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China's Sharply Declining Fertility: Implications for Its Population Policy*

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On March 28, 2001, China's fifth national census (conducted in November 2000) reported a total population of 1.265 billion, with an average annual growth rate of 1.07 percent since the last census in 1990. This figure is 0.4 percentage points lower than the annual growth rate for the 1980-90 period. Beijing attributed this decline to the successful implementation of the government's one-child policy (OCP). Having undergone two successful fertility transitions, China's total fertility rate (TFR)—the average number of children born alive to a woman—was around 1.8 by the early 1990s. The most critical issue is whether China has also undergone a third *fertility transition since the late 1990s—from below-replacement fertility to a substantially lower level. Chinese demographers, and perhaps even the Chinese government, are not in total agreement among themselves over the actual TFR level. The goal of this research is to estimate China's current TFR. This paper finds that the figure could well stand at 1.7, and may be moving toward 1.6. While this sharp fall in fertility may well be the*

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single most significant socioeconomic achievement for China in the first quarter of this century, there is the possibility of the government's OCP overshooting its targets. Thus the paper argues that sooner or later Beijing will be forced to drop the unpopular OCP, a policy which has outlived its usefulness amidst the thrust of radical social and economic transformation of China today. Looking at the experiences of other East Asian societies, we find that when fertility has declined to a very low level and is a product of the social and economic life of the people, even the subsequent adoption of pro-natal policy by their governments is ineffective in reversing such declining trends. Such examples may be a valuable lesson for Beijing.

KEYWORDS: total fertility rate (TFR); fertility transition; replacement fertility; aging population; one-child policy

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Declining Fertility in the 1990s

China is the world's most populous nation. On March 28, 2001, China released the results of its fifth national census (conducted on November 1, 2000), which reported China's own population (i.e., comprising its thirty-one provinces, autonomous regions, and municipalities but excluding Hong Kong, Macao, and Taiwan) officially at 1.265 billion, accounting for about one-fifth of the world's total. This figure represents an average annual increase of 12.8 million or 1.07 percent, which is 0.4 percentage points lower than the average annual growth rate of the fourth census in 1990.[1]

In recent years, China's natural rates of population growth have been consistently on the decline. In 1999, the crude birth rate (粗出生率 the number of live births per one thousand population) fell to 1.52 percent, down from 3.34 percent in 1970 when China began family planning. Since China's crude death rates for many years have been quite low (at around 0.6-0.7 percent) by international standards, the natural population growth rate (i.e., birth rate minus death rate, net of migration) in 1999 fell to an all-time low of 0.88 percent—from 1.44 percent in 1990 and 2.58 percent

[1]"Population Growth Well Under Control," *China Daily* (Beijing), March 29, 2001.

Table 1
China's Vital Statistics, 1950-99

Year	Total Population (million)	Birth Rate (%)	Death Rate (%)	Natural Growth Rate (%)	Urban Population (%)
1950	552	3.70	1.80	1.90	11.18
1953*	588	3.70	1.40	2.30	13.31
1955	615	3.26	1.23	2.03	13.48
1960	662	2.09	2.54	–0.46	19.75
1964*	705	3.91	1.15	2.76	18.37
1965	725	3.79	0.95	2.84	17.98
1970	830	3.34	0.76	2.58	17.38
1975	924	2.30	0.73	1.57	17.34
1980	987	1.82	0.63	1.19	19.39
1982*	1,017	2.23	0.66	1.57	21.13
1985	1,059	2.10	0.68	1.43	23.71
1990*	1,143	2.11	0.67	1.44	26.41
1991	1,158	1.97	0.67	1.30	26.37
1992	1,172	1.82	0.66	1.16	27.63
1993	1,185	1.81	0.66	1.15	28.14
1994	1,199	1.77	0.65	1.12	28.62
1995	1,211	1.71	0.66	1.06	29.04
1996	1,224	1.70	0.66	1.04	29.37
1997	1,236	1.70	0.65	1.05	29.92
1998	1,248	1.60	0.65	0.95	30.40
1999	1,259	1.52	0.65	0.88	30.89

Note: *denotes a census year.

Sources: *Zhongguo renkou tongji nianjian 2000* (China population statistics yearbook 2000) and earlier years.

in 1970 (see table 1). In 1998, for the first time in China's modern history, the country's natural population growth rate was below the 1 percent benchmark.

In fact, China's official natural population growth rate today is comparable to that of Korea, Taiwan, and Singapore, as can be seen from table 2. Shanghai has actually experienced negative population growth for seven years in a row (not including migration),[2] with demographic trends similar

[2]Since 1993, Shanghai has experienced negative population growth. In 1999, for instance, the crude birth rate was 5.2 per thousand while the crude death rate was 7 per thousand. See "Negative Population Growth for Shanghai for the Past Seven Years," *Lianhe Zaobao* (Singapore), December 4, 1999.

