# **Chapter 2**

# AGE AND SEX

# 2.1 Introduction

The age and sex structure of a country's population can affect gender issues in a variety of ways. Age structure determines dependency ratios, for example, which are clearly pertinent in a culture where caregiver roles are gender-based. In the labour force, younger workers can find their career opportunities limited if the age cohorts immediately ahead of them are larger than their own, especially in bureaucracies or organizations where advancement depends more on seniority than merit. And imbalances in the sex ratio can generate a "marriage squeeze" and accompanying social problems if spouses are "imported" from or "exported" to neighboring countries.

In this chapter we examine the census data on sex ratios, dependency ratios, and on regional differences, and consider their implications for gender relations. We begin with an overview of Cambodia's age-sex structure in 2008.

# 2.2 Age- and Sex-structure of the Cambodian Population

Table 2.1 gives the population counts and percentages for 5-year age groups for total population and separately for males and females; it also gives similar breakdowns for the rural and urban populations. Some of the patterns in these data are easier to grasp by looking at the age-sex pyramids in Figures 2.1 and 2.2.

The overall shape of the age-sex pyramid in 2008 is typical of a developing country which has been experiencing a decline in fertility over the past 2 or 3 decades. The classic triangular pyramid shape, still clearly apparent in 1998, has been replaced by a notable "pinching in" of the size of the age cohorts at the base and a bulge passing upwards through the age structure (reflecting larger numbers of annual births in the past than in the present) (Figure 2.1). Even though the total population grew by 17.1 percent during 1998-2008, the 0-4 age group enumerated in 2008 is in absolute numbers (1,372,615) smaller than the 0-4 enumerated in 1998 (1,466,792); similarly the 2008 5-9 age group (1,470,672) is smaller than that counted in 1998 (1,772,820).

Indeed the 1998 pyramid shown in Figure 2.1 suggests the decline in the absolute number of annual births had already begun by 1998, since the 0-4 age cohort appears smaller than the 5-9 age cohort; however we should be cautious about inferring fertility decline from a reduction in size of a single 0-4 age cohort since censuses everywhere invariably record a significant undercount of live births in the 1 or 2 years immediately preceding the census (for methodological reasons).<sup>7</sup> By 2008, however, it is not just the single 0-4 age cohort that is recorded as smaller than the preceding birth cohort of 5-9; the 5-9 is also smaller than the 10-14. By 2008 the data show a consistent decline in the absolute number of births for 2 successive 5-year birth cohorts.

<sup>&</sup>lt;sup>7</sup> And this was presumably the case in Cambodia in 1998, since although the recorded 0-4 cohort is smaller than the 5-9, 10 years later in the 2008 age-sex pyramid the 10-14 cohort is larger than the 15-19!

	Total population		Rural population			Urban population			
Age	Both sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
0-4	1372615	703058	669557	1166064	597129	568935	206551	105929	100622
	10.2	10.8	9.7	10.8	11.4	10.3	7.9	8.4	7.4
5-9	1470672	752336	718336	1262131	645584	616547	208541	106752	101789
10	11.0	11.6	10.4	11.7	12.3	(11.2	8.0	8.5	7.5
10-	1670505	859412	811093	1421240	132337	12 5	249259	12/0/5	9.0
14	1610200	024416	704074	1276055	(72115	602940	240225	161201	101024
15-	1019290	834410 12.8	/ 848 / 4	12/0955	0/3113	10.0	542555 13.1	101301	181034
19	12.1	12.0	(00050	000501	12.0	502007	270(21	12.7	10.052
20-	1369202	009343 10.3	10.2	998581	495574	0.1	3/0621	1/3/09	196852
24	10.2	10.5	10.2	9.5	7.4	9.1	214964	152591	1(2292
25-	9.2	005700	02/000	918497	453125	465372	314804 12.1	152581	162283
29	9.2	225046	250100	546972	0.0	0.4	146262	71062	74400
30-	693235 5 2	5 1	5 2	546872	263083	283789	140303	/1963 5 7	74400
34	9.140.49	J.1 409205	J.2 426652	5.1	2017(2	240004	174201	9(522	97750
35-	844948 6 3	408295	430053	670657	521705 61	548894	67	80532 6.0	65
39	0.5	0.5	0.4	0.2 501002	0.1	0.5	0.7	72195	0.5
40-	/3/451	5 2	393176 57	591902	272090	5 8	145549	72185 5.8	/3364
44	5.5	3.5	5.7	5.5	3.2	J.0	3.0	J.0	J.4
45-	653650	299005	354645	523947	23/06/	286880	129703	61938	67765
49	4.9	4.0	3.2	4.9	4.5	3.2	5.0	4.9	5.0
50-	490726	195911	294815	386904	1514//	235427	103822	44434	59388
54	5.7	3.0	4.3	3.0	2.9	4.5	4.0	3.3	4.4
55-	391116	162328	228788	313257	128570	184687	77859	33758	44101
59	2.9	2.5	3.3	2.9	2.4	3.0	3.0	2.7	3.3
60-	277611	116731	160880	226375	95006	131369	51236	21725	29511
64	2.1	1.8	2.3	2.1	1.8	2.4	2.0	1./	2.2
65-	216839	90521	126318	181142	75932	105210	35697	14589	21108
69	1.6	1.4	1.8	1.7	1.4	1.9	1.4	1.2	1.6
70-	158945	63938	95007	133324	54095	79229	25621	9843	15778
74	1.2	1.0	1.4	1.2	1.0	1.4	1.0	0.8	1.2
75-	107886	42710	65176	91148	36599	54549	16738	6111	10627
79	0.8	0.7	1.0	0.9	0.7	1.0	0.6	0.5	0.8
80+	87630	33023	54607	72653	27938	44715	14977	5085	9892
	0.7	0.5	0.8	0.7	0.5	0.8	0.6	0.4	0.7
Total	13395682	6516054	6879628	10/81655	5260484	55211/1	2614027	1255570	1358457
1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.1 Population (number and percent) by age group and sex, for total, rural and urban<br/>populations, Cambodia 2008

