impact on levels of economic growth have been taken into consideration, there is no link to levels of population growth. To date, that result constitutes the dominant judgement, which is known as “the neutrality of the population factor”. The development-related international community does not therefore any longer consider population as an intrinsic means of strengthening economic growth.

However, modern studies have established that it is an error to assume that the population factor is neutral. In the process of demographic transition, namely, the move from high to low rates of mortality and fertility, a change takes place in the population structure. Initially, the base of the population age pyramid expands as a result of the increase in the size of the young population. That base subsequently shrinks as demographic transition takes place, and the pyramid changes shape as the age distribution of the population changes and the number of youth and persons of working age increases. Bloom stresses that the age structure of the population impacts on the manner of economic growth. When large waves of young people reach the age at which they become economically active, the per capita productive potential of the economy begins to expand. Furthermore, economically active persons tend to save and invest more than young and ageing persons. Both the input of savings into the economy and the contribution of new entrants to the labour force may be considered factors that stimulate economic growth.

Bloom underlines the fact that the combination of demographic change and improvements in health is one of the factors with the greatest impact on economic growth. If the proportion of persons working to those who are not working is considered, the future of the region seems rosy. The growth of manpower could add between 1 and 1.5 per cent annually to the economic growth rate. Bloom stresses that the so-called demographic gift usually offers a window of opportunity for positive gains in respect of economic growth, and sound policies are therefore required to benefit from that opportunity. As far as the Arab countries are concerned, the major challenge is to absorb waves of young people into the work force.

Youssef, on the other hand, holds that the demographic gift represents an opportunity to make positive gains for economic growth, which are not, however, guaranteed. Warning of the dangers of sufficiency, he affirms that demographic change does not automatically lead to perceptible alterations in economic growth, because the demographic factor exerts its influence by changing the age structure of the population (reference 10). When that happens, extensive growth takes place in the supply of work and there is greater accumulation of productive capital. Until that takes place, there are many channels by means of which the economic growth rate may be increased. Youssef believes that dependence on the demographic gift requires, above all, a flexible and active work force and such accumulation procedures as financial markets and stock exchanges.

Youssef identifies two problems relating to the labour structure that require immediate attention, namely, labour practices in the public sector and the fragmentation of the labour force. He cites the example of Kuwait, where 98 per cent of the labour force works in the public sector, while 95 per cent of those working in the private sector are foreign nationals. At the same time, the Kuwaiti Government is struggling to withstand the pressures of absorbing further numbers.

In Morocco and Yemen, legal procedures and pressures prevent easy movement within and between public and private institutions. In many of the countries of the Middle East, the education system continues to produce graduates that are equipped with the capacities appropriate to the requirements of the public rather than the private sector.

Against that background, it behoves the Arab countries, in order to encourage savings and investment in productive capital, to develop financial markets and overall and fiscal policies that prioritize the private sector and guarantee that contracts will be concluded in a favourable institutional environment. Youssef gives the example of Egypt in the 1930s, when the liberalization of the private sector experiment produced noticeable rates of growth, to prove the feasibility of exploiting that demographic opportunity.

Sirageldin discusses the policies that are required in Arab countries in order to benefit from the possibilities offered by the current phase of demographic transition. He considers that an integrated population and development policy is the best way of exploiting the demographic gift. That approach

includes elements of both supply and demand, and aims to strengthen and maintain a proper standard of living. At the level of supply, it is important to pay attention to the quantitative and qualitative dimensions in order to develop human resources. Ways must therefore be found to improve health and education. With respect to the latter, Sirageldin refers to the fact that the Middle East continues to be behind the times, particularly with respect to mathematics and science, and could even be said to be in the first stages. Similarly, the health sector complains of the effectiveness of programmes and their returns, notwithstanding the recorded improvement in the health situation demonstrated by child and maternal mortality rates. The health sector further suffers from the differences in use caused by educational and socio-economic level and residence in rural or urban areas. He stresses that decades of socialism, dependence on oil revenue and the adoption of protectionist policies have resulted in a culture of dependency in the Arab world. The fall in the price of oil and the opening of the door to competition has led to a change of the behaviour described as “motivated by incentives” to behaviour that is characterized by the “regulation of incentives”. Fiscal and social policies must recognize and be consistent with such regulation.

With respect to demand, Sirageldin refers to the fact that internal demand for labour does not succeed in finding a force sufficient to provide opportunities for the growing supply of labour. Furthermore, transparency in the administration of power, and the elements linked to the quality of labour have not improved to the extent necessary to attract foreign investment in high-tech industries. Internal reforms must be undertaken in order to confront the challenges of demand posed by the latest stage of the demographic transition.

Sirageldin identifies two additional demographic challenges that are linked to development, the first of which is labour mobility and the second support for ageing persons. Globalization is increasing demand for the mobility of highly skilled persons and for labour incentives. To date, the labour force of the countries of the Middle East consists of a large and growing number of unskilled and poorly educated persons. In order to counteract that situation, those countries must improve the quality of education and ensure that intensive work training is given.

With respect to ageing persons, the social security programmes of the countries of the Middle East lack sustainable returns. Because of deficiencies in the design of those programmes, they may be expected to experience financial crisis when the age of the population peaks. Consequently, the priority for those countries must be to develop a “sustainable social contract between the generations” (reference 9).

Figure IX sets out a simplified model of the relationship between demographic changes and overall economic changes and their relationship to economic growth. Demographic change affects income through its indirect impact on value-added, which represents in sum the GDP of a country. Similarly, such change directly affects the savings and investment behaviour of the population, which necessarily reflects on the supply of labour and income.

Increased levels of population growth increase the capital expenditure of the Government and, consequently, increase capital accumulation in such public service sectors as health and education. The quality of such investment is linked to levels of public income in the State, which in turn has either a positive or negative impact on levels of fertility and mortality.

However, fertility and dependency rates may be positively affected by judicious population policies that can lead to changes in population trends with respect to consumption patterns and the value of labour. Reductions in those indicators can help to increase female entry into the labour market and interest in relatively small families, because of the quality of the education received by the members of such families.

The impact of the demographic transition may be analysed on the basis of figure IX through the set of variables set forth below:

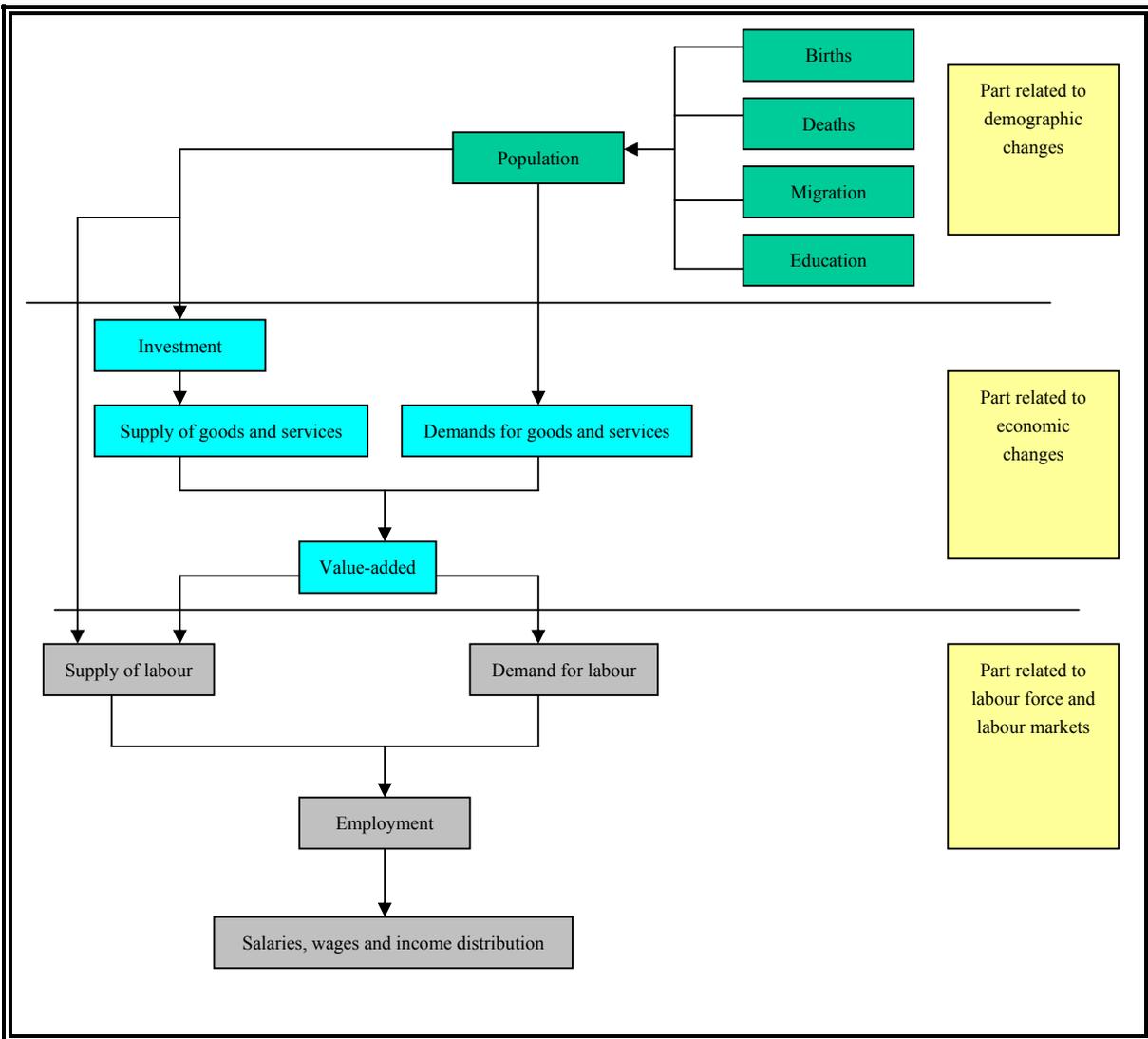
### 1. *Labour supply*

Lower fertility rates affect labour supply by reducing the proportion of workers to non-workers and, because families are smaller, increasing opportunities for women to participate in the workforce. Change in

the age structure of the population therefore affects the labour market and, consequently, economic growth. When the sector of the population currently aged less than 15 years reaches working age and, at the same time, there is a reduction in levels of fertility, dependency rates will fall and participation in the labour force will increase, provided the labour market is capable of absorbing that sector. If the desired levels of absorption are attained, accompanied by decreased rates of dependency, per capita share of GDP will improve.

Similarly, lower fertility rates lead to a decrease in the number of years of child care required, giving women greater opportunity to participate in the labour market, thereby narrowing the labour gap between men and women and their respective participation in the workforce. Opportunities will also be created for new positions, linked to the type of education and care received by children, which will gradually be assumed by kindergartens and nurseries, domestic workers and resident care-givers rather than mothers, increasing the contribution to GDP of domestic workers.

**Figure IX. Model of the relationship between demographic and economic changes**



Source: United Nations, Department of Economic and Social Affairs, "The demographics of macro-economic-demographic models", by Richard E. Bilsborrow, *Population Bulletin of the United Nations*, No. 26 (New York, 1989), p. 42.

## *2. Savings and investment*

Many studies indicate that consumption rates in the child and ageing person population sectors have increased, while such rates in the economically active sector aged 15 to 64 have decreased, despite the discrepancy in age between the groups included in that broad band, because of the general tendency of persons in that age group to build up levels of savings as security against the time they leave employment or retire. Those studies show that savings are highest in the 45 years age group (reference 5).

Therefore, the demographic transition that is manifested in lower rates of fertility and dependency is connected positively with levels of savings: small families have an increased tendency to save and to invest in their children's education. Similarly, the lower dependency rates linked to demographic transition contribute to increased expenditure on education and therefore improve the quality of education provided to children and youth at advanced stages of their development on the one hand and, on the other hand, increase investment in education. Lower dependency rates also increase the number of years of school enrolment. Furthermore, some studies have indicated that the increase in average age contributes to higher school enrolment rates and increases the number of years spent in school. That increase in the number of years of schooling and the consequent increase in demand for education has the effect of increasing both expenditure on education by the population and investment of local capital in the education sector.

## *3. Demand for goods and services*

Reduced levels of dependency and fertility help to increase per capita income which, in turn, increases demand for goods and services and overall demand, to which the market responds by a sustained amplification of investment that contributes to a greater supply of goods and services to meet the increased demand. Because the demand for employment stems from the demand for goods and services, the increased overall demand and related increase in investment will lead to increased demand for labour and, consequently, increase participation in the labour force and the involvement of women in that force, which will have a positive impact on the ability of the market to provide employment and reduce levels of unemployment, thereby improving income distribution.

## II. DEMOGRAPHIC CHANGE AND LABOUR MARKETS IN THE ARAB COUNTRIES

The working document of the United Nations International Conference on Population and Development (ICPD) held in Cairo in 1994 affirmed that the links between population, steady economic growth, sustainable development and poverty are interdependent and reciprocal. It also pointed out that the daily activities of human societies are closely connected to population change, patterns and levels of productive resource use, the environment and the speed and quality of economic and social development (reference 11).

It has therefore become a practical necessity to study the indicators for demographic transition in tandem with labour markets and their prospects: if those subjects are not studied together, no outcomes or practical lessons may be drawn or used in order to exploit demographic trends and impact positively on economic growth levels.

With respect to the Middle East and North Africa (MENA) or, more precisely, the Arab region thereof, population estimates show that this group of countries will face a huge challenge in the forthcoming two decades, because it is expected that the labour force will increase from 104 million in 2000 to 146 million in 2020, making it incumbent upon the economies of the region to create 42 million new employment opportunities within that period, solely in order to absorb new entrants to the labour market, let alone the additional employment opportunities that must be created in order to reduce rates of unemployment, which currently stand at some 18 per cent. It is therefore natural that the future economic life of the MENA and Arab regions will be largely dependent on the way their labour markets develop (reference 12). The position of the Arab region in facing that challenge is unusual, in that population projections for the period 1990-2020 show that the economically active population, aged 15-64 years, is expected to grow at a faster rate than the dependent sector aged under 15 years and over 64 years, and at a rate greater than in any other region. As the experience of the East Asian countries shows, that discrepancy, which is known as the demographic gift, offers the countries of the region the opportunity to accelerate economic growth by more rapid accumulation of production factors (reference 12). The issue of transforming the “demographic burden” into a “demographic gift” is linked to the ability of the countries of the region to increase the participation in economic activity of those of the population who are of working age.

This section of the report will deal with the most prominent characteristics of the Arab labour markets, including size and age composition, and will draw comparisons between the levels of productivity of workers in those markets. It will also consider the educational level of the Arab labour force, the average participation of women, the sectoral distribution of the labour force and unemployment rates. The subsequent section will consider the absorptive capacities of Arab labour markets. The final section will set forth the outcomes and recommendations of the report.