Table 2
Natural Population Growth Rates in Asia

	Crude Birth, Death, and Natural Growth Rates (%)														
	1975			1980			1985			1990			1998		
	B	D	N	B	D	N	B	D	N	B	D	N	B	D	N
China	**2.30**	**0.73**	***1.57***	**1.82**	**0.63**	***1.19***	**2.10**	**0.68**	***1.42***	**2.10**	**0.63**	***1.47***	**1.60**	**0.65**	***0.95***
Japan	1.71	0.63	*1.08*	1.36	0.62	*0.74*	1.19	0.63	*0.56*	0.99	0.67	*0.32*	0.96	0.75	*0.21*
NIEs															
Hong Kong	1.82	0.49	*1.33*	1.70	0.50	*1.20*	1.40	0.46	*0.94*	1.18	0.50	*0.68*	0.79	0.49	*0.30*
South Korea	2.39	0.65	*1.74*	2.34	0.67	*1.67*	1.64	0.62	*1.02*	1.64	0.58	*1.06*	1.38	0.53	*0.85*
Singapore	1.77	0.51	*1.26*	1.71	0.52	*1.19*	1.66	0.52	*1.14*	1.84	0.48	*1.36*	1.32	0.46	*0.86*
Taiwan	2.30	0.47	*1.83*	2.34	0.48	*1.86*	1.80	0.48	*1.32*	1.66	0.52	*1.14*	1.24	0.56	*0.68*
ASEAN															
Cambodia	4.70	1.80	*2.90*	3.01	2.70	*0.31*	4.55	2.00	*2.55*	3.90	1.56	*2.34*	3.53#	1.17#	*2.36#*
Indonesia	4.00	1.70	*2.30*	3.45	1.30	*2.15*	3.05	1.12	*1.93*	2.76	0.90	*1.86*	2.25	0.75	*1.50*
Laos	4.20	2.20	*2.00*	4.50	2.10	*2.40*	4.20	1.90	*2.30*	4.47	1.60	*2.87*	4.13#	1.51#	*2.62#*
Malaysia	3.14	0.64	*2.50*	3.09	0.53	*2.56*	3.19	0.50	*2.69*	2.80	0.46	*2.34*	2.50	0.45	*2.05*
Myanmar	3.29	1.19	*2.10*	2.69	0.81	*1.88*	2.85	0.89	*1.96*	3.02	0.92	*2.10*	2.75	0.82	*1.93*
Philippines	2.91	0.64	*2.27*	3.37	0.87	*2.50*	3.22	0.79	*2.43*	3.18	0.74	*2.44*	2.84#	0.61#	*2.23#*
Thailand	2.71	0.56	*2.15*	2.29	0.53	*1.76*	1.88	0.44	*1.44*	2.23	0.70	*1.53*	1.73	0.65	*1.08*
Vietnam	4.10	1.60	*2.50*	3.94	1.23	*2.71*	3.40	0.80	*2.60*	3.11	0.89	*2.22*	2.56#	0.70#	*1.86#*

Notes: B = crude birth rate; D = crude death rate; N = natural growth rate; # denotes 1997 figure.

Sources: United Nations, *Statistics Yearbook for Asia and the Pacific 1999*; and *Statistical Yearbook of the Republic of China 2000.*

to those in Japan and Western Europe. This trend prompted China's state population agency in 1999 to proudly declare its family program a success. As a result, China averted 330 million births for the past thirty years, thereby saving the country a huge sum equivalent to its 1997 gross domestic product (GDP).[3] Indeed, China won high praise from UN population experts for having achieved the "most successful family planning policy in the history of mankind in terms of quantity"[4] (see chart 1 for China's demographic transition).

The "natural growth rate" is not an exact indicator of future demographic changes because the term does not explain how the population growth comes about. Experts commonly use a more precise technical indicator such as the "total fertility rate" (TFR 總和生育率), which measures the average number of children born alive to a woman during her entire reproductive period in accordance with prevailing age-specific fertility rates. The TFR, in providing a better picture of the fertility behavior at the family level, can also predict future demographic movements more accurately for a particular period. Generally speaking, an average TFR of 2.1 (i.e., slightly more than two children per woman) denotes replacement-level fertility. In recent years, however, Chinese family planning officials have avoided making public reference to TFR figures, probably because there is no clear official consensus on the accuracy of various TFR estimates proffered in the current literature.[5]

According to some foreign demographers, China's TFR has been steadily declining since the early 1970s due to the early adoption of the family planning policy.[6] The decline was later accelerated with the introduction of the radical one-child policy (OCP 一胎化政策) in 1980, even though the actual implementation of the policy in the rural areas has been

