Population Change and Family Planning From the Perspectives of Women in Asia and the Pacific

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C O N T E N T S

A B S T R A C T

This paper examines population changes and family planning from the perspectives of women in the five constituent subregions of Asia and the Pacific (i.e., Eastern Asia, South-eastern Asia, Southern Asia, Western Asia, and Oceania) as well as in selected individual countries in each subregion. First, we look at trends and differentials in population growth rate. Next, as two major determinants of population growth, we look at changes in mortality, as indicated by the Crude Death Rate (CDR) and life expectancy at birth by sex, and changes in fertility as measured by the Crude Birth Rate (CBR) and the Total Fertility Rate (TFR). Thirdly, focusing our attention on demographic factors affecting fertility, we examine changes and differentials in the two most important proximate determinants: women's marriage and contraception. As indicators of marriage, we look at changes in the age-pattern of women's marriage through the singulate mean age at first marriage (SMAM), the proportion ever-married by age 50, and differences between men and women in the SMAM; as for contraception, we examine knowledge, use and method of contraception among ever-married women. Fourthly, we also consider governments' perception and policies concerning fertility and family planning in countries in Asia and the Pacific.

This study found that the overall demographic situations in Asia and the Pacific are characterized by: population growth that is under control; mortality that has declined steadily, though not dramatically; fertility that is declining substantially; increasing mean age at first marriage; and contraceptive use that is increasing significantly in recent years; and the prevalence of modern contraceptive methods in many countries. However, demographic situations in Asia and the Pacific are also characterized by wide inter- as well as intra-regional variations. While many countries in Eastern Asia, South-eastern Asia and Oceania have gone through or are now going through demographic transition, most of the countries in Southern and Western Asia still suffer from high population growth rate which is due mainly to high fertility, which is in turn caused primarily by women's early marriage and low contraceptive practice among married women. Findings of the study therefore suggest the importance of delaying women's entry into marriage and effective contraceptive practice aided by appropriate policy interventions.

T A B L E S

I. INTRODUCTION

According to the medium variant of the United Nations population estimates and projections as assessed in 1988, the population of Asia and the Pacific (hereafter referred to also as the Region) is estimated to be 2.86 billion in 1985, comprising approximately 59 percent of the global population. The population in the Region was 1.39 billion in 1950, accounting for slightly more than 55 percent of the world population. While the Region's share in the global population continued to expand during 1950-1985, that percentage is projected to steadily decline after the turn of this century: 4.26 billion in 2010 with 59.2 percent of the world population; 4.72 billion in 2020 with 58.5 percent of the global total; and 4.93 billion in 2025 with 58.2 percent of the world total (United Nations, 1989).

It is also seen from the estimates of the average annual rate of population increase that the speed of population increase in the Region started to slow down during the 1970s. This deceleration in population growth was caused mainly by the Region's significant fertility decline, which more than offset the concomitant mortality decline. From 1970-1975 to 1980-85, for example, the crude birth rate (CBR, the number of births per 1,000 population) in Asia declined by 18 percent, from 34.8 to 28.4, while the CBR declined in Oceania by 13 percent, from 23.8 to 20.6 (United Nations, 1989). On the other hand, during the same period, the crude death rates (CDR, the number of deaths per 1,000 population) declined by larger degrees, 21 percent in Asia and 16 percent in Oceania, respectively, but by smaller absolute amounts, from 12.4 to 9.8 in Asia and from 9.7 to 8.1 in Oceania. Consequently, the greater absolute declines in the CBR brought about the decrease in the population growth rate of the Region.

While the Region as a whole can be captured in terms of these overall population trends, the population situation in Asia and the Pacific is also characterized by diversity among subregions and individual countries. The Region includes countries considered as highly industrialized developed economies, such as Japan and Australia, as well as those ranked among the world's lowest-income countries such as Bangladesh and Nepal (World Bank, 1985). Within the Region, there are also great ethnic and religious diversities among subregions and countries.

These subregional as well as intercountry variations notwithstanding,

population growth is determined mainly by fertility of the population because death rate is unlikely to change as dramatically as fertility rate. In many societies where there is a strong tradition of monogamous marriage and little reproduction outside marriage, fertility is determined primarily by the age pattern of women's marriage and marital fertility. In other words, population levels and trends are therefore determined by, at a mass-behavioral level, the timing and duration of women assuming the role of wife and mother. In this sense, the timing and length of women's marriage and motherhood have profound effects not only on fertility and population growth per se but also on a variety of areas such as the system and structure of the family, population aging and economic growth. Keeping these facts in mind, this paper examines population changes as well as demographic factors affecting these changes from the perspectives of women in Asia and the Pacific, together with an assessment of the conditions and needs of family planning.

Specifically, in this paper, we first look at trends and differentials in population growth by the five constituent subregions in the Region (i.e., Eastern Asia, South-eastern Asia, Southern Asia, Western Asia and Oceania) as well as by selected individual countries in each subregion. Secondly, we examine changes in two major determinants of population growth: mortality and fertility. We first look at trends and differentials in the crude death rate (CDR) and life expectancy at birth by sex. Then, we turn our attention to changes and differentials in two fertility indicators, the crude birth rate (CBR) and the total fertility rate (TFR). As the major demographic factors directly influencing fertility (which are called "proximate determinants of fertility"), we next examine changes and differentials of the two most important variables: marriage and contraception. Specifically, as an indicator of marriage, we look at the age-pattern of women's marriage through the average age at first marriage, the proportion ever-married by age 50, and differences between men and wemen in the mean age at first marriage; as for contraception, we examine knowledge, use and method of contraception. In addition, we will also see the governments' perception and policies concerning fertility in the Region. Based on findings concerning population change and family planning, the paper concludes with suggestions for areas and issues which need to be considered for future change.

II. POPULATION GROWTH

Including the two most populous countries in the world, China and India, the Asian and Pacific Region as a whole has had more than one half of the world population throughout the postwar years (see Table 1). Looking at

TABLE 1. Population Size by Subregion and Selected Country or Area in Asia and the Pacific, Medium Variant, 1960-2025

Subregion and country/area	Population (millions)												
	1960	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
WORLD TOTAL	3019	3698	4080	4450	4854	5292	5766	6251	6729	7191	7640	8062	8467
LESS DEVELOPED REGIONS	2075	2649	2984	3314	3680	4087	4531	4989	5442	5883	6314	6722	7114
ASIA	1667	2101	2353	2583	2834	3108	3404	3698	3973	4226	4463	4680	4889
Eastern Asia	791	874	986	1096	1176	1249	1334	1421	1501	1564	1610	1653	1694
China	657	831	927	996	1060	1135	1214	1286	1341	1382	1421	1460	1493
Hong Kong	3	4	4	5	5	6	6	6	7	7	7	7	7
Japan	94	104	112	117	121	123	126	129	131	132	131	130	129
Republic of Korea	25	32	35	38	41	44	46	48	50	52	53	54	55
Mongolia	1	1	1	2	2	2	3	3	3	4	4	5	5
South-Eastern Asia	225	287	324	360	401	441	483	524	563	600	636	669	701
Burma	22	27	30	34	38	42	46	51	56	61	65	69	73
Democratic Kampuchea	5	7	7	6	7	8	9	10	11	12	12	13	14
Indonesia	96	120	136	151	166	181	195	208	221	232	243	254	263
Laos	2	3	3	3	4	4	5	5	6	6	7	7	8
Malaysia	8	11	12	14	15	17	19	21	22	24	25	27	28
Philippines	28	38	43	48	55	62	70	77	85	92	99	105	111
Singapore	2	2	2	2	3	3	3	3	3	3	3	3	3
Thailand	26	36	41	47	52	56	60	64	68	72	75	78	81
Viet Nam	35	43	48	54	60	67	75	83	91	98	105	111	118
Southern Asia	595	754	849	948	1070	1203	1351	1502	1654	1800	1935	2055	2174
Afghanistan	11	14	15	16	15	17	23	27	30	33	36	38	41
Bangladesh	51	67	77	88	101	116	132	151	170	188	205	220	235
Bhutan	1	1	1	1	1	2	2	2	2	2	3	3	3
India	442	555	621	689	769	853	947	1043	1136	1225	1306	1374	1446
Iran	20	28	33	39	48	57	65	74	85	95	104	114	122
Nepal	9	11	13	15	17	19	22	24	27	29	31	33	35
Pakistan	50	66	75	85	103	123	142	162	184	205	227	248	267
Sri Lanka	10	13	14	15	16	17	18	19	20	21	23	24	24
Western Asia	56	74	85	98	114	131	150	170	193	216	240	263	287
Iraq	7	9	11	13	16	19	22	26	31	35	40	45	50
Israel	2	3	3	4	4	5	5	5	6	6	6	7	7
Jordan	2	2	3	3	4	4	5	6	8	9	10	12	13
Lebanon	2	2	3	3	3	3	3	4	4	4	4	5	5
Oman	1	1	1	1	1	1	2	2	2	3	3	4	4
Saudi Arabia	4	6	7	9	12	14	17	21	25	30	35	40	45
Syrian Arab Republic	5	6	7	9	10	13	15	18	21	24	27	30	32
Turkey	28	35	40	44	50	56	61	67	72	77	81	85	90
Yemen	4	5	5	6	7	8	9	11	13	16	18	21	23

TABLE 1--Continued

Subregion and country/area	Population (millions)												
	1960	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025
Oceania	16	19	21	23	25	26	28	30	32	34	36	37	39
Australia-New Zealand	13	15	17	18	19	20	21	22	23	24	25	26	27
Australia	10	13	14	15	16	17	18	19	19	20	21	22	23
New Zealand	2	3	3	3	3	3	4	4	4	4	4	4	4
Melanesia	3	3	4	4	5	5	6	7	8	8	9	10	11
Papua New Guinea	2	2	3	3	4	4	5	5	6	6	7	8	9

Source: United Nations (1989) World Population Prospects 1988.

subregional differences in population size, we can see that in 1985 Eastern Asia is the most populous subregion, followed by Southern Asia, South-eastern Asia, Western Asia and Oceania, and that this rank order has always been the same in postwar years. At the country level, in 1985, there are six countries with a population of over 100 million (China, India, Indonesia, Japan, Pakistan and Bangladesh) and four countries with a population between 50 and 100 million (Viet Nam, the Philippines, Thailand and Turkey).

From Table 1, we can also notice that the difference between Eastern Asia and Southern Asia has been narrowing rapidly during recent years and it is expected that Southern Asia will surpass Eastern Asia in population size during the late 1990s. The population of Western Asia, though its absolute size is much smaller than Eastern and Southern Asia, has been increasing very quickly, doubling in the 25 years between 1960 and 1985. The rapid population growth of this subregion is expected to continue well into the next century, tripling the population size during the 40 years from 1960 to 2000.

These differences in the tempo of growth in population size can be understood more easily and clearly by examining changes in rate of population change. From Table 2, which shows annual rates of population change by subregion and by selected individual countries in each subregion for the period 1960-2025, we can see that Western Asia has been experiencing the most rapid population growth followed first by Southern Asia, then by South-eastern Asia, and finally by Oceania and Eastern Asia. This rank order is expected to stay as it is until around the year 2020 when the population growth rate of all the subregions is estimated to fall to around 1 percent or less. In addition, it

TABLE 2. Annual Rate of Population Change by Subregion and Country or Area in Asia and the Pacific, Medium Variant, 1960-2025

Subregion and country/area	Annual rate of change (percentage)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
WORLD TOTAL	1.99	2.06	1.97	1.74	1.74	1.73	1.71	1.62	1.47	1.33	1.21	1.08	0.98
LESS DEVELOPED REGIONS	2.35	2.54	2.39	2.10	2.10	2.10	2.06	1.92	1.74	1.56	1.41	1.25	1.13
ASIA	2.19	2.44	2.27	1.86	1.86	1.85	1.82	1.66	1.44	1.23	1.09	0.95	0.87
Eastern Asia	1.98	2.42	2.11	1.41	1.21	1.31	1.27	1.10	0.82	0.58	0.52	0.49	0.41
China	2.07	2.61	2.20	1.43	1.23	1.39	1.34	1.15	0.85	0.60	0.56	0.53	0.44
Hong Kong	3.66	1.31	2.18	2.73	1.59	1.36	1.06	0.92	0.50	0.38	0.30	0.22	0.12
Japan	0.99	1.07	1.33	0.93	0.66	0.44	0.46	0.44	0.31	0.09	-0.09	-0.17	-0.20
Republic of Korea	2.68	2.40	2.20	1.87	1.80	1.59	1.41	1.31	1.15	0.98	0.83	0.71	0.59
Mongolia	2.78	3.09	2.93	2.82	2.75	3.09	3.06	2.88	2.70	2.55	2.38	2.29	1.95
South-Eastern Asia	2.37	2.52	2.42	2.14	2.13	1.92	1.81	1.64	1.44	1.28	1.15	1.01	0.93
Burma	2.11	2.29	2.32	2.11	2.09	2.09	2.09	2.00	1.80	1.59	1.37	1.16	1.10
Democratic Kampuchea	2.45	2.44	0.46	-2.07	2.59	2.48	2.20	1.75	1.42	1.35	1.45	1.34	1.06
Indonesia	2.14	2.33	2.41	2.14	1.96	1.62	1.52	1.34	1.14	1.01	0.93	0.85	0.75
Laos	2.22	2.18	2.18	1.16	2.29	2.49	2.37	2.27	2.06	1.82	1.61	1.44	1.27
Malaysia	3.09	2.66	2.44	2.32	2.31	2.31	2.02	1.68	1.34	1.19	1.18	1.10	0.98
Philippines	3.01	3.17	2.51	2.53	2.63	2.48	2.27	2.04	1.83	1.62	1.50	1.19	1.13
Singapore	2.81	1.97	1.73	1.30	1.16	1.09	0.97	0.79	0.62	0.48	0.38	0.27	0.12
Thailand	2.99	3.08	2.92	2.44	1.99	1.53	1.35	1.32	1.23	1.11	0.95	0.80	0.70
Viet Nam	1.97	2.17	2.34	2.23	2.24	2.24	2.21	2.03	1.79	1.54	1.29	1.23	1.18
Southern Asia	2.35	2.40	2.35	2.22	2.42	2.34	2.32	2.13	1.92	1.69	1.45	1.20	1.13
Afghanistan	2.27	2.42	2.42	0.87	-2.02	2.63	6.70	2.79	2.28	1.89	1.69	1.51	1.32
Bangladesh	2.52	2.68	2.77	2.83	2.73	2.67	2.69	2.60	2.44	2.02	1.67	1.46	1.31
Bhutan	1.81	1.90	1.81	1.70	1.80	2.15	2.27	2.31	2.29	2.22	1.96	1.65	1.41
India	2.26	2.28	2.24	2.08	2.21	2.08	2.09	1.92	1.72	1.51	1.28	1.02	1.01
Iran	3.41	3.30	3.21	3.08	4.05	3.45	2.63	2.86	2.56	2.24	1.94	1.69	1.46
Nepal	1.90	2.10	2.47	2.67	2.59	2.47	2.34	2.25	1.97	1.68	1.44	1.26	1.11
Pakistan	2.69	2.79	2.57	2.64	3.82	3.45	2.87	2.75	2.45	2.25	2.02	1.75	1.47
Sri Lanka	2.43	2.28	1.67	1.71	1.67	1.32	1.25	1.13	1.01	1.02	0.99	0.88	0.75
Western Asia	2.76	2.77	2.91	2.85	2.96	2.76	2.70	2.60	2.46	2.29	2.08	1.87	0.69
Bahrain	4.04	2.79	4.28	4.87	4.27	3.64	3.07	2.54	2.08	1.66	1.36	1.23	1.14
Iraq	3.05	3.19	3.27	3.75	3.58	3.48	3.39	3.23	3.05	2.82	2.57	2.30	2.07
Israel	3.85	2.98	3.00	2.31	1.75	1.58	1.43	1.41	1.35	1.24	1.09	0.95	0.82
Jordan	2.93	3.17	2.46	2.34	3.64	3.94	4.01	3.86	3.62	3.29	2.87	2.55	2.26
Kuwait	10.53	9.17	6.04	6.24	4.36	4.02	3.08	2.64	2.30	2.01	1.76	1.55	1.32
Lebanon	2.94	2.75	2.28	-0.72	-0.01	2.11	2.05	1.84	1.56	1.36	1.22	1.14	1.07
Saudi Arabia	3.25	3.62	4.66	5.13	4.26	3.96	3.83	3.79	3.67	3.46	3.14	2.75	2.42
Syrian Arab Republic	3.10	3.23	3.45	3.36	3.45	3.57	3.52	3.34	3.12	2.77	2.39	2.05	1.78
Turkey	2.49	2.51	2.50	2.09	2.50	1.99	1.90	1.71	1.50	1.31	1.15	1.02	0.96
United Arab Emirates	9.38	8.70	16.35	13.97	5.69	3.26	2.24	1.87	1.61	1.56	1.33	1.08	0.86
Yemen	2.13	1.47	1.77	2.53	2.78	3.04	3.24	3.35	3.37	3.28	3.05	2.70	2.38

