

CHAPTER 3

SUMMARY RESULTS

The 2005-2006 Survey of Population Changes was conducted to study the occurrence of population change such as birth, death, and migration. The presentation of this report emphasizes the changes in birth and death.

Comparisons of the results of 2005-2006 SPC with the results of the previous SPC was done in order to obtain the trend of population change. The factors affecting on population changes were divided into the following items:

3.1 CRUDE BIRTH RATE, CRUDE DEATH RATE, AND NATURAL GROWTH RATE

Results of the 2005-2006 survey of population change has indicated that crude birth rate and crude death rate of Thai population for the whole Kingdom were 10.85 and 6.76 per 1,000 population (Table 1). Natural growth rate was 0.41 percent per annum. The rate of birth and death in municipal areas were lower than those in non-municipal areas. In municipal areas, the birth and death rate were 9.11 and 5.09 per 1,000 population and the natural growth rate was 0.40 percent while in the non-municipal areas, the birth and death rates and natural growth rate were 11.59, 7.48, and 0.41 respectively.

There was quite different in birth rate among regions. The highest birth rate was 12.24 in the northeast followed by 11.78 in the south, 10.13 in the central (excluding Bangkok Metropolis), and 9.78 in the north. The lowest birth rate was 8.63 in Bangkok Metropolis. Death rate among regions differed ranging form 10.28 in the north, to 6.95, 5.72, 5.57 and 4.23 in the northeast, the south, the central and Bangkok Metropolis respectively. The variation of birth and death rates in each region affected the difference of their natural growth rates. The highest natural growth rate was 0.61 percent in the south and the lowest rate was -0.05 percent in the north, followed by 0.53, 0.46, and 0.44 percent in the northeast, the central, and Bangkok Metropolis respectively.

Comparisons of crude birth rate, crude death rate, and natural growth rate of three SPCs according to region are shown in Table 2. The results indicated that the crude birth rate for the whole Kingdom had been decreased from 23.87 in 1985-1986 to 17.90 in 1995-1996, and to 10.85 in 2005-2006. The differences of decline in crude birth rate were also found

in all regions of Thailand, both urban and rural areas. The highest rate of decline in the south was 12.22 per 1,000 population from 1995-1996 to 2005-2006, followed by 7.72, 5.61, 5.48, and 5.05 in the northeast, Bangkok Metropolis, the central and the north respectively. From 1985-1986 to 1995-1996, the highest rate of decline was 7.17 per 1,000 population in the south, followed by 6.82, 6.77, 4.91, and 4.68 in the central, the north, the northeast and Bangkok Metropolis respectively.

The crude death rate for the Kingdom was slightly decreased from 6.44 per 1,000 population in 1985-1986 to 6.02 in 1995-1996 and to 6.76 in 2005-2006. The decline in crude death rate has been decreased in municipal and non-municipal areas which showed the similar declining pattern as the whole Kingdom. The crude death rate for the north increased from 6.97 in 1995-1996 to 10.28 in 2005-2006

The results of the three surveys showed that the natural growth rate of the country decreased from 1.74 percent in 1985-1986 to approximately 1.19 percent in 1995-1996 and to 0.41 percent in 2005-2006. The natural growth rate decreased in all regions of the country both for municipal and non-municipal areas.

TABLE 1 POPULATION, BIRTHS AND DEATHS, CRUDE BIRTH RATE, CRUDE DEATH RATE AND NATURAL GROWTH RATE, BY REGIONS : 2005-06

Region	Mid – year Population ^{1/}	Births ^{2/}	Deaths ^{2/}	Crude Birth Rate (Per 1,000)	Crude Death Rate (Per 1,000)	Natural Growth Rate (Per 100)
Whole Kingdom	65,064,076	705,639	440,024	10.85	6.76	0.41
Municipal area	19,630,259	178,850	99,959	9.11	5.09	0.40
Non–municipal area	45,433,817	526,789	340,065	11.59	7.48	0.41
Bangkok Metropolis	6,825,956	58,911	28,846	8.63	4.23	0.44
Central Region (Excluding Bangkok Metropolis)	15,733,809	159,384	87,656	10.13	5.57	0.46
Northern Region	11,719,886	114,650	120,472	9.78	10.28	-0.05
Northeastern Region	21,953,183	268,664	152,519	12.24	6.95	0.53
Southern Region	8,831,243	104,030	50,531	11.78	5.72	0.61

^{1/} : Based on the average population enumerated in rounds 1 and 5 of the 2005-06 Survey of Population Change