It should perhaps be noted here that data on Arab labour markets are scarce and inaccurate, which means that reliance must be placed on supplementary sources, of which the most important is the website of the World Trade Organization (WTO), and the local statistical resources of certain Arab countries.

### A. CHARACTERISTICS OF THE ARAB LABOUR MARKET

#### 1. *Average participation in the labour force*

Average participation in the labour force is considered an indicator of the percentage of the economically active population within the labour force in the national economy, which demonstrates the relative volume of the supply of labour components qualified to produce goods and services. The rise or fall of that average can affect a set of factors that impact on the labour market. While in general those averages in the Arab countries are some of the lowest in the world, at some 60 per cent, perhaps because of the low rate of female participation, a rise in those levels would not necessarily entail economic improvement: the group of sub-Saharan African nations has the highest rates of participation, namely, over 80 per cent, attributable to high levels of female participation and the inability of workers to leave their employment because of the lack of social security networks or insurance.

The widening gap between male and female rates of participation in labour markets may be explained as part of the disparity in levels of overall participation in the labour force in general. Statistics indicate that, in the Arab countries, the gender gap in participation rates is higher than in other countries, varying between 41 and 45 percentage points.

## *2. Ratio of workers to population*

The ratio of workers to whole population is used as an indicator of the ability of an economy to create employment opportunities. In certain countries, that indicator is as significant as the unemployment indicator. However, when that figure is high it does not necessarily mean that the economic situation of workers is good: low wages and a high proportion of those living below the poverty line often go hand-in-hand with high figures for that indicator. It is therefore necessary to take other indicators into consideration. The proportion of workers to overall population in the Arab region is one of the lowest in the world, at less than 35 per cent in Algeria, Jordan, Morocco and Yemen (reference 13).

The figures set out in table 16 indicate that, of the Arab countries, the highest ratio of workers to population is in the United Arab Emirates, at 63 per cent in 2000, while the lowest ratio in the same year, at 10 per cent, was in Oman. In Saudi Arabia, the figure has vacillated considerably: ranging between 19 per cent in 1990; 13.1 per cent in 1995 after the Gulf War, the fall in oil prices and the slow-down in the economy; and 25.8 per cent in 2000. Insofar as those ratios indicate the performance of an economy, they do not indicate steady economic activity. High ratios are considered an indicator of the increased ability of an economy to create employment opportunities. It is worth noting that, while those figures may appear positive, they are in fact misleading, particularly in the Gulf States, as is the case in the United Arab Emirates. The most prominent manifestations of the paralysis in Arab labour markets will be considered in due course.

Analysis of the proportion of workers disaggregated by gender (see table 17) shows that the low participation of women in the labour force is one of the most significant reasons for the low level of that ratio in the Arab region. During the period 1980-2000, female participation in Algeria ranged from 1.5 to 2.3 per cent. The highest levels of female participation were in the United Arab Emirates: rising from 6.1 per cent in 1995 to 8 per cent in 2000.

## *3. Unemployment*

Unemployment rates are one of the criteria most commonly used to express the volume of relative unemployment in an economy. When they are used in conjunction with the ratio of workers to population indicator, they provide a clear picture of the status of the labour market in any society. There are six economies in the Arab region where unemployment rates are higher than the average of 12.3 per cent in the countries for which data, albeit not for the same time periods, are available. Unemployment in Algeria and Iraq exceeds 20 per cent: in Iraq it reaches some 28 per cent. Such figures are a continuing cause of concern in the relevant economic circles, given that, if that situation persists, it will pose a serious threat not only at the economic level, but also at the political, social, educational and security levels (see table 18).

While, for various reasons, unemployment levels continue to rise in most Arab countries, those countries, including Egypt, Jordan, Lebanon and Syrian Arab Republic, which rely on exporting their surplus labour force to GCC States in order to reduce unemployment, have been severely hit by the fall in oil prices that impacted on demand for labour in Gulf markets in the 1980s and 1990s.

The unemployment situation in the labour markets of the GCC States is different from that in the other Arab countries. While imported labour constitutes some 50 per cent, and in some cases 80 per cent, of the labour market in those States, unemployment amongst nationals of those countries continues to rise because of their refusal to accept employment opportunities in marginal trades which, because of the social welfare provided by those States, rather than for economic or objective reasons, are regarded as socially unacceptable.

In Iraq and the areas governed by the Palestinian Authority, namely, the West Bank and Gaza Strip, unemployment is caused by a number of factors. The state of siege imposed by Israel, the repeated Israeli military invasions of Palestinian Authority areas, and the refusal to allow Palestinians to enter the West Bank, have crippled or slowed down many economic activities, thereby directly increasing the number of unemployed persons. The situation in Iraq is different: the dissolution of the regime and the disbanding by the occupying Power of the Iraqi army and security apparatus, together with the dismissal of many Government employees and the lack of security and stability, are factors that have substantially contributed to the increase in unemployment to unprecedented levels, estimated by the International Labour Organization (ILO) to be 28.1 per cent. Locally, the true figure is believed to be more than 50 per cent of the labour force, because of the difficult security situation being endured by the Iraqi people.

The countries of the Arab Mashreq are experiencing increasing difficulty in exporting surplus manpower to neighbouring European countries because of the stringent measures being taken by those countries in respect of migrant labour for security and economic considerations. Those countries therefore face a real challenge in creating new employment opportunities and, as a result, unemployment is liable to increase in the foreseeable future because of the growing number of those without work and decreased opportunities to migrate to European labour markets.

The figures set out in table 19 clearly indicate that female unemployment in the Arab world is a major contributing factor to high general unemployment levels. It is worth noting here that there is a high concentration of women labourers in certain sectors, including education and health: traditionally, those sectors have been more able to absorb women. Lack of employment opportunities for women in the industrial, services and other sectors has kept levels of unemployment high among women and, in particular, educated women.

#### *4. The labour force and the age structure of unemployment in the Arab world*

Egypt has the largest work force in the Arab region, followed by Algeria and Saudi Arabia (see table 20). The size of the labour force in certain countries represents an enormous challenge with regard to providing employment opportunities and decent wages and standards of living for workers. Wages in such oil-exporting countries as Saudi Arabia, notwithstanding the size of the work force, are considered good, and ensure a desirable standard of social welfare. They also comprise a benchmark for the labour force in the rest of the region.

However, when unemployment in the countries of the region is disaggregated by age, the results are extremely disturbing. Unemployment is highest among youth, exceeding 50 per cent in Egypt, Jordan, Kuwait, Qatar and Saudi Arabia, and exceeding 82 per cent in the Syrian Arab Republic.

The figures set out in table 21 show that the work force in the Arab region is a young one. In all the Arab countries, by far the largest proportion of the work force comprises adults aged between 25 and 34 years.

Unemployment figures disaggregated by gender and age show that unemployment is much higher among women than among men, indicating that there is a difference between the two in respect of opportunities for employment. Lebanon and Yemen are exceptions in that regard (see tables 22 and 23). However, the figures in those two tables also clearly show that levels of unemployment are high among both men and women in the age range 20-24 years, which affirms the predicament of that age group in Arab societies with respect to employment opportunities.

#### *5. Youth and child employment*

In 1985, the General Assembly of the United Nations adopted a definition of youth that continues to be the international standard employed in most studies and research. That definition describes youth as "individuals whose age is between 15 and 24" (reference 14). That definition continues to cause extensive debate with regard to its appropriateness to the differing reality in the various countries of the world and its consistency at the same time with the provisions of international agreements.

On the basis of the foregoing definition, children are those aged 14 or under, whereas article one of the 1989 United Nations Convention on the Rights of the Child specifies that “a child means every human being below the age of eighteen years”. In 1997 and 1998 there was great debate, when the text was being prepared of ILO Convention No. 182 concerning the worst forms of child labour, as to the difference between the definition of “youth” and “child”. At the World Youth Forum held in Dakar in August 2001, the United Nations was asked to reconsider its definition of “youth” and to make the upper age limit 20 in order to serve the requirements of the definition of “youth”, in developing countries in particular (reference 15).

The figures in the 2002 United Nations *Human Development Report* concerning the employment of children aged between 10 and 15 years indicate that, in the MENA region, some 3.8 per cent of children of that age are working, compared with 11.8 per cent in all other developing countries. While the Arab countries have made progress in combating child labour, Sudan and Yemen have yet to make the desired progress because of the low levels of development in certain regions of both countries and the continuation of a rural way of life that makes intensive use of child labour (reference 24).

Youth unemployment in the Arab region is one of the highest in the world. A 2003 ILO report on global employment trends notes that in the Middle Eastern region, levels of unemployment in general and of youth in particular are the highest in the world.

Table 25 gives a clearer picture of the size of youth unemployment in a number of Arab countries. It may be noted that such unemployment is more than three times higher than total unemployment in those countries. That situation underlines the existence of problems linked to the mechanism for the employment of youth and their absorption into the labour market, as well as the structural defect that afflicts the Arab labour market and problems linked to the management of educational outputs, which are not appropriate to the practical needs of the Arab labour markets.

It may be useful here to note that the unemployment picture in the Arab world may be even gloomier than it appears, given the weakness of the systems and databases on labour markets, a recurrent problem for researchers studying the Arab labour market, which impacts negatively on the reliability of unemployment data and makes it necessary to have recourse to estimates that are normally full of discrepancies, contradictions and inaccuracies. If that problem with data continues, it will mean that policies and programmes based on imprecise information are adopted and will be liable to fail, either partially or totally, having economic implications for those countries and social and possibly security implications for their societies.

The characteristics of youth unemployment that are common to all countries of the world, and to the Arab region in particular, may be summarized as follows (reference 15):

- (a) Youth unemployment generally exceeds that of adults, and the Arab countries are no exception to that rule;
- (b) The youth sector is more susceptible than that of adults to economic shocks and changes, and to change in the volume and structure of demand for labour;
- (c) Women are more susceptible to youth unemployment and long-term unemployment in particular, which means that society is deprived of the chance to make use of the capacities and qualifications of women and that the gender gap is widened.

In that respect, the ILO *World Youth Report 2003* says:

“There is evidence that young people, not by choice but by necessity, increasingly turn to the informal sector for their livelihood. This “twilight zone” of work is characterized by informal, part-time or casual jobs that do not have the benefits and security of regular employment; worse, it also includes subsistence self-employment, or “forced entrepreneurship”. Forced by poverty and the lack of possibilities for better jobs, many young people have no alternative but to turn to informal activities to earn income. With

economic growth being insufficient to absorb new labour force entrants, there is a danger that informal work will become the only option for large numbers of young people, thereby making the objective of a decent job for all increasingly unavailable. Increasingly, the distinction between employment and unemployment has lost much of its meaning, as young people move in and out of informal activities where neither term has any real relevance” (reference 16).

Youth unemployment is primarily the unemployment of new entrants to the labour market, who are normally employed at low rates of pay, irrespective of gender. That social group is the most vulnerable to the risk of unemployment (reference 15).

Set forth below is an outline of youth employment programmes in the Arab countries:

The nature and type of unemployment is linked to the policies and programmes that are applied in certain Arab countries. Some Arab educational systems have had the effect of creating a problem of labour force supply in certain specializations. In Jordan, for example, unemployment is highest among graduates of such subjects as the humanities, law and social studies. In the GCC States, unemployment is linked to social outlook and the work ethic, and in other cases it is caused by the cultural concepts prevailing in the society on the employment of women.

Some Arab countries have introduced such special youth employment programmes as the Injaz Programme in Jordan, the Sanad Programme in Oman, the Dakum Programme in Kuwait that links education output to the labour market, the Hariri Technical School in Lebanon, and the National Programme for the Employment and Training of Bahrainis. All those programmes have aspects that are worthy of note. The Injaz Programme in Jordan is considered a model for the involvement of the private sector in directing and guiding youth, particularly in respect of facilitating the process of transition from school to the world of work. Voluntary efforts have activated the role of the private sector in making students aware of the needs of the labour sectors, training them to think creatively and innovatively, and assisting them in making future professional choices. The Omani Sanad Programme is considered a groundbreaking model with respect to the design of programmes that are appropriate to the local reality and its requirements and in encouraging youth to make private investment through special programmes for the support of small and medium enterprises (SMEs). The Dakum Programme in Kuwait links education output and training to the practical needs of the labour market.

#### *6. The sectoral distribution of the Arab labour force*

The majority of the Arab labour force is concentrated in the services sector, which is the sector that contributes most to income in Arab countries, with the exception of Sudan, where agriculture and the pasturing of animals employ 60 per cent of the total work force (see table 27). The slow development of the region's transformation industry sector is obvious, as is its basic dependence on imports, as a result of which all those countries except those which export oil have balance of payments deficits.

#### *7. The productivity of the Arab worker*

Most Arab countries suffer from low productivity for a variety of reasons, foremost among which is dependence on the public sector as the principal employer of the work force (see table 28). That sector is, in general, bureaucratic and unproductive. Low productivity is not restricted to the public sector: it is also a feature of small enterprises in the private sector that are attempting to make a rapid profit, which are normally family-owned and passed down through the generations. Such enterprises rarely attempt to keep abreast of developments in technical and administrative fields (reference 17).

#### *8. Education in the countries of the Arab region*

There are big differences between the countries of the Arab region with respect to educational level and the implications for the labour market in each country and the Arab labour market in general. In Egypt, Jordan and the Syrian Arab Republic, educational output in general has had a huge impact on labour markets

in the GCC States, which have a high demand for educated Arab labour and have provided many employment opportunities.

The North African countries have been affected by the demand for labour in the European countries in general and the Mediterranean countries in particular. However, the type of demand for labour is different. While the focus of the demand in GCC States is for trained, educated workers, demand in the European countries is limited to workers with low levels of education and skill. There has been a huge exodus of labour from the North African countries to Europe, through both legal and illegal channels.

Nevertheless, the sector of the population in Arab countries aged between 5 and 14 years that is enrolled in school is large in comparison with the size of the total population. If the sector of the population that is enrolled in school up to pre-university level is included, it comprises between 30 and 40 per cent of the total population in some countries. It is beyond question that such figures constitute a serious challenge to the economies of those countries in respect of providing appropriate employment opportunities for that educated sector when it joins the labour force.

The proportion of GDP spent on education indicates that most Arab countries belong to the medium human development level in that respect (see table 29). While Yemen is at the low level of development, Bahrain, Kuwait, Qatar and United Arab Emirates are at the highest level. However, those countries, notwithstanding their high rate of expenditure on education, continue to suffer from a serious shortage of specialists and school and university teachers. Other countries suffer from deficiencies caused by educational output that is not appropriate to the nature of the market and is reflected in the youth sector by unemployment that is both disguised and structural.

As is shown in table 30, priorities in Arab countries are reflected in the low level of expenditure on education as a percentage of GDP in comparison with expenditure on defence.

The educational systems in GCC States clearly fail to respond to the demand for labour, not only in jobs that require qualifications, but also in those that need low levels of skill. There are many reasons for that, including cultural attitudes to manual labour and the material comfort that does not encourage youth to work and be independent.