Source: A1.

There are some particular features of the age-sex structure of the population which reflect recent history. The birth rate was unusually low during the 1975-79 years, and this is reflected in the irregularly small age cohort of 20-24 years in 1998 and 30-34 years in 2008.<sup>8</sup>

In 2008 the largest 5-year age cohort is 10-14 (1,670,505 persons or 12.5 percent of the total population) (Table 2.1). The pattern is different for the urban population, where 20-24 years

<sup>&</sup>lt;sup>8</sup> Of course an unusually large number of infants and young children died from violence, malnutrition and sickness during these years too, but it is more difficult to see the results of this reflected in the overall age structure because mortality was generally high for *all* age groups at that time.



Figure 2.1 Age-sex pyramids, Cambodia, 1998 and 2008



is the largest age cohort (370,621 persons, or 14.2 percent of the total urban population). The large size of this cohort is due to in-migration of young people to urban areas. The fact that those in the urban population still in their 20s in 2008 have relatively small age cohorts older than them (Figure 2.2) suggests these young adults have good career prospects and can provide a strong "engine" for economic growth, so long as they are productively employed and institutional obstacles are not left in their way. The fact that the urban population is only 19.5 percent of total population means this demographic development driver has enormous potential for growth in coming decades. The urban population 20-29 is 54.4 percent female.



#### Figure 2.2 Age-sex pyramids for rural and urban populations, Cambodia 2008



# 2.3 Sex Ratios

In human populations under normal circumstances the sex ratio varies with age, since slightly more males are born than females but males die at a faster rate than females. The underlying biological and evolutionary causes of this are not well understood but gender factors can significantly alter the pattern.

Cambodia's sex ratio of 105 males for every 100 females for the 0-4 age group (Table 2.2) is consistent with the normal biological range.<sup>9</sup> The decline in sex ratio by age group to 60.5 for the

<sup>&</sup>lt;sup>9</sup> Unlike in some Asian countries where high sex ratios at birth are evidence of strong male child preference and sexselective abortion.

80 and over category is relatively steep by international standards but not uncommon: men often do not take as good care of their health as women and often participate more in unhealthy behaviours such as smoking, excessive alcohol consumption, and physical violence. The physical violence of the civil war impacted on both sexes at all ages but in terms of mortality probably more on males than females. Overall the sex ratio in 2008 is a little closer to parity than in 1998 (94.7 compared to 93.0).

