

March 2001

Low Fertility in Urban China

Zhongwei Zhao

(Paper prepared for the IUSSP Low Fertility Working
Group Seminar on International Perspectives on Low
Fertility: Trends, Theories and Policies)

Contact Address
Cambridge Group for the History of
Population and Social Structure
27 Trumpington Street
Cambridge CB2 1QA
Tel: 44 1223 333180
Fax: 44 1223 333183
E-mail: zz101@cam.ac.uk

March 2001

Low Fertility in Urban China

Zhongwei Zhao

(Paper prepared for the IUSSP Low Fertility Working
Group Seminar on International Perspectives on Low
Fertility: Trends, Theories and Policies)

According to the Population Reference Bureau, the total fertility rate (TFR) fell to 2.9 children per woman in the world in the year 2000, with 1.5 for developed countries and 3.7 for developing countries. Countries like Italy, Spain, Czech Republic, Bulgaria, Estonia, Latvia, Russia, Slovenia, and Georgia recorded an exceptionally low fertility, where the TFR was less than 1.3 (The Population Reference Bureau, 2000).

Below replacement fertility has been observed in some populations for many years. This trend, as elementary demography suggests, not only helps to bring about rapid population ageing, but also causes sooner or later a decline in total population or even the extinction of a country. Partly for this reason, the issue of low fertility has recently attracted increasing attention in many parts of the world (Hugo 2000; Lesthaeghe and Willems 1999; Cho 1994).

The impact of low fertility by no means concerns only the developed or western world, because below replacement fertility has also been experienced in a number of developing countries or in some of their sub-populations. In South Korea, China, and Thailand, for example, the estimated TFR was all below 2 in the year 2000 (The Population Reference Bureau, 2000). Low fertility of the same kind was also recorded in certain regions of some countries where fertility level in general remained relatively high.¹ The consequence of a rapid fertility reduction from the pre-transitional high to the below-replacement low level will soon affect many developing countries.

¹ In India, for example, the national TFR was still around 3.5 in 2000, but in the State of Kerala the TFR had already dropped to 2 in the early 1990s. The fertility level in the Scheduled-Caste population was even lower with a TFR about 1.4 (Pallikadavath 2000). Another extraordinary example is the below replacement

Why fertility in urban China?

While it is widely accepted that the TFR has been below replacement in China for a decade, this paper focuses on low fertility in China's urban population, its socio-economic consequences, and theoretical and policy implications. To divide a national population into urban and rural and discuss exclusively fertility patterns in one part of the population is not a conventional practice. Some readers probably even question the validity of the approach and the comparability of the results. This, however, may be justified under China's special circumstances and in the context of this meeting.

China is a large country. The population of many of its provinces or municipalities is greater than that of most countries in the world. In addition to their sheer size, some of these sub-populations have followed very different trends of social demographic changes and displayed distinctive fertility patterns (Wilson, 2001). China's urban population is one such example. With a total of more than three hundred million, it probably can be regarded as the largest population in the world that has had below replacement fertility for a generation.² This population not only has a reasonably clear boundary that is defined according to either administrative criteria or geographical characters or both, it also exhibits rather different fertility behaviour in comparison with its rural counterpart.

This is undoubtedly a combined outcome of many complicated political, economic and social factors. China is possibly unique in the sense that the state has enforced a rural-urban demarcation within its population and strictly controlled the movement from the rural sector to the urban sector since the 1950s. During the last 50 years, especially before the 1990s, the Chinese government formulated and implemented a wide range of radically different political, economic, and social policies and regulations according to this division, which directly influenced the interest of every citizen of the country (Zhao

fertility recorded in Addis Ababa of Ethiopia. According to Kinfu, the TFR in Addis Ababa has fallen to 1.8, while the national level has remained close to 7 (Kinfu 2000).

² There have been some changes in the definition of cities in recent years, and the size of the total urban population has been affected by these changes.

2001; Zhang 1988). Two such policies, the policy of family planning and that of controlling rural-urban migration, are extremely relevant to the questions discussed in this paper. In addition to the factors that are frequently found in many other developing countries experiencing a similar level of development, these policies have played a crucial role in creating and maintaining two very different reproductive systems within one country.

The implementation of these policies, their justifications and consequences of course are all open to question, and should be seriously examined. Despite some of their negative results, however, the continuation of such practice also provides a rare opportunity allowing the impact of certain demographic changes and that of some policy responses to be better assessed on the basis of empirical evidence. One such example is the use of controlled migration to combat the side effects of the rapid reduction in fertility. Perhaps from this point of view, the discussion of urban China's extremely low fertility, increasing rural-urban migration, and recent economic development could offer some useful lessons.

