

The Simple Arithmetic of Chinese Income Distribution*

Thomas G. Rawski

Introduction

Following the example of careful empirical study furnished by the works of Professor Shigeru Ishikawa, researchers have produced detailed studies of many aspects of China's economy. Income distribution, a topic increasingly prominent in the development literature, is one area that specialists have tended to overlook, in part because of the paucity of data¹⁾. While we await the outcome of major investigations presently underway in China, it may be useful to survey the impact of three decades of economic policy and economic growth on the income gap between town and countryside, on the distribution of income in urban and rural areas, and on the overall size distribution of income. This is the objective of the present essay. Since the scarcity of detailed information renders our results subject to correction by future research, there will be no further apology for the unavoidable crudity of the statistical manipulations carried out below.

Income Distribution before 1949

Economic historians have devoted little attention to the study of income distribution²⁾. Some authors have hypothesized an increasing concentration of income and wealth in the hands of rural landlords and urban merchants during the nineteenth and twentieth centuries, but little empirical evidence has been adduced in support of this view³⁾. For the 1930s, we have C. Robert Roll's estimates, based on survey materials, of the size distribution of rural incomes. His results are reproduced in Table 1.

* The author gratefully acknowledges comments and references received from Nicholas R. Lardy, Evelyn S. Rawski and Zhao Deyan. The University of Toronto provided financial support for the research on which this essay is based.

1) Chinese writers rarely discuss income distribution in detail. Outside studies include Martin K. Whyte, "Inequality and Stratification in China," *China Quarterly* 64 (1975): 684-711; Ishikawa Shigeru, "Chūgoku no kojū shotoku kakusa to sono kettei" (Personal Income Differentials in China and Their Determinants), *Ajia keizai* (Asian Economics) 17.6 (1976): 2-28; Nicholas R. Lardy, *Economic Growth and Distribution in China* (N. Y., 1978) and "Regional Growth and Income Distribution in China," in *China's Development Experience in Comparative Perspective*, ed. Robert F. Dernberger (Cambridge, 1980), pp. 153-190; Peter Nolan, "Inequality of Income Between Town and Countryside in the People's Republic of China in the Mid-1950s," *World Development* 7 (1979): 447-465; E. R. Lim, "Income Distribution, Poverty and Human Resource Development: The Chinese Experience" (World Bank Discussion Draft, February 1980) and Charles R. Roll, *The Distribution of Rural Incomes in China* (N. Y., 1980).

2) See however Chung-li Chang, *The Income of the Chinese Gentry* (Seattle, 1962) and Jing Su and Luo Lun, *Landlord and Labor in Late Imperial China*, trans. Endymion Wilkinson (Cambridge, 1978).

3) *Chung-kuo chin-tai kuo-min ching-chi-shih chiang-yi* (Lectures on China's Modern Economic History), ed. Hu-pei ta-hsueh cheng-chih ching-chi-hsueh chiao-yen-shih (Peking, 1958), offers one example of this approach.

Roll's estimates indicate a slightly lower degree of inequality in the distribution of total rural income as compared with farm income alone. In both cases, however, he finds substantial concentration, with the poorest 20% of the rural populace, for example, earning only 6% of total income.

Roll also estimates consumption differentials between the rural populace and urban blue collar workers. Surprisingly, he finds that average per capita consumption in rural China was 81–88% of the urban average during the 1930s⁴). These figures, however, understate prewar consumption levels in the urban sector because Roll's urban data are dominated by expenditure figures for textile workers whose low incomes were by no means representative of urban wages in general⁵). Regardless of the exact size of the urban-rural consumption gap, we may accept Roll's view that China's prewar income distribution shared many common features with distributive patterns in other low-income nations.

Economic Policy and Income Distribution since 1949

China's present Communist government came to power in 1949 committed to promoting economic equity as well as economic growth. The goal of reducing inequality has motivated a number of its policies during the past three decades.

Table 1 The Distribution of Per Capita Income among the Rural Population

		FARM INCOME			TOTAL INCOME		
		Percentage Share		Change in Share	Percentage Share		Change in Share
		1930s	1952		1930s	1952	
Top	10%	26.0	21.6	–4.4	24.4	21.6	–2.8
Top	20%	42.7	35.1	–7.6	42.0	35.0	–7.0
2nd	20%	23.8	21.3	–2.5	23.9	21.3	–2.6
3rd	20%	16.3	17.5	+1.2	14.9	17.4	+2.5
4th	20%	11.4	14.8	+3.4	13.2	15.0	+1.8
Bottom	20%	5.8	11.3	+5.5	6.0	11.3	+5.3
Bottom	10%	1.8	5.1	+3.3	2.5	5.1	+2.6
Average Per Capita Income (kg. of grain-equivalent)		486	460		542	541	

Source: Roll, *Distribution*, p. 76.

to less well-endowed households in the same locality. The equalizing effects of these changes are reflected in Roll's estimates for the post-reform year 1952 (Table 1), which show sharp increases in the income share of the poorest quintile at the expense of upper-income groups. At the same time, the 1952 data display a high degree of income concentration despite the levelling effect of land reform. Some of the remaining disparities were removed by the collectivization of agriculture, completed in 1958, which effectively

Land reform and socialization of commerce and industry stripped the old economic elites of their chief sources of income. In the countryside, rentier households and rich farmers who employed hired as well as family labor suffered partial expropriation of land, animals and tools; their assets were turned over

4) Roll, *Distribution*, p. 117.