^{2/} : Adjust under count birth, death from result of post enumeration survey : PES

TABLE 2 CRUDE BIRTH RATE, CRUDE DEATH RATE AND NATURAL GROWTH RATE BY REGION : 2005-06, 1995-96, 1985-86

Region	Survey of Population Change								
	2005-06			1995-96			1985-86		
	Crude Birth Rate (Per 1,000)	Crude Death Rate (Per 1,000)	Natural Growth Rate (Per 100)	Crude Birth Rate (Per 1,000)	Crude Death Rate (Per 1,000)	Natural Growth Rate (Per 100)	Crude Birth Rate (Per 1,000)	Crude Death Rate (Per 1,000)	Natural Growth Rate (Per 100)
Whole Kingdom	10.85	6.76	0.41	17.90	6.02	1.19	23.87	6.44	1.74
Municipal area	9.11	5.09	0.40	14.73	4.14	1.06	18.97	4.22	1.48
Non-municipal area	11.59	7.48	0.41	18.72	6.50	1.22	24.79	6.86	1.79
Bangkok Metropolis	8.63	4.23	0.44	14.24	3.92	1.03	18.92	3.84	1.51
Central Region (Excluding Bangkok Metropolis)	10.13	5.57	0.46	15.61	5.78	0.98	22.43	5.76	1.67
Northern Region	9.78	10.28	-0.05	14.83	6.97	0.79	21.60	7.23	1.44
Northeastern Region	12.24	6.95	0.53	19.96	6.12	1.38	24.87	6.82	1.81
Southern Region	11.78	5.72	0.61	24.00	6.69	1.73	31.17	7.03	2.41

3.2 POPULATION COMPOSITION

3.2.1 Age Composition

Indicating factors on age composition were birth level, death level, and population migration. Factor affecting on sex composition are sex ratio at birth, the difference of death level between male and female, and age composition.

Result of the study on population composition between 2005-2006 revealed that the percentage of population in the lower age groups decreased while the age group of 35-39 to the old ages increased (Table 3 and 4). The results from the 2005-2006 showed that 23.1 percent of the population was under 15 years of age, 66.0 percent was in the working ages (15-59 years old) and 10.9 percent was in the old age group of 60 years and over. When comparing the age structure among all surveys, it was shown that the proportion of population decreased in the youth, while the proportion increased slightly at the ages of 15-59 and 60 years and over. This survey reflects that Thailand is having aging population structure.

The dependency ratio which is the proportion of population aged under 15 years and aged 60 and over per 100 population aged 15-59 years, was about 51.4 in 2005-2006. When considering dependency ratio by the youth and the aged dependency burden, it was found that in 2005-2006 the youth dependency ratio was 34.9 and the aged dependency ratio was 16.5. Comparisons of the dependency ratio are given in Table 3. The total dependency ratio and youth dependency ratio decreased and the aged dependency ratio increased because crude birth rate has been decreased whereas the life expectancy at birth and aged population has been subsequently increased.

3.2.2 Sex Ratio

Sex ratio is the ratio of males to 100 females. In 2005-2006 the sex ratio was about 93.5 where the number of females was more than that of males (93 males to 100 females). Table 4 shows sex ratio according to age groups, males were more numerous at aged younger than 24 years, after which females become more numerous after aged 25 years, particularly elderly females was larger majority than elderly males in 2005-2006

**TABLE 3 PERCENT DISTRIBUTION OF POPULATION BY AGE GROUP, DEPENDENCY RATIO :
2005-06, 1995-96, AND 1985-86 SURVEY OF POPULATION CHANGE.**

Age Group	2005-06 Survey of Population Change ^{1/}	1995-96 Survey of Population Change ^{2/}	1985-86 Survey of Population Change ^{3/}
Total	100.0	100.0	100.0
0 – 14	23.1	27.2	34.4
15 – 19	7.6	9.0	11.4
20 – 29	13.4	17.3	18.3
30 – 39	16.3	16.8	13.3
40 – 49	16.7	12.3	9.2
50 – 59	12.0	8.1	6.9
60 +	10.9	9.3	6.5
Dependency Ratio			
Total	51.4	57.5	69.3
Youth (0-14)	34.9	42.9	58.3
Aged (60+)	16.5	14.6	11.0
Sex Ratio	93.5	95.8	98.5

1/ : Based on the average population enumerated in survey rounds 1 and 5 of 2005-06 Survey of Population Change

