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& \text { RECENT AND FUTURE } \\
& \text { FERTILITY TRENDS IN } \\
& \text { HONG KONG }
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## Recent and Future Fertili.ty Trends in Hong Kong

## Chapter I

## Introduction

This paper discusses the causes and effects of the decrease in births which has been apparent in Hong Kong over the past 10 years and includes estimates of future fertility trends for use in the preparation of the population projections.
2. There is evidence that in the past, Hong Kong, like most Asian countries, had a very high fertility rate. From the end of the Second World War until 1954, the actual number of births each year is not known and although the number of births registered is known, it is generally believed that during this period, many births in the Colony were not, in fact, registered. Table 1 shows the number of births in the Colony for each year from 1954 to 1971 and also the crude birth-rate for these years. 3. It should be noted that for the years from 1954 to 1960 , the figures for births are for registered births only and the crude birth-rates remained fairly stable at between 35 and 38 births per thousand of the population. But in fact, the actual rates then should have been mach higher because of the incomplete registration of births at that time and lack of subsequent adjustments for under-registration. The 1970 birth data have been studied in order to find out the degree of under-registration and of late registration. It is found that about 2.95 per cent of all known live births were under-registered and 0.84 per cent of all known live births were registered five or more months after the birth. Therefore the number of registered births was about 3 to 4 per cent less than the actual known birth in 1970. As there are reasons to believe that the degree of under-registration and late registration improves as time goes on, the percentage of under-registration and late registration in 1950s should have been much higher than 4 per cent.

Table 1: Number of Births and the Crude Birth Rates in Hong Kong, 1954-1971

| Year | Estimated Mid-Year Population (a) | Number of Live Births | Crude Birth Rate (Per l,000 population) |
| :---: | :---: | :---: | :---: |
| 1954 | 2,364,900 | 83,317 (b) | 35.2 |
| 1955 | 2,490,400 | 90,511 (b) | 36.3 |
| 1956 | 2,614,600 | 96,746 (b) | 37.0 |
| 1957 | 2,736,300 | 97,834 (b) | 35.8 |
| 1958 | 2,854,100 | 106,624 (b) | 37.4 |
| 1959 | 2,967,400 | 104,579 (b) | 35.2 |
| 1960 | 3,075,300 | 110,667 (b) | 36.0 |
| 1961 | 3,168,100 | 110,884 (c) | 35.0 |
| 1962 | 3,305,200 | 112,503 (c) | 34.0 |
| 1963 | 3,420,900 | 114,550 (c) | 33.5 |
| 1964 | 3,504,600 | 107,625 (c) | 30.7 |
| 1965 | 3,597,900 | 101,110 (c) | 28.1 |
| 1966 | 3,629,900 | 91,832 (c) | 25.3 |
| 1967 | 3,722,800 | 88,215 (c) | 23.7 |
| 1968 | 3,802,700 | 82,685 (c) | 21.7 |
| 1969 | 3,863,900 | 82,482 (d) | 21.4 |
| 1970 | 3,959,000 | 79,132 (d) | 20.0 |
| 1971 | 4,045,300 | 79,789 (d) | 19.7 |

Notes: Source: Census \& Statistics Department
(a) Revised estimated mid-year population between 1961 and 1970 based on the 1971 Census,
(b) Registered figures,
(c) Registered figures with adjustments for underregistration (revised),
(d) Known births and reported private delivery births and adjustment for a very small number of private deliver births not reported.
4. From 1961 to 1968 adjustments have been included to allow for under-registration, but it is still believed that such adjustments may not be sufficient. From 1969 the known births figure has been used with minor adjustments for under-registration of a very small number of private delivery births. As the known birth figure is compiled from returns supplied by hospitals and maternity homes, both Government and private, and the number of private delivery is very small the adjusted known birth figures are believed to be very reliable.
5. From the revised population estimates based on the 1971 Census, it can be seen that the crude birth-rate starts dropping from 1961 with a sharp decline in 1964. Though the crude birth-rate starts to drop since 1961 the absolute number of births does in fact increase in the period 1961 to 1963. Therefore, the great decrease in the births has been apparent only from 1964 onwards. In 1971, the crude birth-rate is only 56.3 per cent of that in 1961. This decline may be due to one of the following factors or a combination of them:-
(a) a fall in the fertility of married women;
(b) the postponement of bearing children;
(c) changes in the number of women of child-bearing age; and
(d) changes in the proportion of the female population who are married in the productive child-bearing years.

These factors are analysed in greater details in the following Chapters with available statistical information.

## Age-Specific Fertility Rates

6. Although crude birth-rates give a useful general guide to changes in fertility and have the advantage that the computation of the rate is relatively easily understood, age-specific fertility rates are a better measure of fertility because, unlike crude birth-rates, they are not affected by the age distribution of the population. Age-specific fertility rates are calculated by relating the number of births to women within various age-groups during the child-bearing years. Unfortunately age-specific fertility rates cannot be compiled accurately for Hong Kong before 1969. This is because information on the age of mothers was not collected at birth registration but from 1969 this information has been obtained together with other useful demographic details. In Table 2, estimates for the agespecific fertility rates in 1961 and 1966 and actual age-specific fertility rates for 1969-1971 are tabulated.

Table 2: Age Specific Fertility Rates for Hong Kong 1961, 1966 and 1969-1971.

| Age Group | Age Specific Fertility Rates |  |  |  |  |
| :---: | ---: | :---: | :---: | :---: | :---: |
|  | $1961^{*}$ | $1966 \#$ | 1969 | 1970 | 1971 |
| $15-19$ | 47 | 29 | 17.4 | 18.2 | 17.0 |
| $20-24$ | 238 | 213 | 172.1 | 155.1 | 145.6 |
| $25-29$ | 313 | 291 | 242.8 | 233.1 | 243.8 |
| $30-34$ | 231 | 203 | 178.2 | 168.6 | 162.5 |
| $35-39$ | 139 | 111 | 92.8 | 87.0 | 83.6 |
| $40-44$ | 57 | 42 | 37.4 | 30.9 | 28.4 |
| $45-49$ | 9 | 3 | 5.9 | 4.7 | 3.6 |

Source: 1. Population Studies, Vol. XXII, No. 2, July, 1968.
2. Census \& Statistics Department.

