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Fertility Transition in China

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I. Historical review and Current fertility in China

Although large family used to be desired by Chinese culture, the natural fertility level in China was never as high as that recorded in the Hutterites population. According to historical studies, the TFR in the natural fertility regime was around 7-8 in Chinese society¹.

The 1950s and the 1960s witnessed very high fertility, except for the period of 1959- 1961 when mismanagement and natural disaster caused massive excess mortality and very low fertility (Peng, Xizhe, 1987). China's nation-wide fertility transition started in the early 1970s, which was initialised by the government sponsored family planning programme. Total fertility rate declined sharply from 5.8 in 1970 to 2.8 in 1979, a more than fifty per cent decrease. While the government programme has played a crucial role in bringing down Chinese fertility, the fundamental changes that have taken place in China's socio-economic structure since 1950 have also undermined the century-long reproductive norms and paved the way to the fertility reduction.

It is often assumed that once fertility transition has started, the momentum will maintain and fertility will inevitably reach replacement level (Cleland & Wilson, 1987). However, China's marked fertility reduction that had occurred in the 1970s did not get the same rapidity into the 1980s, despite government efforts in implementing the much more rigid family planning regulation, the so-called "One-Child per family" programme. The potential for fertility decline created by the socio-economic changes of 1950-70s seems to be exhausted by the 1980s, leading to a TFR fluctuating between 2.3-2.9.

Patterns of fertility transition in the 1980s indicate that China might have experienced two different kinds of fertility decline in these two decades. While the decline in the 1970s was mainly from high to low fertility, the 1980s witnessed a decline from low to near or even below replacement-level fertility. The two kinds of fertility decline cannot be considered different only in the numerical sense. It seems that the early transition is relative easier and could proceed fast in a

¹ For example, see Zhongwei Zhao, 'Deliberate Birth Control Under a High-fertility Regime: Reproductive

very short time period, but the later is much more difficult and requires somewhat more fundamental shift in socio-economic condition and the value system related to reproduction.

The early 1990s witnessed another nation-wide downward trend of fertility, with the coastal 'opened-up' areas at the fore. This new wave of fertility decline is certainly benefited from the economic reform and social changes generated from economic development. Moreover, the impact of the re-affirmed government commitment to population control should never be underestimated. According to official statistics, the TFR was reduced from 2.3 in 1990 to 2.0 in 1992, and has remained below replacement level since then.

It has been a subject of controversy whether fertility in China was dropping as rapidly as indicated by the official statistics. Some demographers argue that the official birth statistics are subject to serious undercounting. (Zeng Yi 1995, Attane & Sun 1999) The State Family Planning Commission may be the only government agency in China that openly admits the problems in its statistics and tries to correct them. The commission has conducted annual random survey to double check quality of population data and made great efforts to improve the accuracy of statistics. Results from these surveys varied widely between provinces and regions. In areas like Shanghai and Jiangsu, it was reported that more than 99 per cent of the births were registered, while underreporting could mount to more than 20 per cent in some other rural locations².

It is interesting to note that the total fertility rates of the 1990s that were derived from several national surveys, both conducted by the State Statistics Bureau and the State Family Planning Commission, are consistently around 1.6-1.8 after adjustments, in spite of changes in sample selection and methods of field work³. Other researches, more or less, echo these estimations⁴. So far, there is no single estimation of TFR that is widely accepted by the scholars. However, the publicised official figure, say TFR around 1.7-1.8, in my opinion and also commonly cited by researchers, is not far away from the reality⁵.

Behavior in China before 1970', *Population and Development Review*, 23(4): 729-767

² As these surveys were conducted in small scale, these data could not be used to represent the provincial features of birth reporting, or to infer to the national pattern.

³ These surveys include 1992 年国家计划生育委员会的 38 万人调查, 1995 年全国 1% 人口抽样调查, etc.

⁴ For example, a recent study based on the estimation of total population of China claims that given 15 per cent of birth underreporting, China's total fertility rate in the late 1990s should around 1.8. Given 10 per cent underreporting, the TFR should be 1.69. See Cui Hongyan, 'On the Total Population of China', *Population Research* (renkou yanjiu), 2000. No. 5 p.3

⁵ It is unwise at present to discuss the issue of real fertility rate, as valid data sets are not adequately available. In a Chinese Government Directive issued in March 2000, it just simply indicates that China's fertility is below 'replacement level'. See also Yu Xuejun & Xie Zhenming (于学军, 解振明) eds. *China's Population Development Review* (中国人口发展评论), P. 41-43, Beijing: People's Publishing

Figure 1 about here

II. Ethnic and regional differentials

Fertility level remains quite different between ethnic population groups. As birth control has long been vigorously implemented among the majority Han population, family planning programme has just started its formation for some minority nationalities (such as Tibet population). Among China's 55 minority groups, the fertility level of Korea and Manchu women was very low that their TFRs were only 1.56 and 1.86 respectively in 1989, but were the highest among the Uyгур and Kazak nationalities (TFRs are 4.65 and 4.74). Table 1 presents the fertility trends among five large minority populations living in China's minority autonomous regions.

