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PREFACE

In December 2009, the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat convened an Expert Group Meeting on Recent and Future Trends in Fertility at United Nations Headquarters in New York. The purpose of the meeting was to discuss recent changes in fertility trends in the major regions of the world and in selected countries as well as their determinants. Such a discussion set the stage for the consideration of a new approach to the projection of fertility in the preparation of the official United Nations population projections.

The meeting took place from 2 to 4 December 2009. Its agenda and list of participants can be found on the website of the Population Division (www.unpopulation.org). The papers prepared by experts participating in the meeting will be issued as part of the newly launched Expert Paper series available as downloadable PDF files and accessible on the Population Division website (www.unpopulation.org).

This paper focuses on fertility levels and fertility desires in the Arab region. Other facilitators and constraints on fertility change are also considered; in particular, current nuptiality patterns and the availability of contraceptive methods. The paper concludes with a succinct assessment of the prospects for further fertility decline among countries in the region.

The Expert Paper series aims at providing access to government officials, the research community, non-governmental organizations, international organizations and the general public to overviews by experts on key demographic issues. The papers included in the series will mainly be those presented at Expert Group Meetings organized by the Population Division on the different areas of its competence, including fertility, mortality, migration, urbanization and population distribution, population estimates and projections, population and development, and population policy.

For further information concerning this series, please contact the office of Hania Zlotnik, Director, Population Division, Department of Economic and Social Affairs, United Nations, New York, 10017, USA, telephone (212) 963-3179, fax (212) 963-2147.

A. INTRODUCTION

The Arab region is conventionally defined as the twenty-two member States of the Arab League. These are listed in the left-hand column of table 1. The region consists of a diverse set of countries stretching from Mauritania and Morocco along the Atlantic Ocean of northern Africa, to Iraq and the small states in the Persian Gulf region in the East, to Djibouti and Somalia in the Horn of Africa, and finally the small Comoros Islands in the Indian Ocean. The bulk of the Arab population resides along the Mediterranean Sea in Northern African and Western Asia, to which one might add the Moroccan population on the Atlantic Ocean, Iraq in the Mesopotamian river plain, and Saudi Arabia with population concentrations along both the Persian Gulf and the Red Sea.[1] Throughout this geographic expanse annual rainfall is relatively light, and this explains the concentration of population along seas and rivers.

By simple demographic criteria (second column of table 1), Egypt is the dominant country in the region, with an estimated population in 2009 of 83 million, almost one-quarter of the total population of the twenty-two countries. Sudan, Algeria, Morocco and Iraq together contain 111 million, which is close to one-third of the regional total, and Saudi Arabia, Yemen and Syria contain a further 71 million, which is about one-fifth of the regional total. These eight countries, then, in demographic terms constitute about three-quarters of the Arab region.

The demography of the region was recently the subject of a comprehensive and authoritative overview by Tabutin and Schoumaker (2005). Rash

The principal aim of this paper is to assess prospects for further fertility decline in the Arab region. No effort will be made to conduct a thoroug

(TFR = 5.7), these can be regarded as pre-decline levels of fertility. It is notable that pre-decline fertility in Arab society was higher than in other major regions: regional averages for sub-Saharan Africa, South-Central Asia and South-Eastern Asia are shown at the bottom of table 2 for comparison, and these averages are 0.6 to 1.2 births lower than the Arab average. This coincides with other quantitative and qualitative evidence of the fundamental pro-natalism of Arab society in the past: relatively early and nearly universal marriage, short post-partum abstinence and a high valuation placed on children and childbearing.

Five decades later in 2005-10, the average fertility has declined by more than one-half (56 per cent) to 3.1 births per woman. In the majority of countries the decline was concentrated in the twenty-five years between 1980-85 and 2005-10 -- exceptions are Lebanon and, to a lesser extent, the Maghreb States, Morocco and Tunisia, and the Gulf States, Bahrain and Kuwait. Indeed, through the 1960s and 1970s (and even into the 1980s), the Arab region appeared to be very reluctant to join in the gathering international movement towards lower levels of fertility (a fact frequently commented upon in the demographic literature and in policy forums; see Obermeyer, 1992). The twenty-five years since 1980-85 has been a different story, with fifteen of the twenty-two countries experiencing TFR declines of fifty per cent or greater.[4] Of the more populous countries, only Sudan and Yemen were not caught up in a rapid fertility decline in this period (with, nevertheless, both of the latter countries experiencing TFR declines of one-third or more).