* Professor R. Freedman's estimate based on 1961 average age pattern of birth rates for Taipei and Singapore, 1961 as applied to total number of 1961 Hong Kong births.
\# Professor R. Freedman's estimate based on samples of birth records.

7. The age-specific fertility rates in Hong Kong in 1971 are still high when compared with the rates in developed countries. However, the rates are about $20-30 \%$ lower than the rates for high fertility countries where the rate for the female age-group 25-29 is still over 300 per thousand and for the female age-group 20-24, the rate is over 250 per thousand. Table 3 shows the age-specific fertility rates in Hong Kong in 1971 compared with some selected countries.

Table 3: Age specific fertility rate in Hong Kong, 1971 compared with selected countries

| Age Group | Hong Kong\# <br> 1971 | Taiwan* <br> 1968 | England <br> \& Wales* <br> I968 | U.S.A.* <br> 1968 |
| :--- | :---: | :---: | :---: | :---: |
| Under 20 | 17.0 | 18.1 | 24.8 | 31.8 |
| $20-24$ | 145.6 | 249.8 | 160.9 | 167.4 |
| $25-29$ | 243.8 | 306.7 | 160.4 | 140.3 |
| $30-34$ | 162.5 | 158.4 | 87.9 | 74.9 |
| $35-39$ | 83.6 | 67.8 | 40.2 | 35.6 |
| $40-44$ | 28.4 | 25.3 | 10.4 | 9.6 |
| 45 \& over | 3.6 | 4.2 | 0.7 | 0.6 |

Source: \# Census \& Statistics Department

* Demographic Yearbook 1969

8. Anyhow, compared with the estimated rates for 1961, there is a decrease of 20-50\% for the comparable age-groups in 1971 and a decrease of $33 \%$ in the total fertility rate. Upon further investigation, it may be found that the decrease in age-specific fertility rate is the resultant of two processes at work - one is the general decline and the other is the shifting of age of childbearing. The following table shows the age shift:

## Age-specific fertility rates

| Age group | 1971 Actual Rate | 1971 Expected Rate | Difference |
| :---: | :---: | :---: | :---: |
| 15-19 | 17.0 | 15.9 | $+1.1$ |
| 20-24 | 145.6 | 157.8 | - 12.2 |
| 25-29 | 243.8 | 222.6 | + 21.2 |
| 30-34 | 162.5 | 163.4 | - 0.9 |
| 35-39 | 83.6 | 85.1 | - 1.5 |
| 40-44 | 28.4 | 34.3 | - 5.9 |
| 45-49 | 3.6 | 5.4 | - 1.8 |
| Total | 684.5 | 684.5 |  |

The 1971 expected rates are computed by assuming that all the specific rates had declined uniformly by $8.32 \%$ of the 1969 rates (the total fertility rate has declined by $8.32 \%$ between 1969 and 1971).
9. Another yard-stick of fertility sometimes employed is referred to as the general fertility rate. This relates births to all women of reproductive age, say $15-49$, regardless of marital status. The general fertility rate in Hong Kong in 1961 and 1966 were 161 and 117 respectively. By 1971, the rate had dropped to 87 , or a decrease of $46 \%$ as compared with 1961.
10. Of the registered births in 1971, $13.28 \%$ were of 6 th or higher order. $87.05 \%$ of births of 6 th or higher order were from mother aged 30-44. Though the $13.28 \%$ of briths of 6 th or higher order out of the total was still high, this percentage followed closely the track of a declining trend (compared with the corresponding percentage of $15.0 \%$ in $1970,19.2 \%$ in 1966 and $20.9 \%$ in 1965). This declining trend can well be attributable to increasing education, the impact of industrialisation and modernization and effectiveness of the work of the Family Planning Association.
11. Table 4 gives the age specific fertility rate by single year of age in 1969-1971. Though a period of 3 years was too short to establish any conclusions on trend movement the rates in the three years reflected a remarkable decrease in fertility in recent years.

Table 4: Age Specific Fertility Rates for Hong Kong, 1969-1971

| Age | Age-specific birth rates (per 1,000 population) |  |  | Age | Age-specific birth rates (per 1,000 population) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1969 | 1970 | 1971 |  | 1969 | 1970 | 1971 |
| 15 | 1.0 | 0.8 | 1.4 | 33 | 149.9 | 146.3 | 151.9 |
| 16 | 2.7 | 4.0 | 3.8 | 34 | 138.7 | 133.1 | 133.7 |
| 17 | 11.1 | 13.4 | 14.0 | 35 | 120.9 | 113.7 | 108.8 |
| 18 | 26.9 | 26.7 | 27.1 | 36 | 105.3 | 101.8 | 97.4 |
| 19 | 49.4 | 50.4 | 42.9 | 37 | 90.8 | 84.0 | 81.9 |
| 20 | 85.7 | 75.5 | 72.1 | 38 | 78.7 | 75.0 | 76.3 |
| 21 | 135.3 | 113.4 | 109.8 | 39 | 70.3 | 63.4 | 57.2 |
| 22 | 195.0 | 165.4 | 137.4 | 40 | 56.6 | 51.7 | 47.5 |
| 23 | 243.0 | 227.2 | 202.3 | 41 | 45.7 | 34.9 | 37.6 |
| 24 | 262.8 | 247.7 | 248.3 | 42 | 38.0 | 30.6 | 25.8 |
| 25 | 288.6 | 254.7 | 260.5 | 43 | 26.4 | 21.5 | 18.1 |
| 26 | 258.0 | 274.5 | 261.1 | 44 | 17.8 | 13.8 | 12.0 |
| 27 | 221.0 | 240.1 | 267.4 | 45 | 12.9 | 9.4 | 8.6 |
| 28 | 218.2 | 203.0 | 235.4 | 46 | 6.4 | 6.7 | 4.5 |
| 29 | 227.1 | 189.7 | 187.2 | 47 | 3.9 | 2.8 | 2.7 |
| 30 | 221.3 | 208.2 | 183.8 | 48 | 2.4 | 1.6 | 1.2 |
| 31 | 207.0 | 186.2 | 175.7 | 49 | 1.4 | 0.8 | 0.7 |
| 32 | 186.4 | 179.4 | 173.0 |  |  |  |  |