Table 1. Total Fertility Rate of Major Ethnic Populations in Five Autonomous Regions

Period\Provinces	Inner Mongolia		Guang xi		Tibet		Ningxia		Xinjiang	
	Mongol	Han	Zhuang	Han	Tibet		Hui	Han	Uyгур	Han
1970-1974	6.07	5.05	5.54	5.25	5.11		6.70	5.48	6.13	5.20
1975-1979	3.68	3.05	5.16	5.26	4.70		6.61	4.06	5.87	3.69
1980-1984	3.33	2.43	4.35	3.65	5.23		5.45	3.05	6.03	2.77
1985-1989	2.68	1.91	3.50	3.19	4.44		3.58	2.58	5.09	2.42

Sources: Adapted from Yang Shuzhang: 'Fertility Transition of the Ethnic Population in the Autonomous Region of China', Paper presented at the National Seminar on Minority Population and family Planning, Sept. 1992, Yanji City, PRC.

There are always marked regional variations in fertility among China's provincial units, but the gap has been narrowing in the recent years. Table 2 presents the statistics of provincial TFR in different decades of the second half of the 20th century. It shows that while the means of provincial TFR has declined continuously through the years, the deviation from the national pattern increased first and reached the peak in the 1970s, and declined thereafter. This phenomenon is clearly associated with the different path of fertility transition among China's

House, 2000.

provincial units. While big municipalities began their fertility decline as early as in the early 1960s, fertility transition only started in 1980s in some of the western provinces. Even with this regional variation, it seems clear that there has been a general trend of fertility convergence over time, which is evidenced by the decline of the fertility variance.

Table 2 Statistics of TFR in various decades

Decades	Means	Variance	Standard deviation
1950s	6.176	0.323	0.568
1960s	6.036	0.835	0.914
1970s	3.876	1.751	1.323
1980s	2.280	0.559	0.748
1995	2.198	0.276	0.525
1997-99	1.609	0.212	0.460

Sources: Peng & Huang, 1993; Chen, 1995; Figure 3.

Figure 3 about here

III. Major determinants of China's fertility transition

Given the characteristics of China's fertility transition, three factors, the government commitment and population programme, the socio-economic development, and reproductive culture, must be taken into consideration in any analysis of future fertility trend in China.

1. The role of government population policy and programme

China's general population policy at present can be described as 'Controlling population quantity, improving the quality of life, and make efforts to solve aging problem'. The family planning programme is the core of China's national population programme, which is mainly managed by the State Population and Family Planning Commission with support from other government agencies and various NGOs such as China Family Planning Association and All-China Women's Federation etc.

The success of China's birth control has for a long time been heavily depended on government administrative intervention. The programme was initialised at the first instance by the central government and carried out through top-down network. Since later 1980s, a target

responsibility system has been gradually established. The system requires that heads of Party organisations and governments at all levels take the full responsibility for implementing population programme, through comprehensive management and co-operation between governmental departments and non-governmental organisations, and between different development policies and programmes. It aims to ensure the fulfilment of the population growth plan that is set up for each locality. Meanwhile, individual cadres' career development and position promotion would be closely affected by their achievements in family planning.

The basic principles of the family planning programme are 'to promote late marriage and deferred childbearing, to encourage people to have fewer but healthier births, to promote the practice of 'one child per couple' and to encourage a longer birth spacing for couples who have practical difficulties if they only have one child.' This policy took considerable time to develop and the intention for further improvement has never been given up, even though the Government repeats the confirmation of 'keeping the family planning policy stable' each year.

One of the salient features of China's family planning programme is its decentralised policy formation and operation. Under the general guidance from the central government, it is the local governments, primarily the provincial governments that are responsible for the formulating and implementation of the programme. In other words, local authorities have been given some flexibility in adapting the national policy in order to accommodate the vast regional differentials in social, economic and cultural conditions. As a result, the current family planning regulations can be grouped into four major categories⁶. (Table 3)

Table 3: Comparison of Various Local Family Planning Regulations, 1990s

Group	Major Policy Regulations	Coverage
1	One child with very few exceptions in allowing couples to have two children	All urban residents and rural couples in Jiangsu and part of Sichuan province
2	Two children if the first one is a girl	Most rural couples
3	Two children with a four-year spacing	
4	Two or three children	Minorities in the rural areas of minority autonomous regions
5	No numerical regulation	Rural Tibetan population

Sources: Details of provincial family planning regulations are available at www.cpirc.org.cn (accessed 15 Aug. 2002).

