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Inequality and Poverty in China: Institutional Change and Public Policy, 1978 to 1988

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There is considerable uncertainty and debate about changes in poverty and living standards that are likely to occur in an economy in transition from centrally planned allocations to a more market-oriented basis, but a dearth of evidence and rigorous analysis remains. There is a tradeoff between policies that provide a guaranteed living standard with low inequality, albeit at a low income level, and systems that provide much higher monetary incomes, but create greater income variability and vulnerability, particularly during periods of high inflation. The Chinese experience following the economic reforms of 1978 highlights this dilemma, and our analysis strongly suggests the need for appropriate social safety nets if rapid growth is to be achieved without the poor and vulnerable bearing the costs of such growth.

Successive Chinese constitutions have guaranteed the fulfillment of basic needs to Chinese citizens. Despite changes in policy and leadership, an important continuing element in this guarantee has been the prevention of destitution and the protection of vulnerable groups—the "social security" that we will examine here.

In urban areas the permanent residence registration (*hukou*) provided guaranteed employment, access to rationed essential consumer items, and eligibility for an enterprise-based labor insurance system (*danwei*) that included health care, retirement, and disability provisions. Until recently, the system was maintained by strict controls on urban registration and migration.

In rural areas land reform provided households with access to productive assets, and assets were distributed fairly equally within regions. Although the rural guarantee has been subject to local interpretation, severe deprivation was generally avoided (except during the famine of 1959–61) through a system of transfers to the poorest regions. Minimum nutritional intake, shelter, basic

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health care, and education were generally achieved, although cash incomes were low (see Ahmad and Hussain 1991). Individual or household poverty was not a major concern of policymakers; rather resources were directed to areas deemed "poor." Thus, since the People's Republic was established in 1949, China has achieved remarkable improvements in welfare relative to other low-income countries by providing social services to the vast majority of its citizens. Although they were successful in many ways, the institutional arrangements, particularly during the 1970s, were not conducive to initiative, innovation, and growth.

As part of a dramatic policy reform package intended to improve economic incentives, in 1978 collective agriculture was dismantled, and China reverted to family farming under the "contract responsibility system." To stimulate agricultural production, government procurement support prices were raised substantially in three consecutive years starting in 1979 and were maintained at relatively high rates through 1987. Average real per capita net income for rural residents doubled during 1978–88, and agricultural output grew at an annual rate of 6.2 percent between 1979 and 1988, in contrast to the 2.7 percent rate of 1953–78. The reforms also were followed by a striking growth in township and village enterprises (TVEs), which by 1987 employed 87 million workers, compared with around 100 million employed by the state-owned enterprises (SOEs). Although workers in SOEs are covered by an extensive formal social insurance system, this is not true of TVEs or much of the non-SOE urban sectors. Such workers need to rely on employment opportunities for immediate sustenance and on extended family support, based on joint residence, in case of need. TVE production grew from about 3 percent of agricultural output in 1978 to 10 percent by 1987 (State Statistical Bureau annual-1988, pp. 34, 257–58). Despite reforms of the social insurance system, which relieved enterprises of the responsibility for retirees by extending pooling within localities or regions, institutional change has been fairly limited for SOEs.

The contract responsibility system also was extended to the nonagricultural sector, which allowed private and foreign-owned enterprises to operate alongside the SOEs and collectives. The urban employment guarantee was ended when the labor contract system was enforced on a nationwide basis in 1986, and legal provisions for bankruptcy (even of the SOEs) were created. Because of the food rationing system in the urban areas, the food price increases did not hurt residents with *hukou* rights, and the real average per capita expenditure of urban residents increased by 87.6 percent from 1978 to 1988 (State Statistical Bureau 1989a, p. 11) albeit at the expense of increasing budgetary subsidies on consumer goods.

Despite the increases in the average output and income of Chinese citizens since the reforms, the gains have not been evenly distributed, and urban residents without rations and rural net consumers were hurt by the price changes. In addition, disparities in rural areas, which have always existed (Ahmad and Zou 1989), have been exacerbated as a result of the reform, with the irrigated coastal

areas benefiting relatively more than others. This factor and the general relaxation of controls on residence and travel have led to the reappearance of rural-urban migration. Popular estimates of the urban "floating population" (as such migrants are called) range to 50 million. These migrants are not eligible for rationed goods and generally have no access to *danwei* (work unit) housing. Moreover inflation, which had averaged less than 3 percent in the 1970s and around 6 percent from 1980 to 1987, increased to around 20 percent a year in 1988, adversely affecting the poor and fixed-income groups. The State Statistical Bureau reported a decline in real income for 8.6 percent of urban households in 1986, 20.8 percent in 1987 (annual-1989a, p. 57), and 35 percent in 1988 (1989b).

From the policy point of view, China is caught in something of a dilemma. Although income was low under the pre-1978 system, inequality was also very low (especially at the local level, although regional differences existed), basic consumption needs were generally met through considerable public provision, and social indicators were at levels commonly achieved by high- and middle-income countries. Since the reforms, mean incomes have increased dramatically (see appendix tables A-1 and A-3), but there has been a reduction in publicly provided goods, and since 1985 rural poverty appears to have increased. In urban areas the sharp increase in inflation after 1987 also reversed the prior decline in poverty, although systemic changes since 1983 make comparisons with the earlier period somewhat problematic. In many areas the social safety mechanisms that had been built on a collective basis are no longer operative. This increases the likelihood of destitution and poverty, not only in the poorer regions, but also within relatively prosperous areas. Poverty reduction programs, however, provide transfers to poorer regions, not to poor households through individual entitlement (see, for instance, State Council 1987). Thus to measure the extent of poverty and inequality, we cannot assume that all individuals in a poor region are poor and must look at household-level income in both poor and relatively well-off areas.

Section I reviews changes in poverty and other indicators of living standards, and Section II reviews changes in inequality. Section III outlines those aspects of public policy that have relevance for our analysis of inequality and analyzes household-level data and the regional aspects of these data. Section IV presents final remarks summarizing our findings.

I. Poverty and Living Standards in a Decade of Reform, 1978–88

In this section we juxtapose official estimates of rural poverty with alternative figures derived from other sources. To examine overall changes in living standards and poverty we use information from the *Statistical Yearbook* (State Statistical Bureau annual) and other government reports. Household-level observations from a 1985–86 survey (from the Chinese Academy of Social Sciences) are used to examine regional patterns.

Official Estimates of Poverty

There are two official estimates of poverty in China. The first, by the State Council (1989), defined rural inhabitants with per capita nominal net income below 200 yuan (Y200) as poor, and those with income below Y150 as extremely poor (defined in Chinese as *jihan jiaopuo*, or "those who cannot dress warmly and eat their fill"). The Y200 figure was roughly 50 percent of mean rural income; the countries belonging to the Organisation for Economic Co-operation and Development similarly use 50 percent of average income as a poverty line. The use of a nominal figure to estimate poverty changes across sectors and over time is problematic, especially since relative price changes have been accelerating in recent years. In addition various groups in the urban population have had differing access to subsidized and rationed goods, a pattern that has also been changing over time. Thus, although cash incomes are perhaps easier to identify in China than in some other developing countries, they clearly do not reflect actual changes in living standards. If such nominal poverty lines are used, even if adjusted for some national rate of inflation, comparisons over time and across groups and regions are biased because they do not account for differences across regions and groups within regions. A common error is to apply the Y200 poverty line to the period before reform, when cash incomes clearly did not fulfill basic needs (see Ahmad and Zou 1989).