TABLE 2--Continued

Subregion and country/area	Annual rate of change (percentage)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
Oceania	2.09	1.97	1.78	1.51	1.55	1.44	1.34	1.26	1.18	1.11	1.04	0.96	0.85
Australia-New Zealand	1.99	1.85	1.67	1.27	1.30	1.14	1.04	0.96	0.88	0.80	0.75	0.68	0.59
Australia	1.98	1.95	1.64	1.51	1.40	1.22	1.10	1.01	0.93	0.86	0.80	0.73	0.64
New Zealand	2.05	1.41	1.81	0.17	0.84	0.79	0.75	0.70	0.61	0.51	0.45	0.39	0.30
Melanesia	2.46	2.44	2.26	2.54	2.55	2.56	2.39	2.25	2.14	2.04	1.90	1.75	1.53
Fiji	3.27	2.29	2.03	1.77	1.87	1.60	1.17	1.00	0.89	0.74	0.58	0.35	0.13
Papua New Guinea	2.24	2.40	2.14	2.70	2.58	2.66	2.53	2.43	2.32	2.23	2.09	1.94	1.71
Micronesia	2.33	2.82	2.47	2.11	1.92	1.71	1.48	1.30	1.14	1.00	0.83	0.63	0.46
Polynesia	2.61	2.34	1.47	1.57	1.64	1.55	1.36	1.16	1.02	0.94	0.81	0.62	0.47
Samoa	2.91	2.24	0.86	0.70	0.97	0.85	0.95	0.39	0.76	0.43	0.54	0.31	0.21

Source: United Nations (1989) World Population Prospects 1988.

is also noticed that Eastern Asia experienced a dramatic decline in population growth rate during the 1970s, which in turn brought about the deceleration of population growth in Asia as a whole. While Eastern Asia and Oceania are expected to continue the deceleration in their population growth until the year 2025, declines in population growth are anticipated to start in South-eastern Asia during the 1990s, and in Southern Asia at around the turn of the century (2000-2005). The slowing-down of population growth is not anticipated to start in Western Asia until well into the next century, 2015-2020.

The diversity is even more evident when individual countries are considered. For example, there are seven countries, all of which are in Western Asia, having an average annual growth rate of 4 percent and over and five countries having a rate of growth between 3.5 and 4.0 during the period 1980-1985.[1] The countries belonging to the former category are United Arab Emirates, Qatar, Oman, Kuwait, Bahrain, Saudi Arabia and Iran; those belonging to the latter group are Macau, Pakistan, Brunei, Jordan and Iraq. In contrast, the Region also includes countries having a very low growth rate such as Japan, New Zealand, Singapore, China and Australia.

In summary, examining trends of population growth, we can say that although population growth is under control in the Asian and Pacific region as a whole, there are wide subregional and intercountry differences. Population

growth in Eastern Asia and Oceania has been decelerating and is currently at a very low level, and the decline in the growth rate in Eastern Asia during the 1970s was especially notable. Western Asia and Southern Asia are still experiencing rapid growth in their population. Especially, the population growth rate of Western Asia (around 3 percent in 1980-85) was one of the highest in the world, along with Africa (United Nations, 1989).

III. MORTALITY

When migration is considered to be relatively small, the rate of population growth is determined mainly by a difference between the birth rate and the death rate. Table 3 shows changes in the crude death rate (CDR, the number of deaths per 1,000 population) in Asia and the Pacific by subregions and selected individual countries for the period 1960-2025.

From Table 3, we can see that the death rate in Asia and the Pacific has been in steady, though not rapid, decline and it is expected to keep decreasing until roughly 2010-2015. Although this trend of continuous decline is seen in all of the subregions, there are differences among subregions. During the period 1980-1985, for example, Eastern Asia has the lowest mortality with CDR of 6.6 per 1,000 population, followed by Oceania with 8.1 per 1,000 population, and by Western Asia with 9.6 per 1,000 population, and then by Southeastern Asia with 11.0 per 1,000 population. The subregion with the highest mortality level is Southern Asia with CDR of 13.3 per 1,000 population. This subregional difference in mortality levels is, however, projected to become negligible during the first decade of the next century.

Furthermore, examining intercountry differences, we also notice that while most of the Eastern Asian, Oceanian and ASEAN countries now have low mortality, many in Southern Asia have high mortality. Except for Sri Lanka and Iran, all the Southern Asian countries had the CDR of 12.0 per 1,000 or higher between 1980 and 1985.

While the crude death rate is a feasible measure of the impact of deaths on the total population of a country in a certain year, it does not control for the effects of age variations among populations. That is, if the age structures of populations are different, mortality rates are expected to be affected by the difference since deaths do not occur evenly over all populations, i.e., mortality is higher for most vulnerable parts of a population

TABLE 3. Crude Death Rate by Subregion and Selected Country or Area in Asia and the Pacific, Medium Variant, 1960-2025

Subregion and country/area	Crude death rate (per 1,000 population)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
WORLD TOTAL	15.5	13.3	12.2	11.1	10.4	9.9	9.3	8.7	8.3	8.0	7.7	7.6	7.7
LESS DEVELOPED REGIONS	18.3	15.1	13.3	11.7	10.7	9.9	9.2	8.5	7.9	7.5	7.2	7.1	7.1
ASIA	17.7	14.1	12.4	10.7	9.8	9.1	8.5	7.9	7.5	7.2	7.1	7.1	7.3
Eastern Asia	15.7	10.4	8.5	7.1	6.6	6.7	6.6	6.7	6.8	7.0	7.5	7.9	8.4
China	17.1	10.9	8.7	7.2	6.7	6.7	6.6	6.6	6.6	6.8	7.2	7.6	8.2
Hong Kong	6.2	5.4	5.1	4.4	5.0	5.8	6.3	6.7	7.2	7.8	8.2	8.7	9.3
Japan	7.3	6.9	6.6	6.1	6.1	7.0	7.6	8.2	9.0	10.0	10.9	11.6	12.4
Republic of Korea	12.5	10.4	8.8	6.5	6.3	6.2	6.1	6.2	6.5	7.0	7.6	8.2	8.9
Mongolia	13.4	11.2	9.3	9.0	8.5	8.0	7.3	6.6	5.9	5.4	5.1	4.9	4.6
South-Eastern Asia	18.8	16.1	14.4	12.8	11.0	9.7	8.7	7.9	7.3	7.0	6.9	6.9	7.1
Burma	19.5	16.2	14.2	12.4	11.0	9.7	8.7	7.8	7.1	6.6	6.4	6.3	6.3
Democratic Kampuchea	20.4	19.4	22.5	40.0	19.7	16.6	14.6	12.5	11.1	10.3	10.0	9.5	9.2
Indonesia	21.5	19.3	17.3	15.1	12.6	11.2	10.1	9.2	8.5	8.1	7.9	8.0	8.1
Laos	22.7	22.6	22.7	20.7	18.7	16.4	14.4	12.8	11.2	9.9	8.8	8.0	8.1
Malaysia	13.3	10.4	8.8	7.2	6.0	5.6	5.2	5.0	5.0	5.1	5.4	5.7	6.1
Philippines	13.1	10.7	10.5	9.1	8.5	7.7	7.1	6.5	6.0	5.8	5.8	5.9	6.1
Singapore	7.1	5.6	5.1	5.1	5.4	5.6	5.8	6.0	6.4	7.0	7.7	8.7	9.8
Thailand	13.4	11.4	9.3	8.3	8.0	7.0	6.5	6.3	6.3	6.4	6.6	7.0	7.4
Viet Nam	21.2	16.6	14.3	11.4	11.2	9.5	8.2	7.1	6.4	5.9	5.7	5.6	5.7
Southern Asia	20.0	18.1	16.6	14.6	13.3	11.8	10.6	9.4	8.3	7.5	7.0	6.7	6.7
Afghanistan	29.9	28.0	26.0	24.0	23.0	23.0	21.1	19.8	17.1	14.8	13.4	12.3	11.4
Bangladesh	22.0	21.0	20.8	18.9	17.5	15.5	13.8	12.2	10.8	9.3	8.1	7.4	7.0
Bhutan	24.1	22.7	21.3	19.8	18.1	16.8	15.5	14.2	12.9	11.7	10.4	9.3	8.6
India	19.4	17.5	15.8	13.9	12.7	11.3	10.2	9.0	8.1	7.4	7.0	6.8	6.9
Iran	19.6	17.0	14.5	11.9	9.7	8.0	6.9	5.9	5.3	4.9	4.7	4.7	4.8
Nepal	25.0	23.0	21.0	19.0	17.0	14.8	12.9	11.4	9.9	8.8	8.0	7.5	7.2
Pakistan	21.9	20.2	18.3	16.0	14.4	12.6	10.6	8.7	7.4	6.5	5.9	5.5	5.4
Sri Lanka	8.5	8.3	8.1	7.1	6.3	6.0	5.8	5.9	6.0	6.2	6.5	6.8	7.2
Western Asia	17.8	15.5	13.4	10.6	9.6	8.4	7.4	6.5	6.0	5.6	5.3	5.1	5.0
Bahrain	13.8	10.1	7.5	6.3	4.5	3.9	3.5	3.3	3.3	3.4	3.5	3.6	3.8
Iraq	18.8	16.9	14.6	9.4	8.7	7.8	6.7	5.8	5.1	4.6	4.3	4.1	4.0
Israel	6.0	6.7	7.1	6.8	6.8	6.9	6.6	6.2	6.1	6.0	6.0	6.1	6.4
Jordan	22.0	21.0	14.4	9.6	7.9	6.6	5.5	4.6	4.1	3.7	3.3	3.2	3.0
Kuwait	9.0	6.3	5.0	4.2	3.2	2.8	2.7	2.8	3.1	3.5	4.0	4.6	5.2
Lebanon	13.3	11.8	9.3	8.7	8.8	7.8	7.1	6.4	6.1	6.0	5.9	5.8	5.9
Saudi Arabia	21.3	19.2	16.9	10.7	8.9	7.6	6.4	5.5	4.9	4.4	4.1	3.8	3.7
Syrian Arab Republic	16.6	15.3	12.1	8.9	8.6	7.0	5.7	4.9	4.3	4.0	3.7	3.6	3.7
Turkey	16.4	13.5	11.6	10.2	9.4	8.4	7.5	6.7	6.4	6.4	6.4	6.5	6.6
United Arab Emirates	17.3	12.3	9.9	7.3	3.6	3.6	3.8	4.1	4.6	5.3	6.1	7.1	8.1
Yemen	28.1	26.6	26.3	20.2	17.8	15.7	13.8	12.0	10.3	8.7	7.2	5.9	5.0

TABLE 3--Continued

Subregion and country/area	Crude death rate (per 1,000 population)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
Oceania	10.6	10.3	9.7	8.8	8.1	8.0	8.0	7.9	7.8	7.7	7.6	7.7	8.0
Australia-New Zealand	8.7	8.8	8.5	7.8	7.5	7.6	7.7	7.8	8.0	8.1	8.2	8.5	9.0
Australia	8.7	8.9	8.5	7.7	7.3	7.4	7.6	7.8	7.9	8.1	8.2	8.5	8.9
New Zealand	8.9	8.7	8.4	8.2	8.1	8.4	8.4	8.3	8.3	8.3	8.3	8.5	8.9
Melanesia	19.0	16.9	15.0	13.7	11.1	10.3	9.3	8.4	7.5	6.8	6.3	5.9	5.7
Fiji	9.2	7.6	6.5	5.8	5.4	5.0	5.0	5.0	5.2	5.5	5.9	6.5	7.3
Papua New Guinea	21.3	19.1	17.1	15.7	13.1	12.1	10.8	9.6	8.4	7.5	6.7	6.1	5.7
Micronesia	12.4	10.5	9.0	7.1	6.2	5.6	5.4	5.4	5.4	5.5	5.7	5.9	6.3
Polynesia	14.6	12.4	10.4	5.7	5.2	5.0	4.9	4.9	4.9	4.9	5.0	5.2	5.5

Source: United Nations (1989) World Population Prospects 1988.

such as infants/children and elders. In this sense, it is desirable, especially for comparative purposes, to examine a measure of mortality levels which does not reflect the effects of variations in age structure of a population. Life expectancy, derived through construction of life tables that are in turn generated from age-specific mortality rates, essentially combines the mortality rates of a population at different ages into a single statistical measure.