#### B. THE PHENOMENON OF IMBALANCE IN ARAB LABOUR MARKETS: THE GULF STATES AND JORDAN AS MODELS

It is possible to investigate the major imbalances in labour markets either by considering groups of countries that share characteristics, or by considering countries individually. Within the constraints of the information available, the GCC States will be discussed as a unit that has common economic and productive characteristics that are principally based on oil industry revenues, and the major features of the shortcomings of the labour market in Jordan will be considered on an individual country basis.

##### 1. *The GCC States*

Labour markets in the six GCC States suffer from a structural imbalance. In 2001, immigrants constituted one-third of the population of the region, and some two-thirds of the total labour force. That has led to an imbalance in the demographic structure of the population. Subsequent to the first oil crisis in the early 1970s, huge numbers of workers from the Arab and Asian and other countries came to seek employment in the GCC States. In early 1975, the total population of those States was some 10 million, of which immigrants constituted 26 per cent (see table 31). The labour force comprised 2.9 million, of which immigrants represented 45 per cent. In 1981, after the second oil upswing, the population in the GCC States rose to 12 million and the labour force to 4 million, of which more than half, namely, 54.5 per cent, were immigrants. GCC statistics confirm that the size of the population of member States rose to 32 million in 2001, while the percentage of immigrants rose to 34.9 per cent. Those statistics also show that the size of the labour force in the same year was 10.7 million, of which immigrants represented some 65 per cent.

As is shown in table 31, nationals of the United Arab Emirates represented a mere 22 per cent of the population in 2001, and only 8.7 per cent of the labour force. In Qatar, the proportion of nationals was only 30 per cent of the population and 14.1 per cent of the labour force. In Kuwait, which in the early 1990s had the opportunity to reconsider its population policy, the situation rapidly became even more unbalanced than it had been before the invasion: the proportion of nationals in the population and labour force fell to 38.1 and 19.7 per cent respectively. Countries with large populations and high unemployment among nationals are not exempt from rising levels of imbalance in the composition of the population and labour force. It is worth noting here that certain GCC States, including Bahrain, Qatar and the United Arab Emirates, witnessed during that period extensive nationalization movements.

The current population imbalance in the GCC States and, in particular, in Qatar and the United Arab Emirates, will have serious implications for national and regional security and the identity of the original societies; once nationals have become simply one of many minorities in the population, and not even the largest of those minorities, the very nature of those societies will be at risk. The almost total dependence on an immigrant work force has also reduced and marginalized the productive role of nationals. In Kuwait, Oman, Qatar and United Arab Emirates, more than three-quarters of the total work force is represented by immigrants, while in Bahrain and Saudi Arabia the corresponding percentage is more than half. Immigrants have therefore driven nationals out of the labour force in general, and out of the private and joint sectors in particular, because performance in those two sectors is dependent on effort and productivity. The exceptions to that rule are the sectors in which substantial administrative and legal preference is given to the national labour force, which the economies were able to support. Such sectors include oil, and industries based on oil and gas. When budgets permit, nationals are concentrated in public administration, which suffers from extravagantly disguised unemployment. The remainder of the national work force is experiencing growing levels of unemployment. In addition, the GCC States have always suffered high levels of female unemployment because of the paucity of opportunities open to women (reference 18).

## 2. Jordan

There is a clear imbalance in the labour market in Jordan, which is also unique as regards form and structure. While unemployment levels exceed 13 per cent, at the same time, there continues to be great demand for such foreign labourers as Egyptians, particularly in the construction sector, which in 2003 represented 5.7 per cent of GDP (reference 19).

The Jordanian education system encourages the attainment of academic university qualifications at the expense of vocational education, which has increased graduate unemployment. The focus on academic education and, in particular, the humanities and social sciences, has increased demand for immigrant labour to meet needs in construction and basic services. It is estimated that some 350,000 Jordanians, or 23 per cent of the total Jordanian labour force, are working abroad, predominantly in the GCC States. However, political events in the region have an impact on those workers: the occupation of Kuwait in 1990 and the war of liberation in 1991 led to the mass return of Jordanians who had been working in that country and their families. Large numbers also returned from other Gulf States, putting new pressure on the economy, the impact of which began to be felt in 1996, with a downturn in rates of economic growth (reference 20).

### C. THE ABSORPTIVE CAPACITY OF THE ARAB LABOUR MARKETS

Absorptive capacity expresses the proportion of those in the population section aged 15 years and over who are in employment, or the economically active population. This indicator shows the capacity of the labour market to create new employment opportunities for new entrants to that market, who do not normally fall into any category of "unemployment". The number of such new entrants is growing in all the Arab countries, which puts great pressure on the Arab labour market, the effects of which may be seen in the high levels of unemployment.

Table 32 shows the downturn in the absorptive capacity of the majority of Arab labour markets between 1995 and 2001, with the exception of Algeria, Lebanon and Tunisia. In 2001, Qatar had the highest such capacity, namely, 71.3 per cent, followed by Egypt, with 60.1 per cent; Bahrain, with 55.4 per cent; Sudan, with 53.9 per cent; United Arab Emirates, with 52.1 per cent; Morocco, with 51.6 per cent; and

Tunisia, with 50.2 per cent. In the remaining countries, absorptive capacity was below 50 per cent, and was lowest in Algeria, with 35.7 per cent.

When those figures are compared with those of other countries, they appear even more modest and disturbing. Absorptive capacity exceeds 90 per cent in many Asian, European and North and South American countries, with the exceptions of Argentina and Turkey, where the respective figures are 86.9 and 84.5 per cent. The problem in Arab labour markets is exacerbated by the increasing number of new entrants to those markets who are aged 15 years and above. During the period 1995-2001, the annual average increase of such entrants was 4.8 per cent. In several Arab countries, the growth of the population of that age group greatly outstripped the general average, reaching 8.7 per cent in Yemen; 8.2 per cent in the United Arab Emirates; 7.1 per cent in Iraq; 6.4 per cent in Jordan; and 6.2 per cent in Saudi Arabia. The lowest levels of growth were 2.5 per cent in Morocco; 2 per cent in Lebanon; and 1.3 per cent in Tunisia.<sup>8</sup>

#### D. PROSPECTS FOR THE ABSORPTIVE CAPACITY OF THE ARAB LABOUR MARKETS

##### 1. *The data*

This section presents an evaluation of the expected absorptive capacity of the Arab labour markets to the year 2020. In the preparation of the requisite estimates, the following information was used:

(a) The tables of predicted growth of the population in Arab countries that were presented in Part One of this report (see tables 11-15);

(b) The size of the labour force in 2001, taken from the *Unified Arab Economic Report 2003*, for those countries on which information was available concerning the labour force and employed and unemployed persons.

##### 2. *The methodology*

(a) Average population growth for the age sector 15 years and above was calculated for each individual country using the compound annual growth equation set forth below:

$$r = \ln \frac{Y}{Y_0} \div t \times 100 \quad (1)$$

Whereby:

r = average growth

ln = the natural logarithm

Y = the comparison year

Y<sub>0</sub> = base year

t = time period

(b) Average growth was calculated as in step 1 for the period 2000-2010 and then for 2010-2020, each decade being calculated separately;

(c) Average growth was calculated as in step 2 for the period 2000-2020 as a whole.

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<sup>8</sup> Source: Author calculation and data from the *Unified Arab Economic Report 2003*.

(i) *First scenario*

The first scenario is based on the average population growth for the sector aged 15 years and above that appears in Part One of this report, for the two separate periods 2000-2010 and 2010-2020. That scenario assumes that the labour force, the effectively employed and the unemployed will all grow at the same rate, in order to estimate the volume of unemployment and the absorptive capacity of the labour markets for those two periods using the following growth equation:

$$\begin{aligned} \ln(Y) &= [(t^*r) \div 100] + \ln(Y_0) \\ Y &= e^{[(t^*r) \div 100] + \ln(Y_0)} \end{aligned} \quad (2)$$

Table 33 shows the outcomes of the first scenario, which indicate that applying the same growth rate to the population, the labour force and the employed will have no significant impact on the rate of unemployment and the absorptive capacity of the labour markets.

(ii) *The second scenario*

This scenario uses the same assumptions as the first for two separate periods and applies the same growth rate to population and labour force. However, it assumes an intervention of an increase by an estimated half percentage point in the growth of effectively employed persons. It appears from table 34 that such an intervention will have a positive effect, reducing unemployment between 2000 and 2010. It may be seen that, while unemployment rates fall slightly in Algeria and Jordan, that fall is greater in the other countries. It may also be seen that unemployment rates in Bahrain, Kuwait, Qatar and United Arab Emirates appear to be negative, while indicating the possibility that the labour force will be unable to meet the needs of the labour market, and the consequent need to use immigrant labour to maintain the desired economic growth. That result may also indicate the potential for integrating the Arab labour markets and finding common solutions to the problems facing some of those markets, some of which have shortages while others have surpluses.

With respect to absorptive capacity, in this scenario, a slight improvement will take place in the first period in all markets with the exception of Kuwait, but no improvement will be seen in the second period.

(iii) *The third scenario*

This scenario assumes growth levels for the economically active population aged 15 years and above for the whole period 2000-2020, applicable to the labour force and the effectively employed. The results of that scenario are set out in table 35, and indicate a potential for great improvement in levels of unemployment in Egypt, Lebanon, Syrian Arab Republic and Yemen, and a slight improvement in Jordan, Libyan Arab Jamahiriya, Morocco, Oman, Sudan and Tunisia. Unemployment rates will become negative in Bahrain, Kuwait, Qatar and United Arab Emirates, which is to say that those countries will be forced to use immigrant labour to meet the needs of their labour markets and production. The problem of high unemployment will remain unchanged in Algeria: rates will fall from 28.7 per cent in 2001 to 27.2 per cent in 2010, then to 25.6 per cent in 2020. That indicates the need to create policies that will facilitate the creation of more employment opportunities.

Absorptive capacity will not materially change in the period under consideration, indicating that there is a need to formulate interventionist policies to improve that capacity in Arab countries and bring it up to that of their international competitor countries.

### **III. GENERAL FRAMEWORK FOR EXPLOITING THE DEMOGRAPHIC WINDOW**

The most important outcomes of the report may be summarized as follows:

- (a) The Arab region is about to enter, or has perhaps already done so, a stage of demographic transition in which the economically active population aged 15 years and above will grow more rapidly than the economically dependent sector aged less than 15 years;
- (b) That discrepancy in the growth rates of the two population sectors, which has become known as the demographic gift, gives countries the opportunity to accelerate economic growth and improve the quality of life for their citizens;
- (c) The transformation of the demographic burden caused by increased population growth into a demographic gift is linked to the capacity of countries to increase the level of participation in economic activity of those of working age, namely, to increase the absorptive capacity of labour markets;
- (d) Most labour markets in the Arab region suffer from high levels of unemployment, with the exception of those in the GCC States (other than Oman), and from low levels of participation (absorption rate) in comparison with other countries in the world;
- (e) The countries of the Arab region can exploit the demographic transition stage to raise participation rates and create genuine employment opportunities for new entrants to labour markets by pursuing prudent economic policies at the general and particular levels, to the extent their circumstances allow;
- (f) Genuine and strenuous efforts must be made to enable youth and women to obtain remunerative employment and empower poor and marginalized sectors of society to carry out worthwhile jobs that will ensure them improved quality of life;
- (g) Serious consideration must be given to the problem of the low productivity of Arab workers as compared with their counterparts in the rest of the world.

Against that background, suggestions can be made as to how progress can be achieved in empowering youth, women and poor and marginalized groups and the historic opportunity afforded by the demographic window exploited before it closes and the opportunity is lost.

#### **A. SMALL AND MEDIUM ENTERPRISES**

Because the private sector is the most dynamic, and development may be the outcome of individual initiatives and based on small groups that can begin with SMEs, which have the effect of increasing competitiveness and expanding production, the World Bank and a group of international institutions, including the United Nations Industrial Development Organization (UNIDO) and the United Nations Development Programme (UNDP), began to provide support for SMEs in developing countries. The World Bank alone has spent a total of \$10 billion, of which \$1.5 billion was spent in 2002 in order to develop that sector (reference 21).

ESCWA defines small enterprises as those which employ between 4 and 10 workers, and medium enterprises as those which employ between 11 and 25 workers (reference 22). It is currently recognised that the involvement of human resources in the success of investment has a vital impact on SMEs, which is to say that such enterprises are highly dependent on the individual skills of their workers.

SMEs played a role in the development of the developed countries and subsequently became large corporations, some of them multinational. However, the situation in the Arab region would appear to be quite different. If such enterprises are to be encouraged, a state of economic openness and membership of WTO is required, which means that creative capacities must be stimulated, beginning with small and medium

investment activities that can develop themselves and their capacities. Given that such creativity is most common in youth, SMEs, because of their structure and organization, represent opportunities to employ, train and use the innovative capacities of youth in the Arab region. The absorption of youth by such enterprises will help to alleviate the endemic unemployment in that group in the countries of the region, and will also help to bring about the development required in the light of the current demographic transition.

## B. FINANCE FOR SMEs

The countries of the Arab region have responded in different ways to the need for funding for SMEs. Jordan, for example, is very concerned for its youth population and supports SMEs by encouraging international donors to provide funding for them.

However, most Arab countries lack the legal framework to support such enterprises through protective organizations that can back them in their early stages or encourage the banking sector to support that trend with soft loans. The provision of the necessary funding is one of the most serious problems faced by the owners of small enterprises, particularly when the professional experience of such people is very limited, and the structure and composition of the commercial banks and their criteria for funding do not in general take into account what may be called “potential initial success” of SMEs. Sufficient means and administrative and accounting criteria have therefore not been developed to evaluate requests for funding for SMEs, forcing many of those who wish to begin such projects to have recourse to private funding and family support in order to gain the requisite finance. It is possible that the lack of an appropriate financing mechanism and clear funding plan can lead to unsafe or imbalanced financial administration and increase the likelihood that such projects will fail.

In cases where banks do provide funding, they usually consider that there is a high element of risk, and such enterprises must therefore pay high levels of interest, which are also likely to increase the prospect of failure. Consequently, the underwriting parties must step in and act as guarantors for the banks, in order to alleviate the debt burden.

With the growth of interest in risk-related problems, certain countries have established a variety of funding channels. Jordan, for example, has put forward a number of solutions, including programmes that support small enterprises through the United States Development Programme (AMIR), programmes that guarantee loans, through cooperation with the Ejada Programme, and an institution that guarantees loans and covers 70 per cent of the credit risk. Set forth below are some recommendations respecting funding for SMEs:

(a) There is a need to adopt quality programmes to identify SMEs and to focus on their important development role in the economy and the aims that are sought in providing support for them;

(b) A legal framework must be developed to govern SME-related issues, oversee their establishment, keep them in business and regulate matters respecting their operation and employment practices;

(c) Financial support should be provided for SMEs through local and international support programmes;

(d) A legal framework must be developed to regulate funding for such projects, support them, extend the grace period they are afforded in order to repay loans and reduce the interest payable;

(e) Consultancy services should be provided, including feasibility studies and financial analyses, in order to guarantee the success of SMEs;

(f) Specialized Government institutions should be established in order to support and regulate the small and medium business sector;

(g) A competitive fiscal structure should be instituted that will contribute to increased profitability and tie exemptions to the capacity to employ and enhance the growth of the project.

