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**An analysis of the Lowest Total Fertility Rate in  
Hong Kong SAR**

By

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# An Analysis of the Lowest Total Fertility Rate in Hong Kong SAR

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## **Abstract**

Total Fertility Rate (TFR) in Hong Kong has dropped significantly over the past 30 years, from 2.48 births per woman in 1976 to 0.966 in 2005, which is one of the lowest in the world. It is mainly caused by the change of marital distribution which has contributed to about 56% of the decline in the total fertility rate for the period 1976-2001. Delay of marriage and reduction in the marital fertility rate have also been shown to be two major causes for the low TFR. A new measure, called a weighted total marital fertility rate (WTMFR), is introduced such that change of age at marriage and the fertility within marriage can be factored in explaining the decline of the fertility rate. The delay of marriage has contributed to about 52% of the reduction of WTMFR whereas the reduction of the fertility within marriage has accounted for the other 48%. Apparently, the proportion of women remaining single has been stabilized and leveled off recently. However, the preference of having smaller family size has become a norm rather than an exception. It is very unlikely to see a rebound of fertility among the Hong Kong women in the near future if there is no increase in marriages or births outside wedlock. Encouraging more births among married women so as to increase fertility is expected to have limited impact.

**Keywords:** *Age at first marriage; decomposition; Hong Kong; Total fertility rate; Weighted total marital fertility rate*

## Introduction

The Total Fertility Rate (*TFR*) in Hong Kong has been falling at an unprecedented rate over the past 25 years. It plummeted from the replacement level (i.e. 2.1 births per 1 000 women) in 1980 to 0.966 in 2005, which is currently the lowest by world standards. By comparison, it took France more than half a century to double the number of older persons (65 years or older); but it only took Hong Kong 20 years to boost up the proportion of older persons from 7.4% in 1985 to 12.1% in 2005, and is expected to rise further to 27% by 2033 (Prioux, 2005; Census and Statistics Department, 2004). Its pace and magnitude of the *TFR* decline in the past three decades is phenomenal and has serious socio-economic implications.

It is likely that a *TFR* is distorted by changes in the timing of childbearing (i.e. the tempo effect), as indicated by the mean age of mothers at giving birth rises continually over the past two decades (Bongaarts, 1999; Census and Statistics Department, 2002). The current trend of the *TFR* in Hong Kong is subject to both changes in the timing of childbearing and the number of births. Concurrently, the fertility rate of mothers at prime childbearing ages (25-34) is falling significantly (i.e. the quantum effect) (Bongaarts and Feeney, 1998). However, the reduction of fertility is somewhat different from other western countries. The significant reduction of Hong Kong *TFR* is mainly due to (i) increasing number of spinsters; (ii) the delays in marriage (measured by the median age of first marriage); and (iii) reduction of childbearing within marriage.

The objective of the paper is to use a decomposition technique (Kitagawa, 1955) to split the change in the *TFR* in Hong Kong into two components: (i) change in proportion of now married females; and (ii) change in marital fertility rate, so as to arrive at a clearer picture on how the change in the *TFR* has evolved. Furthermore, a new measure, a Weighted Total Marital Fertility Rate (*WTMFR*), is introduced to describe the fertility schedule among married women. It can quantify the effect of the factors of age of marriage and marital fertility rate on the change of *WTMFR*. Discussions on the interpretation of the measure and its relationship to the reduction of *TFR* are provided.

## Definitions

The paper uses birth data for the period 1981–2005 which are made available from the Census and Statistics Department of the Hong Kong SAR (C&SD). All data for marriage is the mid-year data, for example 2 000 women get married in 2004 actually means they get married in the period from middle year of 2003 to middle year of 2004.

We need some definitions and notations.

**Fertility rate (FR)** – This rate represents the number of births occurring in a year per woman in a given community. The fertility rate is age specific (*AFR*) if its denominator contains women in a particular age group, and age-marital specific (*AMFR*) if its denominator contains only married women in a particular age group. The *AFR* and *AMFR* for females of age group  $i$  in year  $t$  are  $AFR_i^t$  and  $AMFR_i^t$  respectively.