Table 4 shows changes in life expectancy at birth by sex for the period 1960-2025. The table documents an overall trend of steadily increasing life expectancy at birth in the Asian-Pacific region during the postwar years. However, we also find considerable diversities in the level and tempo of life expectancy increases among subregions. For the period 1980-85, Eastern Asia had the longest life expectancy at birth (68.4 years), followed closely by Oceania (68.0 years), then by Western Asia (61.0 years), and by South-eastern Asia (57.2 years). The last was Southern Asia with life expectancy at birth of 54.4 years.

TABLE 4. Life Expectancy at Birth by Subregion and Selected Country or Area in Asia and the Pacific, Medium Variant, 1960-2025

Subregion and country/area	Life expectancy at birth (in years)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
WORLD TOTAL													
Both sexes	51.5	54.9	56.7	58.1	59.6	61.5	63.0	64.5	65.9	67.3	68.7	70.0	71.3
Males	50.4	53.8	55.6	56.9	58.2	60.0	61.5	62.9	64.2	65.5	66.8	68.1	69.3
Females	52.6	56.0	57.8	59.4	61.1	63.0	64.6	66.2	67.6	69.1	70.6	72.1	73.5
LESS DEVELOPED REGIONS													
Both sexes	47.6	52.1	54.2	55.8	57.6	59.7	61.5	63.1	64.6	66.0	67.6	69.0	70.4
Males	47.0	51.4	53.6	55.1	56.6	58.6	60.2	61.8	63.1	64.5	65.9	67.2	68.5
Females	48.3	52.8	54.9	56.7	58.7	61.0	62.8	64.5	66.1	67.7	69.4	70.9	72.4
ASIA													
Both sexes	48.0	53.3	55.8	57.5	59.3	61.7	63.6	65.5	67.1	68.7	70.2	71.6	72.8
Males	47.6	52.9	55.5	57.1	58.6	60.9	62.7	64.4	65.9	67.3	68.7	69.9	71.0
Females	48.4	53.7	56.1	57.9	60.0	62.6	64.7	66.6	68.4	70.1	71.8	73.4	74.7
EASTERN ASIA													
Both sexes	51.0	60.2	63.8	66.5	68.4	69.9	71.3	72.5	73.6	74.6	75.4	76.2	77.1
Males	50.0	59.2	62.9	65.8	67.1	68.3	69.5	70.7	71.7	72.7	73.5	74.2	75.0
Females	52.0	61.1	64.8	67.3	69.8	71.6	73.2	74.4	75.7	76.6	77.5	78.4	79.3
China													
Both sexes	49.5	59.6	63.2	65.8	67.8	69.4	70.9	72.1	73.2	74.2	75.1	76.0	76.8
Males	48.7	58.8	62.5	65.5	66.7	68.0	69.2	70.4	71.4	72.5	73.3	74.1	74.9
Females	50.4	60.4	63.9	66.2	68.9	70.9	72.6	73.8	75.1	76.1	77.1	78.0	78.9
Hong Kong													
Both sexes	67.6	70.0	72.0	73.6	75.4	76.2	77.0	77.6	78.2	78.7	79.2	79.6	80.1
Males	64.0	66.5	68.5	70.5	72.6	73.4	74.2	75.0	75.6	76.0	76.6	77.0	77.5
Females	71.3	73.5	75.6	76.8	78.3	79.1	79.9	80.5	81.0	81.4	81.9	82.4	82.9
Japan													
Both sexes	69.0	71.1	73.3	75.5	76.9	78.1	78.8	79.3	79.6	80.1	80.5	81.1	81.3
Males	66.5	68.5	70.6	72.8	74.2	75.4	75.9	76.4	76.8	77.3	77.8	78.6	78.6
Females	71.6	73.9	76.2	78.2	79.7	81.1	81.9	82.4	82.6	83.0	83.4	83.8	84.2
Republic of Korea													
Both sexes	55.2	57.6	61.5	65.6	67.7	69.3	70.6	71.9	73.0	74.0	74.9	75.8	76.6
Males	53.6	56.0	59.2	62.4	64.6	66.2	67.7	68.8	70.0	70.8	71.7	72.5	73.2
Females	56.9	59.4	64.0	68.8	71.0	72.5	73.7	75.0	76.0	77.0	77.9	78.8	79.6
Mongolia													
Both sexes	54.5	58.0	60.7	61.0	62.0	63.5	65.0	66.5	68.2	69.7	70.8	71.9	73.4
Males	52.9	56.3	59.1	59.3	60.0	61.5	63.0	64.5	66.0	67.5	68.6	69.7	71.6
Females	56.2	59.8	62.3	62.8	64.1	65.6	67.1	68.6	70.6	72.0	73.2	74.3	75.3

TABLE 4-Continued

Subregion and country/area	Life expectancy at birth (in years)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
SOUTH-EASTERN ASIA													
Both sexes	46.7	49.3	51.6	54.2	57.2	59.6	61.9	64.1	66.1	67.9	69.4	70.7	72.0
Males	45.4	47.9	50.0	52.6	55.5	57.9	60.1	62.3	64.3	66.0	67.4	68.7	69.9
Females	48.1	50.8	53.2	55.9	58.9	61.4	63.7	65.9	68.1	69.9	71.4	72.8	74.2
Burma													
Both sexes	45.0	49.5	52.5	55.0	57.5	60.0	62.5	64.8	66.8	68.6	70.1	71.3	72.5
Males	43.6	48.1	51.0	53.4	55.8	58.3	60.8	63.0	65.0	66.6	68.0	69.2	70.4
Females	46.5	51.0	54.1	56.7	59.3	61.8	64.3	66.7	68.8	70.7	72.2	73.5	74.7
Democratic Kampuchea													
Both sexes	43.4	45.4	40.3	31.2	43.4	48.4	50.9	53.4	55.9	58.3	60.5	62.5	64.5
Males	42.0	44.0	39.0	30.0	42.0	47.0	49.5	51.9	54.3	56.5	58.7	60.7	62.6
Females	44.9	46.9	41.7	32.5	44.9	49.9	52.4	55.0	57.6	60.1	62.3	64.4	66.5
Indonesia													
Both sexes	42.5	45.1	47.5	50.0	53.5	56.0	58.5	61.0	63.4	65.6	67.5	69.1	70.5
Males	41.7	44.1	46.4	48.7	52.2	54.6	57.1	59.6	61.9	64.1	65.9	67.4	68.6
Females	43.4	46.1	48.7	51.3	54.9	57.4	59.9	62.4	64.9	67.2	69.3	71.0	72.5
Laos													
Both sexes	40.4	40.4	40.4	43.5	46.0	48.5	51.0	53.5	56.0	58.5	61.0	63.4	65.6
Males	39.1	39.1	39.1	42.1	44.5	47.0	49.5	52.0	54.5	57.0	59.5	61.9	64.0
Females	41.8	41.8	41.8	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0	67.3
Malaysia													
Both sexes	55.7	59.4	63.0	65.3	68.0	69.5	70.8	72.0	73.1	74.1	75.0	75.9	76.7
Males	54.2	57.8	61.4	63.5	66.0	67.5	68.7	69.9	71.0	72.0	72.9	73.7	74.5
Females	57.4	61.0	64.7	67.1	70.0	71.6	73.0	74.2	75.4	76.3	77.3	78.2	79.0
Philippines													
Both sexes	54.5	56.2	57.9	59.8	61.9	63.5	65.0	66.5	68.1	69.3	70.4	71.5	72.7
Males	52.9	54.6	56.4	58.3	60.2	61.6	63.1	64.6	66.1	67.4	68.4	69.4	70.4
Females	56.2	57.8	59.4	61.5	63.7	65.4	67.0	68.6	70.2	71.4	72.6	73.8	75.1
Singapore													
Both sexes	65.8	67.9	69.5	70.8	71.8	72.8	73.8	74.8	75.6	76.5	77.3	77.9	78.3
Males	64.1	66.0	67.4	68.6	69.2	70.2	71.2	72.1	73.0	73.8	74.7	75.3	75.8
Females	67.6	70.0	71.8	73.1	74.6	75.7	76.7	77.7	78.5	79.3	80.1	80.6	81.1
Thailand													
Both sexes	53.9	56.7	59.6	61.2	62.7	65.0	67.1	68.7	70.2	71.4	72.6	73.6	74.6
Males	51.9	54.6	57.7	59.3	60.7	63.0	65.1	66.6	68.0	69.1	70.3	71.3	72.3
Females	56.1	58.9	61.6	63.2	64.8	67.1	69.2	70.9	72.4	73.7	74.9	76.0	77.0
Viet Nam													
Both sexes	45.4	47.9	50.3	55.8	58.8	61.3	63.7	66.0	67.9	69.4	70.8	72.0	73.1
Males	43.5	45.7	47.7	53.7	56.7	59.2	61.6	63.8	65.7	67.2	68.5	69.7	70.8
Females	47.4	50.2	53.1	58.1	61.1	63.6	66.0	68.3	70.3	71.8	73.1	74.3	75.5

TABLE 4-Continued

Subregion and country/area	Life expectancy at birth (in years)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
SOUTHERN ASIA													
Both sexes	45.0	47.4	49.5	52.0	54.4	56.9	59.2	61.5	63.7	65.8	67.6	69.1	70.5
Males	45.7	48.1	50.4	52.4	54.5	56.9	59.0	61.1	63.1	64.9	66.5	67.7	68.9
Females	44.2	46.7	48.7	51.6	54.4	57.0	59.5	61.9	64.3	66.7	68.8	70.5	72.1
Afghanistan													
Both sexes	34.0	36.0	38.0	40.0	40.5	41.5	43.5	45.5	47.5	49.5	51.5	53.5	55.5
Males	34.0	36.0	38.0	40.0	40.0	41.0	43.0	45.0	47.0	49.0	51.0	53.0	55.0
Females	34.0	36.0	38.0	40.0	41.0	42.0	44.0	46.0	48.0	50.0	52.0	54.0	56.0
Bangladesh													
Both sexes	40.6	43.3	44.9	46.6	48.6	50.7	52.9	55.0	57.1	59.2	61.3	63.5	65.6
Males	41.7	44.1	45.6	47.1	49.1	51.1	53.1	55.1	57.1	59.1	61.1	63.1	65.1
Females	39.5	42.5	44.1	46.1	48.1	50.4	52.6	54.9	57.1	59.4	61.6	63.9	66.1
India													
Both sexes	45.5	48.0	50.3	52.9	55.4	57.9	60.4	62.9	65.2	67.2	69.0	70.4	71.6
Males	46.2	48.7	51.2	53.3	55.6	57.8	60.1	62.5	64.4	66.1	67.6	68.6	69.6
Females	44.7	47.3	49.3	52.4	55.2	57.9	60.7	63.4	65.9	68.4	70.5	72.2	73.6
Iran													
Both sexes	50.8	53.2	55.9	58.6	60.6	65.2	67.2	68.9	70.3	71.6	72.7	73.8	74.7
Males	50.9	53.5	56.2	58.2	59.4	65.0	66.6	68.0	69.2	70.4	71.4	72.4	73.2
Females	50.6	52.9	55.5	59.0	63.0	65.5	67.8	69.8	71.4	72.9	74.0	75.2	76.2
Nepal													
Both sexes	39.1	41.0	43.3	45.8	48.3	50.9	53.5	56.1	58.8	61.2	63.5	65.6	67.5
Males	39.6	41.5	44.0	46.5	49.0	51.5	54.0	56.5	59.0	61.4	63.6	65.5	67.0
Females	38.6	40.5	42.5	45.0	47.5	50.3	53.0	55.8	58.5	61.0	63.5	65.8	68.0
Pakistan													
Both sexes	44.4	46.8	49.0	51.5	54.0	56.5	59.0	61.4	63.8	65.9	67.8	69.4	70.7
Males	45.6	48.0	50.0	52.0	54.0	56.5	59.0	61.4	63.6	65.5	67.0	68.3	69.5
Females	43.1	45.5	48.0	51.0	54.0	56.5	59.0	61.5	64.0	66.4	68.6	70.5	72.0
Sri Lanka													
Both sexes	63.5	64.2	65.0	66.8	68.9	70.3	71.6	72.7	73.7	74.7	75.6	76.4	77.2
Males	63.3	63.5	64.0	65.0	67.0	68.3	69.5	70.6	71.6	72.6	73.4	74.3	75.0
Females	63.7	65.0	66.0	68.5	71.0	72.5	73.8	74.9	76.0	77.0	77.9	78.7	79.5
WESTERN ASIA													
Both sexes	50.4	53.3	56.4	59.3	61.0	63.1	65.2	67.1	68.7	70.1	71.4	72.6	73.7
Males	49.1	51.9	54.8	57.5	59.5	61.6	63.6	65.3	66.8	68.1	69.4	70.5	71.6
Females	51.7	54.7	58.0	61.0	62.6	64.7	67.0	69.0	70.7	72.2	73.5	74.8	76.0