Source: Census \& Statistics Department

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\text { Chapter III } \\
\text { The Effect of the Change of Age Structure }
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12. The 1961 Census showed that there is an abnormality in the age distribution of the population in the Colony. At that time, between the ages of 13 and 27 inclusive, there was a marked dip in the distribution with its deepest point at ages 18 and 19 where the number of persons was less than half of what would normally have been expected. The cause of this dip is obvious. From late 1938 to early 1946 conditions in South China and from December 1941 to August 1945 conditions in Hong Kong itself were very severe for most of the population. Many were driven from their homes and many were unable to obtain food. Whether by avoiding pregnancy, by terminating pregnancies, or due to inability to bring up their children, the surviving adult population of that period were accompanied at the end of it, by many less children than would normally have been the case.
13. The deepest point of the dip referred to in the previous paragraph had moved to ages 28 and 29 in 1971 so that it was having an effect on the prime child bearing age group, i.e. the 25-29 group. The number and proportions of the female population in this group were smaller in 1966 than in 1961 and even smaller in 1971. Table 5 shows the number of women in each child-bearing age group and the number expressed as a percentage of the total population in 1961, 1966 and 1971.

Table 5: Number of Women in Each Childbearing Age Group, Hong Kong 1961, 1966, 1971

| Age Group | Mid-1961 |  | Mid-1966 |  | Mid-1971 |  |
| :---: | ---: | :---: | ---: | ---: | ---: | :---: |
|  | $*$ Number | \% of <br> total <br> population | * Number | \% of <br> total <br> population | $*$ Number | \% of <br> total <br> population |
| $15-19$ | 90,800 | 2.9 | 162,900 | 4.4 | 214,900 | 5.3 |
| $20-24$ | 90,900 | 2.9 | 94,400 | 2.6 | 163,900 | 4.1 |
| $25-29$ | 117,600 | 3.7 | 94,100 | 2.6 | 95,100 | 2.4 |
| $30-34$ | 124,500 | 4.0 | 118,600 | 3.2 | 94,200 | 2.3 |
| $35-39$ | 109,800 | 3.5 | 124,500 | 3.4 | 118,100 | 2.9 |
| $40-44$ | 96,600 | 3.1 | 109,400 | 3.0 | 123,700 | 3.1 |
| $45-49$ | 82,500 | 2.6 | 96,100 | 2.6 | 108,300 | 2.7 |
| $15-49$ | 712,700 | 22.7 | 800,000 | 21.8 | 918,200 | 22.8 |

Source: Census \& Statistics Department

* Mid-years retrojected population, excluding army \& transients

14. Table 5 shows that the proportion of the female population in the age group 25-29 had dropped from $3.7 \%$ in 1961 to $2.6 \%$ in 1966 and to $2.4 \%$ in 1971. In terms of the actual figures, the number of women aged 25-29 declined by about 22,500 between 1961 and 1971 , despite an increase of more than 900,000 in the total population. The same trend can be noted for the second most fertile age-group, i.e. age group 30-34, with the number of women in 1971 showing a decrease of 30,300 as compared with 1961. On the other hand, there was an increase in the number of women in the age group 20 to 24 during this period from 90,900 to 163,900 but as was seen in Table 2, there was, at the same time, a significant drop in the age distribution of the female population, especially of women in the more fertile age groups, in the past seven or eight years have had a definite effect on the decline in the number of births.
15. Just how great has been this effect can be seen by standardizing the age distribution of the Colony over this period and calculating, using
the known age specific fertility rates at the end of the period, the number of births which would have resulted if the age distribution had remained constant for all ages and sex. Thus, using the 1961 age distribution as the basis for calculation, the direct standarized birth-rate in 1971 would have been 24.0. In other words, assuming that the 1961 age distribution had remained constant up to 1971 , the 1971 birth-rate would have fallen only to 24.0 instead of 19.7 . This means that the decline in birth-rate between 1961 and 1971 would have been $31.4 \%$ instead of $43.7 \%$ if there had been no change in age distribution.
16. In summary, the crude birth rate declined $43 \%$ between 1961 and 1971. If age-specific fertility had been the same in 1961 \& 1971, the crude birth rate would have declined about 13\%. Thus almost one-third of the total decline was associated with the changing age-structure of the women in the reproductive ages.

## Chapter IV

## The Effect of the Change in Proportions

Married \& Average Age at Marriage
17. In paragraph 5, it was noted that changes in the proportions of women married might also have some effect on the decline in the birth-rate in Hong Kong between 1961 and 1971. The proportions of married women within the child-bearing age-groups for various years are given in Table 6. Table 6: Proportions of currently married women by age groups, Hong Kong 1961, 1966 \& 1971

| Age Group | 1961 Census | 1966 By-Census | 1971 Census |
| :---: | :---: | :---: | :---: |
| $15-19$ | 6.4 | 4.7 | 2.9 |
| $20-24$ | 51.0 | 42.7 | 32.3 |
| $25-29$ | 83.4 | 85.2 | 79.4 |
| $30-34$ | 91.4 | 92.4 | 93.4 |
| $35-39$ | 90.0 | 93.1 | 95.1 |
| $40-44$ | 84.5 | 89.7 | 92.9 |
| $45-49$ | 75.5 | 81.2 | 89.1 |

Source: Census \& Statistics Department
18. It will be seen from Table 6 that the proportion of women in the age groups 15-19 and 20-24 decreased considerably whereas in the age groups 30 and above it increased slightly. The change in the proportion of married women in the age group 20-24 has a marked effect on the number of births but the consequence of the slight increase in the proportion for the age group 30-49 was relatively small. The full effect of these changes can be seen by using the direct standardisation technique adopted in paragraph 15, so that on the basis of the 1961 age and marital status distribution, the direct standardised birth-rate worked out at 27.0 for 1971.