5) *Ibid.*, 104. *Wage Rates in Shanghai* (Shanghai, 1935), p. 80 contains data showing that daily earnings of cotton spinners and weavers were consistently below the Shanghai industrial average during 1931–1934. *Ti-yi-tz'u Chung-kuo lao-tung nien-chien* (China's First Labor Yearbook), comp. T'ao Meng-ho (Peiping, 1928), pp. 42–47, includes data showing that temporary coolies, temporary construction laborers and water carriers often earned higher wages than textile workers.

equalized the local distribution of property income by means of uncompensated transfer of privately held land, animals and tools to collective units. Much of the inequality visible in the 1952 distribution, however, arises from interregional differences that were not affected by land reform or collectivization. We will return to these differences in discussing patterns of rural income distribution.

In the cities, socialization of industry and trade paralleled the land reform in its levelling effect. Factories, mines, craft shops, banks, real estate and trading companies were effectively nationalized between 1950 and 1956. Although some owners received partial compensation, the overall impact of socialization was to transfer wealth from upper income groups to the state. Since rapid economic growth and the creation of new welfare programs and transfer arrangements greatly improved the position of the urban poor, urban as well as rural China experienced a compression of both tails of the income distribution during the 1950s.

In addition to redistributing wealth in both rural and urban areas, the Chinese government implemented an investment strategy and fiscal policies that sought to reduce interregional economic differences while stimulating the growth of the economy. Nicholas Lardy finds that in contrast to the commonly observed pattern in which interregional income inequality first rises and then declines during the course of industrialization, a trend of "slow but perceptible convergence" is visible in China as early as the 1950s⁶⁾. Lardy attributes this to a conscious decision by China's leaders to sacrifice growth in pursuit of equity. To this end, the government has consistently assigned large investment funds to relatively undeveloped areas at the expense of Shanghai and other centers of prewar industry. A system of revenue sharing has shifted fiscal resources from prosperous to backward regions. Central control over the size and composition of public expenditure at all levels has been used to lessen inequalities in the distribution of education, health care and other social services.

It is no exaggeration to credit China with anticipating international bodies in developing a policy of ensuring basic needs for its citizens. Rationing of grain, edible oil, cotton cloth and other consumer products; interregional price equalization designed to share the transport costs previously borne by inhabitants of remote areas; prompt relief for disaster victims; innovative use of part-time schools and para-medical workers to spread educational and health services; development of cooperative medical insurance for rural communities and many other policies have helped to raise and stabilize the incomes and consumption levels of households and regions in the lowest income groups.

The favorable impact of these equity-oriented policies is visible in rising life expectancy, high levels of primary school attendance, and in the generally healthy and vigorous demeanor of the populace. Together with the rapid pace of output growth and structural change revealed by official claims and substantiated by independent research, these changes add up to a considerable record of achievement.

There are other factors, however, that have tended to promote rather than lessen inequality. Rural policies of the past two decades and a continuing policy bias favoring urban residents stand out as possible sources of increased economic inequality.

Resource injections into the farm sector remain small. Despite numerous pronounce-

6) Lardy, "Regional Growth," p. 165.

ments stressing the high priority attached to agriculture and the grim lesson of near-famine conditions during the early 1960s, the share of agriculture and water conservancy in state investment outlays is still little more than 10%.

The resources provided to agriculture appear to have been unequally distributed. Although some poor areas, such as the highly publicized Ta-chai brigade, were granted large subsidies, most resources were concentrated in regions best able to convert them into higher output. These regions of "high and stable yield" which, according to Benedict Stavis, contain about 20% of China's cultivated land, overlap substantially with areas whose climate, location and water supply produced the highest yields and incomes both before and after 1949⁷⁾. In 1980, for example, application of chemical fertilizer per hectare of farmland was over three times the national average in prosperous Shanghai and Liaoning, but only 60% of the national average in impoverished Shensi province⁸⁾.

The low level of outside assistance obliges most areas to depend on local initiative and resources to raise farm output and incomes. This also favors the more prosperous regions, with their high surpluses, diversified economies and ready access to urban markets. The expansion of small-scale industry, for example, has provided the greatest opportunities to rural communities whose proximity to urban industrial centers assures ready access to technical skills and advice as well as outlets for their products.

With new resources channeled disproportionately into prosperous farming regions and with self-reliance generally favoring the same areas—although periodic restrictions on cash cropping and trade in farm products may have hurt prosperous regions more than low-income communities—there is a distinct possibility that rural inequality has expanded since the mid-1950s.

The second potential source of rising inequality in China's economy is the persistent urban bias of government policy. Urban bias is a common phenomenon in developing countries. What makes it especially potent as a source of distributive inequality in China is the strict control over personal mobility that prevents rural people from sharing in urban prosperity. The magnitude of the benefits enjoyed by Chinese town dwellers is reflected in their stubborn and successful resistance to the planned resettlement of urban youths in rural villages. We begin our survey of China's present income distribution by considering the size of the urban-rural split.

Income Differences between City and Countryside

China's population of one billion may be roughly divided into urban and rural components of 200 and 800 million respectively⁹⁾. What can be said of trends in the average

7) Benedict Stavis, *Making Green Revolution* (Ithaca, 1974), pp. 1-3.

8) *Beijing Review* 19(1981): 25 and U. S. Foreign Broadcast Information Service, *Daily Report, People's Republic of China* (hereafter FBIS) June 12, 1981: S3; July 7, 1981: 010 and July 14, 1981: T6.