TABLE 4-Continued

Subregion and country/area	Life expectancy at birth (in years)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
Bahrain													
Both sexes	57.0	60.0	63.5	67.5	69.2	70.7	71.9	73.1	74.1	75.1	76.0	76.8	77.6
Males	55.3	58.1	61.7	65.6	67.1	68.6	69.8	71.0	72.0	73.0	73.8	74.6	75.4
Females	58.8	62.0	65.4	69.5	71.4	72.9	74.1	75.3	76.3	77.3	78.3	79.1	79.9
Iraq													
Both sexes	50.0	53.0	57.0	61.4	62.4	63.9	66.2	68.0	69.8	71.1	72.4	73.4	74.4
Males	49.1	52.1	56.1	60.5	61.5	63.0	65.0	66.5	68.0	69.2	70.4	71.4	72.4
Females	50.9	53.9	57.9	62.3	63.3	64.8	67.4	69.7	71.6	73.1	74.4	75.6	76.5
Israel													
Both sexes	69.4	70.8	71.6	73.1	74.4	75.4	76.3	77.0	77.7	78.3	78.8	79.3	79.9
Males	68.1	69.2	70.1	71.4	72.8	73.6	74.4	75.2	75.7	76.2	76.7	77.2	77.9
Females	70.7	72.4	73.3	74.9	76.2	77.2	78.2	79.0	79.8	80.6	81.1	81.6	82.1
Jordan													
Both sexes	48.2	51.7	56.6	61.2	63.7	66.0	68.0	69.7	71.0	72.2	73.3	74.3	75.3
Males	46.9	50.2	54.9	59.4	61.9	64.2	66.2	67.7	68.9	70.1	71.1	72.1	72.5
Females	49.5	53.2	58.3	63.0	65.5	67.8	69.8	71.8	73.3	74.5	75.7	76.7	77.7
Saudi Arabia													
Both sexes	45.9	49.9	53.9	57.9	60.9	63.4	65.9	67.9	69.7	71.0	72.2	73.3	74.3
Males	44.8	48.6	52.4	56.2	59.2	61.7	64.2	66.2	67.7	68.9	70.1	71.1	72.1
Females	47.1	51.3	55.5	59.7	62.7	65.2	67.7	69.7	71.7	73.2	74.4	75.6	76.6
Syrian Arab Republic													
Both sexes	51.0	54.0	57.0	60.1	62.6	65.0	67.2	68.9	70.3	71.4	72.5	73.4	74.3
Males	49.7	52.5	55.4	58.3	60.8	63.2	65.2	66.7	68.0	69.0	70.0	70.7	71.4
Females	52.4	55.5	58.7	61.9	64.4	66.9	69.2	71.1	72.7	74.0	75.2	76.2	77.2
Turkey													
Both sexes	52.1	54.9	57.9	60.3	61.6	64.1	66.2	68.4	69.9	71.3	72.4	73.6	74.6
Males	50.5	53.4	55.9	58.0	60.0	62.5	64.5	66.5	68.0	69.2	70.4	71.4	72.4
Females	53.7	56.5	60.0	62.5	63.3	65.8	68.1	70.4	71.9	73.4	74.6	75.8	76.8
United Arab Emirates													
Both sexes	55.0	59.0	62.5	66.8	69.2	70.7	71.9	73.1	74.1	75.1	76.0	76.8	77.6
Males	53.5	57.3	60.7	64.7	67.1	68.6	69.8	71.0	72.0	73.0	73.8	74.6	75.4
Females	56.6	60.8	64.4	68.9	71.4	72.9	74.1	75.3	76.3	77.3	78.3	79.1	79.9
Yemen													
Both sexes	38.4	40.9	43.4	45.9	48.4	50.9	53.4	55.9	58.4	60.9	63.4	65.8	68.0
Males	37.7	40.0	42.5	44.7	46.9	49.5	52.0	54.5	57.0	59.5	62.0	64.3	66.3
Females	39.1	41.8	44.3	47.1	49.9	52.4	54.9	57.4	59.9	62.4	64.9	67.4	69.7

TABLE 4-Continued

Subregion and country/area	Life expectancy at birth (in years)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
OCEANIA													
Both sexes	63.8	64.2	65.5	66.3	68.0	68.8	69.8	70.8	71.7	72.6	73.6	74.6	75.6
Males	61.6	61.9	63.1	64.1	65.6	66.4	67.4	68.5	69.4	70.4	71.3	72.3	73.2
Females	66.1	66.6	68.0	68.6	70.5	71.3	72.3	73.2	74.1	75.0	76.0	77.0	78.1
Australia													
Both sexes	70.9	70.9	71.7	73.3	74.9	75.8	76.6	77.3	78.0	78.5	79.0	79.5	80.0
Males	67.9	67.7	68.5	69.9	71.7	72.7	73.5	74.3	75.0	75.6	76.1	76.6	77.1
Females	74.2	74.3	75.2	77.0	78.7	79.5	80.2	80.7	81.2	81.7	82.2	82.7	83.1
New Zealand													
Both sexes	71.0	71.3	71.7	72.4	73.7	74.7	75.6	76.4	77.2	77.8	78.3	78.8	79.3
Males	68.3	68.3	68.7	69.3	70.7	71.8	72.7	73.5	74.3	75.1	75.6	76.1	76.6
Females	73.9	74.4	74.8	75.7	76.9	77.9	78.6	79.4	80.2	80.7	81.1	81.7	82.2
Fiji													
Both sexes	60.2	62.7	65.1	67.2	68.9	70.4	71.5	72.6	73.5	74.3	75.1	75.7	76.1
Males	58.8	61.3	63.6	65.6	67.0	68.2	69.2	70.2	70.9	71.6	72.3	72.8	73.1
Females	61.7	64.2	66.7	69.0	71.0	72.7	73.9	75.2	76.2	77.2	78.0	78.7	79.4
Papua New Guinea													
Both sexes	42.7	45.1	47.7	50.3	51.9	54.0	56.0	58.1	60.1	62.2	64.2	66.2	68.1
Males	43.0	45.4	47.7	50.5	51.2	53.2	55.2	57.2	59.2	61.2	63.2	65.2	66.7
Females	42.4	44.9	47.6	50.0	52.7	54.8	56.9	59.0	61.1	63.2	65.3	67.4	69.5
Micronesia													
Both sexes	52.7	55.2	57.7	66.0	68.0	69.6	70.9	72.0	73.0	73.9	74.7	75.4	75.9
Males	50.9	53.4	55.9	64.0	65.9	67.4	68.5	69.5	70.4	71.1	71.8	72.5	72.8
Females	54.5	57.0	59.5	68.1	70.3	72.0	73.4	74.6	75.7	76.7	77.7	78.4	79.1
Polynesia													
Both sexes	61.9	64.6	66.9	68.0	69.6	70.9	72.0	73.0	73.8	74.7	75.4	75.9	76.3
Males	60.3	62.8	64.8	66.0	67.5	68.6	69.6	70.4	71.1	71.9	72.6	72.9	73.1
Females	63.6	66.6	69.2	70.3	72.0	73.4	74.6	75.6	76.7	77.7	78.4	79.1	79.8

Source: United Nations (1989) World Population Prospects 1988.

With regard to the tempo of life expectancy increases, for the period between 1960-65 and 1980-85, Eastern Asia experienced an increase of more than 17 years from 51.0 years to 68.4 years in life expectancy at birth. On the other hand, while South-eastern, Southern and Western Asia all had increases of approximately 10 years during the same period, their levels of life expectancy are considerably different: 46.7 to 57.2 years for South-Eastern Asia, 45.0 to 54.4 years for Southern Asia, and 50.4 to 61.0 years for Western Asia. The increase for Oceania during the same period was only around four years from 63.8 to 68.0 years because the life expectancy at birth in the subregion

was already at a relatively high level in the early 1960s.

The mortality levels among individual countries show stronger heterogeneity. We find, on one hand, countries with one of the world's highest life at birth such as Japan, Hong Kong and Asutralia (76.9, 75.4, and 74.9 years respectively during 1980-85), but, on the other, there are countries with life expectancy at birth less than 50 years (e.g., Afghanistan with 40.5 years, Laos with 46.0 years, Nepal with 48.3 years, Yemen with 48.4 years, and Bangladesh with 48.6 years). Nevertheless, generally speaking, countries having low mortality are found in Eastern Asia and Oceania, whereas many of those with high mortality are in Southern Asia.

Turning to sex differentials in life expectancy at birth, we can see from Table 4 that female life expectancy is longer, sometimes considerably longer, than male life expectancy in most of the subregions and the majority of countries in the Region. Though variable in the degree, higher life expectancy (i.e., lower mortality) of females is not a phenomenon particular to Asia and the Pacific but also occurs in most of the regions and countries of the world. As the basis for this higher male mortality, there seem to be both biological and social factors. For one, males may be biologically more vulnerable than females. Also, generally, men work at the more hazardous, strenuous, and stressful occupations (Shryock et al., 1976: 109-110).

From Table 4, however, we can also notice that Southern Asia is clearly an exception from the general pattern of lower female mortality. Except for Sri Lanka and Iran, the two countries with relatively low mortality, all the other countries have higher female mortality, or mortality with very small sex differentials. Moreover, this deviation from the general pattern of lower female mortality was evident in all Southern Asian countries (including Sri Lanka and Iran) during the 1950s and the early 1960s.

We can think of two possible factors to explain this higher-than-expected mortality for women in Southern Asian countries. One is maternal mortality, mortality associated with pregnancy and childbirth. Married women are generally exposed to special risks of childbearing, and if fertility is high (i.e., frequency of pregnancy and childbearing is high), the probability of maternal death is thought to increase accordingly. As we will see in detail in the next section, birth rates in Southern Asian countries are in general high. But this is also the case in many countries in Western Asia as well as some South-Eastern and Oceanian countries in all of which females enjoy lower mortality than males.

Another possible factor is higher infant and childhood mortality of females due to strong son preference found in many Southern Asian countries. It is indicated that where there is a strong preference for sons, boys receive preferential treatment in feeding and medical care (Williamson, 1976), and accordingly girls tend to suffer from higher infant and childhood mortality. Strong son preference is documented in many Southern Asian countries such as India, Bangladesh, Nepal, and Pakistan (D'Souza and Chen, 1980; Ramanamma and Bambawale, 1980; United Nations, 1982: 60-63). Although such Eastern Asian countries as the Republic of Korea and parts of China are also found to have strong preference of sons (Park, 1983; Arnold and Liu, 1986; Tsuya and Choe, 1988), their fertility levels are much lower than those in the Southern Asian countries with strong son preference. Therefore, unfavorable treatment of female children arising from strong son preference, combined with high fertility, are thought to be responsible for the higher-than-expected mortality suffered by women in many Southern Asian countries.

In summary, examining levels and trends of mortality, we can conclude that mortality has declined steadily, though not dramatically, not only in the Asian-Pacific region as a whole but also in all the subregions. While Eastern Asia and Oceania now have very low mortality levels, Southern Asia still show relatively high mortality, with mortality of Western Asia and South-eastern Asia being at intermediate levels. With a notable exception of Sri Lanka, women in many Southern Asian countries suffer from high mortality levels, which may be due to higher female infant/child mortality caused by unfavorable treatment and care of female infants and children, combined with high fertility.

IV. FERTILITY

Another, and probably the most important, demographic factor of population growth is fertility. Childbearing is a central feature of every women's life, even in the most highly industrialized societies with very low levels of fertility. In societies where family planning is limited, childbearing is likely to occur repeatedly and continue until women approach the end of their reproductive years. In this section, we examine two indicators of fertility, the crude birth rate (CBR, the number of births per 1,000 population) and the total fertility rate (TFR, the average number of births a woman would have if

she lived through her reproductive years and gave birth at prevailing age-specific fertility rates).

Table 5 shows changes in the crude birth rate (CBR, the number of births per 1,000 population) in Asia and the Pacific by subregions and by selected

TABLE 5. Crude Birth Rate by Subregion and Selected Country or Area in Asia and the Pacific, Medium Variant, 1960-2025

Subregion and country/area	Crude birth rate (per 1,000 population)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
WORLD TOTAL	35.2	33.9	31.5	28.4	27.7	27.1	26.3	24.8	22.9	21.2	19.8	18.4	17.4
LESS DEVELOPED REGIONS	41.9	40.4	37.1	32.9	31.8	30.9	29.8	27.7	25.3	23.1	21.4	19.6	18.5
ASIA	39.5	38.4	34.8	29.7	28.4	27.6	26.7	24.5	21.8	19.5	18.0	16.6	16.0
Eastern Asia	35.5	34.6	29.4	21.1	18.7	19.7	19.3	17.6	15.0	12.9	12.7	12.8	12.5
China	37.8	36.9	30.6	21.5	19.0	20.5	20.0	18.0	15.1	12.9	12.7	13.0	12.6
Hong Kong	33.1	23.5	19.5	18.6	16.7	15.9	13.6	12.7	12.2	11.5	11.2	10.9	10.4
Japan	17.2	17.8	19.2	15.2	12.7	11.4	12.2	12.6	12.1	10.8	9.9	9.9	10.3
Republic of Korea	39.6	31.9	28.8	23.9	21.3	18.8	16.6	15.9	14.6	13.3	12.5	12.0	11.6
Mongolia	41.2	41.9	41.0	40.0	39.5	38.9	37.8	35.3	32.8	30.9	28.9	27.8	24.1
South-Eastern Asia	42.5	41.0	37.4	35.2	32.9	28.9	26.9	24.4	21.8	19.8	18.4	17.0	16.4
Burma	40.6	39.1	37.6	35.8	34.3	30.6	29.7	27.7	25.1	22.5	20.1	17.9	17.3
Democratic Kampuchea	44.9	43.9	39.9	30.0	45.5	41.4	36.5	30.0	25.3	23.9	24.4	22.5	19.7
Indonesia	42.9	42.6	38.2	35.4	32.2	27.4	25.4	22.6	19.9	18.2	17.3	16.4	15.6
Laos	44.9	44.4	44.4	44.7	44.7	41.3	38.1	35.4	31.8	28.1	24.9	22.4	20.2
Malaysia	43.2	38.5	34.7	30.4	29.5	28.6	25.4	21.8	18.4	17.1	17.1	16.8	15.9
Philippines	43.6	40.2	36.9	36.4	35.6	33.2	30.4	27.4	24.7	22.2	21.0	17.8	17.4
Singapore	34.0	24.9	21.2	17.2	17.0	16.5	15.5	13.9	12.6	11.7	11.5	11.3	11.0
Thailand	43.5	41.8	35.1	31.6	27.8	22.3	20.0	19.5	18.6	17.5	16.1	14.9	14.4
Viet Nam	40.9	38.3	37.6	38.3	34.8	31.9	30.3	27.4	24.2	21.2	18.6	17.9	17.5
Southern Asia	43.2	41.9	40.4	37.7	37.6	35.2	33.8	30.6	27.5	24.4	21.5	18.7	18.0
Afghanistan	52.6	53.2	51.6	50.8	48.9	49.3	52.2	47.7	39.8	33.7	30.2	27.3	24.6
Bangladesh	46.7	47.5	48.5	47.2	44.8	42.2	40.6	38.2	35.1	29.4	24.8	22.0	20.0
Bhutan	42.2	41.8	41.0	40.0	39.0	38.3	38.2	37.3	35.8	33.8	30.0	25.9	22.6
India	42.0	40.2	38.2	34.7	34.7	32.0	31.1	28.2	25.3	22.6	19.8	17.0	17.0
Iran	46.5	45.3	44.1	43.1	41.9	42.4	39.0	34.5	30.9	27.3	24.1	21.6	19.4
Nepal	45.8	45.5	47.1	44.6	42.9	39.6	36.3	33.9	29.6	25.6	22.4	20.1	18.4
Pakistan	48.4	47.8	47.5	47.3	50.3	47.0	41.9	36.2	31.9	29.0	26.1	23.0	20.1
Sri Lanka	34.7	31.5	28.9	28.5	26.9	22.5	20.6	18.8	17.1	16.9	16.3	15.5	14.7
Western Asia	44.7	42.5	39.7	38.2	36.6	35.4	34.0	32.2	30.4	28.4	26.1	23.8	22.0
Bahrain	47.0	43.4	36.0	34.4	31.0	28.2	24.8	21.7	19.4	17.6	16.4	15.7	15.1
Iraq	49.3	48.8	47.4	46.7	44.4	42.6	40.5	38.0	35.5	32.8	30.0	27.1	24.7
Israel	25.5	25.5	27.4	26.0	23.8	21.6	20.1	19.8	19.2	18.2	16.9	15.5	14.6
Jordan	52.5	52.5	50.0	45.0	44.2	45.9	45.4	43.1	40.1	36.5	32.0	28.6	25.6
Kuwait	44.5	49.7	44.4	40.1	35.6	32.3	28.2	26.1	24.4	23.2	21.5	20.1	18.5
Lebanon	42.7	38.8	32.1	30.1	29.3	28.9	27.6	24.8	21.8	19.6	18.1	17.2	16.7
Saudi Arabia	48.9	48.1	47.6	45.9	43.2	42.0	41.8	41.7	40.9	38.8	35.4	31.3	27.9
Syrian Arab Republic	47.4	47.6	46.6	46.0	45.5	44.1	41.7	38.6	35.5	31.6	27.6	24.0	21.5
Turkey	42.9	39.0	34.5	32.0	30.2	28.4	26.5	23.8	21.4	19.5	17.9	16.7	16.3
United Arab Emirates	43.6	38.6	33.0	30.5	26.6	22.6	20.2	20.1	20.7	20.9	19.4	17.9	16.8
Yemen	49.3	48.8	48.7	50.6	48.6	47.9	47.0	45.8	43.9	41.1	37.6	32.9	28.8

