

Agricultural Labor: Where Are the Jobs?

Fred Gale, Agapi Somwaru, and Xinshen Diao

The transfer of labor from agriculture to industry and service employment that typically accompanies economic development was stifled in China for many years. The household registration system instituted in the 1950s made clear distinctions between rural and urban residents. Rural residents could not freely move to urban areas, so there was no outlet for growth in the rural labor force. When China began its economic reforms in the late 1970s, nearly all rural residents were engaged in subsistence farming because there were few opportunities for rural nonfarm employment. Rural nonfarm employment has grown rapidly over the past two decades, but nearly half of China's labor force is still engaged in agriculture. Farm earnings are low because each worker is limited in both land and capital. In 1999, rural per capita income in China was just \$360, reflecting low earnings in agriculture, which accounted for 60 percent of rural income.

China's high agricultural share of employment and low ratio of land per farm worker are not unusual among developing countries in Asia. However, middle-income and developed countries in Asia have 10 percent or less of their workers in agriculture and ratios of land per worker are much higher than that of China (table M-1). To raise per capita output and income in farming, China's economy needs to shift large numbers of farm laborers to employment in industry and services, where earnings are higher. Creating nonfarm opportunities will become an even higher priority as China's agriculture sector becomes more integrated with the world economy.

How Many Farmers?

China's policymakers and planners need better information about rural employment. Until recent years, "rural" and "agricultural" were essentially synonymous, and the number of farmers could be easily counted as the number of persons with agricultural household registrations. However, during the 1990s, many agricultural people found jobs in cities (though still mostly illegal) and in growing rural nonfarm

enterprises. The number of people with agricultural registrations (over 900 million, including children and retired people) now overstates the farm population.

Estimates of the number of rural people employed in farming and rural nonfarm industries vary widely. In 2000, official statistics reported a rural agricultural labor force (including forestry and fishing) of 328 million and a rural nonagricultural labor force of about 170 million (table M-2). In a 1998 paper, Rawski and

Table M-1—Agricultural labor force share and land per worker, selected countries and regions, 1999

Country/region	Agricultural share of labor force	Land per agricultural worker ¹
	Percent	Hectares
Laos	76	.44
Cambodia	70	.82
Vietnam	67	.21
Africa - developing	60	.83
India	60	.61
Thailand	56	.70
Bangladesh	56	.21
Indonesia	48	.36
Pakistan	47	.87
China ²	47	.39
Sri Lanka	46	.23
Philippines	40	.45
Mexico	21	2.84
Latin America and Caribbean	20	3.02
Malaysia	19	1.03
South Korea	10	.71
Europe	9	9.36
Taiwan ²	8	1.10
Australia	5	107.34
Japan	4	1.63
Canada	2	116.82
United States	2	58.46

¹ Arable/cultivated land divided by agricultural employment.

² Computed from statistical yearbook data. China agricultural employment reported in FAOSTAT is much higher than reported in *China Statistical Yearbook*.

Source: ERS calculations based on data from United Nations Food and Agriculture Organization, FAOSTAT database, except where noted.

Table M-2—China employment and growth by sector, 1990-2000

Sector	Employment	Growth
	2000	1990-2000
	<i>Million</i>	
Agriculture, forestry, and fishing	328	-5
Rural township and village enterprises	128	35
Rural private enterprises	11	10
Rural self-employment	29	14
Urban employment	213	47
Total	710	101

Note: Components do not sum to total due to rounding.

Source: China National Bureau of Statistics, *China Statistical Yearbook 2000* and *China Statistical Abstract 2001*.

Mead argued that official statistics published in China's statistical yearbooks underestimate rural employment in nonfarm industries and overestimate farm employment by perhaps 100 million. However, China's 1997 agricultural census, the first attempt to obtain a comprehensive nationwide count of rural employment, reported an even larger number of 425 million persons primarily employed in agriculture, forestry, and fishing and 136 million rural persons employed in nonagriculture (including 57 million working primarily in urban areas).

Where Are the Jobs?

China faces an enormous task in moving labor out of agriculture. Johnson estimated that China would need to create 15 million jobs per year over three decades to reduce its farm employment to 10 percent of the labor force (about the level of South Korea and Taiwan). This rate is nearly three times the average 5.9 million workers per year that transferred from agricultural to nonagricultural activities from 1978 to 2000, according to China's National Bureau of Statistics. A 20-percent agricultural labor force share (similar to that of Malaysia) is probably more realistic but would also require China to accelerate job growth over current rates.