That is to say, if the age and marital status distribution in 1971 was the same as in 1961, the birth-rate in 1971 would have fallen to 27.0 instead of 19.7 , or a decline of 22.9 instead of $43.7 \%$.
19. Thus, of the just over $43 \%$ decrease in birth-rate between 1961 and 1971 , it is estimated that about $13 \%$ was due to changes in age distribution (paragraph 16) and about $8 \%$ due to changes in the proportions of women who are married; in other words, about $21 \%$ or nearly half of the total decrease was due to these two factors, age and marital status distribution, combined.
20. It is interesting to note from Table 6 that the proportion of women married in the age group 20-24 has dropped from 51.0\% in 1961 to 32.3\% in 1971. Similarly there is a slight drop in the proportion married in the age group 25-29. This indicates that women have been tending in recent years to postpone marriage and this is corroborated by the fact that in the 1971 Census, 34\% of males in the age group 30-34 still remained single. In fact, the average age of marriage for people in Hong Kong is now very high. From age-at-marriage data recorded by the Registrar General in recent years it appears that the average age for men is just over 29 years and just over 23 years for women. This is about 2 or 3 years higher in each case than many other countries. The 1971 Census information on age at first marriage in recent years shows that the averages age at first marriage for men is about 28 years and for women is nearly 23. This lends support to our statement that the Census data agreed with the Registrar General's information because if records other than first marriage are excluded in the R.G. statistics, the average age at marriage data may be about one year lower.
21. Some analysis has been made of the distribution of births by age of the mother, and although this is not entirely related to the average age of marriage, nevertheless the results of the analysis are
included here since it illustrates the point made in the preceding paragraph concerning the average age of marriage compared with other countries.
22. Table 7 shows the percentage distribution of live births by age of mother and birth order in Hong Kong in 1971. It will be observed that in Hong Kong, a fairly lerge proportion of births are to mothers aged 30 and over ( $3408 \%$ of total). These higher rates have existed for a long time and are partly due to the traditional pattern of Chinese families. The fact that the rates have changed less than those of other places could at least be plausibly attributable to a persistence of traditional behaviour among women in the older fertile age group. Although it is also partly due to late marriages, the effects of birth control and the postponement of bearing children, the main fact remains that some women in the older fertile age group still prefer to have a large number of children as illustrated in para. 10.

Table 7 : Percentage distribution of live births by birth order and age of mother in Hong Kong, 1971.

| Age Birth <br> of <br> order | Ist | 2nd | 3rd | 4th | 5th | 6th+ | un- <br> known | Total |
| :--- | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Unknown | 1.21 | 0.68 | 0.40 | 0.31 | 0.25 | 0.49 | 1.34 | 4.68 |
| Under 20 | 3.29 | 0.94 | 0.13 | 0.01 | - | - | - | 4.37 |
| $20-24$ | 13.44 | 9.62 | 4.00 | 1.17 | 0.20 | 0.04 | - | 28.47 |
| $25-29$ | 6.24 | 7.92 | 6.73 | 4.11 | 1.86 | 0.84 | - | 27.70 |
| $30-34$ | 1.48 | 2.89 | 3.59 | 3.74 | 2.98 | 3.61 | - | 18.29 |
| $35-39$ | 0.39 | 0.91 | 1.38 | 1.83 | 2.00 | 5.28 | - | 11.79 |
| $40-44$ | 0.12 | 0.19 | 0.32 | 0.39 | 0.51 | 2.67 | - | 4.20 |
| 45 \& over | 0.01 | 0.01 | 0.03 | 0.05 | 0.05 | 0.35 | - | 0.50 |
| Total | 26.18 | 23.16 | 16.58 | 11.61 | 7.85 | 13.28 | 1.34 | 100.0 |

Source : Census \& Statistics Department Table 8 shows the percentage distribution of live births in Hong Kong in 1971 by birth order, compared with selected countries. For Hong Kong, $\mathbf{1 3 . 3} \%$ of the births are the sixth birth or above whereas in Japan, J. .i. and U.S.A. the percentages are much lower. Moreover, in 1971, 34.78\% of these births were to mothers aged 30 or over.

Table 8: Percentage Distribution of Live Births by Birth Order in Hong Kong 1971, compared with selected countries

| Birth Order | Hong Kong 1971 | Japan 1967 | $\begin{aligned} & \text { U.K. } \\ & 1967 \end{aligned}$ | $\begin{aligned} & \text { U.S.S. }{ }^{\text {** }} \\ & 1968 \end{aligned}$ | India 1964 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st | 26.2\% | 45.9\% | 37.9\% | 37.4\% | 26.5\% |
| 2.nd | 23.2\% | 40.0\% | 31.9\% | 26.2\% | 18.0\% |
| 3 rd | 16.6\% | 11.1\% | 16.1\% | 15.4\% | 15.4\% |
| 4th | 11.6\% | 2.1\% | 7.2\% | 8.8\% | 12.1\% |
| 5 th | 7.8\% | 0.5\% | 3.4\% | 4.9\% | 9.3\% |
| 6 th | 5.6\% | 0.2\% | 1.7\% | 2.8\% | 7.0\% |
| 7 th | 4.0\% | 0.1\% | 0.9\% | 1.7\% | 4.2\% |
| 8 th | 1.9\% | 0.1\% | 0.5\% | ) | 2.8\% |
| 9th | 1.0\% | * | 0.2\% | ) $2.7 \%$ | 1.8\% |
| 10th | 0.8\% | * | 0.2\% | ) | 1. $9 \%$ |
| Unknown | 1.3\% | * | - | 0.1\% | 1. $0 \%$ |

$\begin{aligned} \text { Source : } & * \text { less than } 0.05 \% \\ & \text { \# } \\ & \text { Census \& Statistics Department } \\ & \text { Denographic Yearbook, } 1969\end{aligned}$

Chapter V

## Social \& Economic Factors

24. It has been established that there is a connection between educational attainment of the parents and the number of children in their families. Recent evidence for Hong Kong is contained in Table 9 based or information obtained in the 1971 Census.