TABLE 5--Continued

Subregion and country/area	Crude birth rate (per 1,000 population)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
Oceania	26.7	24.5	23.8	21.3	20.6	20.1	19.1	18.4	17.6	17.0	16.4	15.7	14.9
Australia-New Zealand	22.6	20.3	19.8	16.2	15.7	15.1	14.4	13.9	13.3	12.9	12.6	12.3	12.0
Australia	21.9	19.8	19.5	16.0	15.6	15.0	14.2	13.8	13.3	12.9	12.6	12.3	12.0
New Zealand	25.9	22.6	20.8	17.2	16.0	15.6	15.1	14.6	13.7	12.8	12.3	12.1	11.9
Melanesia	43.2	41.0	39.5	40.6	37.8	37.0	34.2	31.8	29.8	28.1	26.1	24.1	21.7
Fiji	39.4	32.0	31.5	31.3	31.1	27.3	22.6	20.6	19.4	18.0	16.7	14.9	13.4
Papua New Guinea	43.7	42.4	40.6	42.5	38.8	38.7	36.2	33.8	31.6	29.8	27.5	25.5	22.7
Micronesia	39.0	37.4	35.9	36.1	34.7	32.1	29.6	27.8	26.2	24.9	23.4	21.6	20.3
Polynesia	47.3	43.4	40.9	39.5	36.9	34.2	31.3	28.5	26.5	24.7	22.4	20.4	18.9

Source: United Nations (1989) World Population Prospects 1988.

individual countries for the period of 1960-2025. Although the CBR is not a probability-type measure of fertility because it includes subpopulations who "cannot" be exposed to risks of childbearing (i.e., males, and females before menarche and after menopause), it does measure the impact of births on the total population in a certain year.

From Table 5, we can see that Asia and the Pacific as a whole is going through significant and continuous declines in the CBR. Concerning subregional variations, Eastern Asia experienced dramatic declines in CBR during the 1970s and now has relatively low CBR while the other three subregions in Asia still show relatively high levels of CBR although they did experience gradual but steady CBR declines during 1960-1985.

At the country level, we can see that all the Eastern Asian countries, with an exception of Mongolia, had the CBRs of around 20 or lower during 1980-85. In South-eastern Asia, although Laos, Democratic Kampuchea and East Timor (the latter two are not shown in Table 5) still had very high CBRs (over 40 per 1,000 population) during 1980-85, such ASEAN countries as Singapore, Thailand and Malaysia have experienced significant declines in their birth rates and by 1980 their CBRs were lower than 30 per 1,000 population. Especially, it is notable that Singapore's CBR level is now similar to those of two forerunners not only in the Region but also in the world, Japan and Hong Kong. In clear contrast to Eastern Asian countries, Southern Asian countries,

except for Sri Lanka, still show high CBR levels. In fact, a large majority of them had CBRs of 40 or higher during 1980-85. Western Asian countries are characterized by a wide range of CBR levels from 24 in Israel to 49 in Yemen during 1980-85. In contrast, countries in Oceania show a bimodal pattern with two developed countries (Australia and New Zealand) at low levels and countries in Melanesia, Micronesia and Polynesia at relatively high levels.

Unlike the CBR, the total fertility rate (TFR), derived through summation of age-specific fertility rates of women in reproductive ages (usually 15-49 years old), indicates the level of women's fertility, controlling for variations in the age structure of population. In this sense, TFR is one of the ideal measures of fertility and is in fact most commonly used, especially for comparative purposes.

Table 6 shows changes in the TFR by subregions and by selected individual countries for the period of 1960-2025. We can see from the table that as indicated by changes in the CBR, the TFR in Asia and the Pacific has been declining continuously, and that the decline in Eastern Asia during the 1970s was especially dramatic, due primarily to the rapid fertility declines in China and, though to a lesser extent, in the Republic of Korea. Currently, except for Mongolia(which has TFR of 5.4), all the Eastern Asian countries are considered to have completed, or almost completed, their fertility transition.

In contrast, all the countries in Southern Asia, except for Sri Lanka, still have extremely high TFRs, and do not yet show a clear sign of any onset of fertility transition. Although many of these Southern Asian countries with high fertility are estimated to have just started, or are projected to start, their fertility transition during this decade, their TFRs are not considered to reach the level lower than 3 until the late 2010s or the early 2020s, except for India whose TFR has been declining gradually but steadily after 1960.

The TFR level of South-eastern Asia (3.6 during 1985-90) is in between those of Eastern Asia (2.3) and Southern Asia (4.47). Within the subregion, however, we see a considerable variation: Singapore with the lowest TFR in the Region (1.7 during 1980-85) and Laos with the TFR of 6.2 during the same period. Nevertheless, it also has to be pointed out that most of the South-eastern Asian countries are currently going through significant fertility transition--Singapore and Thailand who are quite far along in their fertility reduction. By 2010, all South-Eastern Asian countries are projected to have the TFR lower than 3 per woman.

TABLE 6. Total Fertility Rate by Subregion and Selected Country or Area in Asia and the Pacific, Medium Variant, 1960-2025

Subregion and country/area	Total fertility rate (per woman)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
WORLD TOTAL	4.97	4.88	4.45	3.84	3.61	3.44	3.29	3.13	2.96	2.77	2.58	2.38	2.27
LESS DEVELOPED REGIONS	6.08	5.99	5.41	4.54	4.19	3.92	3.69	3.45	3.21	2.94	2.70	2.46	2.33
ASIA	5.71	5.67	5.05	4.06	3.72	3.45	3.23	2.99	2.76	2.51	2.31	2.12	2.07
Eastern Asia	5.35	5.39	4.40	2.80	2.33	2.31	2.13	2.00	1.91	1.82	1.81	1.81	1.81
China	5.93	5.99	4.76	2.90	2.36	2.36	2.15	2.00	1.90	1.80	1.80	1.80	1.80
Hong Kong	5.30	4.01	2.89	2.31	1.80	1.70	1.60	1.70	1.80	1.80	1.80	1.80	1.80
Japan	2.01	2.00	2.07	1.81	1.76	1.70	1.80	1.80	1.80	1.80	1.80	1.80	1.80
Republic of Korea	5.40	4.52	4.11	2.80	2.40	2.00	1.80	1.80	1.80	1.80	1.80	1.80	1.80
Mongolia	5.72	5.89	5.56	5.50	5.45	5.40	5.23	4.92	4.61	4.30	3.89	3.59	2.99
South-Eastern Asia	5.89	5.79	5.26	4.79	4.28	3.58	3.19	2.85	2.55	2.34	2.21	2.10	2.08
Burma	5.94	5.74	5.43	5.02	4.61	4.02	3.69	3.38	3.07	2.77	2.46	2.15	2.07
Democratic Kampuchea	6.29	6.22	5.53	4.10	5.12	4.71	4.41	4.10	3.79	3.38	2.99	2.58	2.30
Indonesia	5.42	5.57	5.10	4.68	4.10	3.30	2.90	2.50	2.20	2.07	2.07	2.07	2.07
Laos	6.15	6.15	6.15	6.15	6.15	5.74	5.33	4.92	4.30	3.59	2.99	2.58	2.30
Malaysia	6.72	5.94	5.15	4.16	3.91	3.50	3.09	2.68	2.27	2.08	2.08	2.08	2.08
Philippines	6.61	6.04	5.29	4.96	4.74	4.33	3.91	3.50	3.09	2.68	2.47	2.08	2.08
Singapore	4.93	3.46	2.63	1.87	1.69	1.65	1.70	1.75	1.80	1.80	1.80	1.80	1.80
Thailand	6.42	6.14	5.01	4.27	3.52	2.60	2.20	2.11	2.07	2.07	2.07	2.07	2.07
Viet Nam	6.05	5.94	5.85	5.59	4.82	4.10	3.70	3.30	2.90	2.50	2.15	2.07	2.07
Southern Asia	6.03	5.96	5.76	5.27	5.14	4.72	4.47	4.04	3.59	3.10	2.65	2.25	2.16
Afghanistan	7.01	7.13	7.14	7.21	6.90	6.90	6.80	6.17	5.56	4.94	4.33	3.60	3.01
Bangladesh	6.68	6.91	7.02	6.66	6.15	5.53	5.13	4.71	4.30	3.59	2.99	2.58	2.30
Bhutan	5.92	5.89	5.74	5.64	5.53	5.53	5.53	5.43	5.23	4.94	4.30	3.59	2.99
India	5.81	5.69	5.43	4.83	4.75	4.30	4.10	3.69	3.28	2.87	2.46	2.07	2.07
Iran	7.26	6.97	6.54	6.05	5.64	5.64	5.43	4.94	4.30	3.59	2.99	2.58	2.30
Nepal	5.86	6.17	6.52	6.54	6.25	5.94	5.53	5.13	4.35	3.59	2.99	2.58	2.30
Pakistan	7.00	7.00	7.00	7.00	7.00	7.00	6.50	5.94	5.19	4.35	3.59	2.99	2.58
Sri Lanka	5.16	4.68	4.00	3.83	3.25	2.67	2.47	2.27	2.07	2.07	2.07	2.07	2.07
Western Asia	6.48	6.25	5.90	5.48	5.20	4.92	4.66	4.38	4.09	3.77	3.40	3.03	2.73
Bahrain	7.17	6.97	5.94	5.23	4.63	4.14	3.69	3.28	2.91	2.56	2.30	2.15	2.07
Iraq	7.17	7.17	7.11	6.97	6.66	6.35	5.94	5.43	4.92	4.41	3.89	3.38	2.99
Israel	3.85	3.79	3.77	3.41	3.13	2.88	2.68	2.57	2.47	2.37	2.27	2.16	2.08
Jordan	7.99	7.99	7.79	7.38	7.28	7.17	6.87	6.46	5.94	5.23	4.35	3.59	2.99
Kuwait	7.38	7.48	6.97	5.94	5.23	4.82	4.30	3.89	3.48	3.18	2.87	2.66	2.46
Lebanon	6.35	6.05	4.92	4.30	3.79	3.38	3.07	2.81	2.56	2.36	2.17	2.07	2.07
Saudi Arabia	7.26	7.26	7.30	7.28	7.28	7.17	7.07	6.87	6.50	5.94	5.19	4.35	3.59
Syrian Arab Republic	7.46	7.79	7.69	7.44	7.17	6.76	6.25	5.64	5.02	4.30	3.59	2.99	2.58
Turkey	6.11	5.62	5.04	4.30	3.89	3.55	3.23	2.92	2.65	2.42	2.23	2.11	2.11
United Arab Emirates	6.87	6.76	6.35	5.66	5.23	4.82	4.30	3.89	3.48	3.18	2.87	2.66	2.46
Yemen	6.97	6.97	6.97	7.17	7.07	6.97	6.76	6.50	6.15	5.74	5.13	4.35	3.59

TABLE 6--Continued

Subregion and country/area	Total fertility rate (per woman)												
	1960 -65	1965 -70	1970 -75	1975 -80	1980 -85	1985 -90	1990 -95	1995 -2000	2000 -05	2005 -10	2010 -15	2015 -20	2020 -25
Oceania	3.94	3.54	3.19	2.85	2.64	2.57	2.47	2.43	2.41	2.37	2.30	2.22	2.13
Australia-New Zealand	3.37	2.93	2.58	2.11	1.94	1.86	1.81	1.83	1.86	1.88	1.90	1.90	1.90
Australia	3.28	2.87	2.54	2.09	1.93	1.85	1.80	1.82	1.85	1.88	1.90	1.90	1.90
New Zealand	3.79	3.22	2.79	2.20	1.96	1.90	1.85	1.87	1.90	1.90	1.90	1.90	1.90
Melanesia	6.27	5.99	5.64	5.81	5.34	5.26	4.86	4.45	4.08	3.71	3.28	2.93	2.58
Fiji	5.95	4.60	3.71	3.60	3.50	3.19	2.78	2.57	2.37	2.16	2.06	1.96	1.85
Papua New Guinea	6.29	6.21	5.95	6.28	5.66	5.66	5.25	4.84	4.43	4.02	3.50	3.09	2.68
Micronesia	6.21	5.92	5.60	5.33	4.98	4.53	4.10	3.69	3.28	2.93	2.66	2.46	2.36
Polynesia	7.28	6.82	6.42	6.01	5.60	5.08	4.46	3.84	3.36	3.01	2.69	2.49	2.38

Source: United Nations (1989) World Population Prospects 1988.