⁶ Detailed discussion of the issue could be seen in Xie Zhenming, 'Population Policy and the Family Planning Programme', in Peng Xizhe and Guo Zhigang (eds.), *The Changing Population of China*, pp.54-55, Oxford: Blackwell Publishers, 2000.

If all Chinese couples follow local family planning regulations, the total cohort fertility rate in China should be 1.62, but be 1.5 as more Chinese become urban residents⁷.

Financial incentive and disincentive measures have been widely used in the programme. Since 1991, the political commitment to population control has been reaffirmed and the mass is widely mobilised once again⁸. As a positive result of these commitments, financial input for family planning has increased steadily. More personnel have been recruited and trained to work in the family planning programme. The quality of birth control service has to some extent been improved. Moreover, the government requires that relevant social and economic policies should be in compliance with the population policy. These measures work effectively in terms of public awareness and the implementation of population programmes, and play an important role in further fertility decline in the 1990s.

Along with the strong government commitment, the programme has now put more emphases on people's volunteer participation. Couples are expected to, under the general guidance of government population policies, make autonomous decisions regarding the methods of contraception, birth interval and other reproductive health matters. Efforts have been made to promote education and information dissemination, and on provision of better, continuous and regular contraceptive service. Moreover, family planning programme has extended to other fields relevant to people's daily life in order to attract wide voluntary participation. Various experimental projects relating family programme with women's empowerment and community development have also been carried out. Many of them are supported by international organisations such as Ford Foundation.

There are shortcomings as other mass programmes. China's family planning programme is heavily reliant on female contraceptive methods⁹. The programme has been promoted for a long time with little strong support from other socio-economic institutions, so that it has been mainly implemented through government administrative network. The programme requires couples to reduce the number of children they produce, but is unable by it to provide adequate social support for people to adjust their strategy for family formation and necessary compensation for couples to

⁷ This is referred as the policy fertility, which is a weighted average assuming reproductive behaviours of all couples in different locations and of different nationalities following the local government family planning regulations. The figure was calculated by the State Family Planning Commission in early 1990s based on demographic structural pattern (rural-urban, Han-minority, etc.) that was prevailed at that time.

⁸ Such as the fully implementation of family planning responsibility system, the start of the annual conference on population and family planning work which is held during the time of the annual national People's Congress in March, and participated by all central and provincial top leaders.

⁹ According to government statistics, male methods accounted for only 14.7 and 13.1 per cent of total contraception in 1994 and 1999 respectively.

alleviate life risks in the context of low fertility. The later task is certainly beyond the capacity of the family planning programme. In some cases, coercive measures were taken by local cadres although the government emphasis on Mass line and against coercion in general. The relationship between societal interests and individual rights is also an area that needs to be improved.

2. Socio-economic development

China's fertility decline was initialised by strong and effective government-sponsored family planning programme. Nevertheless, socio-economic development is certainly another decisive factor that facilitating the transition. With the time passing, the importance of the socio-economic factors on fertility trend has been rising¹⁰.

Rapid social changes have occurred since the late 1970s as the economic reform commenced. But the speed and the profundity of the reform are much more extraordinary after the release of a speech by top Chinese leader Mr. Deng Xiaoping calling for fast reform in early 1992. The entire Chinese economy is moving dramatically from a central planned one towards a market economy. In accordance with this shift, remarked changes could be easily seen in almost every aspects of the society. These changes inevitably lay their marks on China's future population dynamics and socio-economic development.

As the country's economy is advancing at an unprecedented speed, or even overheated, more people now are involved in the commercial activities. In the countryside, more peasants are preparing to leave their land to cities and other places with better economic opportunities. The volume of temporary migration from the rural to the urban and between regions as well, soared in the last a few years and reached 10 million marks. In the urban sectors, job security is facing great challenge. Urban residents are for the first time suffering from unemployment. Meanwhile, people have got much more freedom to make their own employment decisions. Chinese people are much more mobile (both geographically and socially) than ever before. This change greatly reduces government's ability to monitor population dynamics and the family planning programme which is by and large a community-based (working units or residential places) programme at present. While people are free from the authority of their previous places of

¹⁰ For example, Lin Fude and Liu Jinting claimed that during the period between 1982 and 1990, the importance of family planning program on China's fertility level declined, while the importance of socio-economic factor almost doubled. See: Lin Fude and Liu Jinting, 'China's Fertility Transition and the Prospect of Population Situation', in *Proceedings of the Symposium on Demography of China, 23rd IUSSP general Population Conference*, Beijing: China Population association

working or residences, they are also free from benefits they used to be entitled to obtain, such as free contraceptive services.¹¹

Absolute poverty has been gradually alleviated. The number of the impoverished population reduced from 100 million in the early 1990 down to 40 million by the end of 1998¹² and further down to 26 million in 2005. The Chinese government is determined to take more resolute action to solve food and clothing problems for those people living in China's poverty-stricken areas by 2000¹³. Poverty is one of the major factors that result in high fertility and resistance to birth control in China's countryside. Poverty eradication, therefore, is certainly to provide a relatively better working condition for China's population programme.