There is another consideration of concentrating on fertility patterns in urban instead of whole China. It is widely recognized that the number of births has been severely under-reported in China in recent years. This has been found in household registration, family planning statistics, and even national fertility surveys (Cui 2000; Yu 2000; Attane and Sun 1999; Zeng 1996). Under-registration of this kind has been more serious in rural areas where the reporting system and survey enumeration are generally not as effective as in urban areas. The impact of the problem has been so profound that even demographers feel it is difficult to verify China's actual fertility level, although most of them have insisted that the TFR has been below 2 since early 1990s. For the same reason, the State Statistical Bureau has been reluctant to publish the national total fertility rate in recent years (Guo 2000; Liang *et al.* 2000). Under this circumstance, it is less uncertain to discuss below replacement fertility in urban China where the quality of the data is far more reliable.

Low fertility in urban China

Fertility in urban China, as shown in Table 1, has been consistently lower than the national average since 1950 when such data became available. In spite of the fact that changes in urban fertility were broadly similar to national trends and exhibited a considerable surge immediately after the great famine of 1959 to 1961, a nontrivial fertility decline had already been observed in certain urban populations in the 1950s (Lavelly and Freedman 1990). The fertility increase recorded after the famine was also moderate in some large cities.³ The TFR dropped to less than 4 in urban China in 1965 and has never bounced back to this level since. According to China's Family Planning Information Centre, the TFR further decreased to below replacement in 1974 and has remained below for more than a quarter of a century. Although the annual statistics are not complete, it can be suggested that during the last two decades the TFR has been lower than 1.5 in urban China in most of the years.

Deliberate fertility control existed in historical Chinese population, and the commencement of China's urban fertility decline was well under way before the nationwide family planning campaign (Zhao 1997; Lavelly and Freedman 1990). But without the family planning program, China would not have achieved a fertility reduction of such a speed and magnitude. Its fertility could also not have been maintained at a very low level during the last two decades. The prominent role of the family planning program is clearly reflected in the declining pattern of the urban fertility. The Chinese government launched the nationwide family planning campaign in 1973. In the year that followed, the TFR decreased by about 20 per cent in urban China from 2.4 to 2.0. While a noticeable fertility decline had already been recorded in the urban area in the previous decade, this was the first time that the TFR fell below the replacement level. The one-child policy has been widely implemented in urban areas from 1980. As a response, the TFR dropped to a new low level (below 1.5) in the urban population in the same year and has stayed at this low level ever since.⁴ That the process of China's fertility decline has been shaped largely

³ In Shanghai, for example, the fertility was relatively low during this period. See Peng (2001).

⁴ Two points relating to this rapid fertility decline and the low fertility level are worth mentioning. First, even before 1980, one-child family was already widely encouraged in many areas, which obviously

by the national family planning campaign is also reflected in the fertility pattern and the reproductive behaviour of China's urban population, which can be summarized as four inter-related '*lows*'.

Table 1 Total fertility rates in China

Year	China	Urban China	Year	China	Urban China
1950	5.81	5.00	1975	3.57	1.78
1951	5.70	4.72	1976	3.24	1.61
1952	6.47	5.52	1977	2.84	1.57
1953	6.05	5.40	1978	2.72	1.55
1954	6.28	5.72	1979	2.75	1.37
1955	6.26	5.67	1980	2.31	1.15
1956	5.85	5.33	1981	2.61	1.39
1957	6.41	5.94	1982	2.86	1.58
1958	5.68	5.25	1983	2.42	1.34
1959	4.30	4.17	1984	2.35	1.22
1960	4.02	4.06	1985	2.20	1.21
1961	3.29	2.98	1986	2.42	1.24
1962	6.02	4.79	1987	2.59	1.36
1963	7.50	6.21	1988	2.52	-----
1964	6.18	4.40	1989	2.35	1.55
1965	6.08	3.75	1990	2.31	-----
1966	6.26	3.10	1991	2.20	-----
1967	5.31	2.91	1992	2.00	-----
1968	6.45	3.87	1993	-----	-----
1969	5.72	3.30	1994	1.60	-----
1970	5.81	3.27	1995	1.46	1.13
1971	5.44	2.88	1996	1.55	1.33
1972	4.98	2.64	1997	1.49	1.14
1973	4.54	2.39	1998	1.49	1.13
1974	4.17	1.98	1999	-----	-----

Sources: 1. Data for 1950 to 1992 were compiled by Yao (1995), p3.

2. China's TFRs of 1994 to 1998 were computed from China's Population Statistical Yearbooks published in these years.

Note: Data are not available for some years, which is indicated by the dotted line.