Although there are some exceptions such as Israel, Lebanon and Turkey, the TFR level of Western Asia has been the highest in the Region, and many countries in the subregion still have very high TFRs. For example, Saudi Arabia, Jordan, Syria, Yemen and Iraq had the TFR close to or exceeding 7 per woman during 1980-85. This large intrasubregional variation is expected to continue until the year 2020. On the other hand, although the TFR of Oceania has been decreasing steadily and is currently close to the level of Eastern Asia (due to the low fertility levels of Australia and New Zealand, the two most populous countries in the subregion), we can also see considerable inter-country differeces in Oceania. For example, for the period 1980-85, the TFR levels of the two developed countries, Australia and New Zealand, were lower than 2 per woman while the corresponding levels in Papua New Guinea and Polynesia are estimated to be over 5.5. Like Western Asia, this intrasubregional variation in fertility is projected to remain until the period 2020-25.

In addition, it is important to note that the TFR levels of the developed and NIES countries in the Region are becoming increasingly homogeneous over time, with some countries experiencing a continued gradual decline and others experiencing a tendency of stably low fertility with some fluctuations. Those countries include Japan, Hong Kong, South Korea, Singapore, Australia and New Zealand; their TFRs in the late 1980s are below or within the range of replacement level (2.0-2.1). Replacement-level fertility is the fertility

with the net reproduction rate (NRR) equal to 1.0. The NRR being 1.0 theoretically means that a population can reproduce itself with a group of mothers giving birth to a group of daughters whose number becomes exactly equal to that of their mothers when the daughters start childbearing. Hence, if fertility remains at the replacement level for a long time (and if there is no large-scale international migration), the population would eventually become stable. A population whose fertility remains indefinitely below-replacement level will eventually decline. In order to achieve this replacement level, given that mortality is low, the TFR has to be at the level of 2.0-2.1.

The emergence of below-replacement fertility is not limited to the developed and some NIES countries in Asia and the Pacific. The vast majority of European countries have also been experiencing the same phenomenon since the mid-1960s (Davis et al., 1986). In this sense, below-replacement fertility is a profound development associated with industrialization, and continued below-replacement fertility will influence not only population size, but also the family and household, the age structure, economic growth, and migration. Moreover, it seems extremely difficult, if not impossible, to reverse fertility to the above-replacement level once it becomes below replacement.[2] Nevertheless, though complex, we need to assess the course of below-replacement fertility as well as to attempt to analyze its causes and consequences under the context of a larger social change.

In summary, examining the levels and trends of fertility, we can conclude that the Asian-Pacific region as a whole is going through continuous fertility declines. Concerning subregional variations, Eastern Asia is the "forerunner" in fertility transition, experiencing dramatic fertility declines during the 1970s and now has low levels of fertility in most of the constituent countries. In contrast, although there are some exceptionable countries, fertility levels in Western and Southern Asia are still generally very high, showing no clear sign of significant fertility declines. In addition, large intercountry variations within these subregions are, though they are projected to decrease over time, expected to remain well into the next century. South-eastern Asia is in between Eastern Asia and Southern Asia in its fertility level. Although there are some intercountry variations, most of South-eastern Asian countries are currently experiencing fertility transition and are anticipated to have low fertility by the year 2010. Although its overall fertility level has been low and currently close to that of Eastern Asia, Oceania also exhibits and is projected to sustain substantial intrasubregional variations:

while Australia and New Zealand have low and declining fertility, the other parts of the subregion still have relatively high fertility. It is also pointed out that the developed and some NIES countries in Asia and the Pacific are currently or will soon be having below-replacement fertility (TFR of 2.0-2.1 or lower). Though the reason has not yet been discovered, this is an important demographic phenomenon that needs to be analyzed and explained in a broader social context.

In the following two sections, we will look at two major demographic factors of fertility: patterns of marriage and family planning (contraception) as major regulators of marital fertility.

V. NUPTIALITY

In many societies where there is a strong tradition of monogamous marriage and little reproduction outside marriage, fertility rate of the population can be conceived of as the function of two demographic variables: the age pattern of women's marriage and fertility rate of married women of reproductive ages (i.e., marital fertility).[3] In other words, the importance of marriage as a determinant of fertility is based on the fact that the timing at which women enter marital union determines the timing of exposure to the risk of conception. With the dissemination of family planning (which we will look at in the next section), the association between early marriage and fertility has become weaker, but it still holds that women who marry early are more likely to have large families (United Nations, 1987).

Specifically, in this section, we examine women's marriage patterns in terms of (1) the singulate mean age at marriage (SMAM), (2) the proportion ever-married by age 50, and (3) the difference between men and women in age at marriage (see Table 7). The first variable, the SMAM, is the average age at first marriage calculated on the basis of a hypothetical cohort of women (Hajnal, 1953) and this is an indicator of women's average age at first marriage. The second represents the prevalence of marriage among the female population; and the third is an indirect measure of the status of women if it can be regarded that women are more likely to have more personal autonomy if they are closer in age to the husband. The concept of "marriage" referred to in this paper includes both legal and consensual marital unions.

TABLE 7. Singulate Mean Age at Marriage (SMAM) for Women, Difference in SMAM between Men and Women, and Percentage of Women Ever-Married by Age 50, Countries with Available Data in Asia and the Pacific, 1960 or Later

Subregion and country/area	Year of census or survey	SMAM	Difference in SMAM bet. men and women	Proportion ever-married by age 50
EASTERN ASIA				
China	1981	22.8	n.a.	n.a.
	1982	22.4	2.7	99.8
Hong Kong	1961	21.9	6.8	92.6
	1971	23.8	6.4	96.2
	1981	25.3	3.4	97.6
	1986	26.5	n.a.	97.6
Japan	1960	25.0	2.4	98.1
	1965	24.8	2.6	97.0
	1970	24.6	2.9	96.0
	1975	24.5	3.1	95.1
	1980	25.1	3.5	95.6
	1985	25.8	3.7	95.7
Republic of Korea	1960	21.3	4.0	99.9
	1966	22.8	3.9	99.9
	1970	23.3	3.9	99.9
	1975	23.7	3.7	99.8
	1980	24.1	3.2	99.7
	1985	24.7	n.a.	99.6
SOUTH-EASTERN ASIA				
Burma	1973	21.3	2.9	94.3
	1983	22.4	2.2	94.1
Democratic Kampuchea	1962	21.3	3.0	97.9
Indonesia	1971	19.3	4.5	99.0
	1976	19.4	n.a.	n.a.
	1980	20.0	4.1	98.7
Malaysia	1970	22.3	3.5	98.7
	1974	23.1	n.a.	n.a.
	1980	23.5	3.1	97.4
Philippines	1960	22.2	2.8	92.9
	1970	22.8	2.6	93.3
	1975	23.2	n.a.	n.a.
	1980	22.4	2.9	93.1
Singapore	1966	23.6	n.a.	97.0
	1970	24.3	3.5	96.9
	1980	26.2	2.2	96.5

TABLE 7-Continued

Subregion and country/area	Year of census or survey	SMAM	Difference in SMAM bet. men and women	Proportion ever-married by age 50
Thailand	1960	22.1	2.7	97.4
	1970	22.0	2.7	97.0
	1975	22.5	n.a.	n.a.
	1980	22.7	2.0	96.2
SOUTHERN ASIA				
Afghanistan	1979	17.8	7.5	99.1
Bangladesh	1976	16.3	n.a.	n.a.
	1981	16.7	7.2	99.1
India	1961	16.8	5.2	99.5
	1971	17.7	5.0	99.6
	1981	18.7	4.7	99.6
Iran	1966	18.5	6.5	99.2
	1976	19.7	4.5	99.2
Nepal	1961	16.6	3.5	99.4
	1971	17.5	3.6	99.2
	1981	17.9	3.6	96.8
Pakistan	1961	16.7	6.6	99.0
	1968	19.6	5.9	99.2
	1975	19.8	n.a.	n.a.
	1981	19.8	5.1	97.9
Sri Lanka	1963	22.1	5.8	96.1
	1971	23.5	4.6	95.9
	1975	25.1	n.a.	n.a.
	1981	24.4	3.5	95.6
WESTERN ASIA				
Iraq	1965	20.7	5.0	96.9
	1977	20.8	4.4	97.1
Israel	1961	21.4	4.3	97.5
	1972	22.8	2.6	97.7
	1983	23.5	2.6	97.1
Jordan	1976	21.6	n.a.	n.a.
	1981	22.6	4.2	97.3
Kuwait	1970	19.4	6.8	96.6
	1975	20.5	5.9	96.8

TABLE 7-Continued

Subregion and country/area	Year of census or survey	SMAM	Difference in SMAM bet. men and women	Percentage ever-married by age 50
Syrian Arab Republic	1960	24.8	5.8	97.3
	1970	20.7	5.2	97.5
	1978	22.1	n.a.	n.a.
Turkey	1960	19.2	3.7	98.3
	1970	20.3	3.6	98.4
	1975	20.5	3.1	98.3
	1978	20.5	n.a.	n.a.
	1980	20.6	3.0	98.6
United Arab Emirates	1975	18.0	7.9	97.5
Yemen	1981	17.8	4.4	98.5
OCEANIA				
Australia	1961	21.3	4.2	92.6
	1966	21.6	3.4	94.1
	1971	21.5	2.9	95.1
	1976	22.0	2.4	95.4
	1981	23.5	2.2	95.8
New Zealand	1961	21.3	4.0	91.7
	1966	21.4	3.3	93.3
	1971	21.3	2.7	94.5
	1976	21.5	n.a.	n.a.
	1981	22.7	2.2	95.3
Fiji	1966	21.1	3.5	96.8
	1976	21.6	2.9	96.9

Note: n.a. refers to the data not available.

Sources: United Nations (1982) World Population Trends and Policies: 1981 Monitoring Report. Volume 1; _____(1985) World Population Trends, Population and Development Interrelations and Population Policies: 1983 Monitoring Report. Volume 1; _____(1988) World Population Trends and Policies: 1987 Monitoring Report; National Bureau of Statistics, Republic of Korea (1989) Outline and Major Results of the 1985 Population & Housing Census in the Republic of Korea; Institute of Population Problems, Japan Ministry of Health and Welfare (1990) Latest Demographic Statistics 1989.

From Table 7, we can first see that the majority of the Asian-Pacific countries, where the data are available, show the general tendency of increasing age at first marriage. At the same time, however, the Region is also characterized by a wide range of variation in women's age at first marriage:

some countries in Eastern and South-eastern Asian countries (e.g., Japan, Hong Kong and Singapore) had the SMAM of over 25 years old in the early 1980s while most of the countries in Southern Asia and some countries in Western Asia had the SMAM of less than age 20 during the same period. Generally speaking, Eastern Asian countries and, though to a lesser extent, South-eastern Asian countries exhibit relatively late marriage whereas the prevalence of adolescent marriages can be seen in many Southern Asian and some Western Asian countries. Such Oceanian countries as Australia, New Zealand and Fiji are in the middle of the range. It also has to be added that in the two subregions with prevailing early marriage, there are some exceptions: Sri Lanka (which is the demographic "honor student" in Southern Asia), Israel, Jordan and Syrian Arab Republic.

From these findings on women's age at first marriage and those on fertility levels and trends examined in the previous section, we then notice the negative relationship between fertility levels and marriage timing. The countries with patterns of late marriage are those who experienced fertility transition and now have very low levels of fertility, and the countries with the prevalence of adolescent marriage are those who still have high fertility rates. Therefore, it is implied that decreases in adolescent marriages and increases in women's age at marriage are important factors to trigger fertility declines in many Southern and Western Asian countries having high fertility rates.

While the timing of marriage varies widely across subregions and countries, the prevalence of marriage among women as measured by the proportion ever-married by age 50 rarely falls below 95 percent in Asia and the Pacific (the Philippines being the only exception). This prevalence level is considerably higher than the levels in European countries (at around 92-93 percent) and Latin American countries (often less than 90 percent) (United Nations, 1988). In this sense, we can regard "universal marriage" as a characteristic of Asian-Pacific marriage patterns.

Turning to age differences between men and women at first marriage, there are acute intercountry variations and it is therefore difficult to see general trends. Nevertheless, we notice from Table 7 that most of the South-eastern Asian and Oceanian countries listed have relatively small gender differentials in the SMAM while most of the countries with the differentials over 5 years are located in Southern Asia (e.g., Afghanistan, Bangladesh and Pakistan) or in Western Asia (e.g., Kuwait, Syria and United Arab Emirates).

If we can assume that this variable is a measure of the status of women, it can then be considered that South-eastern and Oceanian women are likely to enjoy relatively high social status, whereas their counterparts in Southern or Western Asia are often deprived of such standing.

In summary, although there are general trends of increasing age at first marriage and of universal marriage in the Region as a whole, patterns of marriage timing in the subregions exhibit a wide range of variation. Eastern and South-eastern Asian countries show tendencies of relatively late marriage for women while adolescent marriage prevails in many Southern and Western Asian countries. Oceanian countries are somewhere in the middle of this continuum in their timing of women's entry into matrimony. Since early marriage (particularly adolescent marriage) seems to be related closely to high fertility, it is important as well as necessary for not only women themselves but also societies as a whole to make efforts to delay women's entry into marriage. Findings on sex-differentials in age at first marriage also indicated that women in South-eastern Asian countries may receive a relatively high status in their societies, whereas women in many Southern and Western Asian countries may suffer from the lack of such a status.

VI. FAMILY PLANNING

Another important demographic determinant of fertility is the degree of fertility regulation within marriage. Of the major "proximate determinants" of marital fertility, in this section, we focus on contraception.[4] Contraception is a "deliberate marital fertility control factor" and it is primarily responsible for a wide variation in the level of marital fertility among populations. Specifically, this section examines three major aspects of contraceptive practice: (1) the level of knowledge about contraception; (2) the percentage of currently and/or ever using contraception among married couples with the wife in the reproductive ages; and (3) the prevalence and types of contraceptive method employed (i.e., contraceptive method mix). Most of the data for this section are taken from nationally representative sample surveys of married women at reproductive ages.