2/ : Based on the average population enumerated in survey rounds 1 and 5 of 1995-96 Survey of Population Change

3/ : Based on the average population enumerated in survey rounds 1 and 5 of 1985-86 Survey of Population Change

**TABLE 4 PERCENT DISTRIBUTION OF POPULATION BY AGE GROUP AND SEX, SEX RATIO
BYAGE GROUP FOR THE WHOLE KINGDOM : 2005-06, 1995-96, SURVEY OF
POPULATION CHANGE**

Age Group	2005-06 Survey of Population Change ^{1/}				1995-96 Survey of Population Change ^{2/}			
	Total	Male	Female	Sex ^{3/} Ratio	Total	Male	Female	Sex ^{3/} Ratio
Total	100.0	100.0	100.0	93.5	100.0	100.0	100.0	95.8
0 - 4	6.2	6.6	5.9	104.6	8.7	9.1	8.3	104.5
5 - 9	7.9	8.4	7.4	106.6	8.8	9.3	8.3	108.0
10 - 14	8.9	9.7	8.2	109.5	9.8	10.1	9.4	103.0
15 - 19	7.7	7.9	7.4	99.4	9.0	9.0	8.9	97.6
20 - 24	6.2	6.5	6.0	100.5	8.2	8.2	8.3	94.2
25 - 29	7.2	7.3	7.0	96.7	9.0	9.1	8.9	98.1
30 - 34	7.6	7.5	7.8	90.8	8.7	8.6	8.9	92.9
35 - 39	8.7	8.4	8.9	88.4	8.1	8.0	8.1	95.0
40 - 44	8.6	8.3	8.9	87.2	6.9	6.8	7.0	92.8
45 - 49	8.1	7.8	8.4	86.9	5.4	5.3	5.5	92.7
50 - 54	6.8	6.5	7.1	86.6	4.3	4.2	4.3	92.2
55 - 59	5.2	5.3	5.1	96.1	3.9	3.8	3.9	93.6
60 - 64	3.2	3.1	3.4	87.4	3.3	3.1	3.5	84.1
65 - 69	2.7	2.5	2.9	81.6	2.4	2.3	2.6	87.0
70 - 74	2.2	2.0	2.4	76.2	1.6	1.5	1.8	79.4
75 and Over	2.8	2.2	3.2	64.6	1.9	1.6	2.3	64.4

^{1/} : Based on the average population enumerated in survey rounds 1 and 5 of 2005-06 Survey of Population Change

^{2/} : Based on the average population enumerated in survey rounds 1 and 5 of 1995-96 Survey of Population Change

^{3/} : Males per one hundred females

3.3 SEX RATIO AT BIRTH

The sex ratio at birth (males per 100 females at birth) in 2005-2006 was 106.7 which was lower than those of the 1995-1996 survey (Table 5) but was higher than the other round surveys.

TABLE 5 SEX RATIO AT BIRTH OF THAILAND : 2005-06, 1995-96, 1985-86, 1974-76, 1964-65 SURVEY OF POPULATION CHANGE

Survey of Population Change	Sex Ratio at Birth
2005-06	106.7
1995-96	110.7
1985-86	104.1
1974-76	106.2
1964-65	105.5

3.4 FERTILITY

3.4.1 Total Fertility Rate and Age – Specific Fertility Rate

Due to the success in Thai family planning policy, the total fertility rate decrease from a level of 2.7 children per woman in 1985-1986 to 2.0 children per woman in 1995-1996 survey and down to 1.5 children per woman in 2005-2006 which was lower than the replacement level (Table 6). Fertility declines were observed in both areas and all regions.

The fertility in municipal area was lower than in the non-municipal area. Women in the municipal area had an average of 1.0 children per woman as compared to the average of 1.7 children per woman in the non-municipal area. However, when compared with the 2005-2006 survey, it showed that fertility declined more rapidly in non-municipal area than those of the municipal area.

Comparisons of the fertility rate by regions in 2005-2006, it was found that the highest fertility rate was in the northeast followed by the north, the south, and the central regions, while the lowest was in Bangkok Metropolis. These regional difference were differed in ranking from those found in the 1995-1996 survey. The highest and the lowest absolute declines were found in the south and the north, where the TFR in the south declined from 2.9 children in 1995-1996 to 1.5 children per woman in 2005-2006.

The TFR decline in the central was 0.5 children per woman and the lowest decline was 0.3 children per woman in the north. Only the fertility rate with replacement level of 2 children per woman was in the northeast.