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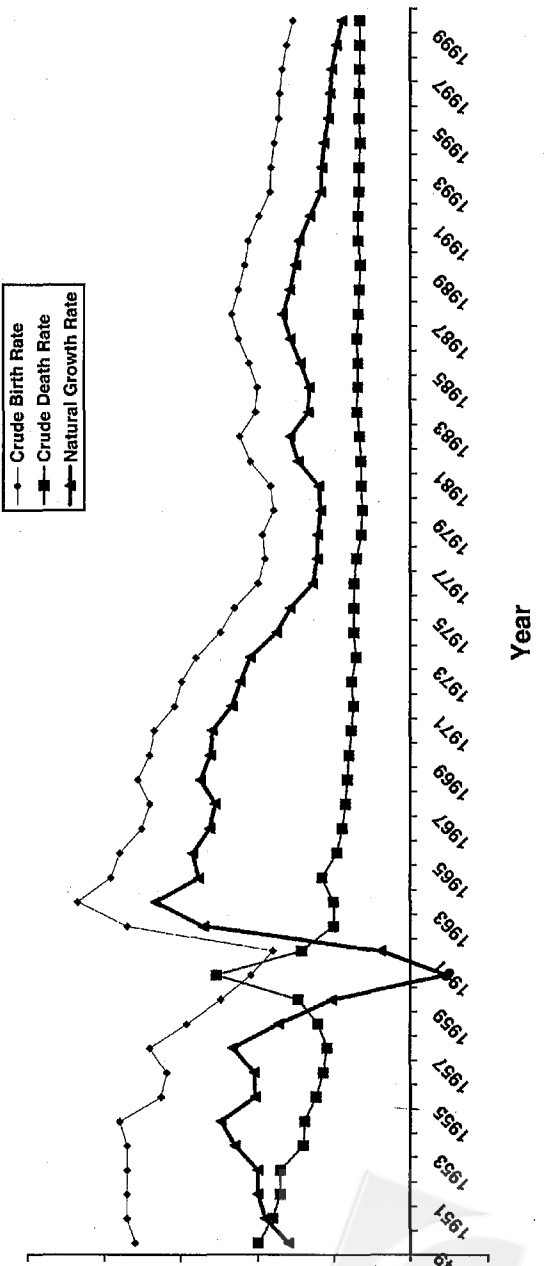
[3]This is based on an estimated average cost of 40,000 *yuan* for raising a rural child for sixteen years, and 110,000 *yuan* for an urban child. See *Ming Pao* (Hong Kong), September 28, 1999.

[4]"China Benefits Mankind," *China Daily*, October 13, 1999.

[5]"Uncertainty the Only Sure Element in Population Statistics," *South China Morning Post* (Hong Kong), July 4, 2000.

[6]Judith Banister, *China's Changing Population* (Stanford, Calif.: Stanford University Press, 1987).

Chart 1
Demographic Transition in China, 1949-99



Source: *Zhongguo renkou tongji nianjian 2000* (China population statistics yearbook 2000) (Beijing: Zhongguo tongji chubanshe, 2000).

mostly ineffective, especially in the early periods. By the end of the 1980s, China's TFR level was officially estimated at 2.2; but subsequent economic growth and concomitant social change since the early 1990s had brought the figure down to below the replacement level, with the TFR at around 1.8.

However, China in the late 1990s has witnessed the rise of even more powerful *anti*-natal forces—rising incomes, expanding education, rural industrialization, rapid urbanization, and increasing rural-urban migration—as a result of continuing dynamic social and economic change. Has China's TFR experienced a further decline to substantially below the replacement level in the second part of the 1990s? A careful examination of various official sample surveys on TFR suggests that China's actual TFR by the late 1990s may have plunged to 1.7-1.6, slightly lower than that of South Korea and Taiwan.

With a TFR at 1.7 or 1.6 and slowly declining, China's total population could be easily capped at 1.4 billion in 2010, as officially targeted, and would eventually peak at 1.5-1.6 billion, possibly as early as 2030. This lowering of TFR will then be the single most significant socioeconomic achievement for China in the first quarter of this century. However, this positive demographic development will be traded off against certain long-term social and economic problems related to an aging population and slower economic growth in the future.

The Process of Fertility Transition

China's demographic transition in the second half of the twentieth century from high birth and death rates to low birth and death rates has largely followed a predictable pattern, quite similar to that experienced in other East Asian economies. Sufficient is to say that China had a typical preindustrial level of high fertility (TFR at 5.0 to 6.0) in the 1950s when social stability was restored after the civil war. This gave rise to China's first baby boom, which subsequently prompted Professor Ma Yinchu (馬寅初), a noted economist and president of Beijing University, to espouse his "new population theory," calling for population control measures.

