

4 China

Censuses of 1982 and 1990

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A Brief Overview

Although having the largest population in the world and having a long history of population census, China's history of modern census with microdata stored and made available is a rather short one. It was not until as recently as two decades ago, in 1982, that microdata began to be stored in machine-readable format and made available for public use. Fragmented individual household census forms have survived in certain locales of China for earlier censuses, especially the ones in 1953 and 1964, but no national or even sub-national microdata are readily available.

Chinese censuses are considered national efforts, mobilizing millions of census takers and hundreds of millions of participants. They are conducted under the direct leadership of China's State Council, which forms a special leadership group composed of high level officials from relevant governmental ministries and organizations. These organizations include statistics, public security, economic planning, family planning, civil affairs, ethnic affairs, education, finance, labor, and others. The actual design, implementation, and processing of census data are carried out by China's State Statistical Bureau (SSB, also known as the National Bureau of Statistics).

After the 1982 census, China has scheduled to have its census taken once every ten years, on the year ending with

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a 0. The subsequent censuses therefore were conducted in 1990 and 2000. In addition to these censuses, China has also conducted intercensal national sample surveys of one-percent of its population. So far two such surveys have been carried out, in 1987 and 1995.

Definition of Population and Census Taking Time

Chinese censuses use the household as the unit of census. They record each person's information mostly on a *de jure* basis, namely according to a person's current place of household registration. Households in China are divided into two types: resident households (*jumin hu*) and institutional households (*jiti hu*). Resident households include households with multiple persons as well as a single person. Institutional households include individuals residing in schools, work places, and other institutions. Military personnel are counted separately, not by census takers.

Both the 1982 and 1990 censuses adopted the following criteria to enumerate the population:

1. a person who resides in the current location (a county or a city) and holds household registration in the place of residence;
2. a person who resides in the current location for one year or more but has household registration elsewhere (in a different county or city);
3. a person who resides in the current location for less than a year but has left the place of household registration for more than a year;
4. a person who resides in the current location but has household registration location pending;
5. a person who used to reside in the location but does not hold registration because he or she is in a foreign country.

A major limitation of such definitions is that they fail to capture temporary migrants, namely those who have resided in

the current location for less than one year but have kept the original place of household registration. Such a limitation has become increasingly more problematic following the acceleration of internal migration after the early 1980s. More recent surveys and the 2000 census are moving toward a different definition. The 1995 inter-census survey, for instance, reduced the length of stay in the current location from one year to one-half year.

Standard reference time for all censuses is 0 o'clock. Prior to 1995, the reference date was July 1. The 1995 intercensal survey used October 1 as the reference date, as will the 2000 census.

Format and Access

Computerization and Sampling

Computerized microdata are available since the 1982 census. The 1982 census records were processed by the central computing center of the then State Planning Commission, using mini- and mainframe computers. The 1990 census was processed with personal computers in four stages (Huang and Yu 1993, Sun 1997). At the first stage, household census forms were entered into computers at each prefecture/city level (there were 431 such units in 1988). After double-checking and editing, raw micro level census data at the township (*xiang*) level (there were 45,195 such units for China in 1988) were generated. At the second stage, the individual records at the township level were checked and edited again, and aggregated into county level micro data files (there were 1,936 such units in 1988). At the same time, tabulations at the county level were generated. At the third stage, both individual records and the summary tables produced at the second stage were checked and aggregated for the whole provincial level coverage. At the last stage, national data files and tabulations were created.

Generation of electronic data for the 1990 census relied largely on personal computers. At the most basic level, 3,690 PCs with the 12 MHZ Intel 8088 CPU and 20 MB hard disk storage capacity were employed for primary data entry. This is roughly equivalent to one PC for every 400,000 individual records. For each prefecture/city level, an Intel 80386 based PC,

at 25 MHZ and 300 MB to 1.3 GB hard disk space, was provided. At the provincial level mini computers by DEC and HP were used. The operating systems used included UNIX V 5.0, HP-UX, and ULTRIX. For the national processing, an IBM 4381 with 16 MB RAM and 140000 MB storage space was used. The operating system used was VM 6.0.