A State Council report suggests that by the end of 1985, there were 102 million rural residents with per capita incomes below Y200, equal to about 12.2 percent of the rural population (State Council 1989, pp. 1–2). Among them, the 38.4 million poorest, or about 4.4 percent of the rural population, lived in 664 out of the 1,936 counties. According to this report, these poor are concentrated in 18 regions in middle and western China. It is not clear whether the method used was to examine the distribution of all households across all regions and then to apply the poverty cut-off point, or whether "poor areas" were identified first and then the entire population of these districts was assumed to be poor. Using the regional classification, however, the central government, together with the provinces and autonomous regions, targeted 678 counties for public works projects amounting to Y4 billion. Of these, 328 counties were on the list of the central government, with 43 percent in minority (non-Han peoples) areas.

A second official source of estimates is the *Statistical Yearbook of Rural Areas of China* (State Statistical Bureau 1985a, 1987), which provides information on the number of recipients of government relief funds and the recipients as a percentage of the total number of the poor. It does not detail, however, the criteria used to define the "poor." The numbers of poor in rural areas calculated from this information were 65.8 million in 1978, 65.3 million in 1983, 96.5 million in 1985, and 102.3 million in 1986. The number for 1985 is close to the State Council estimates, which suggests that the Y200 cut-off point has been used. Recipients of relief funds increased from 30 million in 1978 to 40 million in 1986, but formed a decreasing proportion of the poor after the 1983 reforms

(from 54 percent in 1983 to 40 percent in 1986), which reflects the contraction in social security coverage.

There is no official Chinese estimate for urban poverty, which suggests that authorities have seen poverty very much as a rural and regional phenomenon.

Poverty Lines

Counting the number of poor below a given poverty line fails to measure the intensity of poverty and thus changes in the positions of those below the line. Further the choice of a line may be based on criteria, such as minimum levels of nutrition, income, or expenditures, the setting of which requires some degree of conjecture and normative decisions. Income itself may not reflect real living standards when some goods and services are provided without cost or at different subsidized prices. Further, where intertemporal comparisons are concerned, the choice of the appropriate deflator may make a considerable difference in the poverty line found. Thus the use of a single "absolute" poverty line may be problematic.

With these caveats in mind, we examine the bases for several alternative poverty lines as a first step in our analysis. For both rural and urban areas we take two given poverty lines. To be consistent with the State Council estimates for rural areas for 1985, we first use annual per capita income of Y200 to represent rural poverty and Y150 to capture extreme deprivation. The general index of retail prices does not adequately reflect an average rural consumption basket since it includes prices of items, such as fertilizers, that are not consumed directly. However, we use it in the absence of a more satisfactory deflator. To set a poverty line for urban areas, we took Y375, or slightly above half of the urban mean per capita income of Y682, in 1985. For sensitivity, a lower line of Y300 was also assumed. The general cost of living index for staff and workers was used as the urban deflator. The retail price and cost of living indexes used are averages of the plan prices of state-owned commercial units, negotiated prices, and open-market prices, weighted by the actual value of sales or purchases at different prices (table 1). This first set of poverty lines, adjusted for changing prices, could be taken to measure changes in "absolute poverty."

A second set of lines is constructed relative to mean income in each year: for urban areas we calculate annual poverty lines at 50 percent of mean income and for rural areas at 35 and 50 percent. Using these poverty lines, if a small proportion of households experienced very rapid rises in income while the income of the great majority of households changed little, this would increase average income, the poverty lines, and the proportion of households that fell below those lines. Such lines could be taken as representative of "relative poverty."

An alternative, a poverty line based on level of nutrition, requires information on consumption patterns and the price at which purchases are made. For example, in urban areas different price indexes would be needed for households with and without access to rationed goods. Similarly, many households in poor rural

Table 1. *Alternative Poverty Lines in China, 1978–88*
(yuan per capita per year)

Poverty line	*1978*	*1980*[a]	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Rural									
1985 State Council lines adjusted for inflation[b]									
Y200: poverty	156	169	176	179	183	200	212	228	270
Y150: extreme deprivation	117	127	132	134	138	150	159	171	203
Share of yearly mean income (percent)									
50	67	96	133	155	178	199	212	231	273
35	47	67	95	108	124	139	148	162	191
Urban									
1985 absolute poverty lines adjusted for inflation[c]									
Y375	279	314	320	327	335	375	401	436	526
Y300	224	251	256	261	268	300	321	349	421
50 percent of yearly mean income[d]	158	229	247	263	304	343	414	458	560

a. 1980 figures refer to 1980 for rural and 1981 for urban areas.
b. Deflated using the retail price index.
c. Deflated by the general cost of living index of staff and workers.
d. Based on income available for consumption.
Source: Authors' calculations based on State Council (1987 and 1989) for rural poverty lines and State Statistical Bureau (1989a and annual) for urban lines.

areas obtain grain free or at low "resale prices" while others face relatively high "market" prices. Because such information is not available, we use several different expenditure-based poverty lines, including the official poverty line, without attempting to assign nutritional equivalence.

While the inflation-adjusted absolute rural poverty lines increase gradually from 1978 to 1988, the relative income-adjusted lines start at a much lower level and show a sharp rise after the reforms and a slower increase after 1985. This reflects the lower average income at the onset of the reform period and its dramatic increase during the decade. The choice of the "higher" urban poverty line for 1985 was intentionally taken as above the relative poverty line. However, with inflation and the increase in average nominal incomes, by 1987 the higher absolute poverty line had fallen below 50 percent of mean incomes. By the same token, the higher absolute line was above the "relative" poverty line for the entire period before 1984.

Public transfer payments in China have included rations, subsidies, and payments in kind. In rural areas the government stipulates a "basic consumption of grain" (*jiben kouliang*) and redistributes grain from surplus areas to poor and disaster-prone areas. Peasants in these areas obtain the "resale grain" free or at low prices. In urban areas the government provides low-priced rations of staple food and other consumer goods covering, at times as many as 77 items, including wheat flour, rice, other grains, edible oil, sugar, meat, eggs, cloth, cotton, matches, and soap. Ration coupons are distributed according to size of the household and the gender and age of the household members. Subsidies cover a wider range of commodities and services, including rental housing, public transportation, *danwei*-based child care and health services, and labor insurance

benefits for permanent employees of state enterprises. In Beijing subsidies accounted for around 60 percent of the municipal budget, which amounted to Y530 for each registered resident or around 50 percent of mean cash income (*China Daily* 1989b). These have made the standard of living considerably higher than that measured by cash income alone.

The transfer payments are unevenly distributed, especially between urban residents with *hukou* and others. Clearly, a higher cash income would be needed for individuals without *hukou* rights to achieve the same living standard as someone with *hukou* rights on the poverty line. Rough calculations suggest that the value of rationed grain alone may be around 25 to 35 percent of poverty-level income. Added to that is the value of subsidized housing and other commodities. It would not be surprising, therefore, if the poverty line for non-*hukou* holders were to exceed Y500 per capita in 1985 prices. The relative value of the subsidies would vary by location, especially in proportion to the scarcity of accommodation, so that in the major cities higher poverty lines are likely to be needed. Unfortunately the data do not permit us to differentiate between urban *hukou* recipients and the floating population.

