

Chapter I

BACKGROUND INFORMATION

The countries covered in this report display a wide spectrum of demographic characteristics and of data collection experience. The WFS surveys, roughly half of which took place in the mid 1970s and half of which took place in the late 1970s and early 1980s, are an important source of information on fertility. For about 20 per cent of the countries, WFS data represent the only source for fertility estimates for the period around the time of the survey, and for roughly one third, WFS provides, through its retrospective maternity history, the only measure of recent trends. In most cases, although other estimates exist, the estimates of recent fertility derived from WFS data provide a means for checking and evaluating alternative estimates for a given country in order to assess the relative quality of available estimates. In addition they provide a crucial link in the chain of estimates needed to assess trends.

Table 2 summarizes much of the relevant information on alternative data sources for fertility estimates in these countries. The countries for which WFS data are currently available range in population size from less than 1 million inhabitants (Fiji and Guyana) to some of the biggest countries in the world (Bangladesh, Indonesia, Mexico and Pakistan). In most cases, it is the countries with the smallest populations which have complete civil registration. The exceptions are Egypt and Mexico. Although Mexico has registration which is about 95 per cent complete, certain policy changes with respect to consensual unions and the enumeration of their children have made it impossible to examine fertility trends in the 1970s from registration data.^{6/} An estimate of under-registration in Egypt was made using the CAPMAS Survey of 1974-1975 which placed under-registration in urban areas at 5.2 per cent, in rural areas at 17.5 per cent and for the whole country at 13.1 per cent. However, in an examination of recent levels and trends of fertility in Egypt, Bucht (1986) estimated under-registration for all of Egypt to be between 8 and 13 per cent. The majority of Latin American countries have reasonably complete registration, but only three of the Asian countries participating in the WFS (Fiji, Peninsular Malaysia and Sri Lanka) and two from the African region (Egypt and Tunisia) were recorded as having complete registration.

Before the date of their WFS survey, the large majority of Asian countries can be seen to have had earlier experience with national fertility surveys (table 2). In Latin America, national fertility surveys were a relatively new phenomenon in the mid 1970s^{7/} but in 10 of these 13 countries, the WFS has been followed by even more recent national surveys, suggesting that such surveys have been found useful, even in countries where registration is estimated to be reasonably complete. While nine of the African countries had had previous survey experience, most of them dated back to the 1960s.

Table 2. Sources of data for national fertility estimates, specific countries

Region and country	WFS year of inquiry	Birth registration data a/	Recent census dates			Recent national survey data available for comparison (dates)	
			1960s	1970s	1980s	Before WFS	After WFS
Africa							
Benin	1982	U		1979		1961	
Cameroon	1978	U		1976			
Cote d'Ivoire	1980	U		1975	1986	1970 PES, 1978/79	
Egypt	1980	C		1976		1974/75	1982
Ghana	1979/80	U	1960	1970	1984	1960 PES, 1968/69	
Kenya	1977/78	U	1962, 1969	1979		1973, 1977/78	
Lesotho	1977	U		1976		1967/68	
Mauritania	1981	U		1976/77			
Morocco	1979/80	U	1960	1971	1982	1961-1963, 1972/73	1983/84
Senegal	1978	U		1976		1960/61, 1970/71	
Sudan	1978/79	U		1973	1983		PES
Tunisia	1978	C	1966	1975		1968/69	1980
Asia and Oceania							
Bangladesh	1975/76	U	1961	1974	1981	1962-1965, 1968/69, 1974	PES
Fiji	1974	C	1966	1976			PES
Indonesia	1976	U	1961	1971	1980	1976	PES
Jordan	1976	U	1961	1979 b/		1972	1981
Malaysia	1974	C		1970	1980	1966/67	1976/77
Nepal	1976	U	1961	1971	1981	1974/75, 1976	
Pakistan	1975	U	1961	1972	1981	1962-1965, 1968-1971	1979/80
Philippines	1978	U	1960	1970, 1975	1980	1968, 1973	1983
Republic of Korea	1974	U	1966	1970, 1975	1980	1966, 1971, 1973	1976
Sri Lanka	1975	C	1963	1971	1981		
Syrian Arab Republic	1978	U	1960	1970, 1976	1981	1976-1979	
Thailand	1975	U	1960	1970	1980	1964-1967, 1969/70, 1972/73, 1974-1976	1979
Yemen	1979	U		1975			1981
Latin America and the Caribbean							
Colombia	1976	U	1964	1973		1969	1978
Costa Rica	1976	C	1963	1973	1984	1964	1978
Dominican Republic	1975	U	1960	1970	1981		1980 (WFS)
Ecuador	1979	U	1962	1974	1982		1982
Guyana	1975	C	1960	1970	1980		
Haiti	1977	U		1971	1982	1971-1975	1983
Jamaica	1975/76	C	1960	1970	1982		1983
Mexico	1976	C	1960	1970	1980		1978, 1979, 1982
Panama	1975/76	C	1960	1970	1980		1975-1977
Paraguay	1979	U	1962	1972	1982	1977	
Peru	1977/78	U	1961	1972	1981	1974-1976	PES, 1981
Trinidad and Tobago	1977	C	1960	1970	1980	1970	
Venezuela	1977	C		1971	1981	1974	1979

Sources: See the country chapters in part two, below.