**Total fertility rate (TFR)** – This rate can be understood as expressing how many children could be expected by a woman living through the whole of their reproductive lives (from 15 to 49), provided that, at different ages, they reproduced themselves at the rates experienced in a given year. For convenience, the *TFR* can be expressed as the number of children born per woman. A *TFR* of 2.1 is equivalent to the replacement rate of 1, which means that on average *one woman* in a given community would produce an average of *one girl* (to replace her mother) throughout her reproductive life. This is the replacement level of fertility because it is from its women that a community replaces itself.

**Total marital fertility rate (TMFR)** – This rate can be understood as expressing how many children could be expected by a woman marrying at certain age or age group (say 20 as in Yip and Lee, 2002) living through the whole reproductive period, provided that, at different ages, they reproduced themselves at the rates experienced in a given year. For convenience, the *TMFR* can be expressed as the number of children born per married woman marrying at certain age or age group. However, *marriage rate* for women in different age groups are different in the community, the *TMFR* can only represent the fertility rate for those women who get married at that particular age. It is important to take into account of the shift of the median marriage age of women and their aspirations to have babies within marriage that have experienced drastic changes in Hong Kong. For example, the median age at first marriage for women has increased from 23 in the 1980's to 28 in 2005. (FPAHK, 2005).

## Methodology

A Kaplan-Meier Curve is used to estimate the proportion of women who would remain single in their life time (Andersen et al., 1993). In our case, the ages are grouped into intervals, each of five years, from 15 to 54 for the marriage period and

from 15 to 49 for the reproductive period. A female in a certain age group  $i$  would choose either to get married or remain single throughout the interval. the total single women population corresponds to initial total sample size,  $t_i, i=1, \dots, k$  represent the end of age group  $i$  while a woman's marriage in age group  $i$  is just like an individual's failure in time  $t_i$ .

We define the marital rate,  $q_i$ , which is the same as the estimate hazard by

$$q_i = M_i / N_i$$

where  $M_i$  is the number of females newly married in a certain year( which means having registered their marriages in the period from the previous mid-year to current mid-year) in age group  $i$ ,  $N_i$  is the number of never married women in the previous mid-year in age group  $i$ . Therefore  $q_i$  can be explained as the hazard function for women to get married. Since the length of each interval is five year, the probability of remaining never married for the five year period is given by  $(1 - q_i)^5$ . The probability to remain as a spinster after age group  $k$  is  $S_k = \prod_{i=1}^k (1 - q_i)^5$ ,  $i = 1, \dots, k$ ,  $k = 1, \dots, 7$ , where  $S_k$  is the usual Kaplan-Meier estimate.

*A weighted total marital fertility rate (WTMFR) to detect the changes in the marital fertility rate*

We introduce a new measure, a weighted total marital fertility rate (*WTMFR*) to show the effect of the change of age structure of marriage on  $TMFR_i$ , which denotes the number of children expected by a woman who got married in age group  $i$ . Here the *WTMFR* is a weighted average of the  $TMFR_i$  and the weight  $w_i$ , is

$$w_i = f_i / f$$

where  $f_i$  is the number of women of age group  $i$  newly married in a certain year and  $f$  is the total number of newly married women in the same year. Then we can obtain *WTMFR*:

$$WTMFR = \sum_{i=1}^7 w_i \times TMFR_i.$$

Yip & Lee (2002) have defined *TMFR* as the number of children expected by a woman who get married at the age of 20. If all women get married in 20, *TMFR* would be the same as *WTMFR*. However, less than 3% of the women get married at the age of 20 and the median age at first marriage for women is 28 in 2005 for Hong Kong. Also, the *TMFR* is sensitive to the sudden increase in fertility among the young group (FPAHK, 2005) and the *WTMFR* gives a more robust estimate for the fertility among

married women. Here we use  $TMFR_i$  as the TMFR of women in age group  $i, i=1, \dots, 7$ . Therefore a  $TMFR_1$  is equal to  $TMFR_{15-19}$ , and so on. Also, a decomposition method is used to quantify the effect on the fertility among married women due to a shift of the age at marriage and marital fertility rate.