		<b>1998</b>		2008			
Age	Total	Rural	Urban	Total	Rural	Urban	
	population	population	population	<b>Population</b>	population	population	
0-4	103.9	103.7	105.1	105.0	105.0	105.3	
5-9	104.0	104.0	104.5	104.7	104.7	104.9	
10-14	105.5	105.7	104.4	106.0	106.3	104.0	
15-19	97.7	99.7	90.4	106.3	111.5	89.1	
20-24	90.4	89.6	93.8	95.6	98.5	88.3	
25-29	92.5	90.5	100.4	96.5	97.4	94.0	
30-34	89.7	86.6	102.6	93.5	92.7	96.2	
35-39	87.8	85.1	98.9	93.5	92.2	98.6	
40-44	67.2	64.1	79.0	87.6	85.1	99.2	
45-49	72.7	70.0	83.7	84.3	82.6	91.4	
50-54	73.5	72.4	78.6	66.5	64.3	74.8	
55-59	75.1	74.5	78.1	71.0	69.6	76.5	
60-64	73.2	74.1	68.5	72.6	72.3	73.6	
65-69	73.4	75.3	63.4	71.7	72.2	69.1	
70-74	71.5	74.0	59.0	67.3	68.3	62.4	
75-79	70.1	72.9	56.4	65.5	67.1	57.5	
80+	64.3	65.9	56.9	60.5	62.5	51.4	
Total	93.0	92.6	94.9	94.7	95.8	92.4	

 Table 2.2 Sex ratio by age group and place of enumeration, Cambodia, 1998 and 2008

Source: 2008 data from A1.

One outcome of the variation in sex ratio by age is that while women comprise 52.2 percent of the working age population 15-64 in 2008 (4,339,534 out of 8,310,590), they comprise 59.7 percent of the elderly population 65 and over (341,108 out of 571,300).

The sex ratio for youth and young adults 15-29 is not imbalanced enough to generate a serious marriage squeeze, although sex-selective out-migration of young people from specific rural areas can produce this problem locally (see section 2.5 below). The re-marriage prospects of older women who are widowed or divorced are not so favourable as for older men, however (see chapter 3).

The sex ratio of 66.5 in 2008 for the 50-54 age group (and 67.2 for the 40-44 age group in 1998) diverges from the broader pattern. This birth cohort represents men who were 20-24 years old in 1978, a group heavily involved in the fighting during the peak of violence in the civil war.

The sex ratio for the urban population was higher than that for the rural in 1998, but in 2008 the sex ratio is higher in the rural population. This is attributable to the relatively "large number of young women workers [who have] moved into urban Phnom Penh and neighbouring urban parts of Kandal province to work in garment factories" (NIS 2010c: 14).

### 2.4 Dependency Ratios

Table 2.3 summarizes how the age structure of the population has changed since 1998. We can see the percent of children under 15 has declined significantly as a result of declining fertility; as a result the percent of population in the "working ages" 15-64 has increased so that by 2008 over 71 persons out of every 100 are in this age group. The percent of elderly 65 years and over has changed little. If persons under 15 years of age or 65 and over are considered as "dependents," and if women assume a disproportionate responsibility for caring for dependents compared to men, especially in terms of unpaid work, then these trends are relevant to understanding gender relations. They allow adult women more time to enter the paid workforce and are conducive (although not sufficient by themselves) to more gender equality.

1998 and 2008										
	Total po	pulation	Rural po	pulation	Urban population					
Age group	1998	2008	1998	2008	1998	2008				
0-14	42.8 33.7		43.7	35.7	38.0	25.4				
15-64	53.7 62.0		52.7	59.9	59.1	71.0				
65+	3.5	4.3	3.5	4.4	2.8	3.6				
Total	100.0	100.0	99.9	100.0	99.9	100.0				

Table 2.3 Distribution of population	(percent) h	oy broad	age group	and residence,	Cambodia,
	<b>1998</b> and	d 2008			

Source: Table 2.1 and 1998 Census. Note: Some totals do not add to 100.0 percent because of rounding errors.

The statistics presented in Table 2.3 are often converted into dependency ratios, as shown in Table 2.4. The child dependency ratio shows how many dependent children under age 15 there are for every 100 persons in the working ages (defined here as 15-64 years). The old-age dependency ratio shows how many elderly persons 65 years and over there are for every 100 persons in the working ages. The total dependency ratio shows how many dependents (young or old) there are for every 100 persons of working age. The results in Table 2.4 show that whereas in 1998 every 100 persons of working age had to support 86.2 dependents, in 2008 they only had to support 61.2. In the urban population the dependency ratio is only 40.8 (although of course in practice many of the urban population are "supporting" relatives back home in their rural areas of origin).

Turar and urban populations, Camboula, 1996 and 2006									
	Total population		Rural p	opulation	Urban population				
Age group	1998	2008	<b>1998</b>	2008	<b>1998</b>	2008			
Child dependency ratio	79.7	54.3	82.9	59.6	64.3	35.8			
Old-age dependency ratio	6.5	6.9	6.6	7.4	4.7	5.0			
Total dependency ratio	86.2	61.2	89.5	67.0	69.0	40.8			

Table 2.4 Dependency ratios (number of dependents per 100 working-age persons) for total,rural and urban populations, Cambodia, 1998 and 2008

Source: Table 2.1 and 1998 Census.

