

## Appendix D

# Population and Employment

### Population of China

Chinese population records are more abundant and cover a longer period than those in other parts of the world. This is largely due to the bureaucratic mode of governance and its reliance on various kinds of land and poll tax which required registration of population and land area.

The nature of the population records varied according to administrative and fiscal needs, sometimes covering households, sometimes persons, and sometimes adult males. Bielenstein (1987) provides a masterly survey of the source material for the past 2 000 years. Ho (1959) gives an excellent account of the problems of comparability for the Ming and Ch'ing dynasties.

It is useful to start with the first century AD to get a point of comparison with estimates for Europe when the Roman Empire was at its peak (and for which we have the estimates of Beloch, 1886). For four different points in the first century Bielenstein (1987, p. 12) gives very different figures; I took the average for these (40 million). Population in 960 is the figure given by Durand (1974, p. 15) for the early Sung. I took population in the year 1280 (the end of the Sung) to have been 100 million as suggested by Ho (1959).

For 1380 to 1930, Liu and Hwang (1979) provide estimates at ten year intervals, which they derived from Perkins (1969, pp. 192–216). They do not indicate clearly how they filled the gaps, as Perkins gave a range of probability only for eleven benchmark years (p. 216). For some of their decade intervals, the figures of Liu and Hwang are implausible, e.g. a 45 per cent increase over the ten years 1730–40. I smoothed their estimates to eliminate implausible upward leaps of 20 per cent or more per decade. Table D.1 indicates (with an asterisk) the cases in which I modified their estimates. For 1933, I used Perkins (1959, p. 216). Thereafter from Maddison (1995*a*) and official figures published in the SSB, *Statistical Yearbooks*, adjusted to a mid-year basis.

There are no reliable figures for birth and death rates or life expectancy in traditional China. Liu and Hwang speculate that the birth rate remained “quite steady” from 37 to 42 per thousand from 1380 to the 1950s, with death rates fluctuating widely from 26 to 41 per thousand. The SSB *Statistical Yearbook 1996*, p. 69, shows a birth rate of 37 per thousand in 1952 falling to 18.3 by 1978, and not very different at 17.1 in 1995. The big fall in birth rates came in the 1970s. Death rates in 1952 were 17 per thousand, had fallen to 6.3 in 1978, and were 6.6 in 1995. In October 1995, 26.7 per cent of the population were aged 0–14, 66.6 per cent aged 15–64, and 6.7 per cent were 65 or older (see SSB, p. 72). This means that the proportion of working age was as high as in advanced capitalist countries, but the proportion aged 65 and older was about half of that in Western Europe, the United States and Japan. The ratio of males to total population was 51.9 per cent in 1952, and 51.0 per cent in 1994.

This is unusual as most countries have fewer males than females as women have a longer life expectancy. The Chinese sex ratio suggests that there is some female infanticide or selective abortion.

### **Population of Macao, Hong Kong and Taiwan**

As Hong Kong was reincorporated into China on 1 July 1997, Macao will return in 1999 and Taiwan may also return at some time in the future, estimates for these areas are shown in Table D.2.

### **Employment**

Estimates of employment for 1952–95 are shown in Table D.3; they are described as “labour force” before 1978 and as “employees” for 1978 onwards. I presume that they refer to employment. They exclude the military, so I added 3 million throughout to the official figure for the “non-productive” sector. I also adjusted the figures from an endyear to a midyear basis. For years before 1978 the official sources are very aggregative. They refer to employment in the primary sector, i.e. farming, forestry, fishery and sideline activities (hunting, gathering and household handicrafts); the secondary sector, i.e. mining, manufacturing, utilities and construction; and the tertiary sector. There are also figures for employment in “material production” and “non-material production”, which permit a breakdown of service activity into “productive” and “non-productive”. This classification is the labour counterpart to the Soviet material product concepts previously used in Chinese national accounts. The “productive” sector included transport and communications (except passenger services), commerce and restaurants, geological prospecting and water conservancy management. The “non-productive” sector included other services. In the Soviet–Chinese classification system, repair and maintenance activities were treated as industrial rather than service activity and lumbering was also treated as an industrial activity. Table D.3 provides a consistent series on this old classification for the whole period 1952–95. Since 1978, employment figures are available in more disaggregated form for total employment and for employment in state enterprises. These more detailed figures are shown in Tables D.4a and D.4b.

Table D.5 shows the Liu and Yeh (1965) figures for 1933–57. They present a detailed and fully documented breakdown of employment which is a useful crosscheck on the more aggregative official figures. They also present a very detailed reconciliation (p. 209) of their figures with the official figures which were then available. They made three points about undercoverage of the official figures for the 1950s, which still seem valid (p. 208): “First a significant number of handicraftsmen, old fashioned transportation workers, peddlers and people in personal services and work brigades have been left out of the Communist total. Second, the Communist total figures include neither the employees in the private financial enterprises nor the temporary workers in construction. Third, the Communist statistics on total employment refer to total civilian employment”. Another reason for the higher estimates of Liu and Yeh is that their age cut-off was lower than that of SSB. They included people 7 years and older in agriculture, 12 and over in non-agriculture (pp. 86–7). The World Bank (1981), p. 16, explains SSB official practice as follows: “To determine the size of the economically active population, age cut-offs are used. For rural areas, the cut-offs are 16–69 for males and 16–55 for females; within these ranges, all those who work at collective activities for three months or more are included in the labour force. (In practice, older people are also included if they work at collective activities for three months or more — but this is rare.) For urban areas males aged 17–64 and females aged 17 or 18 to 55 are included, if gainfully employed or waiting for jobs.” Assuming that these SSB cut-offs were actually applied in the 1950s, and that life expectancy was then 45 years, one can make

a rough adjustment (Table D.6) to the Liu and Yeh estimates (a coefficient of .86) to get some clue as to the extent and location of official understatement.

It seems clear from Table D.6 that the official figures substantially understate 1952–57 employment in traditional transport and commerce.