However, Chairman Mao Zedong (毛澤東), true to his Marxist ide-

ology ("For every additional mouth, there will always be two additional hands" 多一張口就多一雙手), harshly repudiated Ma, and brought an abrupt end to the population debate. Not surprisingly, China's fertility throughout the 1960s remained high, except during the Great Leap Forward period of 1959-62, when the population actually declined due to famine. By 1970, China's total population exceeded 800 million, exerting great pressure on the country's low-productivity collective farming. In response, the government introduced a family planning program, which caused the TFR to decline sharply from 5.8 in 1970 to a record low level of 2.7 in 1979, a remarkable reduction of more than 50 percent within one decade.[7]

Demographers have since recognized that China completed its first major fertility transition in the 1970s—from very high fertility to relatively low fertility.[8] From East Asian experiences we find that once the critical fertility transition begins, the momentum for its continuing decline is sustained, thus inevitably bringing fertility down to the replacement level. Why then did Beijing in January 1979 still introduce the controversial (or "notorious" in the eyes of many Western commentators) OCP? If completely successful, such a policy could technically bring China's TFR down to 1.0, which is a highly "unnatural" level of fertility given that such a low replacement rate could in theory depopulate China in the long run.[9]

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[7]The slogan of the time was: "*wan, xi, shao*" ("晚，稀，少" or "later marriage, wider spacing of children, and few children").

[8]See, e.g., P.M. Kulkarni and S. Rani, "Recent Fertility Declines in China and India: A Comparative View," *Asia-Pacific Population Journal* 10, no. 4 (1995): 53-74; and John Cleland and Christopher Wilson, "Demand Theories of the Fertility Transition: An Iconoclastic View," *Population Studies* 41, no. 1 (1987): 5-30.

[9]For a population to replace itself, its TFR must always be 2.0, i.e., two children per couple (actually the rate is slightly higher at 2.1 in order to account for infant mortality). Thus, whenever TFR exceeds 2.0, as in most developing countries, the population will keep growing. When TFR is less than 2.0, as in most developed countries, the population will age and then eventually decline in number. Since the one-child population policy gives rise to a TFR of only 1.0 (i.e., one child per couple), the population will drastically decline, and will theoretically die out in the long run. Even in Japan and some West European countries with declining rates of population growth, TFR still stands at 1.4 or 1.5. Thus, the Chinese one-child policy will theoretically result in a TFR which is, biologically speaking, "unnaturally low." As all species have an instinct for reproduction for their survival, long-term TFR should not be below the replacement level of 2.0. As will be explained, the PRC government understood from the start that its one-child policy would never be fully implemented, especially in the rural areas, and hence the actual TFR would not fall to the theoretically unsustainable and unaturally low level of 1.0.

The Chinese leadership in 1978 was acutely aware of the serious potential demographic impact of the nation's large and youthful population. Because of high fertility in the preceding two decades and the existing large population base, China's total population, if left alone, would continue to grow at least for one generation before stabilizing and decreasing, *even if the TFR had already dropped to the replacement level in 1978*. Such is the familiar "hidden momentum of population growth," known to all demographers. Whereas natural demographic changes are normally a long-term phenomenon, economic reform and development issues like employment creation call for immediate policy initiative. China's aging leadership under Deng Xiaoping (鄧小平) was simply too impatient to wait for the population decline to take its natural course, much less willing to see the fruits of economic reform "eaten up" by population expansion—hence their decision for a radical population control policy.

As expected, the OCP was initially strongly resisted by Chinese couples (particularly those living in rural areas), whose desire to have at least two children remained strong. The implementation of the OCP inevitably involved strong coercive measures, which easily gave rise to abuses and excesses at the local levels, such as forced abortion, infanticides, and a lop-sided sex ratio among the newly born—117 boys to every 100 girls in the recent census.

All the above gave the OCP a bad image abroad, even though few foreigners have known that the OCP has been modified several times. From the start, exceptions were made for minority ethnic groups, remarried couples without their own children, and couples with retarded or handicapped children. In 1984, a major relaxation occurred in rural areas where couples with only one female child were allowed to have a second birth; and in mountainous and extremely poor areas, all couples were allowed to have a second birth. Nevertheless, the policy remains fully implemented in urban areas, except for couples that are themselves single children or who are remarried.

How then has the OCP fared over the past two decades? Many foreign commentators take the view that the OCP has failed, simply because there are limits to what any government can do to effectively force demographic changes. For China as a whole, the policy has clearly not been

thoroughly implemented or the country's TFR today would have already plunged to an unnaturally low level. However, demographers have conceded that the OCP has been successful in the urban areas.[10] In Chinese cities today, the OCP has been widely accepted, partly because of rapidly growing *anti*-natal socioeconomic changes and partly because city governments have the required institutional resources to enforce the policy effectively.[11]

In the rural areas, the extended family has remained a vital institution for making decisions regarding production and consumption, and this state of affairs naturally favors a larger family size. Moreover, most rural couples still have the deep-rooted desire for at least one male offspring to carry on with their family farm business as well as their family lineage. Therefore, the implementation of the OCP in the rural areas has been tardy and its results spotty. What critics of the policy have apparently failed to realize, however, is the fact that the OCP—like many other reform policies of the Deng era—embodies elements of Deng's pragmatism and flexibility as manifested in the motto: "Two steps ahead, if in trouble take one step back" (進兩步，有錯退一步). The leadership knew only too well that enforcing such a severe policy would have required far more forceful measures than the government was willing to use. After all, the OCP is an extreme policy, inherently unachievable even in the very long run.