15
Table 2: Educational attainment of ever married females by the number of births and age, 1971 Census

| Age | Educational attainment | No. of Children Ever Born (\%) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0 | 1 | 2 | 3 | 4 | 5 | $6^{+}$ | Total |
| 15-19 | No schooling | 41.2 | 39.6 | 12.9 | 5.3 | 1.0 | - | - | 100.0 |
|  | Kindergarten, | 41.8 | 46.3 | 10.0 | 1.7 | 0.2 | - | - | 100.0 |
|  | \& Primary Scondary | 48.7 | 44.0 | 6.2 | 1.1 | - | - | - | 100.0 |
|  | Post-secondary <br> \& higher | 64.3 | 14.3 | 21.4 | - | - | - | - | 100.0 |
| 20-24 | No schooling | 20.5 | 32.7 | 28.2 | 13.4 | 3.8 | 1.0 | 0.4 | 100.0 |
|  | Kindergarten, | 23.1 | 39.5 | 26.3 | 8.8 | 1.9 | 0.3 | 0.1 | 100.0 |
|  | Private Tutor <br> \& Primary |  |  |  |  |  |  |  |  |
|  | Secondary | 32.4 | 43.1 | 19.5 | 4.2 | 0.7 | 0.1 | - | 100.0 |
|  | Post-secondary <br> \& higher | 55.2 | 34.9 | 8.7 | 1.0 | 0.2 | - | - | 100.0 |
| . 25-29 | No schooling | 7.2 | 13.5 | 22.4 | 26.0 | 18.8 | 8.2 | 3.9 | 100.0 |
|  | Kindergarten, | 10.0 | 21.0 | 30.7 | 23.5 | 10.7 | 3.1 | 1.0 | 100.0 |
|  | Private Tutor <br> \& Primary |  |  |  |  |  |  |  |  |
|  | Secondary | 17.3 | 31.5 | 31.6 | 13.7 | 4.5 | 1.1 | 0.3 | 100.0 |
|  | Post-secondary | 28.4 | 38.7 | 24.6 | 6.5 | 1.4 | 0.2 | 0.2 | 100.0 |
| 30-34 |  |  |  |  |  |  |  |  |  |
|  | No schooling | 3.6 | 6.7 | 11.8 | 19.0 | 23.5 | 18.8 | 16.6 | 100.0 |
|  | Kindergarten, | 4.4 | 9.1 | 19.2 | 26.1 | 22.0 | 12.0 | 7.2 | 100.0 |
|  | Private Tutor \& Primary |  |  |  |  |  |  |  |  |
|  | Secondary | 8.0 | 17.6 | 31.7 | 23.5 | 12.1 | 4.7 | 2.4 | 100.0 |
|  | Post-secondary \& higher | 12.5 | 25.1 | 38.4 | 17.9 | 4.6 | 1.1 | 0.4 | 100.0 |
| 35-39 | No schooling | 3.1 | 6.1 | 9.1 | 13.9 | 19.2 | 19.3 | 29.3 | 100.0 |
|  | Kindergarten, | 3.7 | 7.6 | 12.9 | 19.6 | 22.4 | 16.8 | 17.0 | 100.0 |
|  | Private Tutor <br> \& Primary |  |  |  |  |  |  |  |  |
|  | Secondary | 5.9 | 11.7 | 23.3 | 23.8 | 17.5 | 9.6 | 8.2 | 100.0 |
|  | Post-secondary | 8.5 | 15.1 | 33.9 | 24.7 | 11.6 | 4.0 | 2.2 | 100.0 |
| 40-44 | No schooling | 3.5 | 8.0 | 9.4 | 11.2 | 15.1 | 16.5 | 36.3 | 100.0 |
|  | Kindergarten, | 4.1 | 9.7 | 11.2 | 13.8 | 17.5 | 16.6 | 27.1 | 100.0 |
|  | Private Tutor <br> \& Primary |  |  |  |  |  |  |  |  |
|  | Secondary | 5.6 | 11.8 | 17.8 | 19.6 | 17.9 | 12.2 | 15.1 | 100.0 |
|  | Post-secondary \& higher | 8.5 | 14.2 | 26.7 | 22.3 | 15.3 | -6.8 | 6.2 | 100.0 |
| 45-49 | No schooling | 5.0 | 11.6 | 12.1 |  |  |  |  |  |
|  | Kindergarten, | 5.3 | 12.7 | 13.0 | 12.5 | 24.4 | 13.8 | 28.3 | 100.0 |
|  | Private Tutor <br> \& Primary |  |  |  |  |  |  |  |  |
|  | Seconary | 6.0 | 11.8 | 15.2 | 15.9 | 16.9 | 13.5 | 20.7 | 100.0 |
|  | Post-secondary \& higher | 8.2 | 13.1 | 21.0 | 22.3 | 15.7 | 9.4 | 10.3 | 100.0 |

Source: Census \& Statistics Department
25. It will be noted that those having no schooling, or only primery school education have considerably more children than those who are more highly educated. In recent years, there has been a marked improvement in educational standards in the Colony with a corresponding general tendency to reduce the size of the family. Table 10 gives a comparison between the educational attainment of the female population of the ${ }^{C_{o l o n y}}$ in 1966 and 1971. The information for 1956 was obtained from the results of the ByCensus taken that year and that for 1971 from the results of Census. Even over this short period of 5 years, an improvement in educational. standards can be observed.