It is estimated that Beijing's floating population numbered around 1.12 million in 1988–89, with 60 percent being migrant workers. Their numbers have increased about 23 percent a year, and they may now constitute one-sixth of Beijing's metropolitan population (*Zhonguo Xinwen She* 1989). Further, casual evidence suggests that the floating population in Chinese cities has grown to more than 50 million (*China Daily* 1989a). Although not all of these floating workers are poor, evidence suggests that most are and reinforces our unease with the use of poverty lines that do not account for this very large Chinese subclass.

Incidence of Poverty

We estimate the incidence of poverty by applying the poverty lines from table 1 to the household distribution from the *Statistical Yearbook* (State Statistical Bureau annual-1988, 1989) for peasants and the urban population (table 2; see tables A-1 to A-3 and A-5 for its derivation). There is some controversy about the size of the rural population (see table A-4), and we also use an alternative rural-urban breakdown from the United Nations to derive alternative poverty estimates (table 3). Additional sensitivity is provided by using household level survey data for 1985–86 (table 4).

The State Statistical Bureau did not break down rural income below Y100 or over Y500, so the distributions for peasants are truncated at the lower end for earlier years and at the upper tail for more recent years. Thus, for 1978, 65 percent of the households are in the two lower groups, and, for 1988, the top two groups account for 53 percent of the households. Consequently, the assumptions concerning distributions within groups are likely to be important in estimating poverty as well as inequality. Group means also are not known, although the overall sample mean is given. This makes the estimation of inequality literally subject to assumption (as discussed below). The urban distributions

Table 2. *Estimates of the Incidence of Poverty in China, 1978–88*

Poverty line	*1978*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
Rural									
1985 State Council line (Y200) adjusted for inflation									
Households (percent)	65.1	44.3	19.1	14.9	16.0	12.3	13.9	13.1	14.8
Population (percent)	—	—	—	—	—	13.6	—	14.4	16.12
Persons (millions)	—	—	—	—	—	90.8	—	83.9	89.5
1985 State Council line (Y150) adjusted for inflation									
Households (percent)	44.1	22.6	7.9	5.6	7.5	4.4	5.6	5.3	5.7
Population (percent)	—	—	—	—	—	5.0	—	6.0	6.34
Persons (millions)	—	—	—	—	—	33.4	—	35.0	35.2
50 percent of mean incomes									
Households (percent)	22	—	8.3	7.6	14.3	12.1	13.4	13.7	15.2
Population (percent)	—	—	—	—	—	13.4	—	14.9	16.6
Persons (millions)	—	—	—	—	—	89.6	—	87.0	92.0
35 percent of mean incomes									
Households (percent)	15.7	—	2.7	2.5	5.2	3.7	4.3	4.4	4.7
Population (percent)	—	—	—	—	—	4.1	—	5.0	5.3
Persons (millions)	—	—	—	—	—	27.5	—	28.9	29.4
Urban									
50 percent of mean incomes									
Households (percent)	—	1.96	1.35	1.75	2.02	9.02[a]	5.60[a]	6.71[a]	7.77[a]
Population (percent)	—	—	—	—	—	11.92	—	7.92	9.12
Persons (millions)	—	—	—	—	—	45.6	—	39.4	49.3
Y375 adjusted for inflation									
Households (percent)	—	11.2	8.9	8.1	4.7	9.87[a]	5.42[a]	5.30[a]	7.29[a]
Population (percent)	—	—	—	—	—	13.03	—	6.24	8.57
Persons (millions)	—	—	—	—	—	49.8	—	31.1	46.3
Y300 adjusted for inflation									
Households (percent)	—	3.05	1.91	1.66	1.50	7.89[a]	4.33[a]	3.52[a]	5.84[a]
Population (percent)	—	—	—	—	—	10.43	—	4.17	6.86
Persons (millions)	—	—	—	—	—	39.9	—	20.8	37.1

—Not available.

a. These figures are not comparable with those of previous years because of the regrouping of the data from the State Statistical Bureau (1989a); see table A-3 for details.

Source: Authors' calculations based on data given in State Statistical Bureau (annual-1988), p. 716, and (1989a), pp. 350, 352, 462, and 465; see tables A-1 to A-3 and A-5.

Table 3. *Incidence of Poverty in China Using U.N. Population Estimates, 1985, 1987, and 1988*
(millions)

Poverty line	1985		1987		1988	
	Adjusted for household size	*Unadjusted for household size*	*Adjusted for household size*	*Unadjusted for household size*	*Adjusted for household size*	*Unadjusted for household size*
Rural						
Y200 adjusted for inflation	Y200 / 113.4	102.6	Y228 / 123.1	112.0	Y270 / 139.5	128.0
Y150 adjusted for inflation	Y150 / 41.7	36.7	Y171 / 51.3	45.3	Y203 / 54.9	49.3
50 percent of mean income	Y199 / 111.8	100.9	Y231 / 127.3	117.1	Y273 / 143.6	131.5
35 percent of mean income	Y139 / 34.2	30.9	Y162 / 42.7	37.6	Y191 / 45.9	40.7
Urban						
50 percent of mean income	Y343 / 25.8	19.5	Y458 / 17.9	15.2	Y560 / 21.1	18.0
Y375 adjusted for inflation	Y375 / 28.2	22.3	Y436 / 14.1	12.0	Y526 / 19.8	16.8
Y300 adjusted for inflation	Y300 / 22.6	17.1	Y349 / 9.4	8.0	Y421 / 15.9	13.5

Note: In the Chinese official estimates of the incidence of poverty, the household distributions are not adjusted for household size. Here the unadjusted 1985 rural poverty estimate coincides with the official figure of 102 million.
Source: Authors' calculations based on United Nations (1986), table A-1.

Table 4. *Estimates of Households and Individuals in Poverty from Cross-Sectional Data, 1985–86*
(percent)

	Poverty line		
	< Y300	*< Y350*	*< Y400*
Urban			
Individuals	13	15.2	17.8
Households	5	7	9.6
Rural	*< Y200*	*< Y250*	*< Y300*
Individuals	8.1	16.1	28.6
Households	7.6	15.2	27.8

Source: Authors' calculations based on the 1985–86 unpublished household survey data tapes.

were not truncated (see table A-3), but in 1984 urban households were regrouped, and a great number of rural townships were reclassified as urban so that rural and urban data for before and after 1984 are not strictly comparable. Although the estimates based on UN population data for 1985–88 are more comparable, it is not clear whether nonmonetary transfers are adequately reflected therein, so that only comparisons for recent years are likely to be valid.

Headcounts corresponding to the poverty lines of table 1 are presented in table 2. All poverty lines show a decline in poverty during 1978–83, with the inflation-adjusted equivalent of Y200 per capita showing the most precipitous drop from 65 percent of the rural households in 1978 to less than 15 percent by 1983. The figure of 65 percent in poverty reflects cash income, but before 1983 there were considerable transfers in kind, so that this does not reflect living standards, which were already as high as those in middle-income countries by the mid-1970s (Ahmad and Hussain 1991, and table 5). The poverty index based on 50 percent of mean income, however, suggests a drop in income poverty from only 22 percent of households to 7.6 percent in 1983.