Given the size of China's population, machine-readable data have been provided mostly in samples. For instance, data tapes for 1982 and 1990 censuses are available in 1/100 samples (of households). The 1987 and 1995 intercensal surveys are also available in machine-readable formats, both in 100 percent and in 10 percent samples.

Laws Governing the Release of Census Data

Census tabulations are published soon after each census, but micro level data have not been made public outside of China except for a few cases where collaborative research is carried out between Chinese agencies and foreign institutions. Microdata are only provided for the specified research topics. Institutions outside of China are not allowed to release the data to a third party.

Chinese statistical laws protect the privacy of individuals. In cases where microdata are provided for authorized use, information which may reveal the identity of an individual or individual household, such as address codes below the level of county/city, can be removed to meet the law's requirement.

Documentation

Three major kinds of documentation are available publicly for the 1982 and 1990 censuses. First, for each census or major sample survey, the implementing agency, the State Statistical Bureau, assembles a documentation volume that contains all the official documents as well as technical interpretations of census taking. Second, after each census, China's State Statistical Bureau publishes multi-volume tabulations containing most information at the aggregate level (SSB 1987, 1993a). Provincial level administrations also publish similar volumes. Due to the nature of the publishing and circulation system in China, however, not many copies are printed. The national volumes

become out of print quickly, and the provincial ones are even harder to find. They are, however, in existence in most large libraries in China and in major research libraries and population studies centers that carry out Chinese demographic research abroad as well. The third major source of census documentation is the conference volume published by China's State Statistical Bureau, resulting from the international seminar or conference following each of the censuses. These volumes contain detailed information on the design and implementation of each census, as well as a number of papers containing preliminary analyses of the census data. These volumes are published in Chinese and English simultaneously (Li 1984, SSB 1993b). In addition, there also exists other literature on Chinese censuses. For instance, there are several papers on Chinese censuses contained in the 1997 volume prepared by China's Population Association for the 23rd General Conference of the International Union for the Scientific Study of Population (IUSSP) in Beijing (Sun 1997, Qiao 1997, Yu 1997). There is also a published doctoral dissertation on Chinese censuses (Qiao 1995, in Chinese).

Comparability Issues

Comparability

Items included in censuses have changed substantially, partly reflecting the changes in the society and partly the perceived importance of different items by the government. The coding schemes of comparable variables have also changed in some cases. There are, nevertheless, many variables that are comparable from one census to another.

Geographic Variables

Geographic variables have changed substantially in recent years, a result of both administrative reorganization and rapid urbanization. Since 1982, for instance, two new provincial level units were created (Hainan province and Congqing municipality), resulting in changing boundaries of adjacent provinces. At the same time, numerous new cities below the provincial level have been created.

Definition of Urban Population

The most difficult item among geographic variables is the definition of urban versus rural. In the 1982 census, the definition was based only on one's household registration status. Those who had registration as "non-agricultural" and resided in a neighborhood committee were considered urban, and those who resided in a village or a rural production team were considered rural. By 1990, two kinds of information were collected in order to supply the basis for classifying the population into urban versus rural, by two different definitions. The first definition is similar to the one used in 1982, by asking an explicit question on the type of the household registration (agricultural versus non-agricultural). This administrative definition of what is considered urban (those with non-agricultural household registration) is the more restrictive of the two. A second definition classifies all those living within a city's jurisdiction, regardless of household registration type, as urban population. This more liberal definition leads to a change in the percent of population in China defined as urban from 26 to 53 percent in 1990.

Contents of Census Items

Household Variables

Both 1982 and 1990 censuses have a short form for the household before recording information for each member of the household. This short form records the type of the household (family or institution/collective), address, and a few selected items relating to the household, such as number of births and deaths during the year preceding the census. Vital events data are collected to allow the calculation of fertility and mortality during the year preceding each census. In addition, each of these two censuses also recorded long term out-migrants. See Table 4-1 for a complete listing of these variables.