The education level of Chinese people is fairly low. The illiterate rate for people aged 15 and over remained at 22 per cent in 1990. There are only 142 collage graduates among every 10,000 population in China, and the same figure is 1492 and 637 in USA and Japan respectively. There are improvements along with the economic development. For instance, the number of illiterate people aged 15 to 47 has dropped by 4 million annually since early 1990s when the number was around 35 million¹⁴. The illiterate rate for this age group has declined from 10 per cent in 1990, to 7 per cent in 1995, and expected to be below 5 per cent by the end of the century¹⁵. On the whole, illiteracy is a problem overwhelmingly among the older age groups. 90 per cent of illiterate people are peasants, and concentrated mainly in a few western provinces. The positive impact of education attainment on fertility reduction is well documented. It could be reasonably expected that further education improvement would contribute to maintain the low fertility in the future.

With the reform advancing, people's income has increased very rapidly and to some extent out of government control. So is the cost of living, especially the cost of rearing children. Saving for children's education has already been the major consideration that determining the consumption behaviour in China. The gap between the rich and the poor is widening. New social stratification is emerging. People are stimulated by the hope of being rich. Under this circumstance, to have many children becomes irrational economically and a burden of the social

¹¹ This is especially the case for millions of female floating population. China's family planning programme has made efforts to handle the issue with various experiments, such as assigning the receiving area to take the major responsibility for contraceptive service.

¹² Since 1985, China has begun its large-scale poverty alleviation programme. The definition of poverty in China is mainly an economic one based on the per capita annual income. The criterion has changed over time, from 200 RMB Yuan in 1985, to 300 Yuan in 1991, 400 Yuan in 1994.

¹³ The *China Population Today* Vol. 13, No.5-6 provides a briefing on this issue.

¹⁴ Figures refer to people who are no longer belonging to the illiterate category in a specified year. As a certain portion of the group return to illiterate status a few years later, the sum of these figures should be used with caution.

¹⁵ See 全国教育事业九五计划和 2010 年发展规划, 中国教育部, 1996

mobility. This has a positive effect on people's acceptance of birth control, at least for the coming years.

It is too early to draw any conclusions regarding the impact of rapid social changes at present on China's population dynamics. While some are beneficial to family planning programme, others may be unfavourable. Some changes undermine the government capacity to manipulate people's reproductive behaviour; some others could facilitate further fertility reduction. For the long run, socio-economic development will make the population control easier. But what will be the case in a period of sudden and sharp change, especially with the larger cohort of fertile women, remains a crucial question to be answered. Efforts must be, and have already been, made to rethink the strategy of China's family planning programme in order to adapt to the changing situation. A few experiments have been carried out in some rural counties to integrate the rural community development with family planning programme, and to set examples at which the birth control will more rely on voluntary participation with very limited government intervention. The next few years will be crucial in terms of China's population control.

3. Changes in reproductive culture

The major features of marriage patterns in recent decades for China as a whole can be summarised in four main points. (1) The Chinese pattern of universality of first marriage has evidently been continued. (2) The age at first marriage increased dramatically in the 1970s, but decreased in 1980s with a modest scale, and increased again in the early 1990s. (3) There are significant differences of timing at first marriage among Chinese cities, towns and rural areas. (4) The first marriage of Chinese women has been concentrated at a rather narrow age interval. (Zeng Yi, 2000)

However, some radical changes in nuptiality have already emerged, especially in big cities like Shanghai. The proportion of unmarried women in their early 30s increased sharply in recent years in Shanghai, particularly among white-collar employees. According to fragmental information, about 3 per cent of women aged 30 remained single in 1997, while the figure was less than 1 per cent in the 1980s. The interval between marriage and the first childbearing increased from 1 year to near 2.5 years, as more young couples would like to spend longer years without the burden of childbearing. The number of voluntary childless couple is also rising in the recent years. The cases of premarital cohabitation are also increasing¹⁶. On the whole, people in

¹⁶ Unfortunately, there are no solid data on above-mentioned new phenomenon. But interested readers could find many TV series, novels, and other media materials touching on this issue.

cities like Shanghai are taking a much more tolerate attitude towards marriage and sex activities, although the traditional ethic remains strong. We could expect that such a trend would continue into the next century and extend to other regions and social groups as well.

It is shown from population census data that the average number of children per household decreased from 1.49 in 1982 to 1.12 in 1990. Comparing the mean household sizes of 4.43 in 1982 and 4.05 in 1990, average persons per household reduced by 0.38, the reduced births during the eight inter-censal years make up 97 per cent of the shrinking size of household or family. The nuclear family has taken an important place and this pattern is gradually expanding in society. However, the stem family holds as the leading pattern in society and most of the elderly still live with their adult children. The intra-family relationship has been changing to be much more equalised between generations, as the traditional pattern of parent domination, especially in terms of marriage and childbearing, is gradually given away. This provides much more autonomy for the young couples to make their own reproductive decision with less intervention from their parents as they did in the past.