Fertility rates of women in each five-year age group in the childbearing years are shown in Table 7 Fertility rates increased up to aged 20-24 and declined thereafter, reaching the minimum at aged 45-49. In the municipal area, the fertility was the highest among women in aged 25-29 whereas in the non-municipal area, the highest was among aged 20-24.

When compared the fertility rates by region, it was indicated that peak fertility occurred at the age of 20-24 in the north and the northeastern regions, where the highest fertility was among women aged 30-34, as appeared in Bangkok Metropolis. The south and the central peak fertility were among women aged 25-29.

Table 8 shows the comparisons of crude birth rate and total fertility rate among countries. Crude birth rate in Thailand was rapidly decreased from 35.6 per 1,000 population in 1974-1976 to 23.9 in 1985-1986, and further declined to 17.9 in 1995-1996, down to 10.9 in 2005-2006. Among the Southeast Asian countries, the crude birth rate of Thailand was closed to Singapore which was 10 per 1,000 population, while for the last ten years, the crude birth rate of Thailand was higher than Singapore. (CBR of Thailand was 17.9 and in Singapore was 15.9 per 1,000 population). Thailand CBR was much lower than Malaysia, Indonesia, Philippines, China and Australia but higher than developed countries such as Japan and Germany. United Kingdom had crude birth rate about 11 per 1,000 population which was nearly the same as Thailand.

The total fertility rate of Thailand also decreased in 2005-2006, with the average of 1.5 children per woman which was also similar to Singapore but lower than those of other countries in Southeast Asia, United State of America, United Kingdom, China and Australia. Total fertility rate of Thailand was higher than Japan and Germany.

TABLE 6 FERTILITY MEASURES BY REGION : 2005-06, 1995-96, AND 1985-86 SURVEY OF POPUALTION CHANGE

Region	Crude Birth Rate (CBR)			General Fertility Rate (GFR)			Age Standardized General Fertility Rate ^{1/} (GFR std.)			Gross Reproduction Rate (GRR)			Net Reproduction Rate ^{2/} (NRR)			Total Fertility Rate (TFR)		
	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86
Whole Kingdom	10.85	17.90	23.90	38.59	63.06	90.30	38.59	63.06	90.30	0.71	0.95	1.34	0.70	0.90	1.32	1,471.21	2,021.99	2,730.00
Municipal area	9.11	14.73	19.00	29.16	43.57	60.50	27.48	41.31	57.30	0.51	0.63	0.87	0.51	0.60	0.86	1,033.02	1,331.59	1,766.00
Non-municipal area	11.59	18.72	24.80	43.35	69.33	97.20	44.97	70.32	98.30	0.86	1.07	1.45	0.81	1.02	1.44	1,726.68	2,284.74	2,962.00
Bangkok Metropolis	8.63	14.24	18.90	25.87	41.51	59.20	23.65	39.07	55.70	0.44	0.61	0.85	0.44	0.57	0.84	877.76	1,260.66	1,735.00
Central Region (Excluding Bangkok Metropolis)	10.13	15.61	22.40	33.60	53.25	82.80	31.80	51.34	83.10	0.55	0.77	1.22	0.55	0.71	1.21	1,190.25	1,664.40	2,494.00
Northern Region	9.78	14.83	21.60	36.72	54.73	78.90	41.09	58.71	77.10	0.76	0.93	1.10	0.76	0.87	1.09	1,574.92	1,894.29	2,248.00
Northeastern Region	12.24	19.96	24.90	47.57	73.83	100.00	52.07	74.93	102.50	1.01	1.19	1.52	0.98	1.14	1.50	2,037.90	2,435.30	3,096.00
Southern Region	11.78	24.00	31.20	41.71	89.28	127.90	40.57	87.02	130.80	0.76	1.25	1.98	0.71	1.19	1.96	1,523.70	2,850.86	4,049.00

^{1/} : Whole Kingdom Population from 2005-06, 1995-96, and 1985-86 Survey of Population Change are used as Standard