Housing Variables

Housing information was not collected nationally in the 1982 and 1990 censuses. Local provinces or municipalities, however, took the initiative, and conducted housing surveys

together with census taking. In 1982, for instance, Shanghai municipality did so (described in Li 1984). Housing questions have become regular items in more recent surveys and will be included in the short form of the 2000 census.

Individual Variables

In addition to the basic demographic variables of age, sex, and ethnicity, both the 1982 and 1990 censuses contain the following categories of individual variables: household relationship, geographic location (type of resident status), education, employment status, industry, occupation, marital status, and childbearing status. A complete listing of the individual variables and coding schemes for these two censuses can be found in Table 4-2 at the end of the chapter.

Basic Demographic Information:

For all members of the household, the following questions are asked: name, relationship to the head of the household, sex, age, ethnicity, and current household registration status.

Education:

Educational attainment is only asked of those aged six and above. Whereas both censuses recorded the highest level of schooling, the 1990 census also added a current enrollment status variable, to differentiate graduates from others.

Employment Related Questions:

Three employment related questions are included in both censuses: employment status, industry and occupation. These questions are only asked of those aged 15 and above. The 1990 census dropped the answer category of 'waiting for state job assignment,' an illustration of changes in the employment system. By 1990, job assignment by the state, a legacy of the socialist planned economy, was no longer an option. It added a category of 'lost ability to work,' to separate an involuntary cause of non-employment, such as physical disability, from other causes and types.

Table 4.1— Household Variables Included in China's 1982 and 1990 Censuses

Item	1982	1990
Address: <ul style="list-style-type: none"> • Province/municipality /autonomous region • City/county • Xiang/township /street /district • Census track 	Yes (included commune and production brigade and team, no census track)	Yes
Type of Household <ul style="list-style-type: none"> • family household • collective household 	Yes	Yes
Number of births preceding the census, by sex	Yes (for one year before the census)	Yes (by six-month periods for 1989 and first half of 1990)
Number of deaths in the household preceding the census, by sex	Yes (for one year before the census)	Yes (by six-month periods for 1989 and first half of 1990)
Household members who are away for more than one year, by sex	Yes	Yes

Marital Status and Childbearing:

Similar to employment related questions, marital status is only asked of those aged 15 and above. Women aged 15 to 64 were also asked two types of questions related to childbearing in the 1982 and 1990 censuses. The first questions are on reproductive history, asking the number of children ever born and number surviving. In 1990, such questions were asked for children by sex as well. The

second category of questions is aimed at gathering detailed reproductive information for the year preceding the census. Enumerators not only ask a question of whether a child was born, but also by birth order (in 1982 census) and by six-month period and by sex (1990).

Migration:

Though geographic movements of the population continued in China during the era of the planned economy between the late 1950s and the late 1970s, such movements were under strict state control and the volume of movement was rather modest. Migration questions therefore were not included in the 1982 census. This situation has changed drastically during the 1980s, with the changes in the economic system and relaxation of the state's control resulting in a sharp rise in migration. Two questions on migration were thus included in the 1990 census. These questions were also asked for those aged five and above. One question asked whether a person had a change of residence during the five years preceding the census, and a second question asked for reasons of migration for those who had migrated. Though a major step forward in collecting information on population movement, the change of residence question is still highly limited, as it omits those who moved without changing residence registration and those who make circular moves. By this census definition of migration, only a small proportion of all migrants is included. This is a serious limitation which more recent surveys and the 2000 census have attempted to reduce.

Research Possibilities and Resources

Collecting and disseminating machine-readable census data have opened a vast range of opportunities for scholarly research of China's population (see Banister 1987 for an example of the use of the 1982 census, and Lavelly, Lee, and Wang 1990 for a review of the research up to the late 1980s). The censuses conducted since 1982 have not only allowed the construction of

demographic baselines for China for the past half-century, they have also made possible studies of demographic behaviors at the individual level. Some examples of such research include social determinants of infant mortality, patterns of marriage, divorce, and childbearing, migration, urbanization, employment, occupational attainment, household structure, and living arrangement of the elderly.