### C. GOOD GOVERNANCE

The steady increase in levels of growth and the concomitant flourishing of trade, industry and the business sector may appear to be positive indicators, albeit accompanied by a steady increase in social and class divisions in the community, as is borne out by the experience of China and many East Asian countries.

UNDP states that the purpose of sustainable development is to create and improve an environment in which all people can expand their capabilities (reference 23). Progress along the path of sustainable human development therefore requires good governance, which takes steps to create the climate to which that definition refers. That concept is distinguished by its transparency and accountability as well as its effectiveness and justice.

Good governance activates the role of the law by applying it justly and without prejudice. It also ensures that the voice of the poor, the marginalized and those most vulnerable to economic problems is heard by decision makers.

Economic, political and social priorities are based on three main pillars, which are essential to sustainable development, namely, the State, the private sector and civil society. While it is the State that provides the appropriate environment at the political and legal levels, it is the private sector that generates income and creates jobs, while civil society provides the political and social interaction necessary for the success of the other two pillars (reference 24).

The provision of employment opportunities is the peak of the pyramid in any matrix or any economic and social reform plan that aims to improve quality of life by achieving sustainable human development. In that respect, the role of good governance in providing job opportunities, for youth in particular, on an impartial basis, without prejudice as to gender, religion or race, is an important one. If people are able to find employment that fits their capacities and qualifications, and they are able, because of that employment, to advance on the basis of their performance and ability, they will be content and subsequently able to exercise authority and share it with others in an egalitarian manner.

### D. POLITICAL SUPPORT FOR THE DEMOGRAPHIC GIFT

Guaranteed political support and a belief that the demographic gift is a development enterprise help to combat poverty in a manner that reflects the utmost importance of the population and its role in achieving the Millennium Development Goals (MDGs), ensuring full employment and increased productivity, and developing human resources in order to permit them to benefit from the opportunity offered by the demographic window. Political support for this opportunity will ensure that Governments and international organizations are able to achieve the goals adopted by ICPD and MDGs as a means of using demographic changes to improve economic performance and ensure greater social equality. That means, at the same time as it is attempting to ensure high levels of economic growth, it also endeavours to ensure that the human being is given priority in the production process and is worked with cooperatively as both the target and the means of production. In that way, the basic principles of ICPD and MDGs are translated into a standard model that can incorporate demographic factors into the process of planning for development.

Set forth below are a number of suggestions:

1. Countries should adopt the macroeconomic models that were developed in order to absorb the demographic changes that take place in the age structure of the population, on the basis that that is a basic condition for estimating the returns made available by the demographic gift on the one hand, and, on the other hand, for formulating economic policies and policies for the development of human resources. Because the demographic gift is a dynamic approach that assists decision makers in exploiting the changes that affect the age structure of the population, that procedure may constitute the general framework for economic, social and administrative plans, programmes and policies that will help to speed up the achievement of lower dependency rates in the countries where fertility rates are falling only slowly or remaining constant at rates much higher than the replacement level.

2. Economic sectors should be so developed as to be capable of absorbing surplus manpower and, in particular, that which is the outcome of demographic change, or the supply of labour. Supporting mechanisms, including improved productivity, should also be developed in order to overcome the problem of low productivity, especially in the agriculture and services sectors. With respect to the industry sector, countries should encourage the process of labour development, in order to attract and absorb greater numbers of skilled workers, who would constitute a competitive fund that would permit comparison and speculation at the regional and international levels and ensure the sectoral structural balance of that force. That would strengthen the position of GDP in the industry sector, by increasing exports and attracting material and technical investment. In addition to a strategy for the support of small industries, some studies point to housing as the economic sector on which the economies of the Arab countries could depend to create value-added at annual growth levels of between 5 and 6 per cent, and to ensure levels of growth in employment that could reach an average of 4.3 per cent annually. Because of its very nature, that sector is heavily reliant upon manpower: it must rely on manpower rather than technology to create value-added. At the same time, demand for housing will increase as young people reach the age of marriage and begin to have families (reference 25).
3. The education system should be involved in both the economic and social aspects of the development process and incorporated into the planning for development process. It is therefore necessary to formulate goals for the system that will make it consistent with the needs of the community. Education is a system with inputs and outputs which affect and are derived from the economic and social development process, particularly in respect of the needs of the labour market, given that the education system is the principal supplier of highly skilled and effective human resources. Perhaps the most important thing is to take action to amend and reform higher education and make it a useful tool in the service of the development process, and to link it to the global market. Rather than that system being a mirror that keeps reproducing whatever is prevalent in society, it could be so adapted as to become a tool for overall development. It is well known that the traditional education system is eclectic and competitive, and encourages the best to continue to pursue their studies, abandoning the rest to drop out at various stages, meaning that only a small minority with the best opportunities ever reaches university level.
4. Countries should establish a data system for the labour market, with the aim of providing an appropriate channel for employment which is based on determining the type of demand for labour, according to the needs of the labour market for professions, skills, and educational levels, what is available and what is in demand.
5. Attention should be paid to new training methods, which develop existing skills and create skills where they do not exist. There is also a need to redress the low level of the current work force that is the result of ignorance of technology and to put in place training policies that will strengthen the competitive capacities of the work force and increase the competitiveness of exports.
6. Foreign and domestic investment should be encouraged: national investors must be given the same benefits as foreign investors. Tax exemptions alone are not sufficient to encourage investment. Infrastructure, including roads, ports, transport, communications and appropriate living conditions must be provided. There must be a clear and simple legal system that recognizes and provides protection of rights; and an effective, just and expeditious judicial system. Furthermore, sound and up-to-date data and statistics must be made available, together with stable financial and monetary policies that are not vulnerable to unexpected events: political stability and social security are two extremely important matters. While such political, legal and economic institutions are essential, Government administration that is known to be effective and above reproach is also essential.



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## **TABLES**



TABLE 1. MAIN DEMOGRAPHIC INDICATORS FOR THE ARAB COUNTRIES, 2000-2005

Country	Population (thousands)	Average annual population growth	Total fertility rate	Average child mortality	Life expectancy at birth
All Arab countries	303 614	2.3	4.1	43.7	66.7
Jordan	5 401	2.7	3.6	23.9	71.0
United Arab Emirates	2 966	1.9	2.8	13.6	74.7
Bahrain	717	2.2	2.7	14.2	74.0
Tunisia	9 780	1.1	2.0	23.3	72.8
Algeria	31 533	1.7	2.8	43.9	69.7
Comoros	725	2.8	4.9	67.0	60.8
Libyan Arab Jamahiriya	5 498	1.9	3.0	20.7	72.8
Syrian Arab Republic	17 590	2.4	3.3	22.3	71.9
Djibouti	698	1.6	5.7	102.4	45.7
Sudan	33 244	2.2	4.4	77.0	55.6
Somalia	9 685	4.2	7.3	117.7	47.9
Iraq	24 842	2.7	4.8	83.3	60.7
Oman	2 810	2.9	5.0	19.7	72.4
Palestine	3 495	3.6	5.6	20.7	72.4
Qatar	606	1.5	3.2	12.3	72.2
Kuwait	2 482	3.5	2.7	10.8	76.6
Lebanon	3 624	1.6	2.2	17.2	73.5
Egypt	71 219	2.0	3.3	40.6	68.8
Mauritania	2 850	3.0	5.8	96.7	52.5
Morocco	30 319	1.6	2.7	42.1	68.7
Saudi Arabia	23 868	2.9	4.5	20.6	72.3
Yemen	19 663	3.5	7.0	70.6	60.0

Source: Reference 5, Part One.

TABLE 2. POPULATION AND POPULATION GROWTH IN THE ARAB COUNTRIES

Country	Population (thousands)			Annual population growth (thousands)		Annual growth rate (percentages)	
	1980	2000	2020	1980-2000	2000-2020	1980-2000	2000-2020
All Arab countries	169 935	286 650	431 397	5 836	7 237	2.61	2.04
Jordan	2 225	5 035	7 560	141	126	4.08	2.03
United Arab Emirates	1 015	2 820	3 786	90	48	5.11	1.47
Bahrain	347	677	969	16	15	3.34	1.80
Tunisia	6 469	9 519	11 621	152	105	1.93	1.00
Algeria	18 740	30 245	40 479	575	512	2.39	1.46
Comoros	387	705	1 154	16	22	3.00	2.46
Libyan Arab Jamahiriya	3 043	5 237	7 378	110	107	2.71	1.71
Syrian Arab Republic	8 959	16 560	25 077	380	426	3.07	2.07
Djibouti	327	666	912	17	12	3.56	1.57
Sudan	19 387	31 437	44 493	602	653	2.42	1.74
Somalia	6 487	8 720	17 928	112	460	1.48	3.60
Iraq	12 962	23 224	37 992	513	738	2.92	2.46
Oman	1 187	2 609	4 349	71	87	3.94	2.56
Palestine	1 476	3 191	6 064	86	144	3.85	3.21
Qatar	229	581	752	18	9	4.65	1.29
Kuwait	1 375	2 247	3 647	44	70	2.46	2.42
Lebanon	2 669	3 478	4 395	40	46	1.32	1.17
Egypt	43 915	67 784	96 852	1 193	1 453	2.17	1.78
Mauritania	1 609	2 645	4 473	52	91	2.49	2.63
Morocco	19 382	29 108	38 726	486	481	2.03	1.43
Saudi Arabia	9 604	22 147	36 253	627	705	4.18	2.46
Yemen	8 140	18 017	36 537	494	926	3.97	3.54

Source: Reference 5, Part One.

TABLE 3. BIRTH AND DEATH RATES AND NATURAL POPULATION INCREASE, 1980-2020

Country	Raw birth rate (per 1,000 population)				Raw mortality rate (per 1,000 population)				Natural growth rate (per 1,000 population)			
	1980-1985	1995-2000	2005-2010	2015-2020	1980-1985	1995-2000	2005-2010	2015-2020	1980-1985	1995-2000	2005-2010	2015-2020
All Arab countries	41.0	30.6	28.0	23.9	11.7	7.5	6.6	6.0	29.3	23.1	21.4	17.9
Jordan	42.3	30.9	25.0	20.4	8.9	4.6	4.1	4.1	33.4	26.3	20.9	16.3
United Arab Emirates	29.5	19.0	15.5	14.1	4.0	2.3	2.7	4.1	25.5	16.7	12.7	9.9
Bahrain	32.8	23.0	17.5	15.0	4.5	3.2	3.3	3.9	28.3	19.7	14.3	11.1
Tunisia	33.6	18.7	16.7	15.4	7.6	5.5	5.5	5.8	26.1	13.2	11.2	9.6
Algeria	40.6	24.1	21.5	17.6	10.4	6.0	5.3	5.2	30.2	18.1	16.2	12.4
Comoros	48.7	38.6	33.8	26.5	13.7	9.4	7.5	6.0	35.0	29.1	26.3	20.5
Libyan Arab Jamahiriya	45.6	23.2	22.7	18.1	10.9	4.2	4.3	4.6	34.8	19.1	18.3	13.5
Syrian Arab Republic	46.4	29.6	25.9	20.8	8.2	4.2	3.7	3.7	38.2	25.4	22.2	17.2
Djibouti	44.3	42.3	36.7	32.3	19.0	17.2	17.7	15.6	25.3	25.1	19.0	16.7
Sudan	41.6	36.0	29.7	24.7	15.9	12.1	11.6	10.3	25.6	23.9	18.2	14.4
Somalia	51.8	52.4	49.6	44.5	22.0	20.2	15.2	12.1	29.8	32.2	34.3	32.4
Iraq	41.0	37.3	32.6	26.3	8.1	9.8	7.4	5.3	32.9	27.4	25.2	21.0
Oman	46.0	31.3	30.0	24.6	7.7	3.4	3.2	3.5	38.3	27.9	26.8	21.2
Palestine	44.6	41.8	36.0	30.9	9.1	5.0	3.8	3.2	35.5	36.8	32.3	27.7
Qatar	28.7	22.0	15.5	15.3	4.9	3.6	4.1	5.4	23.8	18.4	11.4	9.9
Kuwait	34.7	22.8	17.6	14.4	3.2	1.9	2.1	3.2	31.4	20.9	15.5	11.1
Lebanon	29.3	20.4	17.8	15.4	8.8	5.5	5.4	5.7	20.5	15.0	12.3	9.7
Egypt	38.7	27.0	25.9	20.5	12.4	6.7	5.9	5.5	26.3	20.4	20.0	15.0
Mauritania	43.2	42.6	39.6	33.2	17.5	15.5	12.8	10.2	25.7	27.1	26.8	23.0
Morocco	37.1	24.4	21.9	18.3	11.4	6.6	5.8	5.6	25.7	17.8	16.2	12.7
Saudi Arabia	41.7	32.9	28.3	23.0	7.8	3.9	3.5	3.5	33.9	29.0	24.8	19.6
Yemen	55.6	46.0	44.3	41.4	16.8	10.4	8.0	6.0	38.7	35.5	36.3	35.5

Source: Reference 5, Part One.

TABLE 4. INFANT MORTALITY RATES IN THE ARAB COUNTRIES, 1980-2020

Country	Average infant mortality (per 1,000 live births)					Change in average infant mortality rates (per 1,000 live births)
	1980- 1985	1995- 2000	2000- 2005	2010- 2015	2015- 2020	1980-2000
All Arab countries	74.7	49.8	43.7	33.1	28.9	24.8
Jordan	54.1	28.3	23.9	17.1	14.7	25.8
United Arab Emirates	31.6	15.7	13.6	10.4	9.5	15.9
Bahrain	22.0	16.3	14.2	10.9	9.6	5.7
Tunisia	59.3	27.6	23.3	17.6	15.0	31.7
Algeria	88.0	53.5	43.9	31.3	26.3	34.5
Comoros	105.6	76.3	67.0	49.6	42.3	29.3
Libyan Arab Jamahiriya	47.0	23.6	20.7	16.2	14.4	23.4
Syrian Arab Republic	59.3	26.9	22.3	15.8	14.0	32.4
Djibouti	132.5	109.8	102.4	85.4	76.8	22.7
Sudan	110.2	84.1	77.0	61.7	54.4	26.1
Somalia	143.3	133.4	117.7	94.5	85.9	9.8
Iraq	73.8	94.8	83.3	49.4	37.8	-21.1
Oman	58.3	22.6	19.7	15.4	14.2	35.7
Palestine	50.6	24.0	20.7	15.9	14.2	26.6
Qatar	34.0	15.8	12.3	9.9	8.8	18.2
Kuwait	21.8	12.3	10.8	9.2	8.8	9.5
Lebanon	44.4	20.0	17.2	14.2	13.0	24.5
Egypt	107.5	49.0	40.6	28.1	23.4	58.5
Mauritania	119.6	105.6	96.7	79.7	71.7	14.1
Morocco	95.9	52.2	42.1	29.3	24.3	43.8
Saudi Arabia	58.4	25.0	20.6	14.7	12.9	33.5
Yemen	125.9	80.0	70.6	52.9	44.6	46.0

Source: Reference 5, Part One.