The Change in marriage and family patterns is partly brought about by the past fertility transition. Meanwhile, it also affects the fertility desire and behaviour of the young generation. Based on survey reports, we know that the average desired family size varied narrowly between 1.6-2.5 over time and across regions. It means that large family has been no longer the desire of Chinese people. Some may argue that many of these replies from the interviewees were biased by the policy enforcement. Nevertheless, it can be sure that 'two children per family' has been the widely desired family pattern regardless rural-urban stratification.

III. Factors that affecting regional variations in fertility

As discussed in the foregoing sections, there are always marked regional variations in fertility patterns, both in terms of the absolute level and the path of change. In this section, we try to provide statistic evidence that determining regional disparities.

Based on our understanding of the fertility transition, relevant socio-economic indicators are chosen and conventional statistic analysis is carried out. Data from table 4 reveals that the general relationships between fertility level and selected socio-economic variables are maintained. But the relative importance of various socio-economic factors on fertility has changed over time. On the whole, the government population policy and programme (indicated by Policy TFR) and general level of socio-economic development (represented by Per Capita GDP and Consumption, and Proportion of Urban Population etc.) are the most crucial determinants of China's regional fertility variation. Figure 4 is just an example of such close relations. (Table 4)

Table 5. Correlation Coefficients between TFR and selected socio-economic variables

Variables	1980s	1995	1997-99
Per Capita GDP	-0.61	-0.74	-0.601
Proportion of Urban Population	-0.57	-0.71	-0.513
Per Capita Consumption	-0.55	-0.69	-0.569
Policy TFR	0.76	0.69	0.792
Female late Marriage Rate	-0.55	-0.19	-0.193
Female Contraceptive Prevalence	-0.81	-0.23	-0.334
Female Illiterate Rate	0.56	0.60	0.713

Sources: see table 4.

The above analysis shows that there is a strong association between fertility and the proportion of urban and minority populations at the aggregated level. In general, provinces with a high proportion of urban population and a low proportion of minority population have achieved low fertility. It reflects the fact that deliberate fertility control was first adopted by the Han population and started in urban and coastal areas, then gradually adopted by other minority populations and diffused to rural and inland areas. It also reflects differences in the family planning policy and its implementation between Han and minority populations and between urban and rural areas. However, we should also note the considerable heterogeneity in urbanisation and population's ethnic composition among provinces with a similar fertility.

V. Discussion and Conclusion

In March 2000, Chinese government issued a directive to reaffirm its commitment to population control¹⁷. It also indicates that the present population policy will more or less maintain in effects for the coming years, allowing some minor modification. Under this context, together with the findings from early sections of the paper, the government population policy will decide the basic level of China's fertility, at least for the early 21st century. The deviation from this line will be determined jointly by the ability of the government to implement its policy and programme, the impact of development in China's social, economic and political reform, and people's general desire for family size. It seems most likely that the Chinese government will

¹⁷ "Decision on Strengthening Population and Family Planning Work, Maintaining low Fertility"(中共中央国务院关于加强人口与计划生育工作稳定低生育水平的决定), Directive issued by CCCP and the State Council, 2nd March 2000.

maintain its commitment to population control, and will make every effort to achieve its population target in the 21st century¹⁸. Meanwhile, people's volunteer participation and free determination will play much more important roles in determine the future fertility level in China.

The transformation of government organisations and functions is under way. The basic idea is to make the government focusing on certain important issues and the society will take care of the remaining things, or so-called 'small government and big social services' in Chinese. The government system is undergoing a profound restructure. Although the Family Planning Commission remains within government system, its staff numbers are due to be reduced, this is inevitably affecting the family planning programme. It is reported that in some local areas, the family planning commission, especially its technical unit, is transferred to be non-government institutions and financially independent with partial government subsidies. This change may not directly affect the quality of contraceptive service, but may make it more difficult now to keep people working for family planning programmes as job security reduces. Together with other administrative restructure, this shakes the foundation of China's current family planning programme since it has been largely depended on effective administrative system. Another development in the political field is the direct election of the village management committee that is responsible for the daily operation of China's Population programme. The election itself would reduce the occurrence of coercion and increase the volunteer participation.

There are different projections about the future fertility level in China. (E.g. Jiang, Zhenghua, 1998; Zhai Zhenwu, 2000) Three kinds of fertility assumptions are provided in light of the above-described trends in China: 1) TFR is assumed constant at the 1990 level (2.3); 2) TFR will maintain at a level around 2; 3). TFR will go down further from 2 by 2000 to 1.7-1.8, a value representative of the average level of the more developed countries in the early 1990s¹⁹. While the first assumption reflects the general concern about the difficulties in the implementation of current population programme, the other two share a relatively optimistic view.