The first is that fertility level is extremely low in urban China. After a few decades of decline, China's urban fertility has now been far below the replacement level. The TFR observed in some large cities such as Shanghai, Beijing and Tianjin is among the lowest that has been recorded in a sizeable population. More importantly, the low fertility

contributed to the low TFR of 1980. Second, according to recent survey results, the ideal number of children of urban women was 1.6 that is still higher than the mean number of children they ever had (Yang

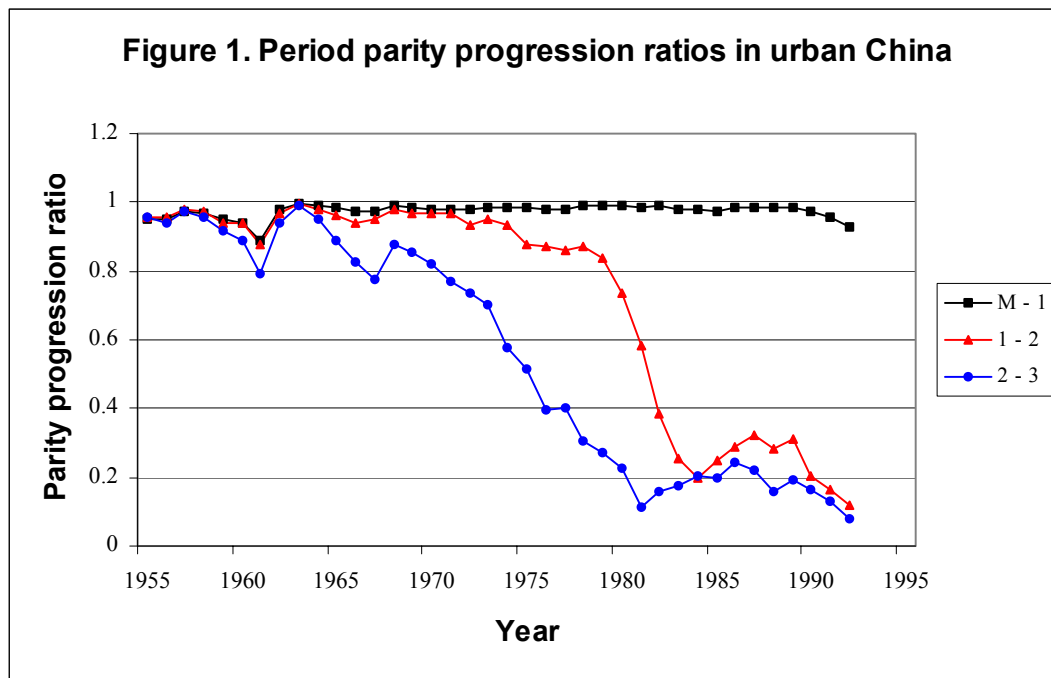
of China's urban population is not only indicated by its very low period fertility rates, it is also reflected in the exceptionally low cohort fertility measures. This is fundamentally different from that found in many other populations including those with a very low fertility. In Japan, for example, low period fertility rates have been reported for more than half a century. But, the mean number of children borne to married women aged 35 to 39 has been very consistent and has decreased only marginally during recent decades. In the year 1995, those having had at least two children still accounted for more than 80 per cent of married women of this age group (Sasai 2000)⁵. In contrast, similar statistics suggest that cohort fertility among urban Chinese has been markedly lower. In 1989, for example, the mean number of births of women aged 35-39 already reached 1.23 in Beijing and 1.08 in Shanghai (including those living in suburban counties). The up-to-date figures, if available, are most likely to be even lower. These could easily be the lowest cohort fertility ever-recorded in human history.

This leads to the second *low* -- the proportion of women having two or more than two children is very low in urban China. Because of the implementation of the one-child policy, the number of urban couples having two or more than two children decreased very rapidly in the 1980s. This is revealed by the change in the period parity progression ratio recorded between mid-1950s and early 1990s. As shown in Figure 1, prior 1975 the proportion having a second birth among women who already had a child remained very high, above 97 per cent in most of the years. Given the impact of sterility, this implies that almost all couples had a second child if they were capable to do so. This parity progression ratio fell to 0.74 in the year 1980 when the one-child family campaign was launched. It further decreased to around a quarter in 1983 and fluctuated around this level in the rest of the decade. The period parity progression ratio of the second birth to the third started its decline earlier. It dropped to less than 0.6 by the year 1974 and around one-fifth by 1980. In the early 1990s it further decreased to below 0.2, indicating that the number of those having a third child accounted for less than 3 percent of women of childbearing age. Period parity progression ratios of the kind reported above were not

and Tang 2000).

⁵ Some researchers suggest, however, that the decline in marital fertility also played a noticeable part in recent reduction in TFR in Japan (See Hiroshima 2000).