9) China's year-end 1980 population is officially reported as 982.6 million (*Beijing Review* 20(1981): 20). Chinese authors frequently refer to a population of 1000 million and a rural or peasant sector of 800 million persons (e. g. FBIS March 17, 1981: L1). FBIS June 12, 1981: K8 states that "the urban residents account for 1/5 of our total population...the peasants...80 percent of our total population." Thomas G. Rawski, *Economic Growth and Employment in China* (N. Y., 1979), pp. 24-28, presents data indicating a 1975 urban population in the neighborhood of 175 million. Since 1975, the

of urban relative to rural incomes? We begin with the following basic data on average annual compensation received by urban wage-earners and by the farming populace (in current yuan)¹⁰:

Before reaching any conclusions about urban-rural income spreads, these data must be adjusted to reflect additional income sources in both the rural and urban sectors.

Farm households earn substantial incomes from economic activity organized around private plots. If per capita peasant income is assumed to have been identical in 1956 and 1957, private income per head in the farm sector for 1957 may be estimated at 25–32 yuan or 25–44% of collective receipts¹¹. A 1979 publication, presumably referring to 1978, states that “for the great majority of communes and brigades, the members’ income from household sidelines generally amounts to 10–20% of total distributed income, with some even higher¹².” Official encouragement of sideline activities led to a sharp rise in 1979, when private income reportedly reached 30–40 yuan per head or 36–48% of average collective income, and in 1980, when a survey revealed average sideline income of 63 yuan for a small and perhaps unrepresentative sample¹³. Combining these data leads to the following estimates of per capita income in the farm sector (current yuan):

These estimates use the higher of alternative estimates of private income for 1977–79; they may therefore

	1957	1977	1978	1979	1980
1. Average urban wage					
A. per worker	490 ^{a)}	565	599	668	762
B. per capita	162 ^{b)}	282 ^{b)}	300 ^{b)}	334 ^{b)}	381 ^{b)}
2. Per capita peasant income from collective sources ^{c)}	41–48	65	74	83	86
3. Per capita ratio: 1B/2	3.4–4.0	4.3	4.0	4.0	4.4

a) National average wage for workers and employees in the state sector multiplied by 0.77, the ratio of average wages of all employees to those of state sector workers for Shanghai in 1956. See Christopher Howe, *Wage Patterns and Wage Policy in Modern China, 1919–1972* (Cambridge, 1973), pp. 31, 49.

b) Participation rate assumed to be 0.33 in 1957 and 0.50 (a 1975 estimate) for 1977–80. See Rawski, *Economic Growth*, pp. 29–30. The rise in participation rates is confirmed by numerous urban surveys.

c) Includes the monetary value of commodity distributions.

	1957	1977	1978	1979	1980
1. Collective income	41–48	65	74	83	86
2. Private income	32–25	13	15	40	63
3. Total income per capita	73	78	89	123	149

urban populace has been swelled by the return of over ten million youths sent to rural communities during the previous decade.

10) Data sources: *Beijing Review* 27 (1979): 10; 20 (1980): 23–24 and 20 (1981): 20; Lim, “Income Distribution,” Table A–3 and *Ching-chi yen-chiu* (Economic Research) 12 (1979): 37. The urban wage for 1978–1980 is an employment-weighted average of wages for workers and staff in the state sector and for employees of urban collective units.

11) FBIS February 6, 1981: L9 gives average per capita peasant income for 1956 as 73 yuan. Since the total value of farm output (in 1952 prices) rose by 3.5% during 1956/57 while population rose by an estimated 2.4%, there should have been little change in per capita incomes. See Nai-ruenn Chen, *Chinese Economic Statistics* (Chicago, 1967), p. 364 and John S. Aird, *Population Estimates for the Provinces of the People's Republic of China: 1953 to 1974* (Washington, 1954), p. 23.

12) *Ching-chi yen-chiu* 8 (1979): 28.

13) British Broadcasting Corp., Summary of World Broadcasts, Part 3, The Far East, *Weekly Economic Report* (hereafter BBC) W1089 (1980): A3 and *Jen-min jih-pao* (People's Daily) June 16, 1981, p. 1. The sample group in the 1980 survey reported sideline income of 44 yuan per person in 1979, well above the 30–40 yuan range noted above.

overstate average incomes for those years as well as for 1980.

In the cities, total income exceeds wage income by an amount equal to the value of monetary and commodity transfers provided by the state. The subsidies available to urban residents are large and varied. They include concessional pricing of farm products at an annual cost variously set at 12 and 20 billion yuan; wage supplements to offset food price increases, costing around 5 billion yuan annually; a "huge annual subsidy for the construction and maintenance of urban housing" that is rented and sometimes sold at extremely low prices; concessional pricing for transport, utilities and medical services; subsidized canteens and creches; substantial pensions for retirees; and preferred access to urban employment for children of city dwellers¹⁴. None of these benefits is widely available to rural Chinese.

A Chinese scholar reports that "the total amount of various kinds of subsidies received by a worker or staff member averaged 526 yuan in 1978 which was equivalent to 80 per cent plus of his average income of 644 yuan¹⁵." Employees of urban collective units, who are not classified as "staff and workers" receive fewer benefits as well as lower wages. If we assume that subsidies available to collective workers are worth one-third of their cash wages, then the average subsidy outlay for all workers becomes 444 yuan, and the total subsidy package comes to 42 billion yuan or about three-fourths of the 1978 urban wage bill¹⁶.