This logic explains why the State Family Planning Commission, initially given the authority to maintain surveillance and monitoring of births, soon lost power and prestige and became merely a weak, decentralized regulatory body, which often turned a blind eye to violations provided they were not too blatant or excessive. The government was apparently prepared to allow the OCP to work slowly in the rural areas, letting the under-

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[10]According to one study, as early as 1986, only 20 percent of urban women with one child had borne a second one compared to rural areas where the percentage was as high as 94 percent. See Griffith Feeney, Feng Wang, Mingkun Zhou, and Baoyu Xiao, "Recent Fertility Dynamics in China: Results from the 1987 One Percent Population Survey," *Population and Development Review* 15, no. 2 (1989): 297-322.

[11]Among other reasons, urban residents enjoy the institutional support of the state such as guaranteed full employment, free housing, and medical care, and trust the state to look after them in their old age, thus removing one of the traditional reasons for having more children to take care of them in their old age.

lying socioeconomic forces finish the job.

Viewed from such a broad perspective, China's OCP has actually worked. The policy was instrumental in bringing about China's second fertility transition from low fertility to below-replacement fertility, a highly creditable achievement given China's present stage of economic development. According to the U.S. Census Bureau, China's TFR since 1992 has consistently hovered around 1.8, a level comparable to that in Taiwan or South Korea, countries which are economically more developed than China (see chart 2).

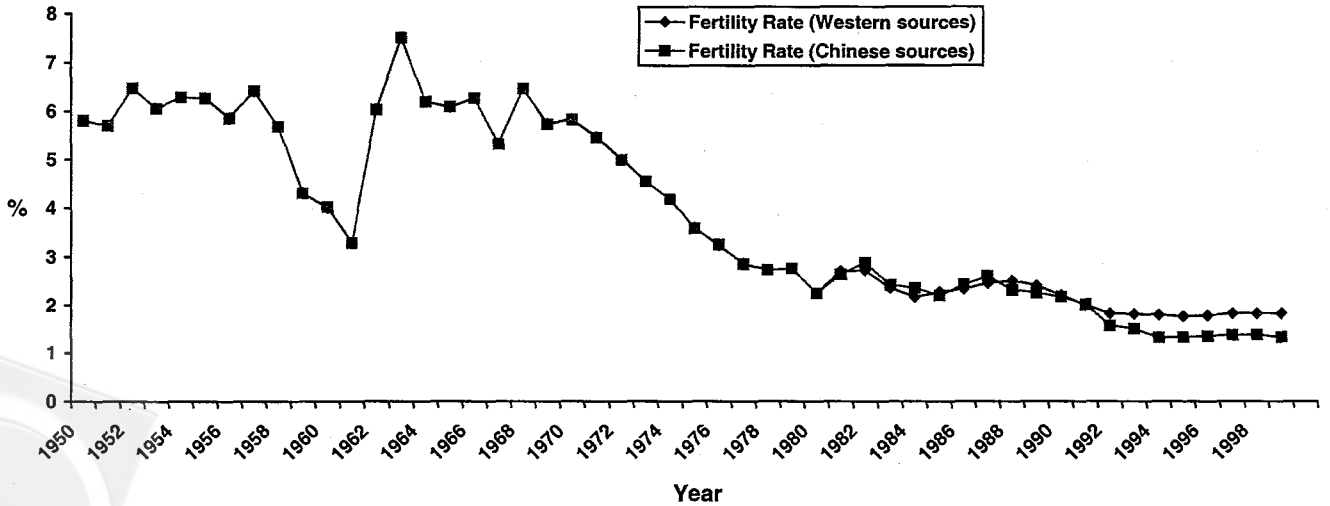
Has TFR Fallen Far Below the Replacement Level?

What is China's likely TFR level today? Has it fallen further below the 1.8 "benchmark" level? Put differently, has China also undergone a *third* fertility transition in the late 1990s—from below-replacement fertility to a substantially lower level of fertility? Chinese demographers do not seem to be in total agreement among themselves. In the absence of officially confirmed figures, the answer remains a matter of guesswork, which nevertheless should be undertaken carefully.

To begin with, China's first fertility transition—from high fertility to low fertility—that occurred in the 1970s did not come as a surprise to experts because of the two-decade radical socialist transformation of Chinese society, which in turn undermined the "century-long reproductive norms."[12] The second fertility transition (starting in the early 1980s) from low fertility to below-replacement fertility, occurring under the impact of economic reform and rapid development, was also predictable. The reform brought about a visible rise in rural prosperity in the early 1980s, which in turn sparked off rapid rural industrialization marked by the rise of township and village enterprises (TVEs). Social and economic change in the urban areas was even more far-reaching. In demographic parlance, economic develop-

[12]Peng Xizhe, "Current Fertility and Future Prospects in China" (Draft, Institute of Population Research, Fudan University, Shanghai, China).