Chinese official estimates (State Council 1989, State Statistical Bureau 1985a) do not correct for varying household size and use a higher figure for total rural population (870 million for 1985), rather than the 665 million given by the State Statistical Bureau. Using the UN population projections does not greatly affect directions of change in poverty or the overall incidence of poverty, but the number of poor in rural areas is higher, with fewer urban poor (see table 3). All the headcount measures suggest an increase in poverty and destitution after 1983–84, following national adoption of the Responsibility System, when some disruption would be expected. During 1985–88 the share of rural households and the rural population in poverty increased substantially according to both State Council lines, possibly because of the stagnation of agricultural production and the acceleration of inflation after 1985.

Given the changed definition of urban areas since 1985, the headcount measures for 1981–84 are not strictly comparable with those for 1985–88, but the poverty line based on 50 percent of mean income suggests an increasing trend in

each period. However, adjusting the fixed (1985) poverty lines for price changes leads to a decline in the first period, but an increasing trend since 1985. The increase in urban poverty is particularly marked in 1988 relative to 1987. This is strongly correlated with the inflationary trends that have adversely affected urban fixed-income groups, such as pensioners.

Rural and urban incomes and poverty for 1985 are compared in figure 1. A larger share of the rural population appears at the lower income levels. For the poverty lines chosen (Y200 in rural areas and Y375 in urban areas), the incidence of urban poverty is somewhat higher. If the urban poverty line (Y300) is chosen, the incidence would be less than for Y200 in rural areas, but greater than for Y150. The data from the State Statistical Bureau exclude the floating population, and in the analysis above it has been assumed that such households have the same income distribution as those with *hukou* rights. Most evidence suggests that the floating population is more concentrated at the lower end of the income scale, however, so that true urban poverty would be higher than the estimates here.

Additional cross-section evidence on poverty has been obtained for both rural

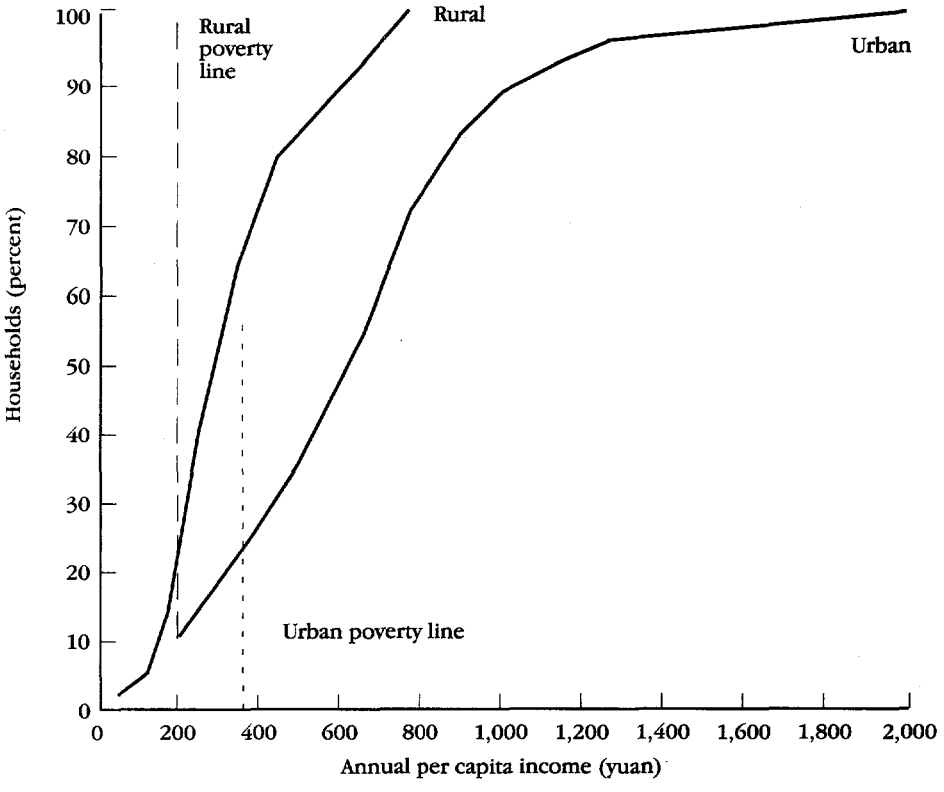
Table 5. *Infant Mortality and Life Expectancy at Birth in China, 1950–86*

	Infant mortality rate (per thousand live births)			*Life expectancy at birth (years)*	
Year	*Official*	*Estimated*		*Official*	*Estimated*
1950		265		35	30.5
1954	138.5	236			34.1
1956	81.1				
1957	70.9	229		57	34.8
1958	80.8				
Cities	50.8				
Counties	89.1				
1959	88.3	208			37.7
1963	83.6	137			49.0
1973–75	47.0	96			57.3
Male	50.1				
Female	43.7				
1975	27.1				
1978	22.3	65			64.2
1981	34.7	44		67.9	
Male	35.6	45		66.4	65.8
Female	33.7	43		69.4	68.7
1986	34.0	51		69.05	
Cities	15.4	20	Male	67.3	
Counties	38.5	59	Female	70.7	

Note: Bannister (1989) quotes some Chinese authors' work, which reported under-sampling of the areas with high infant mortality rates in the 1987 survey on children.

Source: Official infant mortality rates: for 1954–81, Wang (1988) p. 37; for 1986, State Statistical Bureau (1989c), p. 417–19. Estimated rates: through 1978, Jamison and others (1984), p. 5; and, for 1981 and 1986, Hao, Arriage, and Banister (1988) and Banister (1989). Official figures for life expectancy at birth: for 1950, State Statistical Bureau (1989a), p. 109–10; for 1957, a survey conducted in 11 provinces; for 1981, the third population census conducted in 1982; and, for 1986, the 1 percent survey conducted in 1987. Estimated rates: through 1978, Jamison and others (1984), p. 5; and, for 1981 and 1986, Hao, Arriage, and Banister (1988) and Banister (1989).

Figure 1. *Cumulative Distribution of Income in Rural and Urban Households, 1985*



Note: Since the group mean incomes are not given, we take the mid-point of the interval as the mean income for each household group.
Source: State Statistical Bureau (annual - 1989), pp. 726 and 742.

and urban areas for 1985–86 from household-level data. Table 4 presents six alternative poverty lines for rural and urban areas and the proportions of households and individuals below these levels. No attempt has been made to adjust the provincial samples relative to the national population. Adjusting the Y200 rural poverty line for inflation results in a line of Y212 for 1986, so that the actual 1985–86 incidence in rural areas should be closer to that shown for Y200 than for Y250. For urban areas the inflation-adjusted Y375 base is Y401 for 1986, so that the comparison of figures from table 2 should be made with the results of the <Y400 line. The cross-section estimates thus are roughly the same orders of magnitude as are our estimates using data from the State Statistical Bureau in table 2.