Lacking detailed benefit information for other years, we must focus on 1978. In that year, average urban wages of 599 yuan plus subsidies equivalent to 444 yuan yield a combined income of 1043 yuan per worker or, assuming a participation rate of 0.5, 522 yuan per person. Compared with per capita peasant income of 89 yuan in the same year, the urban-rural per capita income ratio may be conservatively estimated at 3.4:1 excluding or 5.9:1 including the value of urban subsidies. If anything, these figures understate the urban-rural income gap because participation rates in the cities may be as high as 0.6 rather than 0.5, private plot income may have averaged less than 40 yuan per person, and the estimated cash value of urban subsidies may omit pension rights or other benefits that are difficult to quantify¹⁷.

What are the implications of these large income differentials favoring urbanites?

14) On subsidies, see BBC W1087(1980): A17; W1110(1980): A4; W1120(1981): A6 and W1126(1981): A17; FBIS February 8, 1981: Q5; Dwight H. Perkins, et al., *Rural Small-Scale Industry in the People's Republic of China* (Berkeley, 1977), pp. 44-46.

15) Qiyuan Xiang, "Economic Development and People's Income Distribution in China" (paper delivered to the U. S.-China Conference on Alternative Strategies for Economic Development, 1980), p. 25.

16) This calculation is based on wage and employment data for 1978 shown in *Beijing Review* 27 (1979): 40 and 20(1980): 23-24.

17) A national urban survey of staff and worker households in 1980 revealed a participation rate of 0.61 (FBIS February 12, 1981: P1); another source implies that the participation rate in China's municipalities is 0.56 (*ibid.*, June 26, 1981: K12). Alexander Eckstein argues that the urban-rural gap declined during the 1960s and 1970s, but his analysis implicitly assumes static participation rates; in fact, these rates have risen sharply, but only in the cities (see Eckstein, *China's Economic Revolution* (N. Y., 1977), p. 303). A 1980 survey in prosperous Liaoning province reported average private farm income amounting to only 28.7 yuan per person (FBIS June 12, 1981: S7), suggesting that the national averages given in the text may be considerably overstated.

In comparing urban and rural consumption levels for 1955, Roll found that high urban prices reduced the real consumption standard of city dwellers to a level only about 13–23% above the rural average¹⁸⁾. Nolan's more detailed study of materials relating to 1956 and 1957, while emphasizing the difficulties of comparing urban and rural consumption standards, contains evidence of considerably larger differentials favoring urban residents¹⁹⁾.

In the late 1970s, however, urban prices are no longer higher than rural prices. On the contrary, economist Hsueh Mu-ch'iao reports that "the selling prices of many farm products are lower than their purchasing prices²⁰⁾." Given the large share of farm produce in household expenditure and uniform pricing of consumer manufactures, it is evident that any consumer price variations favoring the rural populace are now offset by urban subsidies. And since these subsidies extend well beyond the sums needed to offset higher urban food prices, it is reasonable to conclude that the 3.4:1 ratio of urban to rural per capita incomes before subsidies represents a minimal estimate of the real income gap between urban and rural Chinese. This is far larger than the differential shown in data relating to the 1950s. Clearly, the urban-rural income gap has widened markedly since the mid-1950s²¹⁾.

This income gap does not mean that city dwellers enjoy a consumption standard equivalent to 3.4 times that of rural Chinese. For some basic commodities, notably foodgrain, edible oil and cotton cloth, rationing ensures a relatively even commodity distribution. Housing may be more abundant, in terms of floor space per person, in the countryside, although recent policy shifts may gradually change this situation²²⁾.

Once we look beyond rationed commodities and housing, large differences favoring urban consumers become evident. Despite problems of transport and storage, meat consumption is much higher in urban than in rural areas. Urban pork consumption averaged 19 kg per person in the cities during 1979; in 1980, record pork output amounted to less than 11 kg per capita for the nation²³⁾. For consumer durables, data on stocks per 100 persons show a huge disparity favoring the cities²⁴⁾:

Chinese urbanites

	Bicycle	Sewing Machine	Radio	Television
National average	10	5	12	0.7
Survey of 44 cities	32	16	21	8

18) Roll, *Distribution*, p. 119.

19) Nolan, "Inequality," pp. 449–457.

20) BBC W1110(1980): A4.

21) Data obtained or estimated by World Bank personnel show that urban incomes were 2.2 times the rural average in 1979/80 (*Far Eastern Economic Review* August 14, 1981, p. 50). Resolution of the conflict between these figures and our own results showing substantially larger income differences must await publication of the details underlying the World Bank data.

22) Recent policy changes include large increases in construction of government-financed urban housing, subsidized sale of public housing to private buyers and relaxation of prohibitions against private construction in urban areas. See BBC W1069(1980): A12; W1089(1980): A9; W1103(1980): A8 and W1128(1981): A4.

23) Urban figure is from BBC W1104(1980): A2. Pork output in 1980 was 10.6 million tons, or about 10.6kg. per person (BBC W1128(1981): A4).

24) National figures are from BBC W1117(1981): A1–A2. The urban survey data reported in FBIS April 24, 1981: K13 give stocks per 100 households. These figures have been divided by 4 to reflect

enjoy access to commodities and services that are largely excluded from rural consumption baskets, but they remain frustrated by a shortage of outlets for spending their high and rapidly rising incomes. This is reflected in the large disparity between urban and rural savings. Data for 1980 show that urban residents, who number only one-fifth of the population, hold 44% of individual deposits in banks and credit cooperatives; other reports imply even larger differences in per capita deposits between urban and rural areas²⁵). Even though peasants may accumulate wealth in the form of new or improved housing, an option closed to most urban Chinese, these figures indicate a massive disparity of private wealth-holding between urban and rural residents. Only China's low interest rates, limited spending opportunities and the small share of private assets in total wealth prevent this disparity from further enlarging the income and consumption gap separating the cities from the countryside.