In addition to the authors of the papers published in the volumes organized by the State Statistical Bureau and the references listed above, many other leading scholars of Chinese population are also expert users of the recent censuses. A partial short list includes the following: ZENG Yi at Beijing/Duke University, GUO Zhigang, HAO Hongsheng and QIAO Xiaochun at the People's University of China, Judith Banister at the Hong Kong University of Science and Technology, Griffith Feeney at the East-West Center, William Lavelly at the University of Washington, and Zai Liang at the City University of New York.

Table 4.2— Individual Variables and Coding Schemes of China's 1982 and 1990 Censuses

Item	1982	1990
Name	Yes	Yes
Relationship to head of household	1. head 2. spouse 3. children 4. grand children 5. parents 6. grandparents 7. other relatives 8. non-relatives	(same as 1982)
Sex	1. male 2. female	(same as 1982)
Birth year, month, day	Yes	Yes, day of birth not asked
Age	Yes	Yes
Ethnicity	Yes (separate coding)	Yes (separate coding)
Household registration status	1. resides in current location, household registration in the same place 2. resides in current location over a year, registered elsewhere 3. resides in current location for less than a year, left location of registration over a year 4. resides locally, registration to be determined 5. used to reside in current location, currently abroad, no registration	
Type of household registration	No	1. agricultural 2. non-agricultural

Table 4.2 — Individual Variables and Coding Schemes of China's 1982 and 1990 Censuses (Continued)

Item	1982	1990
Location of permanent residence five years ago (asked only for those 5 years and older)	No	1. current county/city 2. other county/city in the same province 3. other province
Type of residence five years ago (asked only for those 5 years and older)	No	1. city street district 2. town 3. countryside (<i>xiang</i>)
Reasons for moving to current location (asked only for those 5 years and older; asked only those who moved)	No	(asked only of those who had moved) 1. job reassignment 2. job assignment 3. job and business 4. study/training 5. visiting relatives/friends 6. retirement 7. move following spouse 8. marriage

Table 4.2 — Individual Variables and Coding Schemes of China's 1982 and 1990 Censuses (Continued)

Item	1982	1990
Education (asked only for those six years or older)	1. graduated from college 2. college, not graduated 3. senior high school 4. junior high school 5. primary school 6. illiterate or semi-illiterate	1. illiterate or semi-illiterate 2. primary school 3. junior high school 4. senior high school 5. vocational training school 6. three-year college 7. university
Status of school enrollment (six years or older)	No	1. currently enrolled 2. graduated 3. dropped out 4. other
Industry (asked only for those aged 15 and above)	Separate coding scheme	Separate coding scheme
Occupation (asked only for those aged 15 and above)	Separate coding scheme	Separate coding scheme

Table 4.2 — Individual Variables and Coding Schemes of China's 1982 and 1990 Censuses (Continued)

Item	1982	1990
Status of non-employment (asked only for those aged 15 and above)	1. currently enrolled	1. currently enrolled
	2. student	2. student
	3. house work	3. house work
	4. waiting for schooling	4. waiting for schooling
	5. waiting for state job assignment	5. waiting to be employed
	6. waiting to be employed	6. retired/resigned
	7. retired/resigned	7. lost ability to work
	8. other	8. other
Marital status (asked only for those aged 15 and above)	1. never married	1. never married
	2. currently married	2. currently married
	3. widowed	3. widowed
	4. divorced	4. divorced
Number of children ever born (asked of women aged 15 to 64)	Yes	Yes , also asked by the sex of births
Number of children alive (asked of women aged 15 to 64)	Yes	Yes , also asked by the sex of births
Childbearing status in 1981 (asked of women aged 15 to 64)	0. none	No
	1. first birth	
	2. second birth	
	3. third birth	
	4. fourth birth	
	5. fifth or higher order birth	

Table 4.2 — Individual Variables and Coding Schemes of China's 1982 and 1990 Censuses (Continued)

Item	1982	1990
Childbearing status since January 1, 1989	No	0. none 1. male birth during first half of 1989 2. female birth during first half of 1989 3. male birth during second half of 1989 4. female birth during second half of 1989 5. male birth during first half of 1990 6. female birth during first half of 1990

Research Possibilities and Resources

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