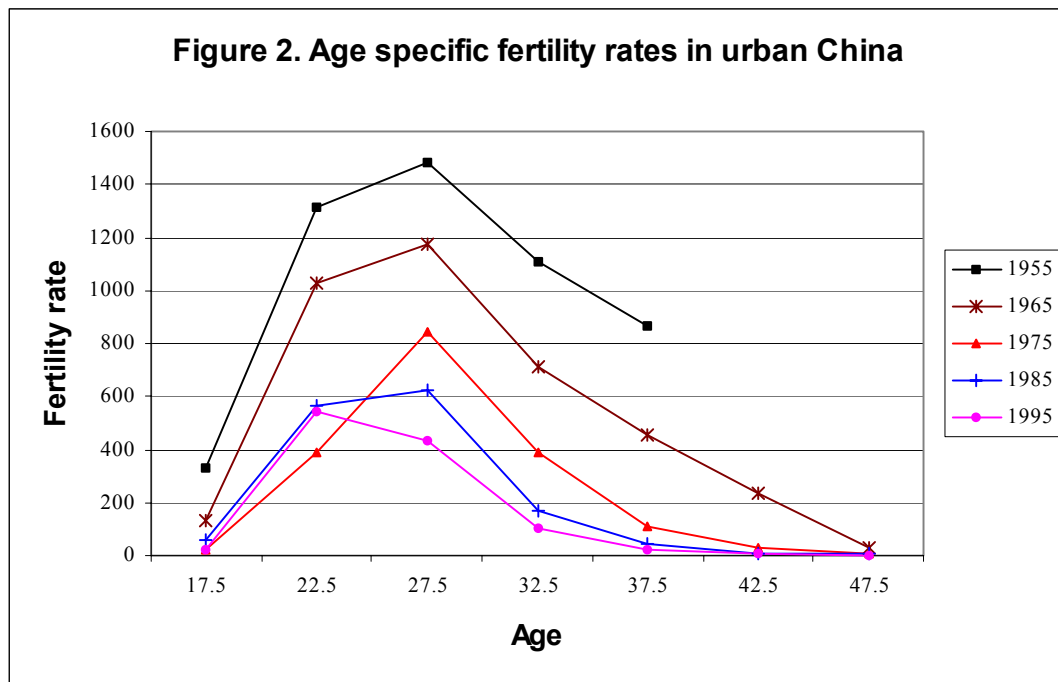
available for the later period, but the parity distribution of the newborns showed the same pattern. During the period between 1995 and 1997, about 85 per cent of the babies recorded in urban China were first children, around 13 per cent were the second, and third children made up less than 2 per cent. This very skewed distribution probably has never previously been found in any population.



Source: Hao and Gao (1997) Pages 76 and 81.

The third *low* is the low proportion of women having no children. Differing from many western populations, where a fairly large proportion of women are not marrying or not having children, Urban China's exceptionally low fertility has been accompanied by an almost universal low parity. As far as their reproductive behaviour is concerned, the urban Chinese seem to have become more homogeneous than ever before. The population not only records a very low proportion of couples having two or more than two children, it also has a very low proportion of women remaining celibate or childless. While some cities have recently witnessed a noticeable change in people's attitude toward marriage and an increase in the proportion of late marriage and not marrying, universal marriage is still an important feature of marriage patterns of Chinese women.

At the end of the 1980s, the proportion of urban women marrying before age 30 was still about 98 per cent. The proportion having at least one child has been very high. As Figure 1 shows, women having first birth out of those having married accounted for more than 97 per cent in most of the years between 1950 and 1990. In the 1990s the proportion of women, or married women, without children remained very low – a pattern very different from those found in some European populations (Imhoff and Keilman 2000).⁶



Sources: 1. Data for 1955, 1965, and 1975 were compiled by Yao (1995), Pp. 190-221. Fertility rates of those aged 35 and over in the year 1955 are not available.
 2. Data for 1985 and 1990 were published by Feeney and Others, (1994), p 684.
 3. Data for 1995 were computed from China's Population Statistical Yearbook, (1995).

The last *low* is that the mean age of childbearing is rather low. Because women in urban China have on average had less than 1.5 children and the inter-birth interval of those having two children is not long (less than four years), this also means that age at last birth has become very low. Women's reproduction has now highly concentrated in a rather short period. This is reflected clearly in their very distinctive age specific fertility

⁶ This is also reflected in the number of children people want to have. A survey conducted by the State Family Planning Commission in 1997 revealed that only 0.7 per cent of women of childbearing ages wanted to have no children in China (Yang and Tang 2000).

patterns. The truncated fertility curve in Figure 2 suggests that age-specific fertility rates were high among the urban women in 1955. They had declined markedly by the mid-1960s, but the age patterns still bore many characters similar to those observed in the past. The fertility started at a relatively low level, increased rapidly and reached the peak when women aged between 25 and 29. Thereafter, it remained moderately high for five more years and then declined gradually to a low level. The data of 1975 display a slight irregularity in the sense that the age-specific fertility was lower among women under age 25 in comparison with that recorded in the later period. This was largely an outcome of the first wave of China's nationwide family planning campaign. During this period, many local governments set up minimum ages of marriage and of having children, which were often considerably higher than those stipulated in the Marriage Law passed in the early 1980s. This played a remarkable role in delaying marriage and childbearing.

By the late 1990s, the fertility pattern of the urban women had changed significantly. Very few women had children before reaching age 20, but the number rose very quickly soon after they passed the legal age of marriage. The overwhelming majority of women gave birth to a child when they were aged between 20 and 29. Thereafter, the fertility returned to its very low level. As a result, the mean age of childbearing has now decreased to around 26 years, which is more than two years lower than four decades ago.⁷ The mean age at last birth has fallen by about 10 years. The average length of generation gap has become shorter than before.