*A decomposition method (Kitagawa, 1955) for detecting the reasons for the changes of TFR and WTMFR*

The following notations are used in this method:

$B_i^t$  = Number of births given by females in age group  $i$  in year  $t$ ;

$K_i^t$  = Number of females in age group  $i$  in the middle of year  $t$ ;

$k_i^t$  = Number of married females in age group  $i$  in the middle of year  $t$ ;

Moreover, a bar over a variable (i.e.  $\bar{a}$ ) denotes the average of the variable over two time-points and a delta in front of a variable (i.e.  $\Delta a = a^t - a^{t_0}$ ) denotes the change of the variable over two time-points  $t_0$  and  $t_1$ . Since female foreign domestic helpers are unlikely to give births in Hong Kong, more than 200 000 female foreign domestic helpers aged 20–49 have been excluded in our calculation (C&SD, 2005a).

The total fertility rate in year  $t$  is  $TFR^t$  :

$$TFR^t = \sum_i AFR_i^t \quad \text{where} \quad AFR_i^t = \frac{B_i^t}{K_i^t}$$

The age specific marital fertility rate ( $AMFR$ ) for now married females in age group  $i$  in year  $t$  is  $AMFR_i^t$  :

$$AMFR_i^t = \frac{B_i^t}{k_i^t}.$$

Let  $p_i^t$  be the proportion of now married females in age group  $i$  in the middle of year  $t$  among all females in age group  $i$  in the middle of year  $t$ :

$$p_i^t = \frac{k_i^t}{K_i^t}$$

*A Decomposition for TFR*

Let  $\Delta TFR$  be the change in the total fertility rate between two time-points  $t_0$  and  $t_1$ . As the birthrate outside marriage in Hong Kong is too small to be counted in, only about 7% in recent years, we naturally assume that all births are given by married women. Hence  $\Delta TFR$  can be decomposed into two components in the following way:

$$\begin{aligned}
\Delta TFR &= \sum_i \left[ AFR_i^{t_1} - AFR_i^{t_0} \right] \\
&= \sum_i \left[ \frac{B_i^{t_1}}{K_i^{t_1}} - \frac{B_i^{t_0}}{K_i^{t_0}} \right] \\
&= \sum_i \left[ \frac{B_i^{t_1}}{k_i^{t_1}} \times \frac{k_i^{t_1}}{K_i^{t_1}} - \frac{B_i^{t_0}}{k_i^{t_0}} \times \frac{k_i^{t_0}}{K_i^{t_0}} \right] \\
&= \sum_i \left[ \frac{1}{2} \left( \frac{B_i^{t_1}}{k_i^{t_1}} + \frac{B_i^{t_0}}{k_i^{t_0}} \right) \times \left( \frac{k_i^{t_1}}{K_i^{t_1}} - \frac{k_i^{t_0}}{K_i^{t_0}} \right) + \frac{1}{2} \left( \frac{k_i^{t_1}}{K_i^{t_1}} + \frac{k_i^{t_0}}{K_i^{t_0}} \right) \times \left( \frac{B_i^{t_1}}{k_i^{t_1}} - \frac{B_i^{t_0}}{k_i^{t_0}} \right) \right] \\
&= \sum_i \left[ \overline{AMFR}_i \times \Delta p_i + \overline{p}_i \times \Delta AMFR_i \right]
\end{aligned}$$

From the above formula, it can be seen that the change in the  $TFR$  may be decomposed into two components: one from compositional changes in age specific proportions of now married females ( $\Delta p_i$ ) and one from changes in age specific marital fertility rates ( $\Delta AMFR_i$ ), weighted respectively by the average age specific marital fertility rates ( $AMFR_i$ ) and the average age specific proportions of females married ( $p_i$ ) over two time-points.