The age structure is becoming more conducive to rapid economic development. UN projections suggest that in another 15 years or so there will be 2 persons of working age for every dependent – a situation sometimes described as a "demographic dividend." It means the country is currently in a situation where it can devote increasingly more resources to health and education, and to removing barriers to gender equality.<sup>10</sup>

<sup>&</sup>lt;sup>10</sup> The demographic dividend does not last forever, however, since as population ageing continues the number of elderly dependents increases resulting eventually in an increase in the total dependency ratio again.

# 2.5 Regional Differences

The age-sex structure of the population does vary by province and region as a result of local variation in fertility, mortality and migration rates. Thus, while the percent of total population which is 0-14 years old is 33.7 percent, this statistic varies by province from a low of 21.9 in Phnom Penh to a high of 40.5 percent in Ratanak Kiri. The sex ratio (national total is 94.7) varies from 89.1 in Phnom Penh to 106.4 in Pailin.<sup>11</sup>

Duovinco	<b>Pop. 0-14</b>	<b>Depend'y</b>		Sex ratio		
Province	(percent)	ratio	Total	Rural	Urban	
Bantey Meanchey	33.7	59.3	95.8	95.1	97.8	
Battambang	34.4	61.9	97.6	98.5	93.5	
Kampong Cham	34.6	66.4	95.0	95.0	95.0	
Kampong Chhnang	35.9	67.8	92.5	92.5	93.0	
Kampong Speu	36.5	68.9	94.6	94.6	94.2	
Kampong Thom	37.0	71.0	95.1	95.2	92.7	
Kampot	35.5	67.2	94.2	94.0	95.6	
Kandal	31.2	57.0	93.9	94.7	89.6	
Koh Kong	36.3	64.2	102.0	103.1	99.7	
Kratie	37.2	70.8	99.4	99.5	98.9	
Mondul Kiri	40.4	74.2	105.5	104.7	114.7	
Phnom Penh	21.9	34.0	89.1	93.4	88.8	
Preah Vihear	39.7	74.9	99.4	99.0	106.5	
Prey Veng	35.1	67.0	91.7	91.5	95.5	
Pursat	35.8	65.5	94.5	94.9	88.3	
Ratanak Kiri	40.5	76.6	102.4	101.2	110.4	
Siem Reap	36.0	63.6	96.4	95.6	99.8	
Preah Sihanouk	32.4	54.7	100.1	101.6	98.0	
Stung Treng	38.3	71.4	99.3	98.7	102.7	
Svay Rieng	33.6	62.0	92.2	92.1	94.2	
Takeo	35.2	68.0	94.6	94.6	96.8	
Oddar Meanchey	37.6	65.9	101.6	101.5	102.8	
Кер	37.3	70.3	97.8	97.0	102.9	
Pailin	33.7	54.9	106.4	106.9	104.8	
Cambodia Total	33.7	61.2	94.7	95.3	92.4	

Table 2.5 Selected age and sex variables by province, Cambodia 2008

Source: NIS (2010c: Table 4.5, Table 4.8, Table 3.5).

# 2.6 Final Remarks

The demographic outcomes described in this chapter in terms of the age-sex structure of the population do not by themselves determine the content of Cambodia's gender issues but they do provide some basic parameters for when analyzing these issues. Especially noteworthy are the following points:

- Cambodia has a low sex ratio by international standards, but it has increased a little since 1998 and moved closer to parity;
- during the same period the sex ratio of the urban population has moved in the opposite direction and is lower in 2008 than in 1998;
- at the same time the sex ratio at birth is within the "normal" range.
- The base of the age pyramid has narrowed both in relative and absolute terms since 1998, consistent with declining fertility; even though the total population grew 17.1 percent during 1998-2008 the under-10 population declined by 12.2 percent;

<sup>&</sup>lt;sup>11</sup> See NIS (2010c) for more details on variation in age and sex structure.

- correspondingly the median age of the population has increased from 16.8 in 1998 to 21.0 in 2008.
- The age pyramid for the urban population has more of a bulge in the young adult years, reflecting larger in-migration in these age groups, especially for young women.
- The dependency ratio has declined significantly since 1998; given that women do more of the "caring work" for dependents than men this trend is favorable to increasing the empowerment of females.

Policy interventions aimed at addressing gender problems need to take these parameters into account.