Major consequences of below replacement fertility

Fertility changes of this magnitude inevitably have a significant impact on China's present and future socio-economic development, the nature of the society, and that of the life of individuals. Such influence is more observable in large cities where fertility decline has been more dramatic. In Shanghai, for example, the TFR fell to below replacement in the early 1970s. The proportion of the first child out of the total number of

⁷ In the 1950s and 1960s, women's mean age at last birth was around 38.5 and the mean age of childbearing was about 29. See also (Liang *et al.* 2000; Zhao 1997).

newborns has been consistently higher than 90 per cent since 1982. The local population started to decrease from 1993. In the year 1996, the TFR was 0.9 and the local population had a negative growth rate of 2.3 per thousand (Peng 2001; Gui 1995; Leete 1994). The situation in Beijing, Tianjin, and other large cities has been very similar to that in Shanghai, although the start of their fertility decline was slightly late and the outcome has up to now been less extreme.⁸ This section examines three major consequences that have resulted directly from these salient fertility changes.

The first is the rapid acceleration of population ageing and the difficulty brought about by this process. Since China has gone through an extraordinary fertility decline, it is also approaching an aged society at a high speed. China as a whole has been experiencing population ageing at a pace very similar to those recorded in Japan and South Korea, which are the fastest in the world. Because of its phenomenal fertility reduction and the exceptional low fertility, China's urban population is facing a more severe ageing situation. In Shanghai, for example, there were 1.9 million people aged 60 and above in 1990. The number increased to 2.4 millions in 2000. It is expected to further rise to nearly 3 millions in 2010 and 4.5 millions in 2020. Thereafter, the situation will become more serious when the baby-boom generation enter their old ages. What makes the change in the age composition of the population of Shanghai more dramatic is not only the expansion of the elderly, but also the contraction of the young caused by the rapid decrease in the number of children. Shanghai's local population is very likely to have a mushroom-shaped age structure during the period between 2030 and 2050. The old age dependency ratio will see a significant increase accordingly (Peng 2001; *The Population of China Towards the 21st Century: Shanghai Volume* Editorial Group 1994).

To prepare for the daunting task of taking care of the rapidly increasing old population, the reform of pension system has already been underway in many Chinese cities. Old age insurance as a supplementary measure has also flourished. Differing from their rural counterparts, retirees in the cities in general enjoy a reasonably generous old

⁸ Beijing also recorded a natural decrease in its population in 1998. In the same year the reported TFR was only 0.65. In Tianjin, the TFR was 1.24 in 1998 and more than 80 per cent of the newborns have been first children in recent years.

age pension, although this has been affected recently by the poor performance or even bankruptcy of a large number of factories and companies. While the financial situation of the elderly may not be too difficult in the future in the urban areas, providing adequate care to the increasing number of old people has already become an important social problem. In the year 1996, Shanghai registered 2.3 millions people aged 60 and above. But there were only 375 social welfare institutions with 16 thousand beds available to them, approximately one bed for 150 people (Peng 2001). This is far below the demand. In 20 years, the number of old people will double. The number of oldest old will rise at a still greater speed. Their mean number of available children will be significantly smaller than at present. The need to increase old people's homes, carers, and service providers of other kinds has become more urgent than ever before.

The second consequence of the rapid fertility reduction is the labour shortage. This is not a problem for China as a whole, either at present or in the foreseeable future. However, in some large cities labour supply from the locally registered population has been in deficit for many years. The number of those leaving the work force was already greater than the number entering the labour market (from the local population) in the 1990s. This trend is expected to continue and to become more serious in many areas. Even under the strict migration control, many cities have witnessed a net gain in the number of permanent migrants since at least early 1980s – i.e. more people have moved into the city and been granted local resident status. Maintaining the same or a higher level of migrant intake is widely seen as a major component of, and has been incorporated into, future urban development plan in many places.

The gain from this type of migration alone could hardly fill up the huge gap between the local labour supply and demand. This is one major cause of and reflected in recent great volume of temporary rural-urban migration. The total floating population is now numbered around a hundred million in China. In the three major cities (Shanghai, Beijing and Tianjin), the number of temporary migrants has been between 6 and 9 millions in recent years. Despite the sharp increase in unemployment rate in many cities, it does not seem to have been too difficult for a large fraction of this huge floating

population to find jobs in urban areas. According to a survey conducted in Beijing in 1997, more than 80 per cent of the temporary migrants were aged between 15 and 39, and they worked in a wide range of occupations. The same situation is prevailing in many other Chinese cities.

This is no doubt related to many factors, such as the boom of the urban economy, the structural shortage in labour supply, the prejudice of some urban dwellers toward certain occupations. Nonetheless, the impact of lacking self-sufficiency in urban labour supply should not be overlooked. Many cities have now been heavily depended upon temporary migrants for 'construction, traditional services, and other physically demanding and hazardous jobs that are usually denied by urban workers' (Peng 2001: 8). Without these temporary migrants, China could not have achieved and maintained its rapid economic development in recent years. It is noteworthy that international migration of similar nature has been also on the rise. Many low fertility countries including some that formerly strictly restricted admission of foreigners (e.g. Japan and South Korea), have now become migrant receiving countries (Hugo 2000; Abella 1994).