These data show that the economic gap between urban and rural China is large. Although precise comparisons are not possible, there is strong evidence that the urban-rural gap is larger now than in the mid-1950s. With higher incomes and superior occupational prospects for their children, urban Chinese families continue to enjoy great economic advantages over rural households.

Urban Income Distribution

The most detailed information about China's urban income distribution comes from a series of sample surveys conducted during 1980. Some of the survey data on monthly per capita incomes of staff and worker households (in yuan) are as follows²⁶):

Area	Per Capita Income		Percent of Households with Per Capita			
	Total	For Living Expense	Monthly Income for Living Expenses	<Y15	<Y25	>Y35
National	36	33		2	24	40
Harbin	36	30		2	24	36
Kwangtung	41	36		2	18	50
Liaoning	36	11	54
Shansi	...	27		6	...	21
Szechwan	32	29		3	35	26

Descriptions accompanying these and other survey data indicate that incomes are higher in large than in small cities, apparently because of wage differentials favoring employees of units admin-

istered by higher levels of government. The importance of seniority in wage determination raises average wages in long-established industrial centers. Recent reforms have average urban household size of 4.03 reported from a national survey in FBIS February 12, 1981: P1.

25) FBIS July 7, 1981: K1. Other data for 1980 show that 120 million urban resident held savings deposits of 230 yuan per person, or 18 times the average for 812.5 million peasants (see BBC W1115 (1981): A1 and W1116: A8).

26) Data are from *Hsin-hua yueh-pao* (New China Monthly) 12 (1980): 124-125; FBIS February 11, 1981: Q2-Q4 and February 12, 1981: P1-P2; BBC W1116 (1981): A1-A2, W1118 (1981): A1 and W1120 (1981): A1. It should be noted that the first source, which is reprinted from People's Daily of December 31, 1980, apparently contains either a misprint or an arithmetic error, for the text implies that there were no families with average monthly per capita incomes of 30-35 yuan even though the national average fell within this range! Monthly income for living expenses is "regular income used for the arrangement of the family's daily life, after deducting expenses for supporting the aged, children or the disabled, and for presents and gifts" (FBIS February 11, 1981: P2).

given an income advantage to workers in occupations eligible for bonuses.

Despite these variations, the surveys reveal a high degree of uniformity in distribution patterns within Chinese cities. Since the regional and occupational dispersion of wages is small, we expect demographic factors to play a large role in determining relative household incomes. This is confirmed by the surveys, which show that prosperous families with per capita monthly incomes above 50 yuan have few members and high participation rates, while poor families with per capita monthly incomes under 15 yuan have many members and few workers. Wage levels are not important determinants of relative prosperity: in the Szechwan survey, the difference between average monthly earnings of workers in the richest and poorest groups of households was only 11 yuan²⁷⁾.

The data reveal a substantial life-cycle component to China's urban income distribution. Adults in their late 30s and early 40s are burdened with the task of supporting both young children and aged parents. In Shantung, the lowest income group consists of "families whose working persons are about 40 years of age²⁸⁾." These families suffer low incomes because of high dependency ratios. As the family breadwinners become older, their wages rise with seniority; at the same time, the death of elderly parents and maturation of children lowers the family's dependency ratio and raises average income. This migration of families along the income ladder adds a levelling element to the urban income distribution.

Urban survey data also show that today, as in the 1950s, the urban-rural income gap does not mean that urban households are uniformly better off than rural families. Urban households with monthly per capita incomes of less than 15 yuan, whose numbers would swell if urban surveys were not limited to the relatively well-paid "staff and worker" category, may fall short of the living standards achieved in suburban farming communities.

Rural Income Distribution

Table 2 presents information on the size distribution of per capita agricultural incomes in 1952. These are Roll's estimates, based on Chinese investigations of average incomes among so-called rich, middle and poor peasants in six regions constructed by grouping counties according to average levels of per capita farm income²⁹⁾.

These data emphasize the importance of geography as a determinant of farm incomes. Poor peasants in region 1, composed of the most prosperous counties, earn less than their immediate neighbors, but are nonetheless within the top 5% of rural income earners. They earn more than middle peasants in all but the richest region and average more than five times the per capita incomes of poor peasants in the poorest counties (region 6). These interregional income variations explain why China's land reform, which

27) *Ibid.*, Q4. In the Kwangtung survey, workers from families whose per capita monthly incomes were below 15 yuan earned monthly wages of 69 yuan (FBIS February 12, 1981: P2), which exceeds the national average for workers in the state sector.

28) FBIS, February 9, 1981: 04.

29) Roll, *Distribution*, p. 72. The composition of the six regions, each of which includes clusters of counties in several provinces, is described in *ibid.*, 61-63. The original data source is Li Ch'eng-jui, *Chung-hua jen-min kung-ho-kuo nung-yeh-shui shih-kao* (Draft History of Agricultural Taxation in the People's Republic of China; Peking, 1959), pp. 134-136.

attacked local wealth disparity, produced only a modest shift in the national distribution of rural income.