There are concerns about the vulnerability of China's fertility transition and the possibility of fertility rebound if the government, either voluntarily or forced to, loses control on population issues. On the other hand, the optimistic view takes into account the determination and capacity of the government in carrying out family planning plus the significant impact on people's reproductive behaviour of the fundamental changes that have occurred in China's society and economy since the opening and reform.

¹⁸ Based on different fertility assumptions, the population targets by the middle of the 21st century range from 1.5-1.6 billion, and but should never exceed 1.6 billion.

¹⁹ For example, in 1990, North Europe had a TFR of 1.8, West Europe 1.7, and North America 2.0.

At the launch of the One-Child-Policy, the intention was made clear that this should be a policy measure for a period of only 20 to 30 years.²⁰ After more than 20 years of implementation, it has met its primary objective to slow down China's population growth. On the other hand, there are also profound socio-economic and demographic consequences. Current policy debates have concentrated on these issues.

In 2000, there were 88.11 million elderly (people over 65 years), and the proportion in the total population for the first time in China's history exceeded 7 per cent, indicating that for the country as a whole, China had become an "aged society".²¹ The total elderly population (aged 65+) increased up to 100.45 million in 2005, occupied 7.69% of the overall population, an increment of 13.58 million over this five-year period. The number is expected to increase by 3 times over the first half of the 21st century.

An aging population has long been a major challenge facing many cities and the wealthier rural areas in the eastern region. In Shanghai, 13 per cent of the city population is 65 and above. On the other hand, Qinghai province is projected to enter the aging society stage in as late as 2014. Regional variations in population aging are very similar to the regional variations in current fertility, indicating that the aging process is mainly determined by the decline in fertility.

An abnormal sex ratio at birth is another issue linked to China's fertility transition. Researchers in the late 1980s attributed the situation mainly to misreporting of births.²² However, it soon became clear that it was real and that pre-birth selective abortion in favor of boys was the primary cause.²³ The government has employed tough measures to try to prevent and reverse the trend, but with very limited success. The continuous and increasing skew in the sex ratio at birth indicates that the situation has worsened over the years.²⁴ In 1982 it was 108.5, and 110.9 by 1987, 111.3 by 1990, 115.6 by 1995 and 119.9 by 2000.²⁵

²⁰ See *Guanyu kongzhi woguo renkou zengzhang wenti zhi quanti gongchan dangyuan, gongqing tuanyuan de gongkaixin* (An Open Letter to All Members of the Communist Party and Communist Youth League), Central Committee of Chinese Communist Party, 25 Sep. 1980.

²¹ National Bureau of Statistics of the People's Republic of China, *Communiqué on Major Figures of the 2000 Population Census*, no. 1, 28 Mar. 2001.

²² For example, Zeng Yi, et al., "Causes and Implications of the Recent Increase in the Reported Sex Ratio at Birth in China," *Population and Development Review* 19, no.2 (1993): 283-302.

²³ According to the 2000 Population Census, the sex ratio for the 0-4 and 5-9 age groups is 119.5 and 114.4, respectively. If misreporting caused the abnormal sex ratio at birth, it would re-appear in the young age groups in the census or surveys conducted a few years later. This is certainly not the case in China.

²⁴ Regulations, including heavy penalties, have been set up in many provinces/regions to prevent medical doctors from using ultrasound machines to identify the sex of the foetus. See for example, <http://sdrd.sd-china.com/zfjd/400012> (accessed 23 Nov. 2002).

²⁵ Report from China's State Family Planning Commission. See <http://www.sfpc.gov.cn/cn/news20020516-1.htm> (accessed 2 Nov. 2002).

Some blamed the rigid implementation of the family planning programme as the major cause. Indeed, there is some kind of relationship between the fertility level and abnormality of sex ratio at birth. Provinces with a normal or slightly higher sex ratio at birth actually belong to two groups. One is where there is a concentration of minority people and the fertility rate is relatively higher, the other group is where there is low fertility. The most serious problem is occurring in the provinces/regions which fall somewhere in between. However, similar abnormality can also be found in South Korea and India where there are very different family planning programmes.²⁶

Despite all the shortcomings, China's family planning programme has been supported in large by the public. On the whole, it has brought about dramatic changes in people's fertility behaviour in a relatively short period, and successfully slowed down the rapid population growth in China, which also has profound impact on the stabilisation of the world population. There should be no technical difficulty for China's to reach its population target. Research and production of contraceptive devices have always been put at a very favourable position. The deepened involvement of China into globalisation of world economy may further facilitate the introduction of new and more effective birth control methods. If the political stabilisation and current path of development in China are maintained, it is quite possible for China to maintain a TFR around 1.7-1.8 in the middle of the next century.