Chart 2
China's Total Fertility Rate, 1950-99



Sources: Judith Banister, *China's Changing Population* (Stanford, Calif.: Stanford University Press, 1987); Griffith Feeney, Feng Wang, Mingkun Zhou, and Baoyu Xiao, "Recent Fertility Dynamics in China: Results from the 1987 One Percent Population Survey," *Population and Development Review* 15, no. 2 (1989): 297-322; U.S. Bureau of the Census; China Population Information Research Center (CPIRC); and Guo Zhigang, "Lifetime Fertility of Chinese Women: A Look at the Recent Period Fertility Behavior," *Renkou yanjiu* (Population Research) (Beijing) 24, no. 1 (January 2000): 7.

ment is the best contraceptive; hence we see the expected fertility decline in this phase.

In the 1990s, China experienced even higher levels of social and economic development, and across a larger base. The economy in the 1990s grew at an annual rate of 10.1 percent, compared to 9.3 percent in the 1980s. Industrialization had also spread from the original large urban clusters and special economic zones in the coastal region to the small and medium-sized cities in many parts of China. In 1978, 68 percent of the labor force was engaged in farming; the proportion decreased to only 47 percent in 1999, however.[13] The 1990s also witnessed massive migration of rural youths (the "floating population" 流動人口) into cities and towns to seek nonfarm employment. Social progress in this period was no less impressive. The total number of people living under the poverty line decreased from 250 million at the beginning of economic reform in 1978 to 34 million in 1999; and illiteracy among the young and the middle-aged had been virtually eliminated by 1999.[14] In fact, by 2000 China was a different society altogether when compared to twenty years ago. The total number of fixed-line telephone subscribers in 2000 reached 144 million (in addition to 85 million mobile phones in use), compared to only 1.2 million phone sets in 1978 and 5.4 million in 1990.[15] Such rapid socioeconomic development must have triggered another spurt of fertility decline, causing the TFR to dip further.

How much has the TFR actually declined? As can be seen from table 3, there is no consistent official TFR series for the period after 1992. All that is available to the public are some sample surveys conducted by the State Statistical Bureau (SSB), which are technically competent but widely deemed to be unreliable due to serious undercounting caused by large numbers of unregistered households and unrecorded births forming the

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[13] *Zhongguo tongji nianjian 2000* (China statistical yearbook 2000) (Beijing: Zhongguo tongji chubanshe, 2000).

[14] The White Paper, "China's Population and Development in the 21st Century" (Information Office of the State Council, December 2000).

[15] "Mobile Subscriptions Double," *South China Morning Post*, February 12, 2001; *Ming Pao*, February 10, 2001.

Table 3
Estimates of China's Total Fertility Rate

Year	Total Fertility Rate (TFR)					6
	Western Estimates		Chinese Official Estimates			
	1 Banister & Feeney et al.	2 U.S. Census Bureau	3 CPIRC	4 1997 Sample Survey	5 1992 Sample Survey	Average No. of Live Births Per Woman
1950	5.81	–	5.81	–	–	–
1953	6.05	–	6.05	–	–	–
1958	5.68	–	5.68	–	–	–
1959	4.31	–	4.30	–	–	–
1960	4.00	–	4.02	–	–	–
1961	3.29	–	3.29	–	–	–
1962	6.03	–	6.02	–	–	–
1965	6.07	–	6.08	–	–	–
1970	5.82	–	5.81	–	–	–
1971	5.44	–	5.44	–	–	–
1972	4.98	–	4.98	–	–	–
1973	4.54	–	4.54	–	–	–
1974	4.17	–	4.17	–	–	–
1975	3.58	–	3.57	–	–	–
1976	3.23	–	3.24	–	–	–
1977	2.85	–	2.84	–	–	–
1978	2.72	–	2.72	–	–	–
1979	2.75	–	2.75	–	–	–
1980	2.24	–	2.24	–	–	–
1981	2.69	–	2.63	–	–	–
1982	2.71	–	2.87	–	–	–
1983	2.35	–	2.42	–	–	–
1984	2.16	–	2.35	–	–	–
1985	2.27	–	2.20	–	–	–
1986	2.33	–	2.42	2.59	2.46	–
1987	2.45	–	2.59	2.66	2.57	–
1988	2.50	–	2.31	2.41	2.28	–
1989	2.40	–	2.25	2.40	2.24	–
1990	–	2.20	2.17	2.29	2.04	–
1991	–	2.00	2.01	1.75	1.66	–
1992	–	1.82	–	1.57	1.47	–
1993	–	1.81	–	1.51	–	–
1994	–	1.79	–	1.32	–	1.49
1995	–	1.76	–	1.33	–	1.99
1996	–	1.78	–	1.35	–	1.42