^{2/} : Calculated using Whole Kingdom life table for female

TABLE 7 TOTAL FERTILITY RATE AND AGE-SPECIFIC FERTILITY RATE BY REGIONS : 2005-2006, 1995-1996, AND 1985-1986

Region	Total Fertility Rate (TFR)			Age - Specific Rate (ASFR)																				
				15 - 19			20 - 24			25 - 29			30 - 34			35 - 39			40 - 44			45 - 49		
	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86	2005-06	1995-96	1985-86
Whole Kingdom	1,471.2	2,022.0	2,730.0	37.2	53.8	68.3	86.4	125.7	166.4	80.0	106.6	141.6	58.8	68.4	86.0	25.2	35.9	56.1	6.4	11.4	21.5	0.3	2.8	6.1
Municipal area	1,033.0	1,331.6	1,766.0	20.8	23.8	33.4	51.3	53.7	93.4	55.1	80.6	101.5	52.7	67.5	67.9	18.8	34.1	43.3	5.5	6.0	12.0	0.4	0.6	1.7
Non-municipal area	1,726.7	2,284.7	2,962.0	43.0	64.3	75.6	109.4	156.0	185.3	95.6	115.6	152.1	62.2	68.6	90.3	28.0	36.4	58.9	6.8	12.8	23.3	0.3	3.1	7.0
Bangkok Metropolis	877.8	1,260.7	1,735.0	16.3	21.9	29.4	37.9	50.3	88.7	47.5	71.5	95.5	47.7	66.6	77.4	21.5	36.8	37.9	4.2	3.9	13.9	0.6	1.1	4.2
Central region (Excluding BKK.metropolis.)	1,190.3	1,664.4	2,494.0	36.3	46.9	61.1	55.4	92.3	156.5	63.4	92.3	129.5	50.7	56.1	89.8	26.2	34.7	41.0	5.8	7.1	14.9	0.2	3.5	6.1
Northern region	1,574.9	1,894.3	2,248.0	53.8	48.9	68.3	97.8	126.5	152.7	70.2	105.8	122.7	67.2	66.7	58.2	23.7	25.4	38.0	2.2	4.9	9.0	0.0	0.7	0.7
Northeastern region	2,037.9	2,435.3	3,096.0	39.1	69.3	80.5	154.1	178.4	188.1	118.2	123.3	162.9	64.8	65.4	84.3	24.3	34.2	71.8	6.7	13.7	25.3	0.4	2.7	6.3
Southern region	1,523.7	2,850.9	4,049.0	31.3	63.7	78.8	78.5	164.4	238.0	87.6	136.8	201.9	61.2	105.0	147.5	30.4	60.5	84.9	15.2	30.7	41.6	0.5	9.0	17.1

TABLE 8 CRUDE BIRTH RATE AND TOTAL FERTILITY RATE FOR THAILAND AND OTHER COUNTRIES.

Countries	Crude Birth Rate (Per 1,000)	Total Fertility Rate
Thailand		
2005-06	10.9	1.5
1995-96	17.9	2.0
1985-86	23.9	2.7
1974-76	35.6	4.9
Other Countries (2000-2005)		
Malaysia	23	2.9
Singapore	10	1.4
Indonesia	21	2.4
Philippines	26	3.2
Australia	13	1.7
China	14	1.7
Japan	9	1.3
U.S.A.	14	2.0
Germany	9	1.3
United Kingdom	11	1.7

1/ : World Population Prospects 2004, United Nations (2000-2005)

3.5 MORTALITY

3.5.1 Crude death rate

The survey revealed that the crude death rate of Thailand in 2005-2006 was 6.76 per 1,000 population. There were much different in crude death rates between urban and rural areas which were 5.09 and 7.48 per 1,000 population. Regional variation in the level of mortality was also evident with the highest crude death rate found in the north about 10.28 per 1,000 population, followed by the northeast, the south and the central about 6.95, 5.72 and 5.57 respectively and the lowest mortality was observed in Bangkok Metropolis with a crude death rate of 4.23 per 1,000 population (Table 9).

In the past, the mortality of Thai population decreased from about 10.8 per 1,000 population in 1964-1965 to 8.6, 6.4 and 6.0 per 1,000 population in 1974-1976, 1985-1986 and 1995-1996 respectively,^{1/} but the last survey of 2005-2006 reported the crude death rate of 6.76 per 1000 population

^{1/} : Survey of population change in 1964-1965, 1974-1976, 1985-1986, and 1995-96, National Statistical Office.

3.5.2 Age-Specific Death Rate

The mortality pattern by age was found to be U-shape curve. Death rates were very high at ages under one then rapidly decline at the next age group and continue to decrease at the adult age groups and start to increase after the age of 15-19 and so on. Both municipal and non-municipal areas had the same pattern for all regions (Table 9). In addition, the differential of mortality pattern by sex in three surveys which are presented in Table 10, showed that female mortality rate in general was lower than the male (5.86 and 7.73 per 1,000 population in 2005-2006 about 5.1 and 7.0 per 1,000 population in 1995-1996, and about 5.8 and 7.1 per 1,000 population in 1985-1986). Age-specific death rates by sex were much differed in higher age groups and male death rate was higher than the female death rate. Among all three surveys, the mortality pattern by age-sex were similar.