TABLE 5. LIFE EXPECTANCY AT BIRTH IN THE ARAB COUNTRIES, 1980-2020

Country	Life expectancy at birth (years)															Number of additional years		
	1980-1985			1995-2000			2000-2005			2010-2015			2015-2020			1980-2000	2000-2015	2000-2020
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Both sexes		
All Arab countries	58.0	61.3	59.5	63.8	67.1	65.3	65.1	68.5	66.7	67.6	71.1	69.2	68.9	72.4	70.5	5.9	2.5	3.8
Jordan	61.9	65.8	63.7	68.5	71.0	69.7	69.7	72.5	71.0	71.9	74.9	73.3	72.9	76.1	74.4	6.0	2.3	3.4
United Arab Emirates	67.1	71.4	68.6	72.3	76.4	73.8	73.3	77.4	74.7	74.9	79.2	76.2	75.7	80.0	77.0	5.2	1.5	2.3
Bahrain	67.1	71.4	68.9	71.3	75.1	73.0	72.5	75.9	74.0	74.3	77.9	75.8	75.1	78.7	76.6	4.1	1.8	2.6
Tunisia	63.6	66.5	64.9	69.8	73.7	71.7	70.8	74.9	72.8	72.4	77.1	74.7	73.4	78.1	75.7	6.8	1.9	2.9
Algeria	60.0	62.0	60.5	66.6	69.3	67.9	68.1	71.3	69.7	70.5	74.0	72.2	71.5	75.2	73.3	7.4	2.5	3.6
Comoros	51.0	55.0	52.9	57.4	60.2	58.8	59.4	62.2	60.8	63.4	66.2	64.8	65.4	67.7	66.6	5.9	4.0	5.8
Libyan Arab Jamahiriya	60.6	64.2	62.2	69.6	74.2	71.6	70.8	75.4	72.8	72.8	77.4	74.8	73.6	78.4	75.7	9.4	2.0	2.9
Syrian Arab Republic	60.8	64.4	62.5	69.4	71.6	70.5	70.6	73.1	71.9	72.6	75.5	74.1	73.4	76.5	75.0	8.0	2.2	3.1
Djibouti	43.2	46.4	44.7	45.5	48.5	47.0	44.7	46.8	45.7	45.8	46.5	46.2	47.9	48.6	48.3	2.3	0.5	2.6
Sudan	47.8	50.6	49.1	53.6	56.4	55.0	54.1	57.1	55.6	56.1	57.8	57.0	58.2	59.8	59.0	5.9	1.4	3.4
Somalia	41.4	44.6	43.0	43.3	46.3	44.8	46.4	49.5	47.9	51.4	54.6	53.0	53.4	56.6	55.0	1.8	5.1	7.1
Iraq	61.1	63.7	62.3	57.2	60.3	58.7	59.2	62.3	60.7	65.4	68.5	66.9	67.6	71.2	69.3	-3.6	6.2	8.6
Oman	61.3	64.3	62.7	70.2	73.4	71.6	71.0	74.4	72.4	72.6	76.2	74.0	73.1	77.0	74.6	8.9	1.6	2.2
Palestine	62.7	66.2	64.4	69.8	73.0	71.4	70.8	74.0	72.4	72.4	76.0	74.2	73.2	76.8	75.0	7.0	1.8	2.6
Qatar	65.4	69.8	67.0	69.3	74.2	70.9	70.5	75.4	72.2	72.5	77.4	74.1	73.5	78.4	75.1	3.9	1.9	2.9
Kuwait	69.6	73.7	71.3	74.1	78.2	75.7	74.9	79.0	76.6	76.2	80.6	77.9	76.7	81.1	78.4	4.4	1.3	1.8
Lebanon	63.9	68.0	65.9	71.1	74.1	72.6	71.9	75.1	73.5	73.2	76.7	75.0	73.7	77.5	75.7	6.7	1.5	2.2
Egypt	55.3	57.8	56.5	65.2	69.0	67.0	66.7	71.0	68.8	69.4	74.0	71.6	70.6	75.2	72.8	10.5	2.8	4.0
Mauritania	45.9	49.1	47.4	48.9	52.1	50.5	50.9	54.1	52.5	54.9	58.1	56.5	56.9	60.1	58.5	3.1	4.0	6.0
Morocco	56.7	60.1	58.3	64.8	68.5	66.6	66.8	70.5	68.7	69.5	73.5	71.5	70.7	74.7	72.7	8.3	2.8	4.0
Saudi Arabia	61.4	64.1	62.6	69.6	72.2	70.9	71.1	73.7	72.3	73.1	76.1	74.4	73.9	77.1	75.3	8.3	2.1	3.0
Yemen	48.8	49.3	49.1	56.9	59.1	58.0	58.9	61.1	60.0	62.9	65.1	64.0	64.9	67.1	66.0	8.9	4.0	6.0

Source: Reference 5, Part One.

TABLE 6. TOTAL FERTILITY RATES IN THE ARAB COUNTRIES, 1980-2020

Country	Overall fertility rates (children per woman)					Net replacement level
	1980-1985	1995-2000	2000-2005	2010-2015	2015-2020	
All Arab countries	6.2	4.4	4.1	3.4	3.1	..
Jordan	6.8	4.1	3.6	2.8	2.5	2030-2035
United Arab Emirates	5.2	3.2	2.8	2.3	2.2	2020-2025
Bahrain	4.6	3.0	2.7	2.2	2.0	2015-2020
Tunisia	4.9	2.3	2.0	1.9	1.9	2000-2005
Algeria	6.4	3.2	2.8	2.3	2.1	2015-2020
Comoros	7.1	5.4	4.9	3.8	3.3	>2050
Libyan Arab Jamahiriya	7.2	3.4	3.0	2.4	2.2	2020-2025
Syrian Arab Republic	7.3	3.8	3.3	2.6	2.4	2030-2035
Djibouti	6.6	6.1	5.7	4.8	4.2	>2050
Sudan	6.0	4.9	4.4	3.4	3.1	2045-2050
Somalia	7.3	7.3	7.3	6.6	6.1	>2050
Iraq	6.4	5.3	4.8	3.8	3.3	2040-2045
Oman	7.2	5.4	5.0	3.9	3.5	>2050
Palestine	7.0	6.0	5.6	4.6	4.1	..
Qatar	5.5	3.7	3.2	2.6	2.4	2025-2030
Kuwait	4.9	2.9	2.7	2.3	2.2	2025-2030
Lebanon	3.8	2.3	2.2	2.0	1.9	2005-2010
Egypt	5.3	3.5	3.3	2.8	2.5	2030-2035
Mauritania	6.3	6.0	5.8	5.0	4.5	>2050
Morocco	5.4	3.0	2.7	2.4	2.3	2025-2030
Saudi Arabia	7.2	5.1	4.5	3.4	3.0	2040-2045
Yemen	8.5	7.3	7.0	6.3	6.0	>2050

Source: Reference 5, Part One.

TABLE 7. TOTAL FERTILITY RATES, 1995-2000, AND MEAN AGE AT MARRIAGE IN SELECTED ARAB COUNTRIES

Country	Mean age at marriage		Total fertility rates
	1980-1988*	1990-1995*	1995-2000
Tunisia	24.9	26.6	2.3
Algeria	23.8	25.9	3.2
Sudan	..	22.7	4.9
Syrian Arab Republic	21.5	24.5	3.8
Lebanon	25.7	27.5	2.3
Libyan Arab Jamahiriya	..	29.2	3.4
Egypt	21.4	22.2	3.5
Morocco	23.5	25.3	3
Mauritania	20.5	23.8	6
Yemen	..	20.8	7.3
Bahrain	..	24.3	3
Saudi Arabia	21.7	24.2	5.1
Oman	19.2	22	5.4
Qatar	22.8	26.5	3.7
Kuwait	21.7	25.3	2.9
United Arab Emirates	23.1	24.3	3.2

Sources: League of Arab States, Population Research and Studies Unit, *Mother and child health indicators in the Arab countries*, First edition, on CD, May 1999; and Council of Health Ministers of GCC States, reports for each State on maternal and child and family health surveys.

Notes: \* For one year within that period or close to it.

Two dots (..) indicate that no data are available for the years in question.

TABLE 8. TOTAL FERTILITY RATES, 1995-2000, AND CONTRACEPTIVE USE  
(ALL METHODS AND MODERN METHODS) IN SELECTED ARAB COUNTRIES

Country	Total fertility rates (1995-2000)	Percentage of women using contraception				
		1985*		1995*		2001
		All methods	Modern methods	All methods	Modern methods	All methods
Tunisia	2.3	41	34	60	51	60
Algeria	3.2	36	31	52	49	56.9
Sudan	4.9	9	6	8	7	8.3
Syrian Arab Republic	3.8	20	15	36	28	36.1
Lebanon	2.3	..	..	61	37	61
Libyan Arab Jamahiriya	3.4	..	..	40	26	39.7
Egypt	3.5	30	29	48	46	56.1
Morocco	3	26	21	50	42	50.3
Mauritania	6	1	0	3	1	3.3
Yemen	7.3	1	1	13	10	20.8
Bahrain	3	53	30	62	31	61.8
Saudi Arabia	5.1	..	..	32	29	31.8
Oman	5.4	9	8	24	18	23.7
Qatar	3.7	32	29	43	32	43.2
Kuwait	2.9	35	32	50	41	50.2
United Arab Emirates	3.2	..	..	27	24	27.5

Sources: League of Arab States, Population Research and Studies Unit, *Mother and child health indicators in the Arab countries*, First edition, on CD, May 1999; and Council of Health Ministers of GCC States, reports for each State on maternal and child and family health surveys.

Notes: \* For one year within that period or close to it.

Two dots (..) indicate that no data are available for the years in question.

TABLE 9. TOTAL FERTILITY RATES, 1995-2000, AND MEAN BREASTFEEDING PERIOD  
(IN MONTHS) IN SELECTED ARAB COUNTRIES

Country	Total fertility rates	Average period for which child is breastfed	
	1995-2000	1987-1989*	1998-1990*
Tunisia	2.3	..	15.3
Algeria	3.2	..	12.5
Sudan	4.9	..	19.2
Syrian Arab Republic	3.8	..	13.3
Lebanon	2.3	..	9.1
Libyan Arab Jamahiriya	3.4	..	11
Egypt	3.5	..	17.8
Morocco	3	..	12.4
Mauritania	6	..	19.4
Yemen	7.3	..	16.8
Bahrain	3	11.1	14.6
Saudi Arabia	5.1	13	12.5
Oman	5.4	15.9	..
Qatar	3.7	10.2	8.5
Kuwait	2.9	10.3	5.3
United Arab Emirates	3.2	9	12

Sources: League of Arab States, Population Research and Studies Unit, *Mother and child health indicators in the Arab countries*, First edition, on CD, May 1999; and Council of Health Ministers of GCC States, reports for each State on maternal and child and family health surveys.

Notes: \* For one year within that period or close to it.

Two dots (..) indicate that no data are available for the years in question.

TABLE 10. PROXIMATE FERTILITY VARIABLES INDICATORS AND TOTAL LEVELS OF FERTILITY

Country	Marriage indicators	Contraceptive indicator	Breastfeeding indicator	Miscarriage indicator	Total fertility rate
Egypt					
1988 <sup>a/</sup>	0.640	0.694	0.737	0.988	0.640
1995 <sup>b/</sup>	0.605	0.503	0.771	1.000	3.000
Morocco <sup>c/</sup>					
1987	0.750	0.690	0.740	0.970	4.500
1995	0.510	0.560	0.770	0.860	3.300
Lebanon					
1976 <sup>d/</sup>	0.580	0.690	0.780	1.000	7.770
1996 <sup>e/</sup>	0.390	0.460	0.840	1.000	2.500
Yemen <sup>f/</sup>					
1992	0.707	0.926	0.703	0.990	7.700
1997	0.707	0.707	0.664	0.990	6.480

Sources: <sup>a/</sup> Y. Courbage and M. Khalat, *Population structure and population growth in the Arab world: latest trends*, Ined, Paris (UNFPA, LAS and ESCWA, Arab Population Conference, High level and expert meeting, 4-6 April 1993, Amman, Jordan).

<sup>b/</sup> Reference 12, Part One.

<sup>c/</sup> Reference 13, Part One.

<sup>d/</sup> Reference 14, Part One.

<sup>e/</sup> Reference 15, Part One.

<sup>f/</sup> Reference 16, Part One.

TABLE 11. POPULATION DISAGGREGATED BY VARIANT, 2000-2020

Country	High			Medium			Stable			Low		
	2000	2010	2020	2000	2010	2020	2000	2010	2020	2000	2010	2020
All Arab countries	286 650	365 649	45 408	286 650	357 827	431 397	286 650	369 283	476 076	286 650	349 764	408 369
Jordan	5 035	6 537	7 991	5 035	6 385	7 560	5 035	6 734	8 710	5 035	6 232	7 130
United Arab Emirates	2 820	3 425	3 962	2 820	3 363	3 786	2 820	3 452	4 066	2 820	3 300	3 609
Bahrain	677	846	1 018	677	828	969	677	852	1 047	677	810	918
Tunisia	9 519	10 870	12 376	9 519	10 581	11 621	9 519	10 871	12 337	9 519	10 292	10 867
Algeria	30 245	36 453	42 963	30 245	35 549	40 479	30 245	36 770	44 620	30 245	34 646	37 997
Comoros	705	947	1 213	705	927	1 154	705	968	1 331	705	907	1 095
Libyan Arab Jamahiriya	5 237	6 490	7 821	5 237	6 332	7 378	5 237	6 576	8 236	5 237	6 174	6 935
Syrian Arab Republic	16 560	21 351	26 556	16 560	20 835	25 077	16 560	21 896	28 629	16 560	20 314	23 580
Djibouti	666	788	953	666	773	912	666	797	1 012	666	759	871
Sudan	31 437	39 138	46 797	31 437	38 323	44 493	31 437	40 045	50 886	31 437	37 507	42 192
Somalia	8 720	13 157	18 593	8 720	12 948	17 928	8 720	13 050	18 871	8 720	12 736	17 261
Iraq	23 224	30 922	39 917	23 224	30 290	37 992	23 224	31 456	43 113	23 224	29 658	36 069
Oman	2 609	3 527	4 553	2 609	3 459	4 349	2 609	3 584	4 893	2 609	3 392	4 146
Palestine	3 191	4 597	6 350	3 191	4 506	6 064	3 191	4 683	6 884	3 191	4 415	5 779
Qatar	581	681	785	581	670	752	581	692	823	581	658	719
Kuwait	2 247	3 102	3 816	2 247	3 043	3 647	2 247	3 102	3 839	2 247	2 979	3 474
Lebanon	3 478	4 051	4 558	3 478	4 000	4 395	3 478	4 051	4 555	3 478	3 892	4 117
Egypt	67 784	84 531	102 437	67 784	82 590	96 852	67 784	84 451	105 002	67 784	80 551	91 175
Mauritania	2 645	3 584	4 666	2 645	3 520	4 473	2 645	3 586	4 854	2 645	3 453	4 277
Morocco	29 108	34 828	40 841	29 108	34 066	38 726	29 108	34 858	41 318	29 108	33 276	36 516
Saudi Arabia	22 147	29 744	37 975	22 147	29 176	36 253	22 147	30 583	41 859	22 147	28 572	34 448
Yemen	18 017	26 080	37 867	18 017	25 662	36 537	18 017	26 227	39 189	18 017	25 241	35 192

Source: Reference 5, Part One.