Other Indicators of Living Standards

Although evidence on living standards indicates that life expectancy at birth has steadily improved (State Statistical Bureau 1989a, pp. 109–10), this is a

relatively stable measure reflecting long-term trends. The infant mortality rate, however, is much more sensitive to short-term fluctuations. It is often taken as a comprehensive indicator of living standards since it reflects the nutritional status of women, health care facilities, access to clean water, sanitary conditions, and so on. In China the infant mortality rate increased substantially during 1958–62 and since the reforms (see Hussain and Stern 1988), while life expectancy was relatively unchanged (see table 5). Both life expectancy and infant mortality levels had reached middle-income standards by the early 1970s.

The reforms have led to a decline in the local collective resources that had been used to provide preventive health care and the public hygiene network in rural areas. Alternative financing mechanisms have been slow to develop. The infant mortality rate appears to have increased recently, as seen in estimates for 1986 (Jamison and others 1984), and official figures (State Statistical Bureau 1989a). Evidence of the rise in the rate alarmed the government sufficiently to induce it to introduce a nationwide inoculation program, in conjunction with UNICEF, to cover at least 90 percent of infants by 1991 (Ahmad and Hussain 1991).

The original delivery mechanisms of medical and educational services have been under severe stress since the 1980s. The problems with preventive care are apparent in the case of snail fever. Although this had reportedly been eradicated, it is now estimated that there are 1 million patients affected (World Bank 1989, p. 9–12). Altogether there are now 60 million sufferers from various endemic diseases, with 500 million potentially threatened (*China Daily* 1989c). Policies and new mechanisms to provide social services and safety nets for the vulnerable groups in a period of economic transition are needed, often with support from international agencies.

II. Inequality in China

Measuring changes in living standards through the use of poverty lines is not very enlightening because of both the existence of subsidies and rations and the inability of such measures to reflect changes in the extent and distribution of poverty among those below the line. For the latter purpose, inequality measures that are sensitive to transfers at the lower range of the income distribution are preferred to the headcount index. Poverty measures such as the Foster-Greer-Thorbecke class are sensitive to the intensity of poverty, but they also are subject to the problems inherent in the choice of a poverty line. We use here two variants of the Atkinson index of inequality, which reflect the degree of inequality aversion through the value assigned to a parameter, e. This parameter could be varied from 0 to infinity. With $e = 0$, a unit of income to the poorest would be equivalent to a unit to the richest, regardless of income levels. We set e equal to 2 and 5 to reflect relatively high degrees of inequality aversion. With $e = 2$, the Atkinson index weights the welfare of poor individuals 32 times more heavily than that of another with twice the income. A value of $e = 5$ is often used to express maxi-min or Rawlsian preferences. If the gap between the wealthiest and

Table 6. *Estimates of Rural Income Inequality in China under Differing Distribution Assumptions, 1981 and 1987*

	Coefficient of variation		Gini coefficient		Atkinson index[a]			
					$e = 2$		$e = 5$	
Distribution assumption	*1981*	*1987*	*1981*	*1987*	*1981*	*1987*	*1981*	*1987*
Group mean income unknown								
Households are concentrated at lower bounds of income groups	0.365	0.324	0.172	0.180	0.102	0.144	0.227	0.426
Households are concentrated at upper bounds of income groups	1.219	2.089	0.342	0.386	0.557	0.478	0.904	0.929
Midpoint as group mean								
Households are concentrated at the mean of the income groups	0.470	0.440	0.247	0.243	0.231	0.240	0.566	0.659
Households are concentrated at the bounds of the income groups	0.483	1.455	0.266	0.306	0.405	0.297	0.889	0.637
Households are distributed evenly within income groups	0.475	1.010	0.260	0.285	0.290	0.284	0.809	0.849

Note: Indexes are based on data on the number of households in each income range, with the mean income and distribution in each range unknown. Only the population means are known.

a. e is the inequality aversion parameter.

Source: Authors' calculations based on State Statistical Bureau (1989a).

Table 7. *Estimates of Urban Household Income Inequality in China under Differing Distribution Assumptions, 1981 and 1987*

	Coefficient of variation		Gini coefficient		Atkinson index[a]			
					$e = 2$		$e = 5$	
Distribution assumption	*1981*	*1987*	*1981*	*1987*	*1981*	*1987*	*1981*	*1987*
Group mean income unknown								
Households are concentrated at lower bounds of income groups	0.216	0.335	0.099	0.179	0.042	0.097	0.108	0.217
Households are concentrated at upper bounds of income groups	1.080	0.780	0.262	0.283	0.202	0.313	0.395	0.713
Midpoint as group mean								
Households are concentrated at the mean of the income groups	0.517	0.578	0.221	0.255	0.167	0.201	0.435	0.444
Households are concentrated at the bounds of the income groups	0.850	0.657	0.248	0.259	0.196	0.247	0.444	0.679
Households are distributed evenly within income groups	0.679	0.614	0.239	0.258	0.177	0.216	0.438	0.565

Note: Indexes are based on data on the number of households in each income range, with the mean income and distribution in each range unknown. Only the population means are known.

a. e is the inequality aversion parameter.

Source: Authors' calculations based on State Statistical Bureau (1989a).

poorest 5 percent of the population was 15 times the income of the poorest, the Atkinson index would give a weight of 50,000 to the bottom 5 percent relative to the top 5 percent and in effect would focus almost exclusively on the bottom 5 percent. We also present measurements based on other commonly used indexes: the Gini coefficient, which is relatively sensitive to transfers among the middle ranges of the distribution, and the coefficient of variation, which is most sensitive to income changes among the rich (see Champernowne 1974 for a discussion of these indexes).

Given that the reported income ranges for each year have been fairly large and that the mean incomes are unknown, the calculation of inequality indexes requires some assumptions about the distributions. In table 6 we experiment with the effect on measures of inequality of five such assumptions about rural income distribution for 1981 and 1987. For instance when we assume that observations are clustered at the upper income bound, this generates a Gini coefficient of 0.34 for 1981 (a decidedly more unequal distribution than the estimate of 0.23 reported in table A-1). Assuming instead a grouping around the lower bound reduces the Gini coefficient to 0.17. When we assume that the midpoint of each group represents the group mean, this reduces the spread of the Gini estimates for 1981 for lower and upper clustering to 0.247 to 0.266. However, the rural income data ranges were overly aggregated at the lower (Y0–Y100 per capita) and upper (+Y500 per capita) ranges, and thus the underlying density-functions were truncated. Therefore one would not expect the distributions to remain constant or the midpoints to represent the group means.

The Atkinson indexes, which weight heavily changes in the income of the poor, show either improvement or deterioration in the position of the poorest from 1981 to 1987, depending on the grouping assumptions. For $e = 2$ under three of the five assumptions the index declines: the position of the rural poor improved relative to the mean. With $e = 5$, however, the index rises under four of the five assumptions, which suggests a relative deterioration in the position of the poorest.

Examination of the upper ranges of the size distribution, using the coefficient of variation, suggests sharp increases in inequality resulting from the presence of the relatively rich. For instance there is a sharp increase in the coefficient of variation (when the midpoint is assumed with linear interpolation). As expected, this increase is even higher when the crude upper bound assumption is adopted. It would be unrealistic to expect that all the rich would have been clustered at the lower bound.