The third major consequence is the profound impact of the rapid fertility decline on people's life course. China's extraordinary reduction in fertility has brought about two significant changes. At the level of the society, reproductive behaviour has become more homogeneous among urban women. They have maintained universal marriage, and almost all married women have children. Most of them have started their reproduction within a couple of years after getting married. The overwhelming majority have had the same number of births and completed their childbearing within a rather narrow age span. At the level of individuals, the process of reproduction has become shorter, simpler, and easier than ever before. As McDonald recently pointed out, fertility transition of this kind would inevitably change the nature of the society and that of women's lives (McDonald 2000: 431). Such uniform fertility behaviour itself is a powerful force that helps to

consolidate the new reproductive norm, which was formed during recent fertility transition.⁹

The significance of these changes may be beyond our imagination. While socially constructed expectations for female or couple behaviour and the life course of individuals are now undergoing profound changes, people often find that they are less capable of keeping up with these transitions and understanding their consequences. Ages 40 to 50, for example, were widely regarded as a period with both a heavy family burden and a high health risk in the past. This was so because women of this age group still bore the task of bringing up children even after they had completed a twenty year long reproduction. Moreover, their surviving parents and parents-in-law could have become rather fragile and needed their support accordingly. Such a sandwich situation imposed a considerable financial and physical pressure on people of middle age. Yet, this will soon become history in China's urban areas, despite the fact that reports discussing these difficulties still appear from time to time. Because of the fall in both the number of children and the age at last birth, the majority of the urban women have no longer bear the burden of looking after children after entering their 40s. Many middle-aged couples now live in an empty nest. The fertility transition has considerably reduced their traditional burdens and enabled the 'second honeymoon' become a widely accessible reality.

Policy responses and theoretical implications

During the last quarter of the twentieth century China experienced two radical and in many ways successful changes: the economic reform and the fertility transition. The economic reform has transformed an entirely centrally controlled economy into a fairly competitive and largely market economy. After two decades of rapid development, China has now become a major economic power in the world and the momentum of its growth

⁹ One such example is the change in people's ideal number of children. A recent survey conducted in 1997 revealed that the mean number of children people would like to have was 1.78. In the urban area, it was only 1.56. This is obviously affected by the homogeneous fertility behaviour recorded in China in the last twenty years (Yang and Tang 2000).

shows no sign of slowing down. Because of the strong government intervention and the family planning program, China also has considerably speeded up its fertility decline and advanced the demographic transition. While in many respects it is still behind other developing countries, demographically China, its urban area in particular, is rather similar to some developed countries.

These developments place China in a much better (compared with 25 years ago) and yet still difficult situation. The Chinese government will continue to pursue its economic reform and maintain the very impressive growth that has been to a large extent contributed by its drastic demographic transition. In the meantime, China has to prepare itself to cope with the negative consequences of the rapid fertility decline, which are also approaching at a fast speed. The governments, especially those in large cities, have already faced and will continue to face such a dilemma in the years to come. The following policies are likely to be adopted in many areas as a response to these challenges.

China's current urban development policies and migration control policies are expected to continue in the near future. Chinese government strictly controlled the urban expansion and rural-urban migration between late 1950s and early 1980s. This has been considerably relaxed during the economic reform as both a stimulus of and a response to the rapid development. The current policies emphasize the need to control the growth of large and mega-cities, and to develop intermediate and small cities. To ensure such policies are implemented successfully, the government has also enforced different migration regulations according to the size of the migrant-receiving city.

Finding a job, living and being registered as a permanent resident in small cities have all become relatively easy in many areas. Some local authorities even provide incentives for this to happen. However, the intake of permanent migrants is still strictly restricted in large and mega-cities like Shanghai and Beijing, despite temporary migrants now being numbered in millions in many places. The government is interested in keeping a large number of temporary migrants to fill the gap in (local) labour supply, the supply

of unskilled labour force in particular. But it is reluctant to accept them as permanent city dwellers. While many temporary migrants can find a job in the large city, they have no access to many rights and benefits that are readily available to their urban resident counterparts. Moreover, their family members, even if they could be brought into the city, are also disadvantaged in searching for jobs, enrolling in schools, visiting hospitals or even finding a place to live.

The unfairness of this policy is beyond dispute, but it is unlikely to be changed fundamentally in the near future, although some steps have recently been taken to improve the situation of the temporary migrants. This is so because such a practice allows the government to overcome the difficulty of labour shortage and at the same time to avoid the burdens that are usually associated with a large amount of rural-urban migration. An international example that has a similar nature is the large volume of government controlled temporary migration from the Philippines to Hong Kong and Singapore (Abella 1994).