(1) Contraceptive Knowledge and Use

Table 8 shows the percentage of married women who reported hearing of at least one contraceptive method, the percentage who ever used contraception, and the percentage currently using contraception among couples with the wife

TABLE 8. Levels of Knowledge, Ever-Use, and Current Use of Contraception, Estimates Based on Surveys, Countries with Available Data in Asia and the Pacific

Subregion and country/area	Year of survey	Age range of to which estimates refer	Percentage of ever-married who heard of any contra. method	Percentage of currently married who:	
				Ever used contraception	Were currently using contraception
EASTERN ASIA					
China	1982	15-49	..	..	69
Hong Kong	1967	15-49	..	..	43
	1972	15-49	..	65	50
	1977	15-49	99	88	72
	1982	15-49	100	90	80
Japan	1950	15-49	..	29	20
	1955	15-49	..	52	34
	1959	15-49	..	63	43
	1965	15-49	..	72	56
	1969	15-49	..	71	52
	1975	15-49	..	82	61
	1979	15-49	..	84	62
	1985	15-49	..	84	63
Republic of Korea	1966	15-44	..	27	20
	1971	15-44	..	..	25
	1974*	15-49	98	59	35
	1976	15-44	..	63	44
	1978	20-44	..	..	49
	1979	15-44	..	76	54
	1982	15-44	100	81	58
	1985	15-44	100	84	70
SOUTH-EASTERN ASIA					
Indonesia	1973	15-44	56	12	10
	1976*	15-49	80	38	26
	1979	15-49	..	..	31
	1980	10-49	78	..	27
	1985	Under 50	..	..	38
	1987	15-49	..	..	49
Malaysia	1966/67	15-44	..	..	9
	1970	15-44	..	27	16
	1974*	15-49	92	50	33
	1984	15-49	99	77	51
Philippines	1968	15-44	63	19	16
	1973	15-49	..	28	18
	1978*	15-49	94	58	36
	1983	15-44	94	..	33
	1986	15-49	..	..	44

TABLE 8-Continued

Subregion and country/area	Year of survey	Age range of to which estimates refer	Percentage of ever-married who heard of any contra. method	Percentage of currently married who: Ever used contraception	Percentage of currently married who: Were currently using contraception
Singapore	1973	15-44	..	77	60
	1977	15-44	98	86	71
	1982	15-44	100	..	74
Thailand	1969/70	15-44	..	19	15
	1972/73	15-44	..	34	26
	1975*	15-49	97	48	33
	1978/79	15-44	..	69	53
	1981	15-49	99	76	56
	1984	15-49	100	82	63
Viet Nam	1982	15-49	..	..	21
SOUTHERN ASIA					
Afghanistan	1972/73	15-44	4	..	2
Bangladesh	1975/76*	15-49	83	15	8
	1979	15-49	95	20	13
	1981	15-49	..	..	19
	1983	Under 50	98	33	22
	1985	15-49	..	..	25
India	1970	15-44	..	18	14
	1980	15-49	95	39	34
Iran	1982	15-49	..	..	23
Nepal	1976*	15-49	22	4	2
	1981	15-49	52	9	7
	1986	15-49	50	17	15
Pakistan	1968	15-49	97	12	6
	1975*	15-49	75	10	5
	1979/80	Under 50	26	5	3
Sri Lanka	1975*	15-49	92	45	32
	1982	15-49	91	..	55
WESTERN ASIA					
Iraq	1974	15-49	..	38	14
Jordan	1972	15-49	94	49	22
	1976*	15-49	97	47	25
	1983	15-49	97	..	26

TABLE 8-Continued

Subregion and country/area	Year of survey	Age range of to which estimates refer	Percentage of ever-married who heard of any contra. method	Percentage of currently married who: Ever used contraception	Were currently using contraception
Lebanon	1971	15-49	91	67	53
Syrian Arab Republic	1978*	15-49	78	34	20
Turkey	1960	15-49	..	..	5
	1968	15-49	..	..	32
	1978	15-49	88	56	38
Yemen	1979*	Under 50	25	3	1
OCEANIA					
Fiji	1970	15-49	..	..	33
	1974*	15-49	100	69	41
Papua New Guinea	1982	15-49	..	..	5

* Estimated from the World Fertility Survey (WFS) data.

Sources: United Nations (1982) World Population Trends and Policies: 1981 Monitoring Report. Volume 1; _____(1985) World Population Trends, Population and Development Interrelations and Population Policies: 1983 Monitoring Report. Volume 1; _____(1988) World Population Trends and Policies: 1987 Monitoring Report; World Bank (1985) World Development Report 1985. New York: Oxford University Press; Population Problems Research Council (1986) Summary of Eighteenth National Survey on Family Planning. Tokyo: Mainichi Newspapers; Palmore, James A. and Rodolfo A. Bulatao, (1989) "The contraceptive method mix: an overview," Pp. 3-24 in R. Bulatao, J.A. Palmore and S. Ward (eds.), Choosing A Contraceptive: Method Choice in Asia and the United States. Boulder, Corolado: Westview Press.

in the reproductive ages. Although the data availability on contraceptive knowledge is rather limited, we can generally say that while the knowledge is still quite limited in some of the least economically developed countries in Southern and Western Asia (e.g., Nepal and Yemen), it is also clear that contraceptive information has spread rapidly in most of the countries in Asia and the Pacific, owing largely to the efforts of organized family planning programs.

Concerning the prevalence of actual contraceptive use, we can first notice from Table 8 that, in general, the Region shows a tendency of rapidly increasing contraceptive prevalence, owing to planned efforts and socioeconomic development. However, there is also a wide variation in contraceptive prevalence levels by subregions and countries in Asia and the Pacific. Eastern Asia is again the "forerunner" in contraceptive use, all countries with information having very high levels (more than 60 percent) of prevalence. In

South-eastern Asia, with the exception of Viet Nam, most of the countries with information show moderate (around 45-50 percent in Indonesia, Malaysia and the Philippines to high contraceptive prevalence (Singapore and Thailand). However, it is also likely that levels of use are lower in countries whose data are not available such as Burma, Laos and Kampuchea.

In Southern Asia, except for the 55 percent prevalence level in Sri Lanka, contraceptive prevalence is generally low (Pakistan and Afghanistan being extreme examples) although India, with a 34 percent prevalence rate in 1980, shows a potential to be a country with moderate-level prevalence. In Western Asia, the prevalence level varies from a very low (1 percent in Yemen) to moderate (over 50 percent in Lebanon). Turkey (38 percent in 1978) is also in the path to reach a moderate level, but many other countries in the subregion are thought to have low contraceptive prevalence. In Oceania, although the data are not available, Australia and New Zealand are thought to have high contraceptive prevalence, given their levels of socioeconomic development and fertility. Turning to data available for Melanesia, Fiji has a moderate level of contraceptive prevalence while that of Papua New Guinea is low.

In summary, while the overall trend of contraceptive use in Asia and the Pacific is that of significant increase in recent years, contraceptive prevalence levels in Asia and the Pacific show a wide variation from very high (60 percent or higher) to very low (less than 10 percent). Most countries with high prevalence levels are located in Eastern and South-eastern Asia. A number of countries in Southern and Western Asia still show very low levels of contraceptive use, indicating the strong need to disseminate contraceptive information as well as devices through organized efforts.

(2) Contraceptive Method Used

As contraceptive prevalence levels in Asia and the Pacific are characterized by diversity among subregions and countries, even wider diversity is evident in contraceptive method choice in the Region, both today and in the past. Table 9 shows the percent distribution of current contraceptive method mix for the Asian-Pacific countries with available data. The methods listed in the table can be divided into two broad groups, "modern" and "traditional." Modern methods include sterilization (both male and female), intra-uterine devices (IUD), and oral contraceptives (the pill); traditional methods are condom and such "other methods" as rhythm, withdrawal, foam and injectables.

From Table 9, we can see that the majority of countries in the Asian-Pacific region rely heavily, or at least considerably, on modern methods. The notable exceptions are in Japan, where around 80 percent of users were using condom (the combined use of condom and rhythm was also popular) in the mid-1980s; Singapore, where approximately one-third of the users were depending on condom in the early 1980s; the Philippines, where rhythm and withdrawal were

TABLE 9. Percent Distribution of Current Contraceptive Use by Method Used, Estimates Based on Surveys, Countries with Available Data in Asia and the Pacific

Subregion and country/area	Year of survey	All methods	Sterilization			Pill	IUD	Condom	Other methods
			Male	Female	Total				
EASTERN ASIA									
China	1982	100	10	25	35	8	50	2	4
Hong Kong	1967	100	2	21	23	25	20	11	21
	1972	100	u.	u.	23	36	10	7	24
	1977	100	u.	u.	26	32	4	18	31
	1982	100	2	27	29	27	5	20	19
Japan*	1950	100	u.	u.	u.	u.	u.	36	87#
	1955	100	u.	u.	4	u.	u.	57	86#
	1959	100	u.	u.	6	u.	u.	58	90#
	1965	100	u.	u.	6	u.	4	65	71#
	1969	100	u.	u.	5	2	7	68	62#
	1975	100	u.	u.	5	3	9	78	51#
	1979	100	1	3	4	3	8	81	36#
	1985	100	2	6	8	2	7	81	33#
Republic of Korea	1966	100	u.	u.	12	3	46	15	26
	1971	100	9	4	13	28	29	13	17
	1974	100	9	5	14	24	23	15	24
	1976	100	10	9	18	18	24	14	26
	1979	100	11	27	37	13	18	10	22
	1982	100	9	40	49	9	12	12	18
	1985	100	13	45	57	6	11	10	16
SOUTH-EASTERN ASIA									
Indonesia	1976	100	0	1	1	63	22	8	6
	1979	100	0	1	1	53	20	3	21
	1980	100	a	a	a	53	25	3	18
	1985	100	1	3	4	40	32	2	22
	1987	100	0	7	7	31	29	3	30
Malaysia	1966/67	100	a	a	a	46	2	9	42
	1970	100	a	a	a	75	a	a	25
	1974	100	1	10	11	51	2	9	27
	1984	100	b	15	u.	23	b	19	43

u.= unavailable.
a = Included with other methods.
b = Included with condom.

* Figures do not add to 100 because women using a combination of methods are shown under each method.
# A high proportion of other methods in Japan is due mainly to rhythm.

TABLE 9-Continued

Subregion and country/area	Year of survey	All methods	Sterilization			Pill	IUD	Condom	Other methods
			Male	Female	Total				
Philippines	1968	100	0	0	0	8	6	a	86**
	1973	100	a	a	a	40	15	4	41**
	1978	100	2	13	15	12	6	10	56**
	1983	100	1	28	29	17	8	6	39**
	1986	100	1	23	24	14	5	3	54**
Singapore	1973	100	u.	u.	18	29	5	23	24
	1977	100	1	29	30	24	4	29	12
	1982	100	1	30	31	16	a	33	21
Thailand	1969/70	100	14	37	51	26	15	a	8
	1972/73	100	11	26	37	40	17	0	6
	1975	100	6	20	26	41	18	1	14
	1978/79	100	7	24	41	41	7	4	16
	1981	100	7	32	39	34	7	3	17
	1984	100	7	36	43	31	8	3	16
SOUTHERN ASIA									
Bangladesh	1975/76	100	6	4	10	37	5	9	39
	1979	100	7	20	27	30	2	12	29
	1981	100	4	21	25	19	2	8	45
	1983	100	6	32	38	17	5	8	31
	1985	100	u.	u.	37	20	6	7	29
India	1970	100	26	20	46	2	5	18	29
	1980	100	u.	u.	63	3	1	12	21
Nepal	1976	100	67	4	71	17	4	8	0
	1981	100	42	34	76	16	1	6	1
	1986	100	40	44	84	7	1	4	3
Pakistan	1975	100	2	17	19	19	11	19	32
Sri Lanka	1975	100	2	29	31	5	15	7	42
	1982	100	7	31	38	5	5	6	47
WESTERN ASIA									
Iraq	1974	100	0	4	4	60	4	10	22
Jordan	1972*	100	u.	u.	4	63	4	5	40
	1976	100	0	7	7	47	8	6	31
	1983	100	0	15	15	30	32	2	21

u.= unavailable.
a = Included with other methods.

* Figures do not add to 100 because women using a combination of methods are shown under each method.
** A high proportion of other methods in the Philippines is due mainly to rhythm and withdrawal.

TABLE 9-Continued

Subregion and country/area	Year of survey	All methods	Sterilization			Pill	IUD	Condom	Other methods
			Male	Female	Total				
Lebanon	1971	100	0	2	2	26	2	13	66*
Syrian Arab Republic	1978	100	0	2	2	59	3	3	33
Turkey	1968	100	u.	u.	u.	5	5	13	77##
	1978	100	0	1	1	16	8	8	67##
OCEANIA									
Fiji	1974	100	0	39	39	20	12	15	16

u.= unavailable.
a = Included with other methods.

A high proportion of other methods in Turkey is due mainly to withdrawal.

Sources: United Nations (1985) World Population Trends, Population and Development Interrelations and Population Policies: 1983 Monitoring Report. Volume 1; _____(1988) World Population Trends and Policies: 1987 Monitoring Report; Japanese Organization for International Cooperation in Family Planning (1977) Fertility & Family Planning in Japan. Tokyo: JOICFP; Population Problems Research Council (1988) Summary of Nineteenth National Survey on Family Planning. Tokyo: Mainichi Newspapers; Palmore, James A. and Rodolfo A. Bulatao, (1989) "The contraceptive method mix: an overview," Pp. 3-24 in R. Bulatao, J.A. Palmore and S. Ward (eds.), Choosing A Contraceptive: Method Choice in Asia and the United States. Boulder, Colorado: Westview Press.

used by about one half of the users in the mid-1980s; and Turkey, where almost two-thirds of the users were relying on withdrawal.

We can notice that among modern methods, popularity of one method tends to increase/decrease at the expense/gain of the other method. The most dominant pattern is the increasing use of female sterilization with a comparable decline in the use of the IUD and/or the pill. Such a shift is seen in Hong Kong, South Korea, the Philippines, Thailand, Bangladesh, Nepal and Sri Lanka. The shift of popularity from the pill to female sterilization and IUD is also observed in Indonesia and Jordan. This increasing popularity of sterilization, particularly female sterilization, is also seen in many other parts of the world, accounting for nearly 30 percent of global contraceptive use around 1980 (United Nations, 1984; Ross et al., 1985). It also has to be added that male sterilization is much less common than female sterilization, and the difference is increasing rapidly. The rapid increase in the popularity of female sterilization in the Region started in the late 1970s, owing probably to technological advances which made female sterilization techniques cheaper, easier and safer (Liskin et al., 1983; Ross et al., 1985). Yet, even with

these advancements, female sterilization is still more expensive, difficult and troublesome compared to a vasectomy. Reasons why sterilization is a dominant female procedure may lie in the difference in service available (i.e., a lack of services for men) and in negative attitudes of society, policymakers, and men themselves toward male sterilization.

In summary, while there is a wide variety in contraceptive method mix among countries in Asia and the Pacific, we also see increasing reliance on modern methods such as sterilization, IUD and the pill in many countries in the Region. Among the modern methods, the increasing popularity of female sterilization over IUD and the pill is also observed.