The middle ranges of the size distribution show less change. The Gini coefficient is relatively unchanged for the lower bound assumptions, but increases marginally for the linear interpolation. This suggests that the bulk of the change in inequality results from changes among the relatively well off as well as the relatively poor in rural China.

There is less disagreement among the indexes for the urban sector, except for the coefficient of variation, which is most sensitive to changes in the top range of

Table 8. *Inequality in Rural Areas in China by Province, 1985–86*

	Households					Population				
				Atkinson index[a]					Atkinson index[a]	
Province	*Number*	*Coefficient of variation*	*Gini coefficient*	*e = 2*	*e = 5*	*Number*	*Coefficient of variation*	*Gini coefficient*	*e = 2*	*e = 5*
Beijing	189	0.69	0.25	0.24	0.80	711	0.37	0.20	0.12	0.27
Shanxi	290	0.55	0.27	0.20	0.47	1042	0.43	0.22	0.15	0.41
Heilongjiang	339	0.75	0.27	0.21	0.44	1351	0.62	0.25	0.18	0.40
Gansu	246	0.46	0.25	0.23	0.73	1125	0.48	0.25	0.24	0.76
Jiangsu	442	0.50	0.24	0.29	0.94	1705	0.44	0.24	0.34	0.95
Anhui	434	6.10	0.47	0.43	0.77	1947	6.46	0.51	0.45	0.53
Henan	551	0.65	0.28	0.25	0.68	2367	0.66	0.27	0.23	0.55
Hubei	425	0.52	0.24	0.19	0.71	1802	0.55	0.24	0.18	0.46
Guangdong	286	6.39	0.57	0.55	0.83	1305	6.27	0.56	0.52	0.63
Sichuan	625	5.93	0.42	0.39	0.85	2187	0.73	0.24	0.19	0.79

a. *e* is the inequality aversion parameter.

Source: Authors' calculations based on the 1985–86 unpublished household survey.

the distribution (table 7). The urban data suggest a smoother distribution, with less scope for varying assumptions concerning the underlying group distributions, although group means and distributions are still unknown. The two Atkinson indexes display sharp increases in 1987 relative to 1981, which suggests that increasing urban income concentration is due largely to the increased number of the very poor relative to the urban mean. There is no increased concentration at the upper end of the income scale, which is consistent with the relatively limited institutional changes in the urban enterprise sectors up to 1987. Subsequent increases would be linked to the spurt of inflation experienced.

The aggregate evidence presented above reflects increasing inequality, but it does not indicate why this has happened or who the poor are. Through the use of household level survey data for 1985–86, we examine below some evidence on why inequality has increased: the regional variations and sources of individual vulnerability.

III. Cross-Section Data on Inequality: Regions and Individuals

In this section we describe the regional and individual dimensions of poverty and vulnerability and attempt to describe who the poor were on the basis of household-level observations from the 1985–86 government survey. Identifying the poor puts in context the different policies that have been used by the state and those that might be necessary in the future.

The 1985–86 survey provides an important starting point in describing the poor, but it is subject to some limitations. Although the urban and rural samples are fairly large, 4,203 and 3,827 households, respectively, not all rural or urban areas have been sampled in proportion to their populations. The resulting estimates thus may be more representative of particular provinces rather than regions or of China as a whole. We also cannot estimate comparable regional poverty lines, because we lack province- and sector-specific price deflators. Further work in this area is necessary to generate reliable nationwide estimates. The inequality estimates are more solidly based, however, unless it can be shown that the group-specific rankings change with the use of alternative price indexes.

Regional Variation

Considerable variation in the incidence of inequality is evident among the ten rural areas sampled (table 8). Guangdong, with the second highest mean income in rural areas, has the greatest concentration of income in the upper and middle ranges of the size distribution. However, the Atkinson $e = 5$ index, which weights heavily extremely low incomes relative to the mean, is *lower* in Guangdong than in Jiangsu (a relatively rich province) and Sichuan (and than in Gansu—one of the poorest provinces) in per capita rather than household terms. Although income distributions in Gansu and Jiangsu are relatively alike in the middle ranges of the distribution, the poor in Jiangsu are relatively worse off in relation to the mean, as measured by the Atkinson indexes.

Table 9. *Inequality in Urban Areas in China by Province, 1985–86*

	Households					Population				
				Atkinson index[a]					Atkinson index[a]	
Province	*Number*	*Coefficient of variation*	*Gini coefficient*	*e = 2*	*e = 5*	*Number*	*Coefficient of variation*	*Gini coefficient*	*e = 2*	*e = 5*
Beijing	136	0.47	0.24	0.27	0.79	552	0.57	0.31	0.58	0.86
Shanghai	68	0.46	0.27	0.46	0.87	382	0.78	0.44	0.77	0.90
Tianjin	379	0.48	0.23	0.25	0.84	1511	0.55	0.28	0.61	0.91
Hebei	156	0.47	0.23	0.51	0.95	686	0.62	0.32	0.71	0.94
Shanxi	141	0.49	0.25	0.24	0.62	651	0.51	0.28	0.27	0.60
Inner Mongo	54	0.54	0.24	0.23	0.68	229	0.50	0.22	0.21	0.67
Liaoning	237	0.38	0.21	0.15	0.39	836	0.37	0.20	0.15	0.40
Jilin	170	0.47	0.23	0.44	0.94	716	0.52	0.28	0.76	0.95
Heilongjiang	144	0.56	0.28	0.42	0.88	704	0.70	0.36	0.58	0.86
Shaanxi	191	0.48	0.25	0.54	0.98	828	0.61	0.33	0.91	0.99
Gansu	201	0.43	0.24	0.21	0.64	793	0.45	0.24	0.23	0.65
Ningxia	22	0.38	0.21	0.47	0.88	106	0.39	0.21	0.46	0.88
Qinghai	106	0.59	0.23	0.21	0.60	461	0.46	0.22	0.27	0.68
Xinjiang	81	0.57	0.30	0.49	0.91	427	0.80	0.43	0.77	0.93
Shandong	169	0.42	0.23	0.38	0.92	633	0.43	0.23	0.38	0.92
Jiangsu	119	0.36	0.19	0.25	0.88	412	0.35	0.19	0.27	0.88
Anhui	94	0.39	0.20	0.15	0.46	364	0.42	0.22	0.17	0.46
Zhejiang	84	0.45	0.24	0.19	0.50	309	0.46	0.24	0.19	0.52
Fujian	108	0.43	0.24	0.37	0.83	428	0.45	0.25	0.42	0.84
Jiangxi	170	0.42	0.21	0.18	0.62	691	0.41	0.21	0.18	0.62
Henan	112	0.46	0.24	0.35	0.88	526	0.64	0.34	0.65	0.91
Hubei	219	0.40	0.21	0.17	0.61	839	0.39	0.21	0.18	0.61
Hunan	114	0.46	0.24	0.24	0.76	514	0.56	0.30	0.49	0.83
Guangdong	152	0.43	0.23	0.21	0.66	601	0.43	0.23	0.20	0.61
Guangxi	120	0.45	0.23	0.27	0.75	520	0.60	0.32	0.57	0.83
Sichuan	343	0.51	0.25	0.30	0.88	1287	0.55	0.28	0.58	0.92
Guizhou	96	0.49	0.24	0.19	0.59	388	0.49	0.24	0.20	0.61
Yunnan	217	0.42	0.22	0.28	0.89	794	0.42	0.22	0.31	0.90

a. *e* is the inequality aversion parameter.