TABLE 12. POPULATION DISAGGREGATED BY BROAD AGE GROUP (ABSOLUTE NUMBERS), 1980-2020

Country	0-14			15-24			25-64			65 and above		
	1980	2000	2020	1980	2000	2020	1980	2000	2020	1980	2000	2020
All Arab countries	75 184	109 138	137 748	33 095	58 381	78 339	55 917	108 744	194 005	5 739	10 387	21 306
Jordan	1 099	1 959	2 192	432	1 062	1 444	625	1 873	3 598	69	141	325
United Arab Emirates	290	756	761	179	398	503	534	1 633	2 249	12	34	273
Bahrain	120	201	208	75	111	151	144	348	553	7	17	57
Tunisia	2 717	2 884	2 557	1 365	1 989	1 615	2 141	4 112	6 531	246	533	918
Algeria	8 714	10 616	10 363	3 673	6 563	6 558	5 622	11 826	21 211	731	1 240	2 348
Comoros	186	302	411	73	152	235	118	233	470	10	18	38
Libyan Arab Jamahiriya	1 421	1 723	1 992	536	1 262	1 188	1 019	2 069	3 726	67	183	472
Syrian Arab Republic	4 390	6 607	7 498	1 756	3 809	4 589	2 571	5 663	11 937	242	480	1 053
Djibouti	146	288	352	63	127	194	110	231	329	8	20	36
Sudan	8 589	12 606	14 460	3 664	6 224	8 988	6 592	11 537	18 909	543	1 069	2 136
Somalia	3 029	4 168	8 444	1 220	1 692	3 604	2 050	2 651	5 450	188	209	430
Iraq	5 975	9 777	13 335	2 502	4 645	7 484	4 161	8 152	15 729	324	650	1 444
Oman	540	981	1 470	217	519	800	403	1 057	1 918	27	52	161
Palestine	701	1 481	2 414	295	597	1 267	428	1 002	2 189	52	112	194
Qatar	74	157	157	44	73	114	109	343	424	3	9	57
Kuwait	553	598	758	247	344	521	555	1 276	2 170	19	29	197
Lebanon	1 070	1 071	993	545	654	668	910	1 541	2 413	144	212	321
Egypt	18 181	24 606	28 862	8 519	13 896	17 046	15 458	26 232	44 939	1 757	3 050	6 005
Mauritania	706	1 142	1 780	302	518	895	552	894	1 646	78	90	152
Morocco	8 373	9 577	10 185	3 935	6 171	6 351	6 280	12 109	19 828	795	1 252	2 362
Saudi Arabia	4 255	8 792	11 528	1 777	4 009	6 888	3 304	8 792	16 350	269	554	1 486
Yemen	4 054	8 846	17 026	1 677	3 567	7 234	2 230	5 171	11 436	179	432	840

Source: Reference 5, Part One.

TABLE 13. POPULATION DISAGGREGATED BY BROAD AGE GROUP (PERCENTAGES), 1980-2020

Country	0-14			15-24			25-64			65 and above		
	1980	2000	2020	1980	2000	2020	1980	2000	2020	1980	2000	2020
All Arab countries	44.2	38.1	31.9	19.5	20.4	18.2	32.9	37.9	45.0	3.4	3.6	4.9
Jordan	49.4	38.9	29.0	19.4	21.1	19.1	28.1	37.2	47.6	3.1	2.8	4.3
United Arab Emirates	28.6	26.8	20.1	17.6	14.1	13.3	52.6	57.9	59.4	1.2	1.2	7.2
Bahrain	34.7	29.7	21.5	21.6	16.4	15.6	41.6	51.4	57.0	2.1	2.5	5.9
Tunisia	42.0	30.3	22.0	21.1	20.9	13.9	33.1	43.2	56.2	3.8	5.6	7.9
Algeria	46.5	35.1	25.6	19.6	21.7	16.2	30.0	39.1	52.4	3.9	4.1	5.8
Comoros	48.0	42.9	35.6	19.0	21.5	20.4	30.5	33.0	40.7	2.5	2.6	3.3
Libyan Arab Jamahiriya	46.7	32.9	27.0	17.6	24.1	16.1	33.5	39.5	50.5	2.2	3.5	6.4
Syrian Arab Republic	49.0	39.9	29.9	19.6	23.0	18.3	28.7	34.2	47.6	2.7	2.9	4.2
Djibouti	44.6	43.2	38.6	19.3	19.1	21.3	33.7	34.7	36.1	2.4	3.0	4.0
Sudan	44.3	40.1	32.5	18.9	19.8	20.2	34.0	36.7	42.5	2.8	3.4	4.8
Somalia	46.7	47.8	47.1	18.8	19.4	20.1	31.6	30.4	30.4	2.9	2.4	2.4
Iraq	46.1	42.1	35.1	19.3	20.0	19.7	32.1	35.1	41.4	2.5	2.8	3.8
Oman	45.5	37.6	33.8	18.3	19.9	18.4	33.9	40.5	44.1	2.3	2.0	3.7
Palestine	47.5	46.4	39.8	20.0	18.7	20.9	29.0	31.4	36.1	3.5	3.5	3.2
Qatar	32.3	27.0	20.9	19.0	12.5	15.1	47.6	59.0	56.4	1.1	1.5	7.6
Kuwait	40.2	26.6	20.8	18.0	15.3	14.3	40.4	56.8	59.5	1.4	1.3	5.4
Lebanon	40.1	30.8	22.6	20.4	18.8	15.2	34.1	44.3	54.9	5.4	6.1	7.3
Egypt	41.4	36.3	29.8	19.4	20.5	17.6	35.2	38.7	46.4	4.0	4.5	6.2
Mauritania	43.9	43.2	39.8	18.8	19.6	20.0	34.3	33.8	36.8	3.0	3.4	3.4
Morocco	43.2	32.9	26.3	20.3	21.2	16.4	32.4	41.6	51.2	4.1	4.3	6.1
Saudi Arabia	44.3	39.7	31.8	18.5	18.1	19.0	34.4	39.7	45.1	2.8	2.5	4.1
Yemen	49.8	49.1	46.6	20.6	19.8	19.8	27.4	28.7	31.3	2.2	2.4	2.3

Source: Reference 5, Part One.

TABLE 14. ANNUAL AVERAGE GROWTH OF THE BROAD AGE GROUPS, 1980-2020

Country	0-14				15-24				25-64				65 and above			
	1980-1990	1980-2000	2000-2010	2000-2020	1980-1990	1980-2000	2000-2010	2000-2020	1980-1990	1980-2000	2000-2010	2000-2020	1980-1990	1980-2000	2000-2010	2000-2020
All Arab countries	2.5	1.9	1.3	1.2	2.9	2.8	1.8	1.5	3.4	3.3	3.2	2.9	2.5	3.0	3.1	3.6
Jordan	3.3	2.9	1.1	0.6	5.0	4.5	1.6	1.5	3.8	5.5	3.7	3.3	4.1	3.6	5.2	4.2
United Arab Emirates	6.9	4.8	-0.2	0.0	5.3	4.0	2.9	1.2	7.5	5.6	2.1	1.6	7.0	5.1	8.3	10.4
Bahrain	2.5	2.6	0.5	0.2	0.6	2.0	2.1	1.5	5.3	4.4	2.7	2.3	3.9	4.2	4.2	6.1
Tunisia	1.4	0.3	-1.5	-0.6	1.9	1.9	0.2	-1.0	3.6	3.3	2.8	2.3	4.1	3.9	2.2	2.7
Algeria	2.0	1.0	-0.4	-0.1	3.3	2.9	0.9	0.0	4.0	3.7	3.4	2.9	2.4	2.6	2.1	3.2
Comoros	2.9	2.4	2.2	1.5	3.6	3.6	1.9	2.2	3.2	3.4	3.8	3.5	2.7	3.2	3.5	3.7
Libyan Arab Jamahiriya	2.8	1.0	0.8	0.7	4.7	4.3	-0.9	-0.3	3.5	3.5	3.7	2.9	5.1	5.0	5.1	4.7
Syrian Arab Republic	3.3	2.0	0.7	0.6	3.8	3.9	1.3	0.9	3.7	3.9	4.3	3.7	3.1	3.4	3.6	3.9
Djibouti	4.5	3.4	1.2	1.0	5.1	3.5	2.1	2.1	5.0	3.7	1.3	1.8	6.0	4.7	3.3	3.0
Sudan	2.0	1.9	1.2	0.7	3.1	2.6	2.0	1.8	2.7	2.8	2.6	2.5	3.5	3.4	3.6	3.5
Somalia	1.2	1.6	4.2	3.5	1.0	1.6	3.6	3.8	0.7	1.3	3.9	3.6	0.3	0.5	3.5	3.6
Iraq	2.5	2.5	1.9	1.6	3.4	3.1	2.7	2.4	3.1	3.4	3.4	3.3	3.7	3.5	3.7	4.0
Oman	4.2	3.0	2.6	2.0	3.5	4.4	1.8	2.2	5.3	4.8	3.3	3.0	2.5	3.2	5.8	5.6
Palestine	3.6	3.7	3.0	2.4	4.0	3.5	4.0	3.8	4.0	4.3	3.9	3.9	3.5	3.9	1.9	2.8
Qatar	5.6	3.8	0.3	0.0	2.9	2.6	3.1	2.2	9.2	5.7	1.3	1.1	7.1	6.2	8.0	9.4
Kuwait	3.5	0.4	2.1	1.2	4.0	1.6	2.0	2.1	5.5	4.2	3.5	2.7	2.9	2.1	9.2	9.5
Lebanon	-1.2	0.0	-0.5	-0.4	1.1	0.9	1.2	0.1	1.1	2.6	2.6	2.2	-0.2	1.9	1.6	2.1
Egypt	2.3	1.5	1.0	0.8	1.8	2.4	1.5	1.0	2.8	2.6	3.0	2.7	2.1	2.8	2.8	3.4
Mauritania	2.3	2.4	2.8	2.2	2.6	2.7	2.5	2.7	2.1	2.4	3.2	3.1	3.3	3.1	2.9	2.6
Morocco	1.5	0.7	0.3	0.3	2.5	2.3	0.2	0.1	3.5	3.3	3.0	2.5	1.3	2.3	2.2	3.2
Saudi Arabia	5.0	3.6	2.0	1.4	5.4	4.1	3.1	2.7	6.2	4.9	3.2	3.1	3.5	3.6	5.2	4.9
Yemen	4.2	3.9	3.2	3.3	3.0	3.8	3.9	3.5	3.8	4.2	3.9	4.0	2.9	4.4	2.7	3.3

Source: Reference 5, Part One.

TABLE 15. DEPENDENCY RATES IN THE ARAB COUNTRIES, 1980-2020

Country	Total dependency rate					Youth dependency rate					Elderly dependency rate				
	1980	1990	2000	2010	2020	1980	1990	2000	2010	2020	1980	1990	2000	2010	2020
All Arab countries	90.9	84.6	71.5	63.2	58.4	84.5	78.6	65.3	56.8	50.6	6.4	6.0	6.2	6.5	7.8
Jordan	110.5	100.0	71.5	61.6	49.9	104.0	93.6	66.7	55.6	43.5	6.5	6.4	4.8	6.0	6.4
United Arab Emirates	42.5	42.2	38.9	32.3	37.6	40.7	40.5	37.2	29.2	27.6	1.7	1.7	1.7	3.0	9.9
Bahrain	58.2	51.3	47.5	40.1	37.7	54.9	48.0	43.8	35.7	29.6	3.3	3.3	3.7	4.3	8.1
Tunisia	84.5	73.9	56.0	42.2	42.7	77.5	66.1	47.3	33.3	31.4	7.0	7.8	8.7	9.0	11.3
Algeria	101.6	85.5	64.5	49.3	45.8	93.8	78.7	57.7	42.8	37.3	7.9	6.9	6.7	6.4	8.5
Comoros	102.0	97.6	83.5	76.7	63.7	97.0	92.9	78.7	71.7	58.3	5.1	4.7	4.8	4.9	5.4
Libyan Arab Jamahiriya	95.7	86.6	57.2	52.0	50.2	91.4	81.7	51.7	44.7	40.5	4.3	4.9	5.5	7.3	9.6
Syrian Arab Republic	107.0	102.0	74.8	59.7	51.7	101.4	96.8	69.8	54.5	45.4	5.6	5.3	5.1	5.3	6.4
Djibouti	88.7	84.8	85.9	83.2	74.2	84.2	79.9	80.3	76.6	67.2	4.5	5.0	5.6	6.6	7.0
Sudan	89.0	82.5	77.0	69.8	59.5	83.7	76.8	71.0	63.0	51.8	5.3	5.7	6.0	6.8	7.7
Somalia	98.4	102.0	100.8	104.5	98.0	92.7	96.6	96.0	99.8	93.3	5.8	5.5	4.8	4.7	4.8
Iraq	94.6	89.0	81.5	72.7	63.7	89.7	83.9	76.4	67.4	57.4	4.9	5.1	5.1	5.4	6.2
Oman	91.6	86.2	65.6	65.6	60.0	87.2	82.7	62.3	61.1	54.1	4.4	3.5	3.3	4.5	5.9
Palestine	104.1	100.4	99.6	90.1	75.4	96.9	93.6	92.6	84.4	69.8	7.1	6.8	7.0	5.7	5.6
Qatar	50.2	40.4	39.9	37.0	39.9	48.5	38.9	37.8	33.0	29.2	1.7	1.5	2.1	4.0	10.6
Kuwait	71.2	60.8	38.7	36.4	35.5	68.8	58.8	36.9	33.2	28.2	2.4	1.9	1.8	3.3	7.3
Lebanon	83.5	66.9	58.5	46.2	42.7	73.6	58.3	48.8	37.1	32.2	9.9	8.7	9.7	9.1	10.4
Egypt	83.2	82.1	68.9	60.5	56.3	75.8	75.0	61.3	52.6	46.6	7.3	7.1	7.6	7.9	9.7
Mauritania	88.3	89.4	87.3	85.9	76.1	82.8	83.1	80.9	79.6	70.1	5.6	6.3	6.4	6.3	6.0
Morocco	89.8	76.4	59.2	50.8	47.9	82.0	69.8	52.4	43.9	38.9	7.8	6.5	6.8	6.9	9.0
Saudi Arabia	89.0	80.5	73.0	66.4	56.0	83.7	76.4	68.7	61.1	49.6	5.3	4.2	4.3	5.3	6.4
Yemen	108.3	115.5	106.2	99.2	95.7	103.8	111.2	101.2	94.8	91.2	4.6	4.3	4.9	4.4	4.5

Source: Reference 5, Part One.