#### *A decomposition for WTMFR*

To assess the impact of marital structure change on  $WTMFR$  explicitly, we use a decomposition technique to split the change of  $WTMFR$  into two components: Let  $\Delta WTMFR$  be the change in the *Weighted Total Marital Fertility Rate* between two time-points  $t_0$  and  $t_1$  and it can be decomposed into two components as follows for a totally 7 age groups,  $i=1, \dots, 7$ :

$$\begin{aligned}
\Delta WTMFR &= \sum_i \left[ w_i^{t_1} TMFR_i^{t_1} - w_i^{t_0} TMFR_i^{t_0} \right] \\
&= \sum_i \left[ \frac{1}{2} \left( w_i^{t_1} + w_i^{t_0} \right) \times \left( TMFR_i^{t_1} - TMFR_i^{t_0} \right) \right. \\
&\quad \left. + \frac{1}{2} \left( TMFR_i^{t_1} + TMFR_i^{t_0} \right) \times \left( w_i^{t_1} - w_i^{t_0} \right) \right] \\
&= \sum_i \left[ \overline{TMFR}_i \times \Delta w_i + \overline{w}_i \times \Delta TMFR_i \right]
\end{aligned}$$

Notes:  $\Delta w_i$  is the change in  $w_i$

$\Delta TMFR_i$  is the change in  $TMFR_i$

$\overline{w_i}$  is the average of  $w_i$  of two time-points

$\overline{TMFR_i}$  is the average of  $TMFR_i$  of two time-points

## Results

*A Kaplan-Meier Curve for the proportion of women remaining never married at different age groups.*

See Figure 1

Figure 1 gives the *Kaplan-Meier* curves, representing the women who remain single in different age groups for the years 1991, 1996 and 2001. Teens' marriage is not that common, for the age group 15–19, the four 5 year intervals' data on proportion of never married is almost the same, between 0.96 and 0.99. For the age group 20–24, only about 70 percent of the females remain single in 1991 while in 2001, more than 80 percent females still remain single. The proportion of remaining single increased throughout the period. For example, in the age group 40–44, only 17 percent females remain single in 1991, while there are still 20 percent of the females remains single in 1996 and 25 percent in 2001. Meanwhile, the propensity of remaining never married has become more and more serious, and the gap of age group 25–29 between 1996 and 2001 was about twice the gap between 1991 and 1996.

### *The Weighted Total Marital Fertility Rate (WTMFR)*

Figure 2 shows the age specific marital fertility rate has decreased significantly across all age groups except at the age 15–19. Also, the largest reduction was found for the prime childbearing age group 20–29.

Attached Figure 2 here

Attached Table 1 here

Table 1 gives the  $TMFR$  (or  $TMFR_1$ ),  $WTMFR$  and  $TFR$  for comparison. When comparing between the years 1976 and 2001, the  $TMFR$  has consistently reduced by at least 30% across all age groups except for the age group 15–19 which is sensitive to the increases in teens' pregnancy recently. However, the unusual increase of this age group has minimal effect on the total number of births in the community. Significant reduction of the  $TMFR_i$  was due to the drastic reduction of age-specific fertility rates at the age groups 20–24 and 25–29. Figure 2 show that age-specific marital fertility rate has an overall decreasing trend across all age groups throughout the 25 years period. The largest reductions occurred in the age groups 20–24, 25–29 and 30–34, which are the three main productive periods for women with much higher weight in comparison to other age groups. Note that the total fertility rate in Hong Kong in 2001 is only 0.932. However the reduction is as large as 0.2 live births per woman for the age group 25–29 over the 25 years period.

Figure 3 gives the plots of  $TFR$ ,  $TMFR$  (or  $TMFR_1$ ) and  $WTMFR$  for the period 1976–2001. The  $TFR$  and  $WTMFR$  are almost of the same shape, while the trend of  $TMFR$  is very different from that of  $TFR$ . This shows the new measure  $WTMFR$  is more robust to the increase of teenage pregnancy which has little effect on the total number of births. The  $WTMFR$  has dropped from 3.65 in 1976 to 1.58 in 2001. The reduction is about 57% over the 25 years period whereas the  $TFR$  has dropped from 2.48 to 0.932 over the same period. Apparently, the marriage delay is the main reason for the  $TFR$  decline. As the median age of marriage increases, the expected number of children was only 0.685 for those who got married of age 30-34.