Source: Authors' calculations based on the 1985–86 unpublished household survey.

The survey indicates that the poor are more likely to be the elderly without extended-family support, the incapacitated or sick, and those who have suffered from an interruption of earnings, possibly because of weather or seasonal variations. Transfers in response to geographical concentrations of poverty thus are still appropriate in the period after reform, although migration provides a measure of protection that was not available earlier. The substantial number of poor in the richer provinces illustrates, however, that geographical targeting is unlikely to reduce poverty. The poor in rural areas such as Gansu face relatively low income-generating prospects from agricultural activities, and, given that many of these areas are somewhat inaccessible, prospects for migration are limited. This suggests the need for improvements in infrastructure (irrigation and roads) and in education and training, as well as employment generation and support for the poorest.

As in the rural areas, patterns of inequality differ across China's cities. Guangdong, for example, has the highest mean income levels in the sample from the 1985–86 household survey but appears to have relatively low inequality (table 9). But Shanghai and Beijing, which rank third and second, respectively, in average per capita income, displayed relatively high inequality.

Shanghai has the most mature demographic profile of any city in China, with a greater proportion of the elderly than others: 1.71 million aged 60 and over, out of a total population of 12.5 million. A survey of the aged in Shanghai in 1987 (Chen 1987) suggested that the extremely old, or those above 70, formed 38 percent of the aged. It also found that 30 percent of the aged had annual incomes below Y480, 42 percent below Y720, and almost 70 percent below Y1,080. Given that old age pensioners often live with a spouse or helper, a pension of Y1,080 a year may well imply a per capita income of Y540. Pensions are linked to standard wages at the time of retirement, with little adjustment for inflation. The 70 year old (and above) would have retired around 1978 (the Cultural Revolution discouraged retirement) at a relatively low income level. Thus it would appear that many of those at the lower end of Shanghai's income distribution are the elderly. Since unemployment insurance does not extend to the informal sector in China, the floating population or those looking for work could also form part of Shanghai's poor.

Identification of the poor may also result from comparisons between Gansu, one of the poorest provinces, and Jiangsu, a province that has benefited from the growth of the past decade. Although Gansu is a poor province, urban incomes are determined largely by formal sector wages, which vary little across provinces. Thus, as table 10 shows, in 1982 mean income in urban Gansu was higher than in Jiangsu, and Gansu had a greater concentration of income under all criteria. By 1985–86, however, per capita income in urban Jiangsu was greater than in urban Gansu. Income in Gansu remained more concentrated at the upper and middle ranges, as depicted by the coefficient of variation, the Gini, and the Atkinson index with $e = 1$. In urban Jiangsu, however, the poor appear to have lagged behind the mean: there has been a sharp increase in the Atkinson indexes.

Table 10. *Income Inequality in Jiangsu and Gansu Provinces, 1982 and 1985–86*

	1982		1985–86	
Sector and indicator	*Jiangsu*	*Gansu*	*Jiangsu*	*Gansu*
Urban				
Mean annual income per capita (yuan)	593	648	962	874
Coefficient of variation	0.320	0.582	0.363	0.435
Gini coefficient	0.157	0.252	0.189	0.236
Atkinson index[a]				
$e=1$	0.044	0.109	0.075	0.096
$e=2$	0.083	0.182	0.253	0.214
$e=5$	0.183	0.323	0.876	0.638
Rural				
Mean annual income per capita (yuan)	309	174	555	277
Coefficient of variation	0.287	0.423	0.497	0.463
Gini coefficient	0.149	0.203	0.242	0.246
Atkinson index[a]				
$e=1$	0.038	0.068	0.102	0.104
$e=2$	0.075	0.122	0.286	0.233
$e=5$	0.175	0.231	0.940	0.731

a. e is the inequality aversion parameter.

Source: 1982 distributions, Lim and others (1985), p. 89; 1985–86 figures, authors' calculations based on the 1985–86 unpublished household survey.

Groups at Risk: Characteristics of the Poor

The characteristics of a typical poor household are illustrated by an example in Jiangsu. This was a household of three unemployed adults, headed by a disabled worker, aged 64. They subsisted on a disability pension equivalent to Y984 a year paid by the head's prior employer, a SOE. Thus China's elaborate labor insurance system does not guarantee above-poverty income, as this example shows.

There are two further groups of individuals that are likely to be among the poor. First, it has been estimated that there are as many as 51.6 million disabled in China. Government policy has been directed largely toward occupational rehabilitation, and 34,000 enterprises have been set up to employ disabled people, generating work for 1.34 million disabled workers and an output of Y18 billion in 1988 (communication from the Ministry of Civil Affairs, Beijing, March 1989). Although labor insurance is used for workers in the urban formal sector, in other sectors there is an emphasis on income generation and capability enhancement through occupational welfare schemes. This set of policies is known in China as "enhancing the ability to produce blood, rather than blood transfusion."

A second group of individuals in poverty are the 100 million people each year that are victims of natural disasters. Disaster relief in excess of Y1 billion is provided by the central government annually, mainly in the form of grain to augment local resources. In addition to the rescue, shelter, medical care, and feeding operations that are necessary, the government also establishes

employment-generating activities and attempts to restore infrastructure within three to six months. Early warning and information systems are crucial in mitigating the effects of natural calamities, and such systems have been improved considerably since the period of the great famine (1959–61) (Ahmad and Zou 1989).

There is a system of support for vulnerable rural individuals (widows, orphans, and the elderly without family support) known as the "five guarantee-system" or *wu bao* (see Ahmad and Hussain 1991). In 1988 there were 3 million claimants, who received Y1.5 billion, of which the central government provided Y200 million–Y300 million. Although the level of support varies, the average *wu bao* expenditure was thus Y500 per person in 1988, which suggests that the poverty lines taken in this article may have been somewhat on the low side. As with Victorian poor relief, the emphasis is more on preventing the "nondeserving" elderly from getting relief than on ensuring that all the "deserving" actually do derive benefits. There is a severe social stigma attached to the receipt of *wu bao* funds, and this restricts claim rates and the applicability of the measure. The preferred avenue for ensuring old age support is to rely on sons and if possible to reside with a son (see Jia 1988). As the very low number of claimants shows, the *wu bao* system has failed to provide an acceptable alternative to family support and thus to help curb the growth of the rural population.

IV. Concluding Remarks

The Chinese population in 1978 had low cash income, which was relatively equally distributed at the local level. Despite regional variations, destitution was rare, and social safety nets appeared to work, although the institutional arrangements restricted initiative. After the economic reforms, cash income grew rapidly, particularly in the major cities and coastal areas. Higher mean income, however, was associated with greater variance in standards of living both across and within regions. This appears to have put great stress on the social security system, broadly defined.