At present the estimated TFR falls below 2.5 births per woman in eight countries -- the three large Maghreb countries (Algeria, Morocco, Tunisia), Lebanon, and four Gulf States (Bahrain, Kuwait, Qatar and United Arab Emirates).[5] Fertility is estimated as sub-replacement in Lebanon, Tunisia and U.A.E., and near replacement in Bahrain and Kuwait. At the other extreme, eight countries have TFRs in excess of 4.0 births per woman, including the populous countries Iraq, Sudan and Yemen.

What do current levels of fertility suggest about the potential for further change? Of course fertility in Western countries (in Europe, Northern America and Oceania) has been at or below replacement for multiple decades, and sub-replacement fertility in Eastern Asia and Latin America (Brazil) indicates that the capacity for fertility to fall below replacement is by no means confined to Western societies. Moreover, the average Arab TFR of 3.1 births per woman is substantially above the regional values for South-Central Asia (TFR=2.8) and South-Eastern Asia (TFR=2.3). Finally, the forerunners in the region, most notably Lebanon, already have fertility at or below replacement. All this argues for much potential for substantial further decline in most countries in the region. And yet it is important to be reminded that fertility at the societal level follows no one set of essential rules. Fertility declines can be surprisingly rapid and thorough-going (e.g., China, Thailand, Iran), but they can also be halting and selective (e.g., Philippines and Pakistan). Experience to date does not refute an assertion that the post-transition "equilibrium" level of fertility in some societies will be above replacement, perhaps as much as 0.5 births above replacement. At this historical juncture many countries have TFRs of 2.5 or higher, and thus have not yet demonstrated that their fertility decline will proceed all the way to replacement level.

For this reason it is important to examine closely, to the extent afforded by available empirical data, those factors that will bear most directly on the future of fertility decline in the region.

C. Further fertility decline in the Arab region: opportunities and constraints

2. *Fertility desires*

The opportunity to measure fertility desires (broadly defined to include preferences, expectations and intentions) was a major motivation for the fielding of the first fertility surveys in the 1950s and 1960s. From that time to the present, controversy has surrounded the measurement and interpretation of fertility desires. Their predictive accuracy (individual-level and/or aggregate-level), in particular, has been the subject of long-standing debates that are very much alive today (see e.g. Lee, 1980; Morgan, 2001; Goldstein et al., 2003; Hagewen and Morgan, 2005). One point of contention over the decades has been whether fertility desires lead or lag behavior at the aggregate level; this is a crucial issue if one is contemplating incorporating fertility desires in an assessment of prospects for further fertility decline.

The stance in this paper is that while fertility desires are by no means fully determinative, they are essential elements in any model of fertility decision-making because fertility behavior, especially in mid-

all births unwanted To be sure, fertility desires do not operate in isolation. Reproductive decisions are informed by desires but also must take into account numerous significant constraints, including social and economic conditions. To some extent these constraints may have been taken into account when the women answered the survey items (on their ideal number of children, on their desire for another child).

In sum, Arab societies lack both sterilization and induced abortion as readily-available ways to control fertility. Few societies have achieved low fertility without widespread recourse to one or the other, or both. Women who are sexually active through most of the reproductive years (whether in stable unions or otherwise) and who wish to limit childbearing to a few children (e.g. two children) confront many years of risk of unwanted pregnancy. Exceptional discipline in the use of methods such as the IUD and the pill is required if unwanted pregnancies are to be avoided entirely. But the recent incidence of unwanted births (see table 4) is itself evidence of the challenge of achieving perfect success in the practice of contraception.

D. CONCLUDING COMMENTS

The Arab region has experienced a substantial and rapid decline in fertility during the past two decades that serves as a refutation of much of the expressed pessimism about the prospects for Arab fertility decline in the research literature and public discourse of the 1970s and 1980s. This recent history qualifies any confident statements one might make about prospects for further decline, and in particular skepticism that fertility will proceed down to replacement level (or below). Nevertheless, the factors acting against low fertility in the Arab region are significant and, it would seem, relatively robust:

- A two-child norm is by no means firmly and widely established. There is recognition of the many advantages of stopping at two children, and of the various costs of having three or more children. Even so, many women, even among the younger cohorts, desire to have three (or more) children.