TABLE 16. RATIO OF WORKERS (MALE AND FEMALE) TO POPULATION IN SELECTED ARAB COUNTRIES, 1980-2000  
(Percentages)

Country or territory	1980	1985	1990	1995	2000
Algeria	16.8	17.7	16.6	16.2	18.9
Bahrain	..	27.1	18.9	0.0	22.1
Egypt	22.3	..	25.7	24.9	25.4
Jordan	18.2	17.4	16.1	..	..
Morocco	..	..	13.4	14.4	14.4
West Bank and Gaza Strip	..	..	..	..	18.7
Oman	..	..	..	33.7	10.8
Saudi Arabia	..	..	19.7	13.1	25.8
Sudan	40.4	21.7	28.1	..	..
Tunisia	..	..	..	..	28.4
United Arab Emirates	..	..	..	52.5	63.1

Source: International Labour Organization (ILO), labour data available at: <http://laborsta.ilo.org>.

Notes: No information is available in this set of statistics for Iraq, Kuwait, Lebanon, Libyan Arab Jamahiriya, Qatar, Syrian Arab Republic or Yemen.

Two dots (..) indicate that no data are available for the year in question.

TABLE 17. RATIO OF WORKERS TO POPULATION IN SELECTED ARAB COUNTRIES, DISAGGREGATED BY GENDER, 1980-2000  
(Percentages)

Country or territory		1980	1985	1990	1995	2000
Algeria	Male	15.4	16.3	15.8	..	16.6
	Female	1.4	1.5	1.3	..	2.31
Bahrain	Male	..	..	17.4	..	19.3
	Female	..	..	1.0	..	2.7
Egypt	Male	20.7	..	19.6	20.1	20.6
	Female	1.6	..	6.1	4.8	4.8
Jordan	Male	..	13.6	12.2	..	..
	Female	..	3.8	3.9	..	..
Morocco	Male	..	..	10.1	10.4	11.3
	Female	..	..	3.3	4.0	3.1
West Bank and Gaza Strip	Male	..	..	..	..	15.8
	Female	..	..	..	..	2.9
Oman	Male	..	..	..	..	9.3
	Female	..	..	..	..	1.5
Saudi Arabia	Male	..	..	..	..	22.3
	Female	..	..	..	..	3.5
Sudan	Male	0.3	0.2	0.2	..	..
	Female	0.1	0.1	0.1	..	..
Tunisia	Male	..	..	..	..	21.4
	Female	..	..	..	..	7.0
United Arab Emirates	Male	..	..	..	46.4	55.1
	Female	..	..	..	6.1	8.0

Source: International Labour Organization (ILO), labour data available at: <http://laborsta.ilo.org>.

Notes: No information is available in this set of statistics for Iraq, Kuwait, Lebanon, Libyan Arab Jamahiriya, Qatar, Syrian Arab Republic or Yemen.

Two dots (..) indicate that no data are available for the year in question.

TABLE 18. GENERAL UNEMPLOYMENT RATE IN SELECTED ARAB COUNTRIES, 1995-2001  
(Percentages)

Country or territory	Unemployment rate
Jordan	13.7
United Arab Emirates	1.8
Bahrain	3.1
Tunisia	15.6
Algeria	27.8
Sudan	17.0
Syrian Arab Republic	6.5
West Bank and Gaza Strip	17.5
Iraq	28.1
Oman	17.2
Qatar	2.3
Kuwait	1.0
Lebanon	8.4
Libyan Arab Jamahiriya	11.7
Egypt	7.4
Morocco	17.8
Yemen	11.5
Average for all those countries	12.3

*Source: The Unified Arab Economic Report, 2003.*

*Note: No data are available for countries that are not included in the above table.*

TABLE 19. UNEMPLOYMENT IN THE 15 YEARS AND OVER AGE GROUP, DISAGGREGATED  
BY GENDER, IN SELECTED ARAB COUNTRIES, 1980-2000  
(Percentages)

Country or territory	Year	Gender	Unemployment rate
Algeria	2000	Male	33.9
		Female	29.7
Egypt	2000	Male	5.1
		Female	22.7
Iraq	2003	Male	30.0
		Female	16.0
Jordan	2004	Male	12.3
		Female	19.2
Kuwait	1999	Male	0.8
		Female	0.7
Morocco	2000	Male	13.8
		Female	13.0
West Bank and Gaza Strip	2003	Male	26.9
		Female	18.6
Qatar	2001	Male	2.3
		Female	12.6
Saudi Arabia	2000	Male	3.8
		Female	9.3
Syrian Arab Republic	2002	Male	8.3
		Female	24.1
United Arab Emirates	2000	Male	1.7
		Female	2.6
Yemen	1999	Male	12.5
		Female	8.2
Bahrain	1991	Male	5.2
		Female	11.8
Oman	1996	Male	14.2
		Female	37.0
Lebanon	1997	Male	8.6
		Female	7.2
Libyan Arab Jamahiriya	1995	Male	9.9
		Female	1.7

Sources: International Labour Organization (ILO), labour data which is available at: <http://laborsta.ilo.org>; and *The Unified Arab Economic Report, 2003*.

Note: No data are available for countries that are not included in the above table.

TABLE 20. SIZE OF WORKFORCE IN THE ARAB WORLD  
(Thousands)

Country or territory	1995	2001
Jordan	1 196.91	1 621.97
United Arab Emirates	1 227.20	1 384.67
Bahrain	261.26	307.02
Tunisia	3 368.21	3 908.30
Algeria	8 582.47	10 860.30
Saudi Arabia	5 189.35	6 330.23
Sudan	10 761.30	12 555.92
Syrian Arab Republic	4 242.64	5 380.28
Iraq	5 318.82	6 557.96
Oman	603.07	748.36
Qatar	283.13	316.85
Kuwait	746.38	870.49
Lebanon	1 060.50	1 295.12
Libyan Arab Jamahiriya	1 506.16	1 846.07
Egypt	22 554.50	26 571.97
Morocco	10 396.08	12 096.25
Yemen	4 472.09	5 745.6

Source: *The Unified Arab Economic Report, 2003*.

TABLE 21. UNEMPLOYMENT IN SELECTED ARAB COUNTRIES, DISAGGREGATED BY AGE GROUP

Country or territory	Age group					Total	Youth unemployment (percentage)	Year
	15-24	25-34	35-44	45-59	60 and over			
Algeria	1 081.4	859.9	249.2	149.0	..	2 339.5	2.46	2001
Bahrain	2.7	1.1	..	0.3	0.1	4.2	46.6	2000
Egypt	1 074.8	693.3	14.9	..	..	1 783	60.3	2001
Jordan	112.3	23.9		11.6		147.8	76.0	2004
Kuwait	10.5	3.6	1.0	0.6	0.1	15.9	66.2	1995
Morocco	498.7	575.3	148.2	49.8	3.1	1 275.1	39.1	2001
West Bank and Gaza Strip	61.1	57.5	35.9	18.0	1.6	174.1	35.1	2001
Qatar	3.4	1.8	0.7	0.6	0.0	6.5	52.6	2001
Saudi Arabia	169.8	89.3	13.8	6.0	2.2	281.1	60.4	2001
Syrian Arab Republic	292.1	48.9	6.4	4.4	4.0	355.8	82.1	2002
United Arab Emirates	15.9	9.5	4.4	4.2	0.7	34.7	45.8	2000
Yemen	182.9	97.9	59.5	41.7	7.6	389.6	46.9	1999

Sources: International Labour Organization (ILO), labour data available at: <http://laborsta.ilo.org>; and National Centre for Human Resources Development, *Second mid-year report (Al-Manar project)*, Amman, December 2004.

Note: Two dots (..) indicate that data are not available.

TABLE 22. MALE UNEMPLOYMENT, DISAGGREGATED BY AGE GROUP

Country	Year	Age group				
		15-19	20-24	25-59	60 and over	15 and above
Jordan	2000	31.1	22.0	7.9	3.4	12.3
United Arab Emirates	1995	..	..	..	..	1.7
Bahrain	1991	50.1	16.6	2.2	6.4	5.2
Algeria	1997	..	..	..	..	26.9
Saudi Arabia	2001	..	..	..	..	15.0
Syrian Arab Republic	1998	20.3	19.5	8.5	2.3	8.6
Iraq	1987	12.6	2.4	1.3	11.1	3.5
Oman	1996	54.1	22.1	6.2	2.3	14.2
Palestine	1997	32.4	19.0	13.4	36.6	17.1
Qatar	1997	..	6.7	1.0	0.0	1.8
Kuwait	1999	..	..	..	..	0.8
Lebanon	1997	19.1	20.1	5.1	0.0	8.6
Libyan Arab Jamahiriya	1995	..	..	..	..	9.9
Egypt	1998	..	..	..	..	5.1
Morocco	1996	..	..	..	..	15.8
Yemen	1999	21.3	19.9	9.8	3.7	12.5

TABLE 23. FEMALE UNEMPLOYMENT, DISAGGREGATED BY AGE GROUP

Country	Year	Age group				
		15-19	20-24	25-59	60 and over	15 and above
Jordan	2000	42.1	39.5	15.2	0.0	21.0
United Arab Emirates	1995	..	..	..	..	2.4
Bahrain	1991	68.9	27.1	5.1	0.0	11.8
Algeria	1997	..	..	..	..	24.0
Syrian Arab Republic	1998	19.6	19.8	10.3	6.0	10.5
Iraq	1987	20.5	17.9	4.5	6.8	7.1
Oman	1996	87.1	46.4	9.0	0.0	37.0
Palestine	1997	55.3	29.4	14.5	28.8	20.2
Qatar	1997	..	36.5	2.6	0.0	5.2
Kuwait	1999	..	..	..	..	0.7
Lebanon	1997	18.8	11.5	3.9	0.0	7.2
Libyan Arab Jamahiriya	1995	..	..	..	..	1.7
Egypt	1998	..	..	..	..	19.9
Morocco	1996	..	..	..	..	23.0
Yemen	1999	12.7	14.6	5.7	0.0	..

Source: *The Unified Arab Economic Report, 2003*.

Note: Two dots (..) indicate that no data are available.

TABLE 24. PERCENTAGE OF WORKING CHILDREN AGED 10-14 YEARS  
(Percentages)

Country	1980	2000
Algeria	7	0
Bahrain	0	0
Egypt	18	9
Iraq	11	2
Jordan	4	0
Kuwait	0	0
Lebanon	5	0
Libyan Arab Jamahiriya	9	0
Morocco	21	1
Oman	6	0
Qatar	0	0
Saudi Arabia	5	0
Sudan	33	27
Syrian Arab Republic	14	2
Tunisia	6	0
United Arab Emirates	0	0
Yemen	26	19

Source: *The Unified Arab Economic Report, 2003*.

TABLE 25. YOUTH UNEMPLOYMENT RATES, 2003  
(Percentages)

Region	Unemployment rate	Youth unemployment rate
World	6.2	14.4
Industrialized countries	6.8	13.4
Economies in transition	9.2	18.6
East Asia	3.3	7.0
South East Asia	6.3	16.4
South Asia	4.8	13.9
Caribbean and Latin America	8.0	16.6
Middle East and North Africa	12.2	25.6
Sub-Saharan Africa	10.9	21.0

Source: International Labour Organization (ILO), *Global employment trends*, Geneva, January 2004.

TABLE 26. YOUTH UNEMPLOYMENT RATES IN SELECTED ARAB COUNTRIES

Country	Youth unemployment rate
Bahrain	24.0
Jordan	27.1
Kuwait	6.2
Lebanon	30.0
Oman	17.6
Syrian Arab Republic	7.3
Yemen	19.8
Algeria	38.7
Egypt	34.3
Morocco	38.2

Source: United Nations, *Review of the youth situation in the ESCWA region from the perspective of human resource development*, New York, 2001, p. 26.

TABLE 27. DISTRIBUTION OF ARAB LABOUR FORCE BY PRINCIPAL ECONOMIC SECTOR  
(Percentage of total labour force)

Country	Agriculture		Industry		Services	
	1980	2000	1980	2000	1980	2000
Jordan	13.0	11.1	9.4	8.2	77.6	80.7
United Arab Emirates	6.3	4.7	16.0	16.8	77.7	78.5
Bahrain	1.5	1.0	29.9	27.5	68.6	71.5
Tunisia	26.5	24.3	30.2	28.3	43.3	47.4
Algeria	25.4	24.1	23.0	19.6	51.6	56.3
Saudi Arabia	13.9	9.2	12.8	10.6	73.3	80.2
Sudan	65.4	60.2	9.8	8.7	24.8	31.1
Syrian Arab Republic	30.3	27.3	30.8	26.9	38.9	45.8
Iraq	12.8	9.6	24.6	21.6	62.6	68.8
Oman	40.3	35.0	12.6	11.1	47.1	53.9
Qatar	1.8	1.3	8.1	10.2	90.1	88.5
Kuwait	1.1	1.1	27.8	29.6	71.1	69.3
Lebanon	5.2	3.5	35.2	31.3	59.6	65.2
Libyan Arab Jamahiriya	8.0	5.6	21.2	19.7	70.8	74.7
Egypt	36.5	32.6	24.0	21.9	39.2	45.5
Morocco	40.2	35.3	21.6	20.2	38.2	44.5
Yemen	56.0	49.9	11.4	9.1	32.6	41.0

Source: The Unified Arab Economic Report, 2003.

TABLE 28. AVERAGE PRODUCTIVITY, 1980-2000  
(In United States dollars)

Country	1980	1990	2000
Jordan	7 490	4 933	5 406
United Arab Emirates	54 258	32 081	51 778
Bahrain	22 606	20 776	26 653
Tunisia	3 923	4 400	5 080
Algeria	8 701	8 852	5 206
Saudi Arabia	52 073	21 626	30 917
Sudan	1 092	2 616	951
Syrian Arab Republic	5 275	4 016	3 634
Iraq	15 242	16 988	13 179
Oman	17 727	23 512	27 556
Qatar	74 648	29 560	56 741
Kuwait	57 614	20 394	44 284
Lebanon	5 396	3 319	13 130
Libyan Arab Jamahiriya	37 261	25 692	18 363
Egypt	1 442	1 811	3 783
Morocco	2 701	2 832	2 793
Yemen	1 698	2 618	1 685

Source: The Unified Arab Economic Report, 2003.