Table 10: Percentage Distribution of Female Population by Educational Attainment for 1966 and 1971

| Age Group | Educational <br> Attainment | Kindergarten or No Schooling | $\begin{aligned} & \text { Primary } \\ & \& \\ & \text { Private } \\ & \text { Tutor } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Second- } \\ & \text { ary } \end{aligned}$ | Post Second- ary and Above | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15-19 | 1966 By-Census <br> 1971 Census | $\begin{aligned} & 4.5 \\ & 3.9 \end{aligned}$ | $\begin{aligned} & 46.7 \\ & 44.6 \end{aligned}$ | $\begin{aligned} & 47.6 \\ & 49.9 \end{aligned}$ | $\begin{aligned} & 1.2 \\ & 1.6 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 20-24 | 1966 By-Census <br> 1971 Census | $\begin{array}{r} 12.9 \\ 6.2 \end{array}$ | $\begin{aligned} & 48.1 \\ & 44.9 \end{aligned}$ | $\begin{aligned} & 31.5 \\ & 43.2 \end{aligned}$ | $\begin{aligned} & 7.5 \\ & 5.7 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 25-29 | 1966 By-Census 1971 Census | $\begin{aligned} & 20.1 \\ & 13.3 \end{aligned}$ | $\begin{aligned} & 48.6 \\ & 47.0 \end{aligned}$ | $\begin{aligned} & 24.9 \\ & 33.4 \end{aligned}$ | $\begin{aligned} & 6.4 \\ & 6.3 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 30-34 | 1966 By-Census <br> 1971 Census | $\begin{aligned} & 35.6 \\ & 22.9 \end{aligned}$ | $\begin{aligned} & 48.3 \\ & 47.9 \end{aligned}$ | $\begin{aligned} & 12.6 \\ & 24.0 \end{aligned}$ | $\begin{aligned} & 3.5 \\ & 5.2 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 35-39 | 1966 By-Census <br> 1971 Census | $\begin{aligned} & 47.7 \\ & 35.9 \end{aligned}$ | $\begin{aligned} & 39.5 \\ & 46.6 \end{aligned}$ | $\begin{aligned} & 10.1 \\ & 14.9 \end{aligned}$ | $\begin{aligned} & 2.7 \\ & 2.6 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 40-44 | 1966 By-Census <br> 1971 Census | $\begin{aligned} & 49.7 \\ & 47.2 \end{aligned}$ | $\begin{aligned} & 36.8 \\ & 40.5 \end{aligned}$ | $\begin{aligned} & 10.7 \\ & 10.4 \end{aligned}$ | $\begin{aligned} & 2.8 \\ & 1.9 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 45-49 | 1966 By-Census <br> 1971 Census | $\begin{aligned} & 53.4 \\ & 50.1 \end{aligned}$ | $\begin{aligned} & 33.4 \\ & 37.2 \end{aligned}$ | $\begin{aligned} & 10.4 \\ & 10.6 \end{aligned}$ | $\begin{aligned} & 2.8 \\ & 2.1 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |
| 15-49 | 1966 By-Census 1971 Census | $\begin{aligned} & 30.3 \\ & 22.7 \end{aligned}$ | $\begin{aligned} & 43.2 \\ & 44.1 \end{aligned}$ | $\begin{aligned} & 23.0 \\ & 29.8 \end{aligned}$ | $\begin{aligned} & 3.5 \\ & 3.4 \end{aligned}$ | $\begin{aligned} & 100 \% \\ & 100 \% \end{aligned}$ |

Source: Census \& Statistics Department
26. As educational standards continue to improve and the older geroratic: of women with lower educational stondards reach less fertile ages, the tendency to reduce the size of families will accelerate. In various advanced countries with high educational standards, the size of families shows a marked difference to those in Hong Kong.
27. The change in labour participation rate of females will certainly have some effect on fertility. Table 11 shows the activity status of females aged 15 and above in 1961, 1966 \& 1971. The information for 1961 and 1971 was drawn from the results of Census and that for 1966 from the results of the By-Census. It can be seen that the percentage of women as housewives has decreased over the past ten years from $51.8 \%$ in 1961 to $45.5 \%$ in 1971; on the other hand, the percentage of working women out of the total has increased from $36.2 \%$ in 1961 to $40.8 \%$ in 1971 ( in terms of abisolute number from 329,031 women in 1961 to 509,480 women in 1971). This increase in labour participation rate of female, no doubt, has a considerable contribution to the decline in the fertility rate in the past 10 years.

Table 11: Females aged 15 \& above by Activity Status 1961, 1966 \& 1971

| Activity Statis | 1961 Census |  | 1966 By viensus |  | 1971 Census |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | 3 | Number | \% | Number | \% |
| Independent | 37,832 | 4.2 | 8,010 | 0.7 | 17,730 | 1.4 |
| Students | 40,126 | 4.4 | 79,180 | 7.1 | 94,457 | 7.5 |
| Housowives | 470,903 | 51.8 | 538,150 | 48.5 | 568,085 | 45.5 |
| Employees including trainees | 295,410 | 32.5 | 407.640 | 36.7 | 478.803 | 38.4 |
| Unemployed | 5,677 | 0.6 | 18,820 | 1.7 | 25,147 | 2.0 |
| Employers \& self-employed | 33,621 | 3.7 | 28,900 | 2.6 | 30,677 | 2.5 |
| Retired Persons | 25,280 | 2.8 | 28,670 | 2.6 | 30,754 | 2.5 |
| Inrates of Institutions | - | - | 640 | 0.1 | 2,591 | 0.2 |
| TOTAL | 908,849 | 100.0 | 110,010 | 100.0 | 1,248,244 | 100.0 |

Source: Census \& Statistics Department
28. In order to scrutinize the change in female labour participation rate over the past ten years more deeply, the female working population aged 15 and over has been tabulated by age in Table 12 for the years 1961, 1966 and 1971. It can be seen that the percentage of working population out of total females aged 15-34 has increased from 39.5\% in 1961 to $51.9 \%$ in 1971. The corresponding percentage for the age group 20-24 has shown the most remarkable increase of from $49.9 \%$ in 1961 to $66.1 \%$ in 1971. Though the percentage of working population out of total females aged 35-44 shows no significant improvement over the past ten years it was not of much concern. In conclusion, the increasing labour force participation, especially more females of the most fertile age group (e.g. 20-29) joining the labour force, in the modernizing economy and the decreasing fertility are associated in Hong Kong.