Efforts to formulate a Family Planning Law began in the late 1970s. Although population control is written in China's Constitution and other national laws such as the Marriage Law, it was only on 29 December 2001 that the Law was formally passed by the Standing Committee of China's National People's Congress at its 25th meeting, after more than 20 years of preparation, four rounds of debate, and more than 30 drafts. The Law came into effect as of September 2002. Though its 47 items mainly reaffirm existing policy guidance and principles, its implementation does have significant implications for China's future population policy and programme. It makes clear that the current population policy will more or less remain unchanged in the near future, but the responsibility of modifying policy measures and regulations is assigned to provincial/regional governments, based on local conditions.

On the whole, the author takes a relatively optimistic view regarding China's general development and the fertility future as well. More recently, volunteer participation is reaffirmed in the operation of family planning programme. Reproductive Health is being widely publicised and becoming a well-known term in China. While the society interests remain as the major

²⁶ See for example, Chai Bin Park and Nam-Hoon Cho, "Consequences of Son Preference in a Low-fertility Society: Imbalance of Sex Ratio at Birth in Korea," *Population and Development Review* 21, no. 1 (1995): 59-84.

rational for China's population policy and programme, individual's rights get more attention. There have always been gaps between the targets of the programme and public acceptance, but the gaps reduced with the time passing. Small family norm has been widely accepted by the public, especially in those advanced regions. 'Two Children Per Family' will be gradually a universally practised family pattern in China in the 21st Century.

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Table 3: TFR and other major socio-economic indicators for China's provinces in the 1990s

Province	TFR (1995)*	Per Capita GDP (Yuan) 1	Capita Consumption2 Per	Proportion of Urban 3 (%)	Policy TFR4	Female late marriage rates5 (%)	Female contraceptive rate6 (%)	Female illiterate rate7 (%)
Beijing	1.00	12740.18	3380.91	63.74	1.33	84.51	90.08	11.18
Tianjin	1.64	13256.40	4515.44	56.54	1.35	62.76	91.66	16.19
Hebei	2.19	5286.36	1863.23	16.04	1.67	51.76	92.12	22.13
Shanxi	2.15	4182.33	1673.99	23.36	1.69	64.45	90.25	14.33
Inner Mogolia	1.97	4204.37	1851.51	31.86	1.80	72.45	91.89	23.60
Liaoning	1.69	7753.83	3133.16	43.61	1.50	61.55	91.41	12.61
Jiling	1.85	5000.48	2543.84	40.94	1.50	49.09	73.21	13.80
Heilongjiang	1.88	6350.31	2803.65	43.81	1.44	48.88	93.12	15.50
Shanghai	0.99	21162.14	6807.01	69.37	1.28	62.43	92.45	15.39
Jiangsu	1.89	8410.36	2922.29	23.40	1.52	70.59	93.60	27.62
Zhejiang	1.61	9439.68	3186.09	17.67	1.54	73.72	92.24	25.07
Anhui	2.25	3841.93	1932.08	16.66	1.61	67.70	90.27	29.67
Fujian	2.26	8212.25	3336.42	18.00	1.61	49.73	91.25	32.94
Jiangxi	2.41	3634.64	1681.66	19.97	1.52	29.57	92.94	24.39
Shandong	2.01	6719.48	2309.81	22.43	1.55	99.05	92.22	32.81
Henan	2.74	3924.30	1548.44	14.80	1.56	67.00	90.12	23.55
Hubei	2.29	5085.01	2210.25	24.47	1.55	49.32	92.85	25.46
Hunan	2.16	4129.64	2035.93	16.81	1.64	41.71	93.57	21.24
Guangdong	2.34	9433.48	4082.37	27.50	1.85	71.59	85.44	22.09
Guangxi	2.72	3666.72	1833.35	15.31	1.57	61.52	90.09	21.35
Hainan	2.67	5395.65	2268.43	22.65	1.97	66.94	84.79	27.39
Sichuan	1.85	3584.76	1764.97	16.06	1.57	34.36	91.23	26.25
Guizhou	2.85	1960.72	1283.15	12.98	1.74	52.46	92.58	45.00

Yunnan	2.61	3542.63	1661.79	13.15	2.13	42.89	84.08	39.68
Xizang	3.48	2332.50	1172.08	13.73	-	-	-	68.98
Shannxi	2.57	3233.22	1557.24	19.84	1.64	57.28	90.73	28.84
Gansu	2.05	2781.93	1343.92	17.16	1.58	47.08	88.22	44.52
Qinghai	2.37	3638.22	1714.20	28.16	2.08	53.67	84.99	55.04
Ningxia	2.53	3604.47	1674.68	25.39	2.06	45.50	90.26	34.17
Xinjiang	2.92	5309.63	2351.10	34.02	2.40	82.44	80.77	17.47
China	2.20	6066.64	2427.51	26.98	1.62	58.85	90.40	25.54

Note: Per Capita GDP refers to Average value of 1994-1998, compatible prices.