TABLE 29. PERCENTAGE OF GDP SPENT ON EDUCATION

Country	Human Development Index (HDI) rank	Percentage of Government spending		Percentage of GDP	
		1999-2001	1990	1999-2001	1990
Bahrain	40	..	14.6	..	4.2
Kuwait	44	..	3.4	..	4.8
Qatar	47	..	..	..	3.5
United Arab Emirates	49	..	14.6	..	1.9
Libyan Arab Jamahiriya	58	..	..	2.7	..
Oman	74	..	11.1	4.2	3.1
Saudi Arabia	77	..	8.17	..	6.5
Lebanon	80	11.1	..	2.9	..
Jordan	90	20.6	1.17	4.6	8.4
Tunisia	92	17.4	5.13	6.8	6.0
Syrian Arab Republic	106	11.1	3.17	4.0	4.1
Algeria	108	..	1.21	..	5.3
Egypt	120	..	..	..	3.7
Morocco	125	..	1.26	5.1	5.3
Sudan	139	..	8.20	..	0.9
Yemen	149	32.8	..	10.0	..

Source: United Nations Development Programme, *Human Development Report, 2004*, table 10.

Note: Two dots (..) indicate that no data are available.

TABLE 30. GOVERNMENT SPENDING PRIORITIES

Country	Human Development Index (HDI) rank	Government spending on defence (percentage)		Government spending on health (percentage)		Government spending on education (percentage)	
		2002	1990	2001	1990	1999-2001	1990
Bahrain	40	3.9	5.1	2.9	..	..	4.2
Kuwait	44	10.4	48.5	3.5	4.0	..	4.8
Qatar	47	..	..	2.2	..	..	3.5
United Arab Emirates	49	3.7	6.2	2.6	0.8	..	1.9
Libyan Arab Jamahiriya	58	2.4	..	1.6	..	2.7	..
Oman	74	12.3	16.5	2.4	2.0	4.2	3.1
Saudi Arabia	77	9.8	12.8	3.4	..	..	6.5
Lebanon	80	4.7	7.6	..	..	2.9	..
Jordan	90	8.4	9.9	4.5	3.6	4.6	8.4
Tunisia	92	..	2.0	4.9	3.0	6.8	6.0
Syrian Arab Republic	106	6.1	6.9	2.4	0.4	4.0	4.1
Algeria	108	3.7	1.5	3.1	3.0	..	5.3
Egypt	120	2.7	3.9	1.9	1.8	..	3.7
Morocco	125	4.3	4.1	2.0	0.9	5.1	5.3
Sudan	139	2.8	3.6	0.6	0.7	..	0.9
Yemen	149	7.1	8.5	1.5	1.1	10.0	..

Source: United Nations Development Programme, *Human Development Report, 2004*, table 19.

Note: Two dots (..) indicate that no data are available.

TABLE 31. POPULATION AND LABOUR FORCE IN GCC STATES

	1975				2001			
	Population		Labour force		Population		Labour force	
	Total (thousands)	Immigrants (percentage)	Total (thousands)	Immigrants (percentage)	Total (thousands)	Immigrants (percentage)	Total (thousands)	Immigrants (percentage)
United Arab Emirates	551	61	292	85	3 488	78	2 079	91
Bahrain	267	22	79	50	651	38	308	59
Saudi Arabia	7 334	19	1 968	34	22 690	26	6 090	50
Oman	846	16	192	54	2 478	26	705	79
Qatar	180	71	74	83	597	70	323	86
Kuwait	1 027	54	298	71	2 243	62	1 214	80
Total	10 205	26	2 903	45	32 146	35	10 817	65

Source: Statistical bulletin of the GCC States, 2001.

TABLE 32. ABSORPTIVE CAPACITY OF THE ARAB COUNTRIES AND SELECTED WORLD COUNTRIES  
(Percentages)

Arab countries	1995	2001	Other countries	Year	Absorptive capacity
Jordan	44.2	40.9	Hong Kong	(2001)	94.9
United Arab Emirates	74.7	52.1	Indonesia	(1999)	92.7
Bahrain	65.1	55.4	Japan	(2003)	94.7
Tunisia	46.8	50.2	South Korea	(2003)	96.6
Algeria	43.1	35.7	Philippines	(2001)	90.2
Saudi Arabia	..	42.3	Singapore	(2000)	94.5
Sudan	64.4	53.9	Czech Republic	(2002)	92.7
Syrian Arab Republic	52.8	49.4	France	(2003)	91.4
Iraq	..	43.6	Germany	(2003)	90.0
Oman	40.2	38.8	Italy	(2003)	91.3
Qatar	83.6	71.3	Portugal	(2003)	93.7
Kuwait	53.6	47.6	Turkey	(2003)	86.9
Lebanon	39.7	43.0	Argentina	(2003)	84.5
Libyan Arab Jamahiriya	43.4	41.0	Brazil	(2001)	93.0
Egypt	63.4	60.1	Canada	(2003)	92.4
Morocco	51.4	51.6	Chile	(2003)	94.6
Yemen	58.5	44.9	Mexico	(2003)	99.7

Source: Calculated by author from data in *The Unified Arab Economic Report, 2003* and the ILO on-line statistical data base.

Note: Two dots (..) indicate that no data are available.

TABLE 33. FIRST SCENARIO: POPULATION GROWTH IN TWO DISTINCT PERIODS, 2000-2010 AND 2010-2020

Country	Population aged 15 and over			Labour force			Employed persons			Unemployed persons			Unemployment rate			Absorptive capacity		
	2000	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020
Algeria	19 629	25 347	30 117	10 860	13 674	16 305	7 743	9 749	11 625	3 117	3 925	4 680	28.7	28.7	28.7	39.4	38.5	38.6
Egypt	43 178	55 500	67 990	26 572	33 307	40 803	24 606	30 842	37 784	20 885	2 465	3 019	7.4	7.4	7.4	57.0	55.6	55.6
Jordan	3 077	4 188	5 367	1 622	2 207	2 282	1 400	1 905	2 441	222	302	387	13.7	13.7	13.7	45.5	45.5	45.5
Kuwait	1 649	2 303	2 888	870	1 050	1 316	862	1 040	1 304	9	10	12	1.0	1.0	1.0	52.3	45.2	45.2
Morocco	19 532	24 153	28 541	12 096	14 639	17 300	9 943	12 033	14 220	2 153	2 606	3 080	17.8	17.8	17.8	50.9	49.8	49.8
Qatar	425	508	595	317	372	436	310	364	426	7	8	10	2.2	2.2	2.2	72.9	71.7	71.6
Syrian Arab Republic	9 952	13 731	17 579	5 380	7 188	9 202	5 031	6 722	8 605	349	466	597	6.5	6.5	6.5	50.6	49.0	49.0
Tunisia	6 634	8 105	9 064	3 908	4 679	5 233	3 299	3 950	4 418	609	729	815	15.6	15.6	15.6	49.7	48.7	48.7
United Arab Emirates	2 064	2 619	3 025	1 385	1 716	1 982	1 360	1 685	1 946	25	31	36	1.8	1.8	1.8	65.9	64.3	64.3
Yemen	9 170	13 448	19 510	5 746	8 111	11 766	5 085	7 178	10 413	661	933	1 353	11.5	11.5	11.5	55.5	53.4	53.4
Bahrain	476	617	761	307	388	479	297	375	463	10	13	16	3.3	3.3	3.3	62.4	60.8	60.8
Sudan	18 831	24 105	30 033	12 556	15 682	19 541	10 421	13 015	16 218	2 135	2 667	3 323	17.0	17.0	17.0	55.3	54.0	54.0
Oman	1 628	2 182	2 879	748	974	1 285	620	807	1 065	128	167	220	17.1	17.1	17.1	38.1	37.0	37.0
Lebanon	2 407	2 984	3 402	1 295	1 571	1 791	1 191	1 445	1 647	104	126	144	8.0	8.0	8.0	49.5	48.4	48.4
Libyan Arab Jamahiriya	3 514	4 471	5 386	1 846	2 293	2 762	1 630	2 025	2 439	216	268	323	11.7	11.7	11.7	46.4	45.3	45.3

Source: Calculated by author on the basis of population growth projections in Part One of this report, and data on the labour force and unemployment from *The Unified Arab Economic Report, 2000*.

TABLE 34. SECOND SCENARIO: POPULATION GROWTH IN TWO DISTINCT PERIODS, 2000-2010 AND 2010-2020, WITH THE ADDITION OF ONE HALF OF A PERCENTAGE POINT TO THE WORKING PERSONS GROWTH RATE

Country	Population aged 15 and over			Labour force			Employed persons			Unemployed persons			Unemployment rate			Absorptive capacity		
	2000	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020
Algeria	19 629	25 347	30 117	10 860	13 674	16 305	7 743	10 198	12 160	3 117	3 476	4 145	28.7	25.4	25.4	39.4	4.2	4.2
Egypt	43 178	55 500	67 990	26 572	33 307	40 803	24 606	32 262	39 523	20 885	1 045	1 280	704	3.1	3.1	57.0	58.1	58.1
Jordan	3 077	4 188	5 367	1 622	2 207	2 828	1 400	1 932	2 476	222	275	352	13.7	12.5	12.4	45.5	46.1	46.1
Kuwait	1 649	2 303	2 888	870	1 050	1 316	862	1 088	1 364	9	-38	-48	1.0	-3.6	-3.6	52.3	47.2	47.2
Morocco	19 532	24 153	28 541	12 096	14 639	17 300	9 943	12 587	14 875	2 153	2 052	2 425	17.8	14.0	14.0	50.9	52.1	52.1
Qatar	425	508	595	317	372	436	310	399	467	7	-27	-31	2.2	-7.3	-7.1	72.9	78.5	78.5
Syrian Arab Republic	9 952	13 731	17 579	5 380	7 188	9 202	5 031	7 032	9 002	349	156	200	6.5	2.2	2.2	50.6	51.2	51.2
Tunisia	6 634	8 105	9 064	3 908	4 679	5 233	3 299	4 131	4 621	609	548	612	15.6	11.7	11.7	49.7	51.0	51.0
United Arab Emirates	2 064	2 619	3 025	1 385	1 716	1 982	1 360	1 762	2 035	25	-46	-53	1.8	-2.7	-2.7	65.9	67.3	67.3
Yemen	9 170	13 448	19 510	5 746	8 111	11 766	5 085	7 508	10 891	661	603	875	11.5	7.4	7.4	5 505	55.8	55.8
Bahrain	476	617	761	307	388	479	297	392	484	10	-4	-5	3.3	-1.0	-1.0	62.4	63.5	63.6
Sudan	18 831	24 105	30 033	12 556	15 682	19 541	10 421	13 614	16 964	2 135	2 068	2 577	17.0	13.2	13.2	55.3	56.5	56.5
Oman	1 628	2 182	2 879	748	974	1 285	620	844	1 113	128	130	172	17.1	13.3	13.4	38.1	38.7	38.7
Lebanon	2 407	2 984	3 402	1 295	1 571	1 791	1 191	1 512	1 724	104	59	67	8.0	3.8	3.7	49.5	50.7	50.7
Libyan Arab Jamahiriya	3 514	4 471	5 386	1 846	2 293	2 762	1 630	2 118	2 551	216	175	211	11.7	7.6	7.6	46.4	47.4	47.4

Source: Calculated by author on the basis of population growth projections in Part One of this report, and data on the labour force and unemployment from *The Unified Arab Economic Report, 2000*.

TABLE 35. THIRD SCENARIO: POPULATION GROWTH FOR WHOLE PERIOD, 2000-2020,  
LABOUR FORCE AND WORKING PERSONS

Country	Population aged 15 and over			Labour force			Employed persons			Unemployed persons			Unemployment rate			Absorptive capacity		
	2000	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020	2001	2010	2020
Algeria	19 629	25 347	30 117	10 860	13 167	15 964	7 743	9 591	11 880	3 117	3 576	4 084	28.7	27.2	25.6	39.4	37.8	39.4
Egypt	43 178	55 500	67 990	26 572	32 598	39 987	24 606	30 877	38 746	1 966	1 721	1 242	7.4	5.3	3.1	57.0	55.6	57.0
Jordan	3 077	4 188	5 367	1 622	2 083	2 676	1 400	1 849	2 442	222	234	234	13.7	11.2	8.7	45.5	44.1	45.5
Kuwait	1 649	2 303	2 888	870	1 120	1 441	862	1 141	1 510	8	-21	-68	0.9	-1.9	-4.7	52.3	49.5	52.3
Morocco	19 532	24 153	28 541	12 096	14 347	17 017	9 943	12 019	14 529	2 153	2 328	2 488	17.8	16.2	14.6	50.9	49.8	50.9
Qatar	425	508	595	317	369	429	310	367	434	7	2	-5	2.2	0.6	-1.1	72.9	72.2	72.9
Syrian Arab Republic	9 952	13 731	17 579	5 380	6 950	8 978	5 031	6 686	8 887	349	264	91	6.5	3.8	1.0	50.6	48.7	50.6
Tunisia	6 634	8 105	9 064	3 908	4 497	5 175	3 299	3 856	4 507	609	641	668	15.6	14.3	12.9	49.7	47.6	49.7
United Arab Emirates	2 064	2 619	3 025	1 385	1 645	1 954	1 360	1 646	1 993	25	-1	-39	1.8	-0.1	-2.0	65.9	42.9	65.9
Yemen	9 170	13 448	19 510	5 746	8 071	11 336	5 085	7 417	10 819	661	654	518	11.5	8.1	4.6	55.5	55.2	55.5
Bahrain	476	617	761	307	379	468	297	376	475	10	3	-7	3.3	0.9	-1.4	62.4	60.9	62.4
Sudan	18 831	24 105	30 033	12 556	15 491	19 112	10 421	13 160	16 620	2 135	2 331	2 492	17.0	15.0	13.0	55.3	54.6	55.3
Oman	1 628	2 182	2 879	748	967	1 250	620	824	1 096	128	143	153	17.1	14.7	12.3	38.1	37.8	38.1
Lebanon	2 407	2 984	3 402	1 295	1 513	1 768	1 191	1 416	1 983	104	97	85	8.0	6.4	4.8	49.5	47.5	49.5
Libyan Arab Jamahiriya	3 514	4 471	5 386	1 846	2 237	2 711	1 630	2 018	2 498	216	219	213	11.7	9.8	7.8	46.4	45.1	46.4

Source: Calculated by author on the basis of population growth projections in Part One of this report, and data on the labour force and unemployment from *The Unified Arab Economic Report, 2000*.