Table 12 : Female Working Population Aged 15 \& Above 1961, 1966 \& 1971

| Age | 1961 Census |  |  | 1966 By-Census |  |  | 1971 Census |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Work- <br> ing <br> Popu- <br> Iation | Total <br> Popu- <br> lation | \% of Working Population | Work- <br> ing <br> Popu- <br> lation | Total <br> Popu- <br> lation | $\%$ of Working Population | Work- <br> ing <br> Popu- <br> lation | Total Popu- <br> lation | $\%$ of Working Population |
| 15-19 | 34,328 | 74,857 | 45.9 |  |  |  | 109,335 | 208,187 | 52.5 |
| 20-24 | 45,655 | 91,499 | 49.9 | 134,16 | 274,330 | ) | 107,916 | 163,142 | 66.1 |
| 25-34 | 79,984 | 239,016 | 33.5 |  |  | ) | 69,983 | 182,162 | 38.4 |
| 35-44 | 78,047 | 207,338 | 37.6 | 256,850 | 31,480 | ) 40.7 | 89,752 | 237,521 | 37.8 |
| 45-54 | 59,994 | 144,517 | 41.5 |  |  | ) | 74,613 | 199,719 | 37.4 |
| 55-64 | 24,889 | 89,832 | 27.7 |  |  |  | 42,971 | 139,080 | 30.9 |
| 65 \& ovor | 6,134 | 61,790 | 9.9 | 5,53 | +,200 | $22.3$ | 14,910 | 118,433 | 12.6 |
| Total | 329,031 | 908,849 | 36.2 | 436,540 | 110,010 | 39.3 | 509,480 | 1,248,244 | 40.8 |

Source : Census \& Statistics Department

## Chapter VI

## Family Planning

29. It was estimated in poragraph 19 that of the total decrease of just over $43 \%$ in the birth-rate during the period 1961 to 1971, about 21\% was due to changes in age distribution and marital status distribution combined. Thus, it may be deduced that the remaining $22 \%$ decrease could be attributable to a real decline in fertility or to the postponement of bearing children. Some social and economic factors to account for the decline in fertility have been discussed in the last chapter. Besides, the work of the Family Planning Association has contributed much towards the reduction in the birth-rate. However, it is not easy to assess, in statistical terms, the effects which birth control in or outside the family planning program have had on the birth-rate. Some women practice birth control privately but a large number of women avail themselves of the services of the Hong Kong Family Planning Association and so it may be possible to estimate the effect on the number of births in the Colony by the number of attendance at the Association's clinics.
30. Table 13 shows the number of new and old clients attending clinics of the Association from 1961 to 1971.

Table 13 : Number of New and Old Clients Attending Clinics of the Hong Kong Family Planning Association, 1961, 1964-1971

| Year | Number of Clients |  |  |
| :---: | :---: | :---: | :---: |
|  | New | Old | Total |
| 1961 | 12,299 | 17,044 | 29,343 |
| 1964 | 21,920 | 24,118 | 46,038 |
| 1965 | 35,946 | 30,679 | 66,625 |
| 1966 | 23,031 | 46,926 | 69,957 |
| 1967 | 19,292 | 47,373 | 66,665 |
| 1968 | 26,588 | 47,157 | 73,745 |
| 1969 | 30,886 | 59,205 | 90,091 |
| 1970 | 30,470 | 68,610 | 99,080 |
| 1971 | 30,445 | 75,055 | 105,500 |

31. The records of the Family Planning Association give the age distribution of its "new" clients while that of the old clients has been obtained by sampling from the records of 1969. Data of this type do not permit any concise measurements of the influence of the Family Planning Program on the numbers of births to the women of Hong Kong. If it is assumed that only married women give birth and that no client of the Association gave birth in 1971, it is possible to construct a table showing the maximum possible impact of the Association's program on birth rates. Table 14 gives this "expected" number of births in the absence of the program.

Table 14: Expected number of Births in 1971 if the Hong Kong Family Planning Association had been inactive

| $\begin{aligned} & \text { Age } \\ & \text { Group } \end{aligned}$ | Total <br> Female <br> Popu- <br> lation <br> in 1971 | Total <br> Married <br> Female <br> Popu- <br> lation | Clients for F.P.A. |  | Married <br> Female <br> Popu- <br> lation <br> less <br> F.P.A. <br> Clients | Known <br> Births <br> in 1971 | Age <br> Specific <br> Fertility <br> Rates for <br> Married <br> Female <br> Popu- <br> lation <br> at (6) | Expectod <br> Births <br> using <br> Rates <br> Calcu- <br> lated <br> at (8) <br> for <br> whole <br> married <br> Popu- <br> lation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | New | Old |  |  |  |  |
| (I) | (2) | (3) | (4) | (5) | $\begin{aligned} & (6)=(3)- \\ & (4)-(5) \end{aligned}$ | (7) | (8) | (9) |
| 15-19 | 214,900 | 6,232 | 1,510 | - | 4,722 | 3,649 | 772.8 | 4,816 |
| 20-24 | 163,900 | 52,940 | 11,073 | 2,552 | 39,315 | 23,856 | 606.8 | 32,22 |
| 25-29 | 95,100 | 75,509 | 8,336 | 7,956 | 59,217 | 23,196 | 391.7 | 29,577 |
| 30-34 | 94,200 | 87,983 | 4,683 | 16,287 | 67,013 | 15,304 | 228.4 | 20,005 |
| 35-39 | 118,100 | 112,313 | 3,011 | 22,741 | 86,561 | 9,872 | 114.0 | 12,804 |
| 40-44 | 123,700 | 114,917 | 1,534 | 18,366 | 95,017 | 3,517 | 37.0 | 4,253 |
| - $45-49$ | 108,300 | 96,495 | 298 | 7,153 | 89,044 | 395 | 4.4 | $42=$ |
| Totol | 918,200 | 546,389 | 30,445 | 75,055 | 440,889 | 79,789 | - | 104,093 |