3.5.3 Infant and Under 5 Mortality Rates

The trend of infant mortality rate has been decreased since 1965 because of advancement in medical technology. The results of survey of population change indicated that the infant mortality rates decreased from 84.3 per 1,000 live births in 1964-1965 to 51.8 in 1974-1976 and further decreased to 40.7, 38.8, 34.5 and 26.1 in 1985-1986, 1989, 1991 and 1995-1996 respectively, and down to 11.3 in 2005-2006

In 2005-2006, the infant mortality rate in municipal area was lower than in non-municipal area (7.9 : 12.4 per 1,000 live births).

Considering under 5 mortality rate, defined by UNICEF as the mean number of children under 5 years death per 1,000 live births, it was found that death rate under 5 years was 15.7 per 1,000 live births. In addition, death rate of children under 5 years of non-municipal area was nearly twice higher than that of municipal area. (17.9 and 9.1 per 1,000 live births).

TABLE 9 CRUDE DEATH RATE, INFANT MORTALITY RATE, UNDER 5 MORTALITY RATE, AND AGE-SPECIFIC DEATH RATE BY REGIONS : 2005-06

Age Specific Death Rate	Whole Kingdom		
	Total	Municipal Area	Non-municipal Area
Crude Death Rate	6.76	5.09	7.48
Age Standardized Death Rate ^{1/}	6.76	5.98	7.07
Infant Mortality Rate	11.26	7.92	12.39
Under 5 Mortality Rate	15.68	9.14	17.90
Age-Specific Death Rate			
Under 1 Year	10.44	7.53	11.40
1 – 4	0.95	0.27	1.16
5 – 9	0.64	0.33	0.76
10 – 14	0.49	0.19	0.59
15 – 19	1.21	0.93	1.33
20 – 24	0.87	0.98	0.80
25 – 29	2.22	0.81	3.08
30 – 34	1.24	1.69	1.00
35 – 39	3.81	1.75	4.77
40 – 44	3.79	3.01	4.13
45 – 49	3.69	3.08	3.97
50 – 54	5.78	6.08	5.65
55 – 59	10.94	10.10	11.29
60 – 64	16.57	15.38	17.02
65 – 69	19.28	16.85	20.12
70 – 74	38.72	28.50	42.20
75 – 79	55.58	47.83	58.00
80 years and over	113.63	99.66	118.41

^{1/} : Whole Kingdom population is used as standard

TABLE 10 CRUDE DEATH RATE, INFANT MORTALITY RATE, UNDER 5 MORTALITY RATE, AND AGE-SPECIFIC DEATH RATES BY AGE GROUP AND SEX : 2005-06, 1995-96, AND 1985-86 SURVEY OF POPULATION CHANGE

Age Group	การสำรวจการเปลี่ยนแปลงของประชากร					
	2005-06		1995-96		1985-86	
	Male	Female	Male	Female	Male	Female
Crude Death Rate	7.73	5.86	7.00	5.1	7.1	5.8
Infant Mortality Rate	*	*	26.7	25.4	45.0	36.2
Under 5 Mortality Rate	*	*	32.7	29.9	na	na
Age – specific Death Rate						
Under 1 Year	*	*	30.2	27.5	54.3	44.4
1 – 4	*	*	1.6	1.1	2.2	1.3
5 – 9	0.98	0.29	1.1	0.8	1.3	1.3
10 – 14	0.88	0.06	1.0	0.7	0.7	1.1
15 – 19	2.35	0.07	1.8	1.6	1.5	1.5
20 – 24	1.51	0.22	2.4	1.9	1.9	1.6
25 – 29	3.36	1.11	2.8	2.1	3.4	1.7
30 – 34	1.33	1.16	3.3	2.3	3.5	1.9
35 – 39	4.98	2.79	3.5	2.5	3.9	2.3
40 – 44	4.93	2.79	4.3	3.1	5.0	3.4
45 – 49	4.70	2.82	5.6	3.5	7.4	4.3
50 – 54	9.63	2.45	7.5	6.1	10.4	7.4
55 – 59	13.44	8.54	12.8	9.9	16.5	14.2
60 – 64	21.10	12.61	19.8	11.9	28.7	18.8
65 Years and Over	50.98	45.01	46.1	39.0	63.0	48.8