Note: PES: Post-enumeration survey conducted by WFS.

a/ This assessment is based on evidence provided in country chapters. Malaysia is rated as complete because only Peninsular Malaysia was sampled by the World Fertility Survey. These ratings do not always correspond with the official count ratings published by the United Nations, U= less than 90 per cent complete, C= at least 90 per cent complete.

b/ East Bank

Table 3. Characteristics of population and sample covered by the World Fertility Survey

Region and country	1975 population estimate (millions) (1)	Sample domain target coverage (percentage) (2)	Sample size of the individual survey (3)	Eligibility for individual survey	
				Age (4)	Marital status (5)
Africa					
Benin	3.0	100	4,018	15-49	ALL
Cameroon	7.6	100	8,219	15-54	ALL
Cote d'Ivoire	6.8	100	5,764	15-50	ALL
Egypt	36.3	100	8,788	to 49	EM
Ghana	9.8	100	6,125	15-49	ALL
Kenya	13.7	95	8,100	15-50	ALL
Lesotho	1.2	100	3,603	15-49	EM
Mauritania	1.4	70	3,504	12-50	EM
Morocco	17.3	99	5,801	15-50	ALL
Senegal	4.8	100	3,985	15-49	ALL
Sudan	16.0	70	3,115	to 50	EM
Tunisia	5.6	100	4,123	15-49	EM
Asia and Oceania					
Bangladesh	76.6	100	6,513	to 49	EM
Fiji	0.6	96	4,298	15-49	EM
Indonesia	135.7	67	9,155	to 50	EM
Jordan	1.7	71	3,612	15-49	EM
Malaysia	12.4	85	6,316	to 50	EM
Nepal	12.7	98	5,940	to 49	EM
Pakistan	75.5	93	4,996	15-49	EM
Philippines	43.1	100	9,268	to 50	EM
Republic of Korea	35.3	99	5,430	15-49	EM
Sri Lanka	13.6	100	6,812	to 49	EM
Syrian Arab Republic	7.4	100	4,487	to 49	EM
Thailand	41.9	100	3,778	to 49	EM
Yemen	5.3	94	2,605	to 50	EM
Latin America and the Caribbean					
Colombia	23.2	99	5,378	15-49	ALL
Costa Rica	2.0	97	3,935	20-49	ALL
Dominican Republic	4.9	100	3,115	15-49	ALL
Ecuador	6.9	96	6,797	15-49	ALL
Guyana	0.8	92	4,642	15-49	ALL c/
Haiti	5.2	100	3,365	15-49	ALL
Jamaica	2.0	100	3,096	15-49	ALL c/
Mexico	60.2	100	7,310	20-49 b/	ALL
Panama	1.7	90	3,701	20-49	ALL
Paraguay	2.7	94	4,682	15-49	ALL
Peru	15.2	100	5,640	15-49	EM
Trinidad and Tobago	1.1	100	4,359	15-49	ALL c/
Venezuela	13.1	98	4,361	15-44	ALL

Sources: For column (1), World Population Prospects: Estimates and Projections as Assessed in 1982, Population Studies, No. 86 (United Nations publication, Sales No. E.83.XIII.5); for columns (2), (4), and (5), Chris Scott and Trudy Harphan, "Major issues of survey and sample design", paper prepared for the WFS Symposium held in 1984; for column (3), Trudy Harphan and Chris Scott, "Implementation of sample designs", paper prepared for the WFS Symposium held in 1984, table 7.

Note: EM : Ever-married
ALL: All women

a/ United Nations Population Division estimate for Jordan based on the 1979 census.
b/ Also includes women aged 15-19 who have either had a baby or have been in a union.
c/ Excluding full-time school girls aged 15-19.

In each country, a representative household survey was conducted prior to the detailed individual survey in order to identify women eligible for a detailed individual interview (see table 3); eligibility was determined by age or age and marital status, depending on the country. In most cases the eligible ages ranged from 15 to 49. Indonesia, Malaysia and the Sudan were the only countries where a notable proportion of the country's population was not included in the coverage of the sample design.^{8/} In the case of Jordan, the population living under occupation in the West Bank was excluded as well. Only a minority of the household surveys included questions on recent and lifetime fertility, so that all of the fertility estimates presented here are based on the birth history data from the individual questionnaires.