As with the policy of controlling migration, China's current family planning policies, those implemented in rural areas in particular, are expected to be maintained in the immediate future. However, the continuation of the current family planning policy itself means a significant change in urban fertility control.

Current fertility regulations allow a couple to have two children if both the husband and wife come from the one-child family. This hardly had any impact on the level of fertility in the past, because the number of married who came from one-child families was very small in the population and the chance of two of them marrying was extremely low. This, however, has completely changed. The one-child policy has been implemented in urban China for more than two decades. The majority of those now reaching marriageable ages are from families with only a single child. The number of married couples who satisfy the above criterion is bound to rise, and according to some predictions it could soon account for more than 40 per cent of marriages. This can lead to

a noticeable increase in urban fertility in the near future even if the family planning policies remain unchanged (State Family Planning Commission's Research Group 2000).

Given the current low fertility in Chinese cities and some suburban areas, it is also possible that the Chinese authorities will further adjust its family planning policies and regulations in the near future (between 2005–2010). On the one hand, the government will continue to impose a strict control on high parity births (third and above); on the other hand, regulations allowing each couple to have two children with a long interval are likely to be universally applied. This will not only make the family planning policy less unfair, easier to implement and be better accepted, it will also help China to ease up the pressure created by a very fast fertility decline and to achieve a demographic soft landing after its strict control of population growth for more than a generation.

In addition to their profound policy implications, rapid fertility changes in urban China also pose a further challenge to the fertility theory. The evidence presented in this paper clearly shows that the immediate reason, the process, and the outcome of fertility decline in urban China are very different from those observed in many countries with low fertility. Lesthaeghe and Willems recently suggested that the development and prolongation of below-replacement fertility in Europe consist of three phases. 'During the initial phase, there was no postponement affect, but a decline in fertility at all ages and birth orders, and hence a dominant quantum effect.' During the second phase, 'gains in female education and female labour force participation, continued ideational change, and further increase in union instability foster major tempo shift'. This tempo effect leads to a very low period fertility that tends to over-represent the real change in cohort fertility. 'During the third phase, postponement would stop, but the recuperation of fertility at older ages would be less than complete. In this eventuality, the quantum effect would again become dominant, ...' (Lesthaeghe and Willems 1999: 227). These suggestions have been supported by recent changes in Belgian fertility -- first the fertility level fell at most childbearing ages, and then the trajectory of age-specific fertility rates shifted upward along the age scale while cohort fertility remained relatively stable.

The process of fertility change in urban China has been very different. Both tempo and quantum effects were recorded simultaneously when the decline started. While the postponement in childbearing did lead to a fall in fertility level at young ages and pushed the fertility curve toward higher ages moderately, the change in fertility patterns was largely dominated by limiting the number of high-parity births. This effectively prevented the rightward movement of the fertility trajectory and overshadowed the tempo effect. Since 1980, the delay effect has become even less observable in urban China and the decrease in fertility rates almost entirely been achieved by the quantum effect. The immediate determinant of these changes seems not to be the improvement in female education and labour force participation or the adoption of different marriage patterns, but rather the nationwide family planning program.

Of course we can easily conclude that China's special process of fertility transition and the extremely low fertility are the result of an unprecedented social engineering that could have taken place only under its particular political, economic, social and cultural setting. But this, in stead of providing a satisfactory answer, leads to more theoretical questions. What are the profound reasons of China's extraordinary fertility decline? Why fertility changes of this kind could have happened in China but not in other countries? Given that fertility changes in 300 million Chinese urban population (or 1.3 billion Chinese population), in comparison with those recorded in most low fertility countries, have followed a radically different route and brought about very different results, is there really a demographic convergence? Facing the considerable diversity in the cause, process and outcome of the fertility decline that have been found in many parts of the world, should we continue to work toward developing a unified fertility theory that explains all these variations? Or indeed could such a theory ever exist? None of these questions are examined in this paper, but their importance to the study of fertility is beyond dispute and they clearly deserve our further investigation.

Acknowledgements

The author would like to thank Xizhe Peng, Chris Wilson for their help and comments.