  In-depth data that might shed light on these desires are generally unavailable (an exception is el-Zeini (2008)). The fertility desires may reflect a sense that family life is incomplete and less satisfying when reproduction is limited to two births—fewer children, fewer siblings, fewer cousins, and so forth. In addition, the lack of firm and widespread commitment to a two-child norm may reflect a recognition that stopping at two children can leave one without either a son or a daughter.

- Neither sterilization nor induced abortion is readily available as methods of fertility control. Bahrain, Tunisia and (probably) Lebanon are exceptions, with induced abortion available on request in Bahrain and Tunisia. Fertility rates at replacement level (or below) are almost never achieved without heavy reliance on one or the other of these two methods of fertility control.

These two pieces of empirical evidence inspire a skepticism about whether fertility in the Arab region will stabilize at replacement level (or below) in the short-term (i.e., within 15-20 years). Both the motives and the means for married couples to limit childbearing to just two children appear to be lacking.

Arguing to the contrary are the dramatic changes in nuptiality that occurred in recent decades: the fraction of women in their 20s never married has surged, with a resulting substantial loss of reproductive exposure, given that sexual activity outside of marriage is still relatively limited. This change accounts for a major portion of the rapid fertility decline in the period since the 1980s. (Tabutin and Schoumaker (2005) attribute about equal weight to nuptiality change and increased contraception as proximate determinants of the Arab fertility decline.)

Looking ahead, there are two important unknown factors about the ongoing nuptiality change: First, is this a matter of women postponing marriage (and, hence, the onset of childbearing) into their 30s,

or will large fractions of women not marry at all? Second, how many Arab countries will experience the dramatic nuptiality change already witnessed in Algeria, Lebanon and Tunisia? In answering this latter question the crucial case will be Egypt, with its current pattern of relatively early marriage and high proportions of women married in their 20s. One can make plausible arguments on either side, i.e. that Algeria, Lebanon and Tunisia are exceptional or that they are the leading edge of a change that will spread through the region. On this point, while no Gulf States are shown in table 3, these countries too have experienced sharp increases in the fraction neve

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TABLE 2. TRENDS IN THE TOTAL FERTILITY RATE 1950-55 - 2005-10, ARAB COUNTRIES AND SELECTED OTHER SUB-REGIONS

Country	*Total fertility rate*			*Decline in total fertility rate (%)*		
	1950-55	*1980-85*	*2005-10*	*1950-1985*	*1980-2010*	*1950-2010*
Algeria	7.3	6.5	2.4	11	63	67
Morocco	7.2	5.4	2.4	25	56	67
Tunisia	6.9	4.9	1.9	29	62	73
Median	*7.2*	*5.4*	*2.4*	*25*	*62*	*67*
Egypt	6.4	5.5	2.9	13	48	55
Iraq	7.3	6.4	4.1	13	35	44
Jordan	7.4	6.8	3.1	8	54	58
Lebanon	5.7	3.9	1.9	32	52	68

TABLE 5. IDEAL NUMBER OF CHILDREN, EVER MARRIED WOMEN AGED 20-29

Country	*Mean ideal number*	*Percentage ideal number equals:*		
		0 - 1	*2*	*3+*
Algeria (2002)	3.4	2	29	69
Morocco (2003)	2.8	4	51	45
Tunisia (2001)	2.8	4	44	52

TABLE 7. CONTRACEPTIVE METHOD DISTRIBUTION, CURRENT USE: CURRENTLY MARRIED WOMEN

Country	*Current method*						*Percent using*
	Sterilization	*IUD*	*Pill*	*Traditional*[a]	*Else*	*Total*	
Algeria (2002)	2	5	81	9	3	100	56
Morocco (2003)	5	9	64	13	11	100	63
Tunisia (2001)	0	44	18	15	24	100	63
Egypt (2008)	2	60	20	1	18	100	60
Jordan (2007)	7	39	15	26	14	100	57
Lebanon (2004)	6	25	23	35	11	100	54
Syria (2001)	3	43	26	24	3	100	47
Kuwait (1996)	4	14	57	18	7	100	50
Oman (1995)	19	9	26	24	22	100	24
Saudi Arabia (1996)	3	21	62	10	4	100	32
U.A.E. (1995)	15	14	43	11	17	100	28
Yemen (2003)	8	15	27	41	9	100	23
Comoros (1996)	12	2	14	40	33	100	25
Djibouti (2002)	0	4	49	32	16	100	9

a. Rhythm, withdrawal and breastfeeding.

Source: DHS, PAPFAM and Gulf Family Health surveys.