While  $TMFR$  simply assumes that all women married at the same age, say 20, the new measure  $WTMFR$  has taken account of the exact age group of women getting married. The true situation is that the median age of first marriage for women has been postponed to 28. By assigning a weight to each  $TMFR_i$ , we avoid the impractical assumption that every married woman gets married at 20. Hence,  $WTMFR$  is a better and more consistent estimate to measure the births by married women. In Hong Kong's case, birthrate outside marriage is so small (7% in 2004) that  $WTMFR$  appears as the same shape and trend as  $TFR$ . But for countries such as United States, Switzerland, which have very high birthrates outside marriage, the  $WTMFR$  can help to detect the components of newly births and the trend of birth in marriage and outside marriage, not just concerning on the whole picture by simply using  $TFR$ .

Attached Figure 3 here

### *Decomposition*

Table 2 shows that over the period from 1976 to 2001, changes in proportion of now married females accounted for 56% of the decline in the *TFR* from 2.480 to 0.932, while changes in age specific marital fertility rates accounted for 44% of the decline in the *TFR*. When analyzed by age, changes in proportion of now married females aged 20–29 accounted for nearly 40% of the decline in the *TFR*. Comparatively, changes in marital fertility rates for females aged 20–29 only accounted for 29% of the decline in the *TFR* and a major portion of this was due to the drop in marital fertility rates for females aged 25–29.

Table 2

Table 3

Table 3 shows the decomposition result for *WTMFR*. Over the whole period from 1976 to 2001, changes in  $w_i$  accounted for 52% of the decline in the *WTMFR* from 3.65 to 1.58, while changes in total marital fertility rates accounted for 48%. When analyzed by age, changes in  $w_i$  and  $TMFR_i$  of 20–24 had accounted for over 70% of the decline in *WTMFR*. In age group 25–29, change of  $w_i$  contributes 14% to increase *WTMFR*. For example, comparing with 1976, in 2001 there are more people intending to marry in 25–29 instead of 20–24, so the increasing proportion of marriages in 25–29 increases a little *WTMFR*. The similar results happen to the age groups 30–34 and 35–39. However, the slight negative effect observed for the age groups 30–34 and 35–39 has little effect on the *WTMFR*.

In decomposition of *TFR* and *WTMFR*, we have two different weights. The first one  $p_i$  stands for the proportion of now married women in the whole population (based on age group  $i$ ). The second one  $w_i$  stands for the proportion of women who married in age group  $i$  among all newly married women. Hence contribution to change of *TFR* made by change of  $p_i$  describes the effect of marriage numbers change, in other words, increasing number of spinster. Hence contribution to change of *WTMFR* made by change of  $w_i$  describes the effect of the shift in marriage age, in other words, change in marriage structure.

The new measure, *WTMFR*, for its consistency, can be used as the measure tool for fertility of marriage women, while *TFR* is used as the measure tool for fertility of all women. In Hong Kong, the trend of *WTMFR* is very similar with that of *TFR*, since birthrate outside marriage is still very small, about 9% in 2004. While in other countries, especially some developed countries, in which birthrates outside marriage are rather

high, like 49.6% in Norway (2004), it is not enough to use only *TFR* to estimate the fertility of all women. Thus *WTMFR* will be further needed for measuring fertility inside and outside marriage, in order to have a more complete view about the fertility, which enables the local government to make better strategy for increasing fertility.

## **Discussions**

The total fertility rate (*TFR*) plummets from the replacement level (i.e. 2.1 children per woman) to 0.966 in 2005, which is one of the lowest in the world (Yip and Lee, 2002). Few places in the world ever experience such a steep decline in the *TFR*. Even the very low fertility countries normally take a fairly long time to get the *TFR* falling to particular low levels below replacement, and the fertility rates tend to stabilize at such levels. Examples of these countries include Spain (1.1), Italy (1.2), Germany (1.3), Sweden (1.4) and Japan (1.5). The *TFR* in most of the countries still remains at a level ranging from 1.5 to 1.8 (World Health Organization, 2004). The *TFR* falls seamlessly and shows no sign of recovery in Hong Kong.