Table 3 (Continued)

Year	Total Fertility Rate (TFR)					6
	Western Estimates		Chinese Official Estimates			
	1 Banister & Feeney et al.	2 U.S. Census Bureau	3 CPIRC	4 1997 Sample Survey	5 1992 Sample Survey	Average No. of Live Births Per Woman
1997	–	1.82	–	–	–	1.37
1998	–	1.82	–	–	–	1.38
1999	–	1.82	–	–	–	1.33

Sources: For column 1, Judith Banister, *China's Changing Population* (Stanford, Calif: Stanford University Press, 1987), and Griffith Feeney, Feng Wang, Mingkun Zhou, and Baoyu Xiao, "Recent Fertility Dynamics in China: Results from the 1987 One Percent Population Survey," *Population and Development Review* 15, no. 2 (1989): 297-322; for column 2, U.S. Bureau of the Census; for column 3, China Population Information Research Center (CPIRC); for columns 4 and 5, Guo Zhigang, "Lifetime Fertility of Chinese Women: A Look at the Recent Period Fertility Behavior," *Renkou yanjiu* (Population Research) (Beijing) 24, no. 1 (January 2000): 7; and for column 6, *Zhongguo tongji nianjian 1995* (China statistical yearbook 1995) and subsequent years.

so-called "black population" (黑人口).[16] From table 3, both the 1992 and 1997 sample surveys show an abrupt drop in fertility during 1991-92 to well below-replacement levels (1.5-1.6), and even dropping further to 1.35 in 1996. This has since stirred up heated controversy among China's demographers.[17] Even the State Family Planning Commission openly questioned the validity of the TFR figures derived from the SSB's sample surveys.[18]

Since the mid-1990s, the SSB has conducted an annual sample survey

[16]See, e.g., note 5 above and "China Losing 'War' on Births," *The Washington Post*, May 4, 2000.

[17]The State Statistical Bureau at one time had estimated China's TFR for 1983, 1984, and 1985 respectively at 1.96, 1.96, and 1.94—implying that China's fertility had already reached the below-replacement level in the early 1980s, an assertion which was subsequently proved to be wrong. The more accurate TFR numbers should be 2.42, 2.35, and 2.17, respectively. See Feng Litian, "China's Population Policy: Past, Present, and Future," *Renkou yanjiu* (Population Research) (Beijing) 24, no. 4 (July 2000): 25.

[18]See note 12 above. For more detailed arguments, see also Zeng Yi, "Has China's Fertility in 1991-1992 Been Far Below the Replacement Level?" *Renkou yanjiu* 19, no. 3 (May 1995): 7.

(sampling ratio at 0.98 percent) of the "average number of live births per woman of childbearing age," which has similarly plummeted from 1.99 in 1995 to 1.33 in 1999 (see table 3, column 6). To be sure, the ratio of "live births per woman" is not exactly the same as the TFR (which is usually compiled on a cohort basis), and the former should theoretically be slightly lower than the latter, as many women in the sample have not lived through their entire childbearing years and completed their fertility. Still, the ratio unmistakably points to sharply declining fertility trends in the late 1990s.

Since faulting the SSB's sample surveys is technically difficult, the only rational explanation lies in the underreporting of births during the survey. Treated as a random element, underreporting can indeed occur in any population survey and even in the general population census. To explain such a large discrepancy, however, one needs to assume that the underreporting of the real number of births was practiced *systematically* on a very large scale—virtually by most families and in most villages.[19] Such blatant, yearly underreporting is hard to believe. This also implies that the riddle of China's exact TFR may never be resolved—not even by the recent 2000 census, which was subject, in theory, to the same set of technical and social constraints that were responsible for the underreporting in the past sample surveys.[20]

If the SSB's sample survey results are not completely invalid, the question nonetheless remains: How did China's TFR plunge to such a low threshold of 1.5-1.4 in such a short span of time? According to the World Bank, the average TFR for high-income economies in 1998 was 1.7, with a few developed countries such as Japan, Germany, and Austria having a TFR of 1.4.[21] Russia and many East European countries are currently

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[19]An enterprise can easily underreport profits, which are mere numbers appearing on the books. However, a village official cannot hide the unregistered above-quota births (the so-called "black children") year after year. Furthermore, if a village official has allowed one family to have two or more children illegally, its neighbors in the same village will soon follow suit—as would others in neighboring villages.

[20]For problems faced by the 2000 census, see "China's Floating Population a Headache for Census," *Straits Times* (Singapore), September 22, 2000; "Census Extended amid Fear and Confusion," *South China Morning Post*, November 11, 2000; and an article in Chinese on the 2000 population census, *Yazhou zhoukan* (Asian Week), February 5, 2001.