Per Capita Consumption refers to Average of 1995, 1997 and 1998, 1995 price.

Proportion of Urban refers to the average of 1991-1994 and 1997

Policy TFR refers to the weighted average of people covered by different family planning regulations in the later 1980s, which remained more or less unchanged in the 1990s.

Female late marriage refers to 1995

Female contraceptive rate refers to the average of 1990, 1993 and 1995

Female illiterate rate refers to 1996

Sources:

1. China Statistics Yearbook, 1985-1999
2. China Population Statistics Yearbook 1988-1998
3. China Family Planning Yearbook 1986-1996
4. Fertility data cited from Chen Wei, 'China's Low fertility', in the Special Issue of *Population Research* (renkou yanjiu) 1995.

Figure 1. Fertility Trend in China, 1950-2000

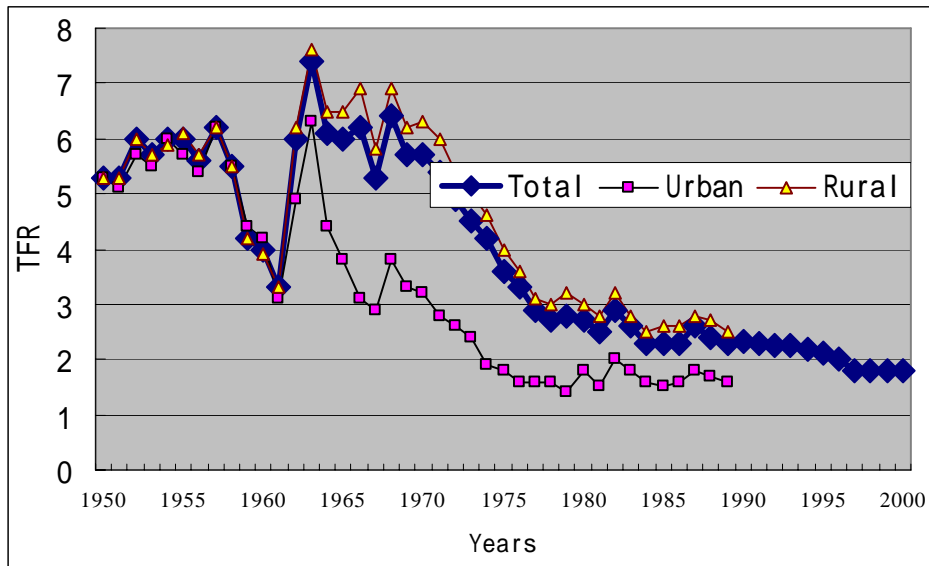
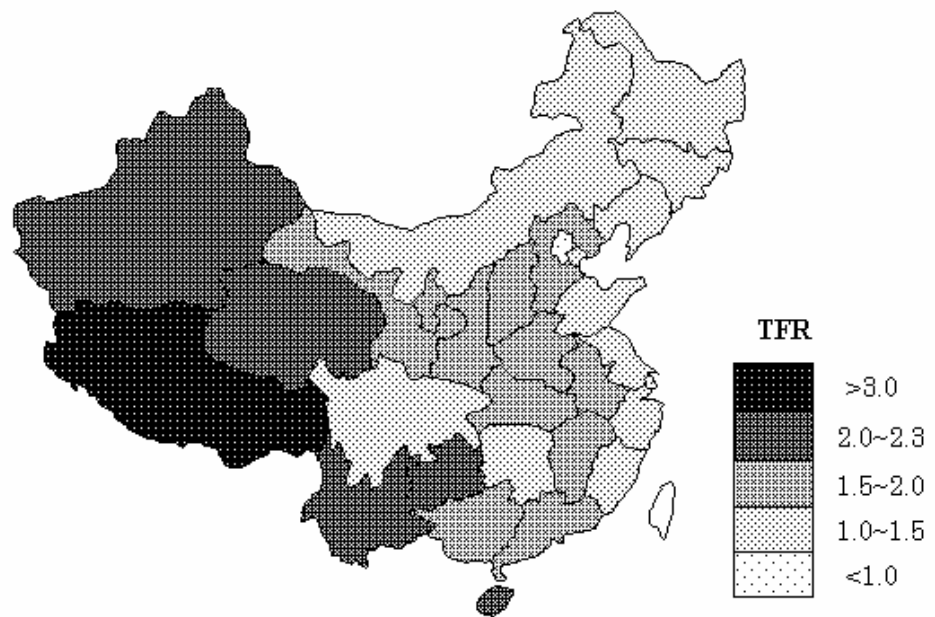


Figure 2 Provincial Fertility Pattern in China, 1997-1999



Note: Based on estimation by China's State Family Planning Commission. Data for Taiwan, Hongkong and Macao are not included.

Figure 4. Relationship Between Fertility Level and Economic Development