Several recent studies have approached rural income distribution by focusing on

Table 2 The Size Distribution of Per Capita Agricultural Income, 1952(catties of grain-equivalent)

Region	Peasant Class ^{a)}	Per Capita Income	Percentage Share in Population	Percentage Share in Income
1	Rich peasant	3339	0.15	0.78
2	Rich peasant	2276	0.28	0.99
1	Middle peasant	2023	1.20	3.79
3	Rich peasant	1523	0.56	1.33
1	Poor peasant/LL	1518	1.65	3.90
2	Middle peasant	1385	2.27	4.90
4	Rich peasant	1191	1.22	2.27
2	Poor peasant/LL	989	3.12	4.81
3	Middle peasant	952	4.45	6.68
5	Rich peasant	916	2.07	2.96
4	Middle peasant	734	9.77	11.17
3	Poor peasant/LL	724	6.12	6.90
6	Rich peasant	644	0.72	0.72
4	Poor peasant/LL	572	13.44	11.98
5	Middle peasant	560	16.56	14.47
5	Poor peasant/LL	428	22.78	15.10
6	Middle peasant	394	5.74	3.52
6	Poor peasant/LL	298	7.89	3.67

Source: Roll, *Distribution*, p. 72.

Note: 1 catty=0.5 kilogram

a) LL indicates former landlords

ber³¹⁾. Thus the ratio of 11:1 between richest and poorest groups shown in Table 2 has been preserved or perhaps even enlarged since 1952.

Merely looking at extremes, however, does not provide an adequate measure of changes in distribution. A more useful approach is to examine the pattern of interregional disparity in average rural incomes over time. This is attempted in Table 3, which shows average per capita farm incomes in a number of provinces for 1934 along with average collective incomes for 1978. Although the sample size is moderate and the income data are by no means fully comparable, the data summarized in population-weighted coefficients of variation suggest that interprovincial income disparities fell between 1934 and 1955 and continued to decline, although at a slower pace, between 1955 and 1978.

Does this outcome provide convincing evidence of narrowing income dispersions in rural China? This is not certain. The observed shift between 1934 and 1955 rests on weak prewar data and is highly sensitive to changes in the sample: removing Kwang-

30) These include Lim, "Income Distribution," p. 99; Marc Blecher, "Income Distribution in Small Rural Chinese Communities," *China Quarterly* 68(1976): 797-816; Azizur R. Khan, "The Distribution of Income in Rural China," in *Poverty and Landlessness in Rural Asia* (Geneva, 1977), pp. 253-280; Tang Tsou, Marc Blecher and Mitch Meisner, "Organization, Growth and Equality in Xiyang County," *Modern China* 5.1 and 5.2(1979) 3-39, 139-185; and Keith Griffin and Ashwani Saith, "The Pattern of Income Inequality in Rural China," (unpublished, 1980).

31) FBIS April 28, 1981: K14 and *Ching-chi yen-chiu* 12(1979): 37.

microeconomic data gathered during visits to China³⁰⁾. Even if these data provide representative samples, they cannot be used to assess changes in interregional inequality that are essential to an evaluation of trends in rural distribution.

We know that large income disparities remain. In 1979, there were 1,622 production brigades containing perhaps two million persons in which collective distribution exceeded 300 yuan per person. At the same time, 30% of production teams distributed less than 50 yuan per person, with some providing only 20-30 yuan to each mem-

tung from the table, for example, sharply reduces the observed decline in interprovincial income variation. Exclusion of private farm income from the 1978 figures may bias the comparison between 1955 and 1978. Although Griffin and Saith suggest that "private sector economic activities may have led to a reduction of inequalities generated in the collective sector," their supporting evidence is purely local³²⁾. If rich regions with better market access enjoy stronger demand for private produce, the private sector may enlarge national inequality while promoting local equity. The example of Shensi province, where private farm income may be further below the national average than collective farm income, illustrates this possibility³³⁾. In addition, the size and diversity of China's provinces, many of which have populations numbering tens of millions and face internal "north-south" problems, raises doubts about their usefulness as units of analysis.

Might the evidence of convergence from Table 3 mask underlying divergence within the rural income distribution? In 1979, 338 of China's roughly 2300 counties produced 36% of total grain output; in 1952, by contrast, the top 509 counties accounted for less than one-fifth of

Table 3 Per Capita Agricultural Incomes, Provincial Data: 1934, 1955, 1978 (Current Yuan)

Province	1957 Population (Millions)	Per Capita Incomes of Farming Population		
		1934	1955	1978 ^{a)}
Anhwei	33	28	71.9 ^{b,c)}	99 ^{d)}
Chekiang	25	32	80.3 ^{e)}	90
Fukien	14	46	88.8 ^{b,f)}	68 ^{g,h)}
Hopei	46	23	103	76 ⁱ⁾
Hunan	36	28	83 ^{b,j)}	81
Hupei	30	24	86	85
Kansu	12	...	45 ^{b,k)}	56 ^{g,m)}
Kiangsu	51	39	130	94
Kirin	14	...	99	107
Kwangtung	37	54	105.4 ^{b,n)}	73 ⁱ⁾
Liaoning	25	...	127	88
Shantung	54	16	70 ^{b)}	68
Shensi	18	28	99	68
Szechwan	71	...	70	71
National average		29	94	74
Population-weighted coefficient of variation (p)				
for provinces in 1934 sample		.390	.210	.173
for provinces in 1955 and 1978 samples	237	.178

Sources: except as noted below, population data are from Aird, *Population*, p. 22 and income data are from Roll, *Distribution*, p. 13 (for 1934); Chen, *Statistics*, pp. 430-432 (for 1955) and Lim, "Income Distribution," Table A-3 (for 1978). Roll's 1934 data for average household income have been converted to per capita figures using survey data on average household size among the farm population of various provinces calculated from *Ch'uan-kuo t'u-ti tiao-ch'a pao-kao kang-yao* (Summary Report of the National Land Survey; Nanking 1937), p. 22. In making this adjustment I have used Shantung household size for the Hopei data and applied the Hunan figure to the data for Fukien and Kwangtung.