* Number of deaths from the survey have a few can't to estimate infant mortality rate and under 5 mortality rate by sex
na = not available

TABLE 11 INFANT MORTALITY RATE BY REGION AND YEAR OF SURVEY

Region	Year of Survey							Percent Change 1995-96 (2005-2006)
	2005-2006	1995-1996	1991	1989	1985-1986	1974-1976	1964-1965	
Whole Kingdom	11.26	26.1	34.5	38.8	40.7	51.8	84.3	56.9
Municipal Area	7.92	15.2	21.0	23.6	27.6	39.6 ^{2/}	67.6 ^{1/}	47.9
Non-municipal Area	12.39	28.2	37.0	41.4	42.6	58.7	85.5	56.1
Bangkok Metropolis	*	18.9	22.5	26.3	27.4	25.2	-	*
Central Region (Excluding Bangkok Metropolis)	*	19.4	26.2	29.8	30.0	48.9	94.0	*
Northern Region	*	30.8	42.4	46.3	48.0	74.0	96.5	*
Northeastern Region	*	29.4	39.0	43.7	45.1	52.1	83.4	*
Southern Region	*	25.7	31.1	35.6	36.7	51.4	48.5	*

Note : The 1985-1986, 1974-1976, 1964-1965 Survey of Population Change utilized the Dual Record procedure.

^{1/} : The 1964-1965 Survey of Population Change, the Municipal Area excluded Bangkok Metropolis.

^{2/} : Adjust new rate by live births distribute by urban and rural

* Number of deaths from the survey have a few can't to estimate infant mortality rate by regions.

3.6 EXPECTATION OF LIFE AT BIRTH

The value of expectation of life at birth indicates the long life of population as well as the lower of mortality which reflects the higher of life expectation. The result of the life table by age from the 2005-2006 survey of population change calculated by using ELT ^{2/} program showed that the expectancy of life at birth of female was 7.6 years higher than that of male, (69.9 years for male and 77.6 years for female) which mean that female live longer than male (Table 12 and 13)

Comparing the life expectancy by region, it was found that female in Bangkok Metropolis had the highest life expectancy (82.85 years for female and 74.57 years for male). Male in the north had the lowest life expectancy of 67.38 years and female in the north has also the lowest life expectancy of about 73.05 years when compared to female other regions.

Expectation of life at 60 years which is defined as the number of years a person will be living after reaching 60 years of age. Table 13 indicated that for male, they can still live for 19.43 years more while female will live for 21.54 years more after 60 years old.

^{2/} Arriaga Eduardo, Patricia Anderson, Larry Heligman. Computer Programs for Demographic Analysis, U.S.Department of Commerce BUREAU OF THE CENSUS.

When compared the life expectancy (e_0) of some selected countries, it was found that among Southeast Asian countries, Thailand had higher life expectancy than Malaysia, Indonesia Philippines and China but lower than Singapore and other developed countries.

Table 12 showed the difference of crude death rate, infant mortality rate among different selected countries including Thailand. It was found that the crude death rate of the Thai people was 6.8 per 1,000 population. Thailand crude death rate was higher than Malaysia, Indonesia and United Kingdom (crude death rate about 5 per 1,000 population) but nearly similar to Singapore, Philippines and Australia (crude death rate about 7 per 1,000 population). In addition, the crude death rate for Thailand was lower than other developed countries such as United State of America, Germany, China and Japan.

Infant mortality rates of Thailand had rapidly decreased from 51.8 per 1,000 live births in 1974-1976 to 11.3 in 2005-2006. Comparisons of infant mortality rate among countries were shown in Table 12. Infant mortality for Thailand was lower than Indonesia, Philippines and China but higher than Malaysia, Singapore, Australia, Japan, United State of America, Germany and United Kingdom, in which most of those countries had infant mortality rate lower than 9 per 1,000 live births. Singapore and Japan had infant mortality rate of only 3 per 1,000 live births.