The coverage of the individual questionnaire varied to some extent by region. In Asia only ever-married women were included in the individual interview, because child-bearing outside marriage is relatively rare, whereas in most of Latin America (with the exception of Peru) and much of Africa (with the exception of Egypt, Lesotho, Mauritania, the Sudan and Tunisia) all women deemed eligible in terms of age were interviewed. Thus, in those countries where only ever-married women were interviewed, the estimation of age-specific fertility rates required information on the proportion married by age from the household data so that fertility estimates were in fact pieced together from both the individual and household surveys. In addition, certain Latin American countries deviated from the guidelines for eligibility according to age by excluding some or all women aged 15-19. In Costa Rica and Panama only women aged 20-49 were interviewed, whereas in Guyana and Jamaica, full-time school girls aged 15-19 were not included. In Mexico, women 15-19 were eligible for the interview only if they had a baby or had been in a union. In the case of Guyana, Jamaica and Mexico, fertility rates for the 15-19-year-old group are based on the births recorded in the individual interview and the proportion of the household population eligible for the individual interview. In Panama and Costa Rica the recent rates for 15-19-year-olds were taken from vital registration data because the WFS estimates are biased upwards by the fact that the oldest women in the age group contribute a disproportionate amount of exposure time during the period 0-4 years before the survey. In Venezuela, the eligible age range was from 15-44 years.

The samples from which birth history information has been drawn vary in size from 2,605 in Yemen to 9,268 in the Philippines. The designs of the samples varied as well. Rather than simple random sampling, complex sampling designs were applied with two or more areal stages and stratification at each stage. In addition, in some countries unequal probabilities of selection were applied to different strata of the population. The sample size as well as the sample design affect the calculation of sample errors. Unfortunately, estimates of sampling error for age-specific and total fertility rates could not be calculated for all countries in this report because, for countries with ever-married samples, the household data are required but are not yet available on tape, and, for most countries with all woman samples, the individual data as currently constituted do not provide the necessary information on sample clustering which is an integral part of any estimates. However, sample errors for age-specific fertility rates have been calculated for five countries (Colombia, Kenya, Nepal, Pakistan, Sri Lanka), which cover a wide range of fertility levels and sample designs and can be usefully

examined here for purposes of illustration (Little, 1982). Expressing the estimated standard error as a percentage of the age-specific fertility rates averaged over five-year age groups 15-44 and averaged over five countries, the percentage error was 8.26 per cent using a reference period of one year before the interview and fell to 4.32 per cent for a five-year reference period with the greatest improvement taking place between a one-year and a three-year reference period. This represented a considerable range across the countries from 5.84 (Kenya) to 10.25 (Colombia) per cent for a one-year reference period and from 3.05 (Kenya) to 6.11 (Colombia) per cent for a five-year reference period. The total fertility rate had a lower relative error than the average of the age-specific rates, ranging from 1.3 per cent for Pakistan to 3.4 per cent for Nepal, using a five-year reference period. The relative errors for age-specific rates were lowest for the 20-24 and 25-29 age groups and highest for fertility estimates based on women over the age of 40.

The age-specific fertility rates and the marital age-specific fertility rates derived from these data are based on the birth and marriage history provided by each respondent in the individual interview. Each respondent was queried about the month and year of each live birth and the month and year for the beginning and termination of each marriage. Where month and year could not be provided, the age of the child was always requested and a computer programme was used to impute months randomly. In countries where eligibility for the individual interview was determined by marital status or school enrolment at the time of the survey, the calculation of age-specific fertility rates also included proportions in union at the time of the survey by single years of age at the time of the survey.

The fertility estimates to be presented in this report are based on the five-year period before the interview.^{9/} This means that the estimate is centred roughly 2.5 years before each survey. Although the country estimates are not centred on the calendar year for each country, there are certain advantages to the approach chosen here. First, no exposure time or births are lost by deleting information for the fraction of a year in which the interview was conducted. Secondly, because of certain problems with the omissions and displacement of births, which are often closely linked to the number of years prior to the interview, a single calendar year for each country, such as 1973 or 1974, for which all countries have data, would represent potentially different problems with respect to the displacement of births. Finally, as can be observed by examining figure V in each of the country chapters, many surveys show what appears to be a dip in fertility one or two years before the survey, followed by a partial "recovery" in the year immediately preceding the interview. Such a pattern may indicate displacement forwards or backwards in time of births that occurred one or two years before the survey. A five-year reference period was chosen for the fertility rates, taking into account sampling error of the estimates, the desire to present current rates, and considerations relating to probable displacement of recent births. It is hoped that these five-year estimates will give the best possible picture of fertility in these countries as of the early to middle 1970s.