We have shown that the significant reduction of fertility in Hong Kong was related to (i) increasing number of spinsters; (ii) the delays in marriage (measured by the median age of first marriage) and (iii) reduction of childbearing within marriage (measured by the weighted total marital fertility rate (*WTMFR*)) have significant effect on the total fertility rate of Hong Kong. One of the reasons is due to significant improvement in the overall education attainment of women. Proportion of women remaining in tertiary education has been increasing due to the expansion of the education opportunities and there are more female undergraduate students than male undergraduate students in the tertiary education system (C&SD, 2005b). Also, female participation rate in the labor force has continuously improved and has increased from 30% to more than 50% in the past two decades (C&SD, 2005b). Women are more financially independent nowadays and getting married is not really high on their priority list.

Moreover, there is a continual increase in the number of marriages between Hong Kong men and Mainland women (i.e. Cross-border marriages). In 2004 one third of the registered marriages (approx 12 000) in Hong Kong were Hong Kong SAR men with Mainland China women whereas Hong Kong women and Mainland China men only accounted for two thousands. It leads to further imbalance of supply and demand of never married male and females in the community. It is estimated that the never married women aged 20–49 has outnumbered the number of never married men aged 25–54 by more than 80 000 (Yip et al., 2005). It certainly creates additional barriers for Hong Kong women to get married. Furthermore, only one to two percent of births were

outside wedlock and cohabitation in comparison to 30-60% in western countries (Prioux, 2005). The difference of *TFR* between Hong Kong and the other developed countries would be much smaller if we ignore the number of birth outside the wedlock or Hong Kong has the same proportion of the births outside wedlock..

The delay of marriage has also imposed additional barrier for fertility. Due to the difficulties of conceiving births at older age, the aspiration of having more children might not be fulfilled. Based on the KAP survey by Family Planning Association of Hong Kong, about 25% of women had not achieved their desired number of children (FPAHK, 2005). On the other hand, the desire of having fewer children within marriage is the norm rather than the exception in the present generation

Raising the fertility among married women is not that easy, since there are structural deep-rooted problems in the community about having more children (Yip et al., 2005). It might be more effective in trying to persuade the never married to get married at a younger age which would have a much stronger impact in raising the fertility level. Also, it is easier to promote the fertility among married couples from no children to one or from one to two. The effort needed to promote the married couples to increase the number of children from two to three is expected to be high and impractical. We shall expect that the downward trend of *TFR* among the Hong Kong women will not be reversed in the near future. It implies the very low *TFR* is likely to remain below 1 for some time. The fertility rate will neither go back to 1 in the short and medium term nor rise considerably above 1 in the long term unless there is a significant fertility rebound, or a substantial increase in the number of births out of wedlock, or a consistent rise in the married proportion in females. Judging by the past reproductive behaviors and marriage habits, these prerequisite conditions will be most unlikely to occur.

The demographic scene in Hong Kong has altered dramatically during 1976-2005. Fertility falls sharply and the marital structure undergoes major changes with many women of marriageable age remaining unmarried. If the tendency for late marriage and low aspiration to have children persists, insufficient replenishment of the labor force would eventually be the demographic consequence. Furthermore, long-lasting below-replacement fertility will inevitably result in continued ageing of the labor force. A slow-growing and ageing labor force has far-reaching implications for the economic vitality of Hong Kong.

#### **What the paper adds:**

The extent of various causes in explaining the reduction of fertility rate in Hong Kong is unknown. A decomposition method is proposed to analysis the reduction of the

fertility rate and a new estimator is proposed to examine the fertility within marriage. The results can help to quantify the amount of reduction due to various causes. It is shown the increase in spinster has the most significant impact on the reduction of fertility rate in Hong Kong but could have different results in other countries.