Patterns of contraceptive method mix are therefore the product of contraceptive availability (which includes technological, economic/ financial, and sociocultural availability), which is an external and objective factor, and personal preference, which is a subjective factor (Palmore and Bulatao, 1989). In this sense, patterns of contraceptive use are partly a reflection of different levels of availability of different, especially modern, methods. In the next section, we examine policies on fertility in terms of governments' perceptions of fertility levels and intervention to change them.

VII. POLICIES ON FERTILITY

Table 10 summarizes government perceptions concerning acceptability of the current fertility level and desirability of intervention, as well as government policies concerning effective use of modern contraceptive methods in countries of Asia and the Pacific. Putting governments' perceptions and policies on fertility in the broader demographic and socioeconomic context, we examine them in terms of their actual fertility (TFR) levels during 1980-85 (see Table 6) and level of development, as well as by subregions.

From Table 10, we can first notice that the three developed countries in Asia and the Pacific (Japan, Australia and New Zealand) all indicated their fertility levels as appropriate and showed no need of government intervention, though they all provide some indirect support for prevalence of modern contraceptives. This is understandable and seem appropriate, considering the current low levels of their fertility and the historical fact that their fertility transition started before or immediately after World War II, which made active family planning efforts by the government unnecessary.

Turning to the developing countries in the Region, the majority of Eastern and South-eastern Asian countries perceive their fertility levels as too high and intervention as necessary, and actually provide direct support for provision of modern contraceptives. The exceptions are Singapore, Mongolia, Burma, Kampuchea and Laos. Among them, however, the situation of Sigapore is

TABLE 10. Government Perceptions and Policies Concerning the Current Levels of Fertility and Desirability of Intervention and Government Policies on Provision of Modern Contraceptive Methods as Assessed in 1986, Countries with Available Data in Asia and the Pacific

Subregion and country/area	Acceptability of the fertility level	Desirability of intervention	Provision of modern contraceptives
EASTERN ASIA			
China	Rates too high	Intervention to lower rates appropriate	Direct support provided
Japan	Rates satisfactory	Intervention not appropriate	Indirect support provided
Republic of Korea	Rates too high	Intervention to lower rates appropriate	Direct support provided
Mongolia	Rates too low	Intervention to raise rates appropriate	Direct support provided
SOUTH-EASTERN ASIA			
Burma	Rates satisfactory	Intervention not appropriate	Indirect support provided
Democratic Kampuchea	Rates too low	Intervention to raise rates appropriate	Access limited
Indonesia	Rates too high	Intervention to lower rates appropriate	Direct support provided
Laos	Rates satisfactory	Intervention to maintain rates appropriate	Access limited
Malaysia	Rates satisfactory	Intervention to maintain rates appropriate	Direct support provided
Philippines	Rates too high	Intervention to lower rates appropriate	Direct support provided
Singapore	Rates too low	Intervention to raise rates appropriate	Direct support provided
Thailand	Rates too high	Intervention to lower rates appropriate	Direct support provided
Viet Nam	Rates too high	Intervention to lower rates appropriate	Direct support provided
SOUTHERN ASIA			
Afghanistan	Rates too high	Intervention not appropriate	Direct support provided
Bangladesh	Rates too high	Intervention to lower rates appropriate	Direct support provided
Bhutan	Rates satisfactory	Intervention not appropriate	Direct support provided
India	Rates too high	Intervention to lower rates appropriate	Direct support provided
Iran	Rates satisfactory	Intervention not appropriate	Indirect support provided
Nepal	Rates too high	Intervention to lower rates appropriate	Direct support provided
Pakistan	Rates too high	Intervention to lower rates appropriate	Direct support provided
Sri Lanka	Rates too high	Intervention to lower rates appropriate	Direct support provided
WESTERN ASIA			
Bahrain	Rates satisfactory	Intervention not appropriate	Direct support provided
Iraq	Rates too low	Intervention to raise rates appropriate	Access limited
Israel	Rates too low	Intervention to raise rates appropriate	Direct support provided
Jordan	Rates satisfactory	Intervention not appropriate	Indirect support provided
Kuwait	Rates too low	Intervention to raise rates appropriate	No support provided
Lebanon	Rates satisfactory	Intervention not appropriate	Indirect support provided
Oman	Rates satisfactory	Intervention to maintain rates appropriate	No support provided
Qatar	Rates satisfactory	Intervention to maintain rates appropriate	No support provided
Saudi Arabia	Rates satisfactory	Intervention to maintain rates appropriate	Access limited
Syrian Arab Republic	Rates satisfactory	Intervention not appropriate	Direct support provided
Turkey	Rates too high	Intervention to lower rates appropriate	Direct support provided
United Arab Emirates	Rates too low	Intervention to raise rates appropriate	No support provided
Yemen	Rates too high	Intervention to lower rates appropriate	Direct support provided

TABLE 10-Continued

Subregion and country/area	Acceptability of the fertility level	Desirability of intervention	Provision of modern contraceptives
OCEANIA			
Australia	Rates satisfactory	Intervention not appropriate	Indirect support provided
New Zealand	Rates satisfactory	Intervention not appropriate	Indirect support provided
Fiji	Rates too high	Intervention to lower rates appropriate	Direct support provided
Papua New Guinea	Rates too high	Intervention not appropriate	Direct support provided
Samoa	Rates too high	Intervention to lower rates appropriate	Direct support provided

Source: United Nations (1988) World Population Trends and Policies: 1987 Monitoring Report. New York: United Nations.

completely different from the others. As we saw in Section III, Singapore now suffers from fertility considerably below-replacement level (the TFR during 1980-85 being 1.69) and the government is currently making organized efforts to reverse the direction of fertility change by providing monetary incentives (Saw, 1987). However, the remaining "exceptionable" countries in the subregions (Mongolia, Burma, Kampuchea and Laos) seem to have inappropriate perceptions and policies concerning their fertility levels. They regard their fertility rates as satisfactory or even too low and they see either no need for intervention or need to raise fertility although all of them had the TFR of around 5 per women or higher during 1980-85.

In Southern Asia, in general, the governments seem to have correct perceptions concerning their fertility levels and need for intervention. Bhutan and Iran being the only exceptions, most of the Southern Asian countries see their fertility rates as too high, perceive desirability for intervention, and do in fact provide direct support for dissemination of modern contraceptives. Their problems seem to lie, however, in the ineffectiveness of their family planning programs. Except for Sri Lanka which has succeeeded in reducing its fertility to a relatively low level, they had the TFR of around 5-7 per woman during 1980-85 (see Table 6). Moreover, as indicated in Section V, their contraceptive prevalence rates are the lowest in the Region. In this sense, it can be said that effectiveness of family planning programs in many Southern Asian countries need to be improved through further efforts to increase the prevalence levels of modern contraceptives.

Similarities to Southern Asia are seen in the situations in developing countries of Oceania. They all perceive their fertility rates as too high and

provide direct support for prevalence of modern contraceptives. However, we can also notice a difference between Fiji and the other countries. Like Sri Lanka, Fiji had the TFR of 3.5 and moderate level of contraceptive prevalence (over 40 percent). In this sense, Fiji's family planning program has been successful. On the other hand, like many countries in Southern Asia, the programs of Papua New Guinea and Polynesia (Samoa) need to be improved in their effectiveness.

Western Asia appears to have a different kind of problem from their Southern Asian counterparts although both subregions have very high fertility levels. Except for Israel, Lebanon and Turkey all of which have relatively low fertility (TFR being less than 4 per woman during 1980-85), the governments of all the other countries in the subregion perceive their fertility rates as satisfactory or too low despite the fact that their TFRs were often well over 5 per woman during 1980-85. They also see either no need for intervention or desirability of intervention to increase rates. Furthermore, many of them either restrict their people's access to modern contraceptives or provide no support for dissemination of modern contraceptives. It seems necessary for the governments of these Southern Asian countries to reassess their perceptions of fertility rates and intervention needs.

In summary, government perceptions and policies on fertility are thought to be in a correct path in all the developed countries in the Region as well as the majority of Eastern and South-eastern Asian countries. On the other hand, a few countries in South-eastern Asia and most of the Western Asian countries seem to have inappropriate perceptions concerning their fertility levels, necessities for intervention, and support for provision of modern contraceptives. Although most Southern Asian countries and developing countries in Oceania have relevant perceptions of their fertility levels as well as the need of government direct support for prevalence of modern contraceptives, their family planning programs seem to suffer from the lack of effectiveness in reducing their fertility.

VIII. SUMMARY AND DISCUSSION

The overall demographic situations in Asia and the Pacific are characterized as follows: Population growth is under control; mortality has de-

clined steadily, though not dramatically; fertility is declining substantially; the average age at first marriage is increasing; the overall contraceptive use is increasing significantly in recent years; and the prevalence of modern methods such as sterilization, the IUD, and the pill is rising in many countries.

This rosy demographic picture notwithstanding, the Region is also characterized by wide subregional and intercountry variations. Eastern Asia is a region known for its demographic success. Its population growth is decelerating and now at very low levels with very low mortality and fertility. Their low fertility rates are due primarily to late marriage for women and high contraceptive prevalence levels, which are often brought about by effective family planning programs.

South-eastern Asia is also doing well in its demographic transition. Like Eastern Asia, though not as successful as Eastern Asia, many South-eastern Asian countries are experiencing substantial fertility declines and currently have relatively low fertility. The mean age at first marriage for women is relatively high and modern contraceptives are widespread in many countries in the subregion. The exceptions from this demographic success achieved by Eastern and South-eastern Asian countries are countries such as Mongolia, Burma, Kampuchea and Laos; they have problems similar to those of many Western Asian countries with high fertility rates. Suggestions for demographic improvement for these countries will be made later when we discuss the needs of Western Asian countries.

While Eastern and South-eastern Asia are in general doing well demographically, together with the two developed countries in Oceania (Australia and New Zealand), most Eastern Asian countries and many South-eastern countries now have, or are soon expected to have, a problem of below-replacement fertility. Although the mechanism producing this scarcity of births is not yet understood fully, this is an important research, as well as a policy issue, that needs to be addressed in a broader social context.

In clear contrast to Eastern Asia, Southern Asia has made relatively little demographic progress: its population growth is still quite rapid, owing mainly to very high fertility rates. This high fertility is due partly to early marriage prevailing in many countries in the subregion, and partly to low levels of contraceptive prevalence. These in turn indicate the needs for changes in female nuptiality patterns as well as the strong need to disseminate contraceptive information and devices effectively through organized

efforts. More specifically, in Southern Asia, with the notable exception of Sri Lanka (in terms of her demographic achievements, Sri Lanka is much like many South-eastern Asian countries with relatively low fertility), it is important as well as necessary for not only women themselves but also societies as a whole to make efforts to delay women's entry into marriage since adolescent marriage seems to be related closely to very high fertility. Concerning family planning efforts, although the governments of most countries in the subregion seem to be aware of their high fertility levels and the need for intervention and provision of modern contraceptives, their problem seems to lie in the ineffectiveness of the program in actually reducing fertility. This indicates the need to seek ways for more feasible implementation of family planning services. In addition, women in many Southern Asian countries suffer from high mortality levels due probably to higher female infant/child mortality caused by unfavorable treatment and care of female infants and children, combined with high fertility. This implies the need for intervention to improve health as well as social status of females, especially that of female infants and children.

Western Asia's demographic problems are similar to Southern Asia: high population growth rates caused by very high fertility, which is in turn due partly to early marriage, but probably more to low contraceptive prevalence. Unlike Southern Asia, however, problems of family planning in most of the Western Asian countries seem to lie in their inappropriate perceptions concerning fertility levels, necessities for intervention and support for dissemination of modern contraceptives. This in turn indicates the strong need to organize family planning programs, if there are any, based on accurate perceptions of their demographic conditions and needs in order to disseminate contraceptive information as well as devices through appropriate organized efforts. The exceptions from these demographic conditions in the subregion are Israel, Lebanon and Turkey, all of which show characteristics similar to many South-eastern Asian countries and Sri Lanka.

In Oceania, population growth of Australia and New Zealand has been decelerating and is currently at low levels, owing to their low mortality and fertility. However, with a probable exception of Fiji (which has similar demographic characteristics to Sri Lanka and some South-eastern Asian countries), developing countries or areas in the subregion seem to be having problems in reducing their fertility, owing probably to low contraceptive prevalence. Although their fertility levels are somewhat lower than those of

Southern Asian countries, they also have similar problems in effectiveness of their family planning programs.

In conclusion, in this paper, we saw that the timing and duration when women assume the roles of wife and mother have profound impacts on the levels of fertility as well as the tempo of fertility decline of a population. Marriage and reproduction determine, at least partly, the status of women in society. Putting it differently, they are important dimensions of women's status in their society. Since fertility is closely related to socioeconomic development, it is important to understand the demographic and social significance of marriage and motherhood from women's perspective.

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NOTES

1. The annual growth rate of 4 percent means doubling of a population in about 18 years and the annual rate of 3.5 percent means the doubling in about 21 years. The annual rate of population change is computed by utilizing the equation:

$$Pt = Po\ (1+r)^t$$ where r is the growth rate,

and t is the number of years.

2. For example, setting the long-term demographic goal as stabilization of the population early in the twenty-first century, Singapore tried to reduce her fertility to the replacement-level and then to maintain that level. Although replacement-level fertility was successfully accomplished in 1975, however, fertility kept declining at a below-replacement level (Saw, 1987). Singapore then implemented a program in 1987 to motivate women to have more children with considerable monetary incentives. The effects of this program are not yet shown in her fertility. In addition, some European countries, particularly in Eastern Europe, have also tried to reverse their fertility decline by adoping pronatalist policies. These measures seem to succeed for a while, but after some years the decline started again (Bourgeois-Pichat, 1986).

3. Changes in the TFR can mathematically be decomposed into changes in the age pattern of women's marriage and marital fertility. For details, see Kitagawa (1955) and Das Gupta (1978).

4. Proximate determinants of fertility are behavioral and biological factors which directly affect fertility. Named by Bongaarts (1978), the proximate determinants of fertility are also called, "intermediate fertility variables." According to him, most of the variation in fertility among populations is due to differences in proportion married, contraceptive efficacy, prevalence of induced abortion, and lactation practice. Marriage is the "exposure" factor, contraception and induced abortion are "deliberate marital fertility control factors", and lactation is "natural marital fertility factor." Among these four, marriage and contraception are found to be the two most important factors. For more details, see Bongaarts (1978, 1980).

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