[^0]Assumptions : (1) No. F.P.A. client gave birth in 1971
(2) Only married women gave birth

The table shows that there might have been a total of 24,000 additional births in the Colony if the assumptions in paragraph 31 are correct. But these are bold assumptions and cannot, in fact, be entirely true. Some Family Planning Association clients must have had children during 1971 due either to accidental pregnancies or to the fact that they were not clients throughout the full year and many have had children before they became clients of the Association or after they had ceased to be clients. Nevertheless, the table indicates that family planning has played an important role in reducing the crude birth-rate, and even if an allowance of $40 \%$ is made to off-set the fact that the assumptions made in paragraph 31 are incorrect, this would mean that some 14,000 possible births had been avoided. In terms of the crude birth-rate, these additional births would have pushed the rate up from 19.7 to 23.3 per thousand. It might be worth mentioning that the 1971 data showed that nearly $70 \%$ of new clients were aged below 30 which suggested that future drives for clientele should search for potential high-order mothers of older age in the roproductive period.

## Future Fertility Trends

33. As observed in previous chapters, a decrease of some $43 \%$ in the crude birth-rate occurred between 1961 and 1971 about $21 \%$ of which was due to changes in age distribution and marital status distribution of the population, and the balance to the actual decrease in fertility. The age specific fertility rates for 1969, 1970 and 1971 illustrated in Table 2 are believed to be fairly accurate since they are compiled from good reported figures. The estimated rates for 1961 and 1966 are also considered reliable because both the levels and trends of these rates compare favourably with the estimated rates compiled from the 1971 Census. A special table was compiled from the 1971 Census by relating the children under 10 years old of each household with the age of their mothers to derive at another set of age specific fertility rates. If these two sets of rates are projected by exponential functions, the $a b^{x}$ values are very similar for each age group. Table 15 shows the value of $b$ by age group compiled from two different sets of rates. Thus, all the available evidence indicates that there will continue to be a decline in age specific fertility rates for some years in the future, although the rate of decrease may be slowed down somewhat. Table 15: Value of $b$ in the exponential function $a^{x}$ by age group

| Age Group | Value of b |  |
| :--- | :---: | :---: |
|  |  <br> Death records | Based on 1971 <br> Census Tables |
| $15-19$ | 0.8886 | 0.9210 |
| $20-24$ | 0.9490 | 0.9456 |
| $25-29$ | 0.9716 | 0.9701 |
| $30-34$ | 0.9663 | 0.9633 |
| $35-39$ | 0.9517 | 0.9468 |
| $40-44$ | 0.9402 | 0.9408 |
| $45-49$ | 0.9401 | Not available |

Source: Census \& Statistics Department
34. By examining the age specific fertility rates by each individual year for 1969, 1970 and 1971 in Table 4, the rates for ages 15 to 23 can be considered as one group with very rapid decrease in the past years and it is believed that the age specific fertility rate for this group has already dropped to a very low level due to reasons such as postponement of marriage and higher young female labour force participation rate, it is doubtful whether in future there will be any substantial decline of fertility for this age group. The fertility rates for the ages 24 to 28 can be considered as another group because the decline is insignificant in the past three years. This may possibly be due to the fact that the average age at marriage for females in the past few years was around 23 and the time lag between marriage and the birth of the 1st and 2nd child was short. Table 15 shows that most of the 1st child is born within the first 3 years of marriage while the 2nd child is within the first 5 years. As mentioned earlier, the average age at marriage is almost the same in the past few years and has already reached a fairly high level, it is believed that it will almost remain so in future. Thus, it is believed that the decline in fertility in this age group will be the least significant but it is hoped that there would be longer time lag between marriage and the birth of the 1 st and 2nd child. The age specific fertility rates for women aged 29 and over will continue to fall in future and the decline should be quite substantial because the rates are still at a high level. the women in the older fertile age group in Hong Kong now still prefer to have a large number of children but once these women have passed the reproductive age in a few years time and females of the younger ages now who generally accept the practice of family planning come up the older fertile age group, the fertility rate in this age group will drop substantially.

- Table 15: Percentage distribution of live births by birth order by duration of marriage in 1970


Source: Census \& Statistics Department
35. For the purpose of preparing the population projections for the coming 20 years for Hong Kong the following assumptions on fertility are made.

Table 16: Rate of decrease in the age-specific fertility rate

| AgeGroup | High Projection |  | Medium Projection |  | Low Projection |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} 1981 \\ \text { (\% decre } \\ \text { over } 19 \\ \text { level } \end{gathered}$ | 1994 (\% decrease over 1981 level | 1981 (\% decrease over 1971) level | $\left\|\begin{array}{c}1991 \\ (\% \text { decrease } \\ \text { over 1981) } \\ \text { level }\end{array}\right\|$ | (\% decrease over 1971) level | $\begin{gathered} 1991 \\ (\% \text { decrease } \\ \text { over 1981) } \\ \text { level } \end{gathered}$ |
| 15-23 | - $4 \%$ | constant | - 14\% | - 5\% | - 20\% | - 5\% |
| 24-28 | + 3\% | + $2 \%$ | - $8 \%$ | - $3 \%$ | - 15\% | -10\% |
| 29-34 | -10\% | - 5\% | - 20\% | -10\% | - 25\% | -15\% |
| 35-49 | -15\% | -10\% | - 25\% | -15\% | - $40 \%$ | -15\% |


[^0]:    * Mid-year estimated population, excluding army \& transients