References

- Abella, J. F. (1994), 'International migration as a solution to labour shortage in low fertility countries', in N. Cho (ed.), *Low Fertility in East and Southeast Asia: Issues and Policies*, Seoul: Korea Institute for Health and Social Affairs, 183-200.
- Attane, I. and Sun, M. (1999), 'Birth rates and fertility in China: How credible are recent data?' *Population (An English selection)*, 11: 251-260.
- Cho, N. (ed.) (1994), *Low Fertility in East and Southeast Asia: Issues and Policies*, Seoul: Korea Institute for Health and Social Affairs.
- Cui, H. (2000), 'On the total population of China', [in Chinese], *Population Research*, 24 (4): 1-4.
- Feeney, G. *et al.* (1994), 'Recent fertility trends in China: Results from the 1990 census,' in The Census Office under the State Council and the Department of Population statistics of the state statistical Bureau (eds.), *1990 Population Census of China – Proceedings of international seminar*, Beijing: China Statistical Publishing House, 661-690.
- Gui, S. (1995), 'The negative growth of population in Shanghai and improving population management: Countermeasures and suggestions', paper presented to International Conference on Population and Sustainable Development, Beijing.
- Guo, Z. (2000), 'Fertility level in China in the 1990s', [in Chinese], *China's Population Sciences*, Vol. 4: 11-18.
- Hao, H. and Gao, L. (1997), 'Sex preference and its effects on fertility in China', in The State Family Planning Commission and the World Health Organization Collaborating Center in Perinatal Care and Health Service Research in Maternal and Child Health, Centers for disease Control and Prevention (eds.), *1992 National Fertility and Family Planning survey, China*, Atlanta: U.S. Department of Health & Human Services, 59-98.
- Hirosima, K. (2000), 'Decomposition of the decline in the total fertility rate since 1970s in Japan: Has not married fertility affected?' *The Journal of Population Studies*, 26: (June) 1-20.
- Hugo, G. (2000), 'Declining fertility and policy intervention in Europe: Some lessons for Australia?' *Journal of Population Research*, 17: 175-198.

Imhoff, E. and Keilman, N. (2000), 'On the quantum and tempo of fertility: Comment', *Population and Development Review*, 26: 549-553.

Kinfu, Y. (2000), 'Below-replacement fertility in tropical Africa? Some evidence from Addis Ababa', *Journal of Population Research*, 17: 63-82.

Lavelly, W. and Freedman, R. (1990), 'The origin of the Chinese fertility decline', *Demography*, 27: 357-367.

Lesthaeghe, R. and Willems, P. (1999), 'Is low fertility a temporary phenomenon in European Union?' *Population and Development Review*, 25: 212-228

Leete, R. (1994), 'The continuing flight from marriage and parenthood among the overseas Chinese in East and Southeast Asia: Dimensions and implications', *Population and Development Review*, 20: 811-829.

Liang, Z., Tang, K. and Jing, S. (2000), 'Changes in China's fertility level during the last twenty years of the Twentieth century', [in Chinese], *China's Population Science*, Vol. 1: 27-39.

McDonald, P. (2000), 'Gender equity in theories of fertility transition', *Population and Development Review*, 26: 427-439.

Peng, X. (2001), 'Response to population change: The case of Shanghai', manuscript prepared for the Consequences of Population Change workshop.

The Population of China Toward the 21st Century (Beijing Volume) Editorial Group (1994), *The Population of China Toward the 21st Century (Beijing Volume)*, [in Chinese], Beijing: China's Statistical Publishing House.

The Population of China Toward the 21st Century (Shanghai Volume) Editorial Group (1994), *The Population of China Toward the 21st Century (Shanghai Volume)*, [in Chinese], Beijing: China's Statistical Publishing House.

The Population of China Toward the 21st Century (Tianjin Volume) Editorial Group (1994), *The Population of China Toward the 21st Century (Tianjin Volume)*, [in Chinese], Beijing: China's Statistical Publishing House.

The Population Reference Bureau (2000), *2000 World Population Data Sheet*, Washington: The Population Reference Bureau.

Sasai, T. (2000), 'Fertility change and its determinants in contemporary Japan', seminar paper presented at the Demography Program, Australian National University.

Saseendran, P. (2000), *The Anomaly of Lower Caste Fertility in Kerala*, The Australian National University Ph.D. thesis.

State Family Planning Commission's Research Group (2000), 'Future population development and fertility policy in China', [in Chinese], *Population Research*, 24 (3): 18-34.

Wilson, C. (2001), 'On the scale of global demographic convergence 1950-2000', *Population and Development Review*, 27: (Page not available yet).

Yang, S. and Tang, M. (2000), 'Stabilizing the low fertility in China: Opportunities and challenges', [in Chinese], *Population Research*, 24 (4): 41-45.

Yao, X. (1995), *Fertility Data of China*, [in Chinese], Beijing: China Population Publishing House.

Yu, H. (2000), 'Census registration for the floating population in China's 2000 population census', [in Chinese], *Population Research*, 24 (5): 57-59.

Zeng, Y. (1996), 'Is fertility in China in 1991-92 far below replacement level?' *Population Studies*, 50: 27-34.

Zhang, Q. (1988), 'Basic facts on the household registration system', *Chinese Economic Studies*, 22: 1-106.

Zhao, Z. (1994), 'Rapid demographic transition and its influence on kinship networks, with particular reference to China', In N. Cho (ed.), *Low Fertility in East and Southeast Asia: Issues and Policies*, Seoul: Korea Institute for Health and Social Affairs, 28-58.

Zhao, Z. (1997), 'Deliberate birth control under a high-fertility regime: Reproductive behaviour in China before 1970', *Population and Development Review*, 23: 729-767.

Zhao, Z. (2001), 'Registered households and micro-social structure in China: Residential patterns in three settlements in Beijing area', *Journal of Family History*, 26: 39-65.