[21]The World Bank, *World Development Report 2000/2001* (Washington, D.C.: The World Bank, 2001), 286-87.

plagued by even lower fertility levels because of rampant abortions and many abnormal socioeconomic problems.[22] For China, all things considered, one may therefore reasonably assume that its TFR currently stands at 1.7, but is moving toward 1.6.[23]

Has the One-Child Policy Outlived Its Usefulness?

Given population pressure on the environment, food supply systems, and social and education services, the Chinese government will find the nation's declining fertility a much welcome relief.[24] At the same time, a sharply declining fertility will also hasten the early arrival of an "aged society," where a smaller productive proportion of the population must support an expanding aging cohort. For a married couple today who are themselves from one-child families and who also want to stop at one offspring, their child will have to take care of six dependents (i.e., two parents and four grandparents) in the future. Currently, those over sixty-five already constitute 10 percent of China's total population, and the proportion will reach 25 percent within three decades.

The labor force will eventually shrink. In fact, as a result of the steady fertility decline in the past three decades, the growth of China's labor force has already slowed down substantially—from 2.2 percent in the 1980s to

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[22]See "Abortion Still Rampant in the Former East Bloc," *International Herald Tribune*, February 16, 2001.

[23]In China's urban areas today, the one-child family has become the norm. In larger cities like Shanghai, Beijing, and Guangzhou, the TFR is likely to fall below one because of the postponement of marriage and rising education of women. In the more developed rural areas of the coastal region (which are also heavily populated), increasingly, young peasants are also postponing their marriage in order to pursue nonfarm occupations and accepting smaller family size, particularly when their firstborn happens to be a boy. Thus, the urban population (30 percent of total population) having a TFR of 1.0 and the rural population (70 percent of total) having a below-replacement TFR together would yield an overall TFR of 1.6-1.7 for China as a whole.

[24]Recently, Jiang Zemin, in a high-level seminar organized by the Central Committee of the Chinese Communist Party, said, "Population control, resources, and environmental protection will be the three crucial issues in China's march toward becoming a great power in the new century." He also stressed "the next few years will be a crucial time during which China must stabilize its birth rate at the current low level and improve population quality." See *China Daily*, March 13, 2001.

1.3 percent in the 1990s.[25] In the short term, however, China will continue to be burdened with the pressing task of creating jobs for the new entrants to the labor force. In other words, continuing fertility decline actually makes no difference to the country's *current* unemployment problem. This suggests that the government should start reassessing the costs and benefits of the OCP, which in any case was supposed to be a "policy only for one generation."

Officially, Beijing has repeatedly stated that the OCP will continue.[26] At the same time, the government has also manifestly eased the strict implementation of this policy.[27] In the urban areas, couples from one-child families can now have a second child while many rural families whose first child is a girl can have a second child. In many parts of rural China, especially in Guangdong (廣東) and Fujian (福建), some couples can even have more than three children after they have paid a specific "fine" to the local government.[28] In the past, such flexibility was applied only when dealing with ethnic minorities. As Zhang Weiqing (張維慶), minister of the State Family Planning Commission, plainly stated, "The family planning policy in China is not the 'one-child policy' as many people, especially Westerners, think."[29]

Why does the government not simply abolish this immensely unpopular policy, whose implementation has been politically and socially costly and whose effectiveness is highly debatable? The government appears to be unsure about just how far below the replacement level China's TFR has actually fallen and is even more uncertain if the fertility decline can be sustained. There is an underlying fear that the untimely scrapping

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[25]See note 21 above.

[26]"Family Planning Policy to Continue," *China Daily*, October 12, 1999; and "One-Child Policy 'Must Stay'," *South China Morning Post*, March 13, 2000.

[27]"China Tries Easing One-Child Policy," *Asian Wall Street Journal*, February 5, 2001; "Abuses under One-Child Policy Lead to Rethink," *South China Morning Post*, December 20, 2000.

[28]"Guangdong Villages Accept Two Babies 'No Longer a Right'," *South China Morning Post*, January 14, 2000.

[29]"Nation Sticks to Family Planning for Long Term," *China Daily*, December 20, 2000; "Two-Child Families Possible for Many," ibid., February 1, 2000; and "Babies Break All the Rules in Remote Areas," *South China Morning Post*, August 13, 1999.

of this policy could spark off an extensive resurgence of second births.

One may, however, argue that since the OCP has been largely an urban phenomenon, the policy's termination is not likely to produce a big baby boom in the urban areas given the rapid socioeconomic transformation of China's cities today. In any case, additional births in the urban areas could actually result in more "quality children," as many believe that the more affluent and better-educated urban parents are better able to bring up children than their rural counterparts.

With fertility trends continuing to decline, sooner or later the government will have to drop the OCP altogether, a policy which has outlived its usefulness amidst the thrust of radical social and economic transformation of China today. The experiences of other East Asian societies show that when fertility has fallen to a very low level and is a product of the social and economic life of the people, even the subsequent adoption of *pro*-natal policies by their governments is ineffective in reversing such declining trends. The Chinese leadership would do well to take heed of this lesson.