Notes:

- a) Collective income only.
- b) Indicates 1956 data.
- c) *An-hui jih-pao* (Anhwei Daily), September 29, 1957.
- d) Survey data in BBC W118 (1981): All.
- e) *Che-chiang jih-pao* (Chekiang Daily), March 30, 1957.
- f) *Fu-chien jih-pao* (Fukien Daily), August 5, 1957.
- g) Indicates 1979 data.
- h) FBIS July 21, 1981: 06.
- i) Griffin and Saith, "Income Inequality," pp. 7, 9.
- j) Vivienne Shue, *Peasant China in Transition* (Berkeley, 1980), p. 316.
- k) Per capita purchasing power given in *Hsin-hua pan-yueh-k'an* (New China Semi-monthly) 115 (1957): 56.
- m) FBIS April 2, 1981: K4.
- n) *Wen-hui pao* (Wen-hui News, Hong Kong), July 31, 1957.
- p) Calculated from $\frac{1}{\bar{y}} \left[\sum_i w_i (y_i - \bar{y})^2 \right]^{1/2}$ where
 y_i = average income for the i th province in the sample
 w_i = share of province i in the total population of the sample provinces
 \bar{y} = national average figure for per capita agricultural income.

32) Griffin and Saith, "Income Inequality," p. 57.

33) Shensi data are from Lim, "Income Distribution," Table A-3 and FBIS April 17, 1981: T1.

agricultural output³⁴). Although grain output is not the same as agricultural output, these figures indicate that strong regional divergence may have occurred in the past three decades.

Without further evidence, broad conclusions about the evolution of China's rural income distribution are premature. Visitor accounts have provided some evidence of low income dispersion within localities, but none of these studies have addressed the crucial issue of interregional disparity. Visitor reports are loaded with data from atypical model units. There is also an aggregation problem arising from the Chinese practice of reporting average income figures for members of collective groups. Comparing these data with international figures for the distribution of household income masks an unknown, but possibly large degree of inequality within Chinese collectives³⁵).

Faced with these complexities, it is not yet possible to describe recent trends in China's rural distribution in any detail. Some equalization may have occurred since the 1950s. It is also possible, however, that the size distribution of rural incomes is similar to or even less equal than that prevailing after the land reform of the early 1950s.

Size Distribution of Per Capita Incomes

Without sufficient data to tabulate the size distribution of incomes for any recent year in either the urban or the rural sector, a full estimate of the overall size distribution remains beyond our grasp. We can, however, provide rough estimates of the income shares of the highest and lowest quintiles of the income distribution for 1978, and compare these shares with historical and international data.

Let us assume that the top quintile of China's income ladder consists of 100 million urban workers and their 100 million dependents. Since the urban populace includes persons with monthly incomes of 15–20 yuan who are certainly worse off than millions of prosperous suburban farm residents, this assumption will understate the income share of the top quintile.

Using our 1978 data, we may calculate per capita and aggregate urban incomes either (1) excluding or (2) including the estimated value of urban subsidies. Rural incomes are derived from a population of 800 million and 1978 per capita income of 89 yuan. Our results are:

Under these assumptions, the urban income share, which is the same as the share accruing to the top quintile of the populace, is 46–59% of total income.

	Per Capita Income (Yuan)		Population (Millions)	Aggregate Income (Billion Yuan)	
	(1)	(2)		(1)	(2)
Urban incomes	300	522	200	60	104
Rural incomes	89	89	800	71	71
National total	131	176	1000	131	176
Urban share			0.20	0.46	0.59

What of the 1978 share of the poorest quintile? We know that 30% of basic accounting units (production teams or, in rare instances, brigades) provided less than 50

34) *Hung-ch'i* (Red Flag) 5 (1981): 25–26 and Li, *Nung-yeh-shui*, pp. 134–136.

35) Rural units in which per capita income from collective sources averaged less than 50 yuan in 1978 include 16.8% of counties and 29.5% of production teams (*Hsin-hua yueh-pao* 2 (1981):117). The percentage of households whose per capita incomes were less than 50 yuan in 1978 is not known, but the figure may be substantially above 30%.

yuan of collective income to their members. We may guess that the poorest 25% of basic units provided an average distribution of between 35 and 45 yuan per capita. Since aggregation masks inequality by concealing poor members of prosperous units and rich members of poor units, we may be overestimating collective income for the poorest quarter of the rural populace, which is also, under our assumptions, the poorest quintile of the whole distribution.

If this poorest quintile earns average collective income of 35–45 yuan plus an added 20% of this amount from private sources, again a generous estimate, income in the lowest quintile amounts to 42–54 yuan per person or, for 200 million persons, 8.4–10.8 billion yuan. We then calculate the income share of the lowest quintile as 6.4–8.2% excluding or 4.8–6.1% including the estimated value of urban subsidies.

How does this compare with China's situation in the 1930s? Roll's size distribution (Table 1) omits the urban sector, where real consumption surpassed the rural average by a margin that Roll estimates at 14–23%. Since this estimate of the urban-rural gap seems unrealistically low, let us assume that the average urban income in the 1930s exceeded the rural average by 100%. If we take the 1930s population as 500 million, of whom 90% were rural, we may repeat our earlier income calculation, this time in terms of kilograms of grain-equivalent per person³⁶:

Roll estimates that the bottom 20% of the rural populace, including 18% of the entire population, received 6.0% of rural income or, using the above figures, 4.9% of total income. If the poorest 18% of the population received 4.9% of total income, the share of the lowest quintile should be roughly $4.9 \times 20/18$ or 5.4% of total income.