In some respects the rural areas of Gansu, Henan, and Shanxi are reminiscent of pre-1978 China, with low incomes and relatively low inequality. Sichuan, another low-income province (but with mean income greater than the above-mentioned provinces), has greater inequality and higher poverty levels than, say, Shanxi. However, the prospects of rapid agricultural growth in these areas must be somewhat limited. Without migration or alternative employment-generating possibilities, the government's policy of targeting extremely low-income counties for transfers, investments, and training would appear to be relatively pragmatic given the information costs of household-specific programs in a country of China's size and stage of development. In 1989 the central government supported 9 counties in Gansu, 34 in Shanxi, 16 in Sichuan, and 15 in Henan. Provincial governments supported 12 in Gansu, 21 in Shanxi, 30 in Sichuan,

and 9 in Henan. In addition, 20 counties in Gansu were supported by a special *Sanxi* (three western areas) grant.

The system of disaster relief in China is relatively well developed, and its information-gathering capabilities have improved since the famine of 1959–61. But the absence of a safety mechanism for vulnerable people in rural areas, other than *wu bao* for the elderly or incapacitated, is an issue of concern, and the poor and vulnerable in richer areas such as Jiangsu are similarly unprotected. There is clearly scope for examining public policies in such cases.

Shifting employment patterns, particularly with respect to township and village enterprises in rural areas and the floating (unregistered) population in urban areas, create both a set of opportunities and problems. The erosion of traditional household-based support, declining protection from unemployment, sharp increases in inflation, and the rise in variation in living standards in the post-reform period have raised new issues in China's social security system.

The economic reforms, which led to substantial increases in income after 1978, undoubtedly improved material living standards, especially in the early years. Subsequently, an unravelling of the established safety nets, an aging population, and the advent of high episodes of inflation reversed this trend for an increasing proportion of the population. In recent years increased poverty has coincided with falls in some of the related social indicators. Changing demographic patterns and employment prospects together make it essential to identify the vulnerable if the poor are to be protected. Although the Chinese method of identifying vulnerable areas is a useful first step in a poverty reduction strategy, it is not adequate to offset the problems and contingencies that China is likely to face in the coming decades.

Table A-1. *Percentage of Peasant Households in China by Nominal Net Income, 1978–88*

Yuan per capita	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
0–100	33.3	19.3	9.8	4.7	2.7	1.4	0.8	1.0	1.1	0.9	0.5
100–150	31.7	24.2	24.7	14.9	8.1	6.2	3.8	3.4	3.2	2.4	1.5
150–200	17.6	29.0	27.2	23.0	16.0	13.1	9.4	7.9	7.0	5.0	3.3
200–300	15.0	20.4	25.3	34.8	37.0	32.9	29.2	25.6	21.8	17.5	13.5
300–400		5.0	8.6	14.4	20.8	22.9	24.5	24.0	21.7	21.3	17.5
400–500	2.4[a]	1.5	2.9	5.0	8.7	11.6	14.1	15.8	16.5	17.2	16.7
Over 500		0.6	1.6	3.2	6.7	11.9	18.2	22.3	28.7	35.7	47.0
Average annual net income	134	160	191	223	270	310	355	398	424	463	545
Gini coefficient	0.32	0.28	0.26	0.23	0.22	0.25	0.27	0.30	0.31		

a. For over 300.

Source: State Statistical Bureau (annual-1988), p. 732, (annual-1989), p. 742, and (1989a), p. 465. Gini coefficients are calculated by World Bank staff.

Table A-2. *Peasants' Income Distribution and Household Size in China, 1985, 1987, and 1988*

	1985			*1987*			*1988*		
Yuan per capita	*Percentage of households*	*Number of household members*	*Percentage of population*	*Percentage of households*	*Number of household members*	*Percentage of population*	*Percentage of households*	*Number of household members*	*Percentage of population*
Below 100	1.0	6.09	1.13	0.87	6.09	0.98	0.5	6.09	0.6
100–150	3.4	6.09	3.83	2.38	6.09	2.68	1.5	6.09	1.7
150–200	7.9	5.90	8.63	4.99	5.90	5.45	3.3	5.90	3.6
200–300	25.6	5.82	27.5	17.51	5.82	18.8	13.5	5.82	14.6
300–400	24.0	5.53	24.5	21.34	5.53	22.0	17.5	5.53	18.0
400–500	15.8	5.08	14.8	17.21	5.10	16.3	16.7	5.20	16.1
Over 500	22.3	4.91	20.2	35.7	5.10	33.7	47.0	5.20	45.3

Source: Authors' calculations based on State Statistical Bureau (1985b), p. 20. The columns on household size are based on data from Hubei province.

Table A-3. *Proportion of Urban Households in China by Nominal Monthly Income Per Capita, 1981–88*

Yuan per month per capita	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*
0–20	2.05	0.92	0.61					
20–25	5.46	3.68	2.97	1.67	11.05			
25–35	31.81	25.63	20.32	10.52		5.67	4.24	8.32
35–50	42.29	45.40	46.56	38.89	24.78	14.81	11.70	
50–60	11.90	14.20	16.42	22.67	19.53	16.17	13.36	7.61
60–70					16.04	17.86	15.74	10.26
70–80					10.96	14.82	14.61	12.53
80–90					7.01	10.24	12.09	12.46
90–100					4.11	7.40	8.49	11.91
100–110	6.49	10.17	13.12	26.25	2.63	4.60	6.08	9.21
110–120						3.05	4.35	7.25
120–130						1.83	3.03	5.32
130–140					3.89	1.24	2.04	3.82
140–150						0.39	1.11	2.95
Over 150						1.69	3.17	8.36
Average	38.17	41.21	43.83	50.63	57.11	68.99	76.33	93.25

Note: Figures after brackets are the sums for the income groups bracketed.
Source: State Statistical Bureau (annual-1988), p. 716, (annual-1989), p. 726, and 1989a, p. 462.

Table A-4. *Total and Urban Population: Comparison between the State Statistical Bureau and United Nations Estimates, 1985–90*

		Urban population as percentage of total population	
Year	*Total (millions)*	*State Statistical Bureau*	*United Nations*
1985	1,050.4	36.4	20.6
1986	1,065.3	40.8	20.8
1987	1,080.7	46.1	20.9
1988	1,096.1	49.3	21.1
1989			21.2
1990			21.4

Source: State Statistical Bureau (1989a), pp. 350 and 352; and United Nations (1986), table A-1.

Table A-5. *Urban Income Distribution and Household Size in China, 1985, 1987, and 1988*

	1985			*1987*			*1988*		
Yuan per year per capita	*Percentage of households*	*Number of household members*	*Percentage of population*	*Percentage of households*	*Number of household members*	*Percentage of population*	*Percentage of households*	*Number of household members*[a]	*Percentage of population*
0–240									
240–300	11.05								
300–420		5.03	14.6	4.24	4.43	5.02	8.32		
420–600	24.78	4.08	26.47	11.7	4.39	13.73		4.39	9.77
600–720	19.53	3.75	19.17	13.36	4.18	14.93	7.61	4.18	8.51
720+	44.64	3.41	39.85	70.7	3.70	66.33	84.1	3.70	81.7
Total	100	3.82	100	100	3.74	100	100	3.74	100

a. 1987 figures used because of lack of data for 1988.

Source: Author's calculations based on data from State Statistical Bureau (annual-1986, 1988, 1989) and (1989a).

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