### **The policy implications**

The Chief Executive of Hong Kong SAR has encouraged the couples to have three or more children to help the fertility decline in Hong Kong. However, in view of the results, the effect would be minimal. The most effective way to increase the fertility is to remove the barriers to encourage people to get married first. \

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**Figures and tables**



Figure 1: Kaplan-Meier curves for females, 1991,1996, 2001.

Data Source: Census and Statistics Department, HKSAR

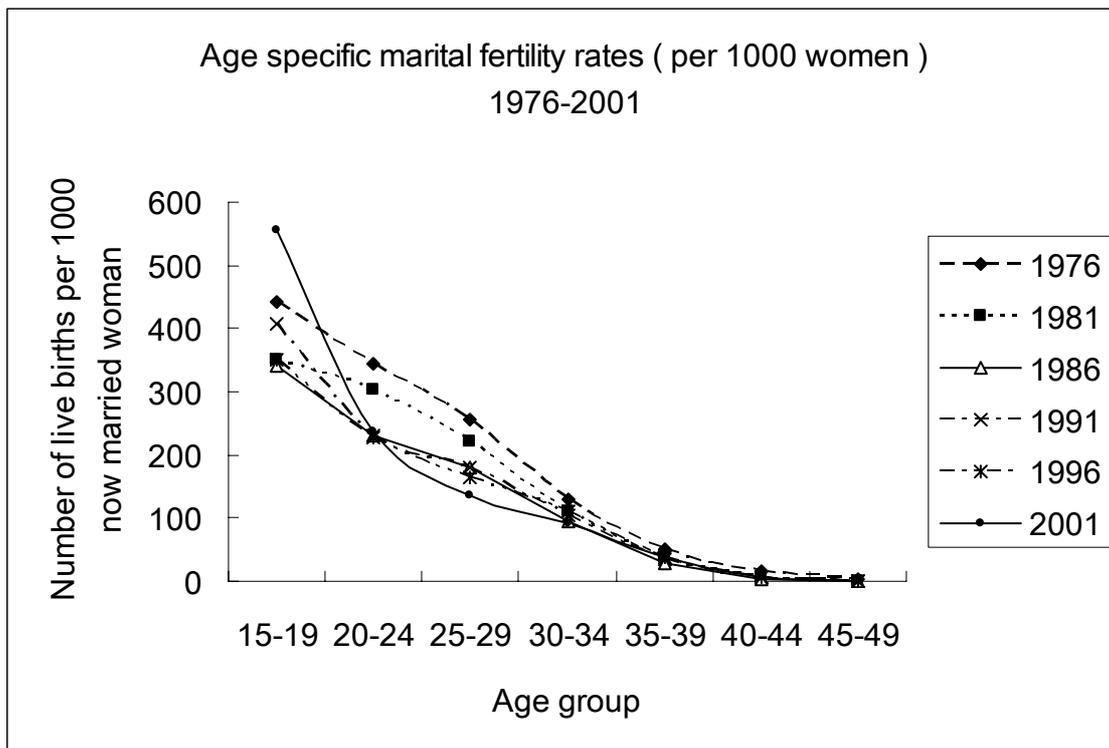


Figure 2: Age specific marital fertility rates (per 1000 women), 1976-2001  
Data Source: Census and Statistics Department, HKSAR