We are now in a position to compare the estimated 1978 shares of the top and bottom quintiles of China's income distribution with historical and international data³⁷:

We have added for comparative purposes a

	Per Capita Income (kg.)	Population (Millions)	Aggregate Income (Billion kg.)
Urban incomes	1084	50	54
Rural incomes	542	450	244
National total	596	500	298
Urban share		0.10	0.18

	Income Share Accruing To		A/B
	Top 20% (A)	Bottom 20% (B)	
China 1978			
1. excluding subsidies	46%	6.4–8.2%	5.6–7.2
2. including subsidies	59	4.8–6.1	9.7–12.3
3. including 1/3 of subsidy value	51	5.8–7.4	6.9–8.8
China 1930s	...	5.4	...
Brazil 1970	62.2	3.1	20.1
India 1963/64	52.0	5.0	10.4
Korea 1970	45.0	7.0	6.4
Pakistan 1963/65	45.5	6.5	7.0
Taiwan 1968	41.4	7.8	5.3

36) Per capita rural income in terms of grain-equivalents is from Table 1. Estimated population is from Dwight H. Perkins, *Agricultural Development in China, 1368–1968* (Chicago, 1969), p. 216. Perkins estimates that 28 million Chinese lived in cities of over 100,000 persons in 1938 (p. 295). In 1953, such cities accounted for 52% of the urban populace Morris B. Ullman, *Cities of Mainland China, 1953 and 1958* (Washington, 1961), p. 10).

37) International data are from Montek S. Ahluwalia, "Inequality, Poverty and Development," *Journal of Development Economics* 3 (1976): 340.

calculation in which Chinese urban wage incomes for 1978 are increased by one-third of the estimated value of urban subsidies. This approach recognizes that some of the subsidies merely offset higher urban prices, while others provide real benefits enjoyed only by urban residents.

Conclusion

Despite the fragmentary nature of available data and the resulting crudity of our analysis, the foregoing considerations lead to some preliminary observations about income distribution in China. Our data show China to be a nation which, like many low income states, is faced with persistent and intractable equity problems. In examining the record of the past three decades, we find progress in truncating local extremes of wealth and poverty, in reducing inequalities within the favored urban sector, and perhaps in reducing the regional dispersion of rural incomes. At the same time, the income and consumption gap between town and countryside has grown considerably. Evidence regarding size distribution shows that despite the effects of land reform, socialization, collectivization, stringent restriction of private accumulation and an impressive (and expensive) array of equity-oriented policies, the shares of the top and bottom income groups and the ratio between these shares are by no means remarkable. Unless we completely ignore the income effect of urban subsidies, we must conclude that the share of the lowest quintile in 1978 income may not be significantly above the corresponding figure for the 1930s. Since our calculations incorporate assumptions that may lead to an understatement of income inequality, it is possible that the income share of the poorest quintile may be lower in 1978 than in the 1930s.

The share of low-income cohorts may remain stable or decline even though incomes of the original members of these cohorts rise over time. Samuel Morley shows just this pattern in the Brazilian case³⁸⁾. In China, however, this situation is unlikely to arise because the poverty of the lowest income earners is rooted in geography³⁹⁾. Since Chinese farmers cannot migrate to the cities or to more attractive agricultural communities, the inhabitants of China's poorest regions suffer continuing impoverishment to a degree that may be unusual in international terms.

It is perhaps inevitable that China's distributive performance cannot measure up to the extravagant claims of domestic and foreign commentators. It is simply mistaken to assert, as does the U. S. Central Intelligence Agency, that China has "distributed the sparse fruits of economic growth more evenly among its huge population than is the case in almost every other" developing country⁴⁰⁾. Although China does not display the distributive extremes observed in Brazil, the Chinese data are not unlike those for India and Pakistan, neither of which is noted for promoting economic equity. Unless one chooses to regard urban subsidies as pure price equalization measures, there is no reason

38) Samuel A. Morley, "The Effect of Changes in the Population on Several Measures of Income Distribution," *American Economic Review* 71.3 (1981): 285-294.

39) *Hsin-hua yueh-pao* 2 (1981): 117-121 presents a detailed review of "Conditions in Impoverished Counties, 1977-1979." The first reason given for the persistence of poverty in these localities is because "natural conditions are different" from those in more prosperous areas (p. 118).

40) *China: The Continuing Search for a Modernization Strategy* (ER80-10248; Washington, 1980), p. 2.

to believe that China's distributive performance can match the unusual achievements reported for Korea or Taiwan.

China has implemented a broad array of policies aimed at reducing economic inequalities. Our preliminary survey shows that despite some progress, important features of China's income distribution have not improved significantly since the 1950s or even the 1930s. If further empirical evidence confirms this finding, we must seek reasons for the resistance of Chinese distributive patterns to what appears to be an energetic application of governmental effort. One possibility is that the impact of egalitarian measures has been outweighed by the unintended consequences of other policies such as emphasis on local self-reliance, limited transport investment, differential allocation of manufactured farm inputs favoring prosperous regions and the persistent bias toward strengthening the urban economy at the expense of the rural sector. Another possibility is that income distribution is so deeply embedded in China's geographic and economic structure that several decades of structural change and strong policy effort are not enough to bring about major changes in distributive patterns formed in China's prewar market economy.

(Department of Political Economy, University of Toronto)