Rural job growth faces a number of challenges (see "Can Rural Income Growth Accelerate?" in this report). Rural township and village enterprises (TVE) have absorbed much farm labor but are now trying to raise productivity and workforce quality, which tends to reduce hiring. TVE employment grew by 35 million during the 1990s but fell by 7 million from 1996 to 2000. Private enterprise and self-employment in rural areas added 24 million jobs during the 1990s but still account for less than 10 percent of rural employment.

Because population growth adds more people to the rural labor force each year, any effort to shrink China's farm labor force will be difficult. The creation of 57 million rural nonfarm jobs during the 1990s decreased farm employment by only 5 million from 1990 to 2000. The aging of the rural labor force presents another obstacle to nonfarm job growth because older persons are less likely to enter off-farm employment than younger persons.

From 1990 to 2000, urban areas provided 46 percent of China's employment growth—much higher than their 30-percent share of the country's population in 1990. According to China's 1997 agricultural census, 40 percent of rural residents working in nonagricultural activities worked in urban areas. Thus, much of the labor moving out of agriculture will likely find jobs in urban areas. As economies develop, most employment growth is in service sectors, and these jobs tend to cluster in urban areas, especially large cities, which are geographic centers for trade and incubators for high-tech industry. Labor-intensive low-skill services will be a logical sector for absorption of China's rural labor force. Manufacturing industries in both rural and urban areas will be under pressure to keep labor costs competitive and increase capital, skill, and productivity per worker. Textile manufacturers, an important employer of rural labor, have already undergone significant consolidation and downsizing.

Institutional Reforms May Aid Mobility

Studies of rural migration in China find that migration tends to follow networks established by village members. Migration is largely temporary, circular, and over short distances. Migrants tend to be young unmarried adults who are members of households with limited farmland. Remittances sent home by migrants are an important source of capital for rural households.

While mobility of rural labor has increased at a rapid pace, it is still constrained by limits on urban migration, grain procurement obligations and land-tenure systems, and lack of rural credit markets (see "Does China's Land-Tenure System Discourage Structural Adjustment?" in this report). As China relaxes some of these barriers to migration, what we know about migration from previous studies may become outdated.

Who Will Stay Behind?

Increased education will make China's rural workers more productive and employable. Rural education

What We Need to Know

Will nonfarm labor demand grow fast enough to absorb farm workers and reduce the agricultural labor force?

Will new jobs be in rural or urban areas?

Will long-distance and permanent migration become more common?

Which workers will be most likely to participate in nonfarm work?

How will labor productivity, earnings, and the structure of the agricultural sector be affected by outmigration?

levels have increased dramatically since the 1950s, especially for women, but many observers believe rural schooling levels are now in decline. Rural local governments must fund their own schools, and many poorer areas have little resources to support education. Rural residents view schooling as a means to migrate to an urban job. In other Asian countries, rural residents see better educational opportunities in urban areas as an important motive for moving to cities. Studies of the impact of education on farmer productivity have found mixed results. Persons with the highest level of education and skill are the most likely to enter nonagricultural work, leaving the less skilled in farming. However, a general rise in rural education seems likely to improve the ability of farmers to understand and adopt new technologies and process market information.

Part-time farming in China is becoming much more prevalent as farm household members commute to off-farm jobs. New institutional innovations in land tenure may allow farm households to maintain “ownership” of their land while devoting their labor to nonfarm work. In Taiwan, for example, over 80 percent of farm households have at least one member working off-farm. The fairly uniform distribution of small land plots among farm households in China may become more skewed as labor migration and consolidation of land occurs in some villages. Marketing arrangements and contract production for processors that need steady supplies of uniform products are becoming more common, which may speed up the commercialization and modernization of farming in China, turning “peasants” into modern farmers.

Further Reading

Johnson, D.G. “Agricultural Adjustment in China: Problems and Prospects,” *Population and Development Review*, Vol. 26, 2000, pp. 319-334.

Rawski, T.G., and R.W. Mead. “On the Trail of China’s Phantom Farmers,” *World Development*, Vol. 26, 1998, pp. 767-781.

Rozelle, S., L. Guo, M. Shen, A. Hughart, and J. Giles. “New Paths and Remaining Hurdles to Rural Migration,” *China Quarterly*, Vol. 158, June 1999, pp. 367-393.

Solinger, Dorothy J. *Contesting Citizenship in Urban China: Peasant Migrants, the State, and the Logic of the Market*, University of California Press, 1999.