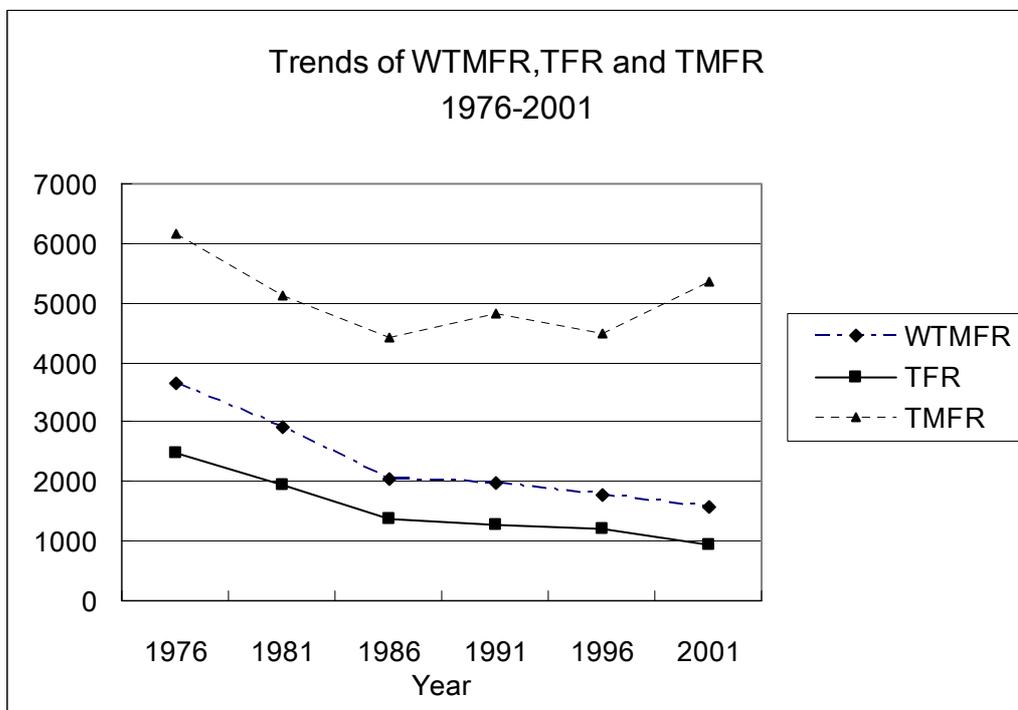


Figure 3: TFR, WTMFR, TMFR of Hong Kong women for the period 1976–2001  
Data Source: Census and Statistics Department, HKSAR

Table 1: TMFR, WTMFR and TFR

Age group	Total Marital Fertility Rate (per woman)					
	1976	1981	1986	1991	1996	2001
15-19	6.180	5.140	4.410	4.820	4.490	5.350
20-24	3.970	3.400	2.700	2.780	2.730	2.560
25-29	2.250	1.890	1.550	1.630	1.590	1.370
30-34	0.970	0.780	0.640	0.720	0.780	0.690
35-39	0.330	0.220	0.700	0.200	0.230	0.220
40-44	0.075	0.035	0.020	0.025	0.030	0.030
45-49	*	*	*	*	*	*
<i>WTMFR</i>	3.650	2.920	2.040	1.970	1.790	1.580
<i>TFR</i>	2.480	1.933	1.367	1.281	1.191	0.932
<i>TMFR</i> (or <i>TMFR</i> <sub>1</sub> )	6.180	5.140	4.410	4.820	4.490	5.350

Note: \*: < 0.005

Data Source: Census and Statistics Department, HKSAR

Table 2: Decomposition of the change in the total fertility rate, 1976–2001#

Proportion (%) of decline in the <i>TFR</i> attributable to change in			
Age group	$p_i$	AMFR	Total
15–19	5	-1	4
20–24	18	7	25
25–29	20	22	42
30–34	9	9	18
35–39	4	4	8
40–44	*	3	3
45–49	*	*	*
Total	56	44	100

Notes: # During this period, *TFR* fell by 1.548, from 2.480 to 0.932.

\*Less than 0.5.

A positive figure indicates that the factor led to a decrease in the *TFR* whereas a negative figure indicates that the factor led to an increase in the *TFR*.

Table 3: Decomposition of change in *WTMFR*, 1976–2001#

Proportion (%) of decline in the <i>WTMFR</i> attributable to change in			
Age group	$w_i$	<i>TMFR</i> <sub><i>i</i></sub>	Total
15–19	28	3	31

20–24	46	27	73
25–29	-14	16	2
30–34	-7	2	-5
35–39	-1	*	-1
40–44	*	*	*
45–49	*	*	*
Total	52	48	100

Notes: # During this period, *WTMFR* fell by 2.070, from 3.650 to 1.580

\* Less than 0.5.

A positive figure indicates that the factor led to a decrease in the *TMFR* whereas a negative figure indicates that the factor led to an increase in the *TMFR*