TABLE 12 EXPECTATION OF LIFE AT BIRTH, CRUDE DEATH RATE AND INFANT MORTALITY RATES FOR THAILAND AND OTHER COUNTRIES

Countries	Life Expectation		Crude Death Rate (Per 1,000)	Infant Mortality Rate (Per 1,000)
	Male	Female		
Thailand				
2005-2006	69.9	77.6	6.8	11.3
1995-1996	69.9	74.9	6.0	26.1
1991	67.7	72.4	5.9	34.5
1989	65.6	70.9	6.0	38.8
1985-1986	63.8	68.9	6.4	40.7
1974-1976	58.0	63.8	8.6	51.8
Other Countries (2000-2005)				
Malaysia	70.8	75.5	5	8
Singapore	76.7	80.5	7	3
Indonesia	64.6	68.6	5	43
Philippines	68.1	72.4	7	30
Australia	77.6	82.8	7	5
China	69.8	73.3	8	26
Japan	78.3	85.3	8	3
U.S.A.	74.6	80.0	10	7
Germany	75.6	81.4	10	4
United Kingdom	75.9	80.6	5	5

1/ : World Mortality Report 2005

TABLE 13 EXPECTATION OF LIFE AT BIRTH AND EXPECTATION OF LIFE AT AGE**60 YEARS BY REGION AND SEX**

Region	Expectation of Life at birth (e_0)		Expectation of Life at age 60 years	
	Male	Female	Male	Female
Whole Kingdom	69.93	77.64	19.34	21.66
Municipal Area	72.78	80.76	20.33	24.04
Non-municipal Area	68.91	76.69	19.09	20.93
Bangkok Metropolis	74.57	82.85	22.21	26.15
Central region (Excluding- Bangkok metropolis)	70.40	81.29	18.46	24.13
Northern region	67.38	73.05	19.73	19.24
Northeastern region	69.58	76.43	18.57	20.54
Southern region	71.20	81.52	21.76	24.08

3.7 COMPLETENESS OF THE OFFICIAL REGISTRATION SYSTEM

The completeness of the official registration system of Thailand has been more modernized, so that it has made the completeness rate of official birth and death registration to be much higher. The completeness of birth and death rate of Thailand in 2005-2006 were higher than those in 1995-1996. For the whole Kingdom, the birth and death were estimated to be 96.7 and 95.2 percent in 2005-2006 and 95.6 and 94.8 percent in 1995-1996. The main reason why the birth and death rate in 2005-2006 were slightly higher than those of 1995-1996 was due to the more efficient ways of recording system. In obtaining birth and death rate in 1995-1996 the birth and death reports had not been verified by the present of birth and death certificates. In addition, the registration system was much more completed in the municipal area than the non-municipal area for both surveys (Table 14)

Regional differential of birth registration was modestly different among 2005-2006 and 1995-1996. The highest birth completeness rate was found in the Northeastern region about 98.3 percent in 2005-2006 followed by the North, the Central and particularly the South which showed the lowest of 95.6 percent in 2005-2006. It was found that birth registration of all region in 2005-2006 was more completed than in 1995-1996. There was not much differed among regions while there was still a variation of death completeness rate in 1995-1996 but varied little in 2005-2006. The death completeness registration of Bangkok Metropolis was 97.3 percent in 2005-2006. In 1995-1996, the highest death completeness registration was 100 percent in Bangkok Metropolis. The lowest was in the south in both surveys which were 89.3 in 2005-2006 and 87.9 in 1995-1996.

**TABLE 14 PERCENT COMPLETENESS OF THE OFFICIAL BIRTH AND DEATH REGISTRATION,^{1/}
BY REGIONS, 2005-2006 AND 1995-1996 SURVEYS.**

Region	Births				Deaths			
	2005-06 ^{2/}			1995-96	2005-06 ^{3/}			1995-96
	Total	Male	Female	Total	Total	Male	Female	Total
Whole Kingdom	96.7	96.5	96.8	95.6	95.2	94.8	95.7	94.8
Municipal area	95.1	95.8	94.4	97.8	94.3	94.6	94.0	98.1
Non-municipal area	97.2	96.8	97.6	95.1	95.5	94.9	96.1	94.3
Bangkok metropolis	91.2	93.3	89.1	98.5	97.3	95.3	100.0	100.0
Central region (Excluding Bangkok metropolis)	96.0	94.9	97.3	96.8	97.1	97.9	95.6	95.3
Northern region	97.2	98.8	95.6	96.1	95.7	93.7	97.8	94.8
Northeastern region	98.3	97.1	99.6	95.5	95.4	95.3	95.5	96.3
Southern region	95.6	96.8	94.2	92.4	89.3	90.4	87.4	87.9

^{1/} : not include the birth and death report in which the birth and death certificate has not been obtained.

^{2/} : percentage of birth calculated form the birth report in which the birth certificate is also presented.

^{3/} : percentage of death calculated from the death report in which the death certificate is also presented.