

SWP-757

**The Asian Experience
in Rural Nonagricultural Development
and Its Relevance for China**

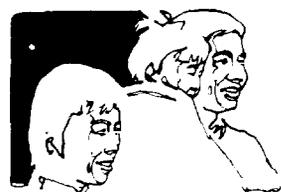
Samuel P. S. Ho

WORLD BANK STAFF WORKING PAPERS
Number 757

A Background Study
for

China: Long-Term Development Issues and Options

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Washington, D.C., U.S.A.

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Samuel P. S. Ho is associate professor at the University of British Columbia and a consultant to the World Bank.

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Abstract

This paper examines the prospects for rural nonagricultural development in China in light of the experience in other Asian developing countries. The paper reviews the Asian experience and some of the more significant issues relating to the growth, importance, and composition of the rural nonagricultural sector. It then discusses rural nonagricultural development in China, and finally, it examines the prospects and policy options for rural nonagricultural development in China. It is argued that the future pace and direction of rural nonagricultural development will be strongly influenced by government policy towards agriculture, by the pace and the extent of economic reform currently under way, and by the pattern of future urbanization. It suggests, furthermore, the prospects for rural nonagricultural development are not equally good among China's rural regions.

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Introduction

(i) Interest in rural nonagricultural development has been growing among policymakers and development economists. One reason for this is that economic development based on large-scale, urban-concentrated, and capital-intensive industries has not had the desired impact on employment and equity. Thus, the development of rural nonfarm activities, as a part of a general development program, is seen by some as an alternative strategy for development.

(ii) A related reason is the realization that in many developing countries in Asia, there are "severe limitations on the capacity of the agricultural sectors ... to absorb the existing supply of rural labor and to satisfy even minimum subsistence requirements of a large proportion of the rural population" (Shand 1983, p. 1). Increasingly, economists are realizing that their original hope for the "Green Revolution" (that is, biological-chemical innovations) to solve both production and employment problems in rural areas (as it did in rural Japan) is no longer tenable (Jayasuriya and Shand 1983). This realization comes in part because of the rapid growth in the rural population, which has greatly increased the number of people that needs to be absorbed, and in part because of the growing evidence that "the direction of government policies and the flow of likely innovations are likely to strengthen the current trends towards low labor absorption in agriculture" (Jayasuriya and Shand 1983, p. 24). Given agriculture's limited capacity to absorb labor, rural nonfarm activity assumes increased importance as an alternative or supplementary source of rural employment and income.

(iii) Another reason for the current interest is the realization that in many parts of the world, rural nonfarm activity is surprisingly important and dynamic. Given its importance and its apparent responsiveness to economic opportunities, rural nonfarm activity merits "special attention in the design of rural--and also of urban--development strategies" (Anderson and Leiserson 1980, p. 227).

(iv) This discussion of rural nonagricultural development is divided into three chapters. The first chapter attempts to summarize the available evidence on rural nonfarm (nonagricultural) activities in Asia and to examine some of the more significant issues relating to their importance, growth, and composition. First, the concept and measures of rural nonfarm activities are discussed, and the extent and growth of nonfarm activities in selected areas in Asia are examined. Next, the roles rural nonfarm activities play in the economy are identified and discussed. This is followed by a discussion of the main determinants of rural involvement in nonagricultural activities. The review then examines the implications of rural nonagricultural activities on the distribution of farm household income and on agriculture. The review concludes with a brief discussion of policies for the development of rural nonagricultural activities. The second chapter examines rural nonagricultural development in China. First, the incidence and composition of rural nonagricultural activities are described. Second, the conditions of commune and brigade enterprises, the most important component of China's rural nonagricultural activities are reviewed. This is followed by a discussion of recent policy changes towards the rural nonagricultural sector and their initial results. The third chapter examines the prospects and policy options for rural nonagricultural development in China.

1. THE ASIAN EXPERIENCE

Incidence of Rural Nonagricultural Activities

1.01 The first issue that needs to be considered is whether or not non-agricultural activities are quantitatively important in rural areas. Two major sources of information have been used to estimate their importance: population censuses and sample surveys of farm households.

1.02 Table 1, based on census results, shows that rural nonfarm activities are an important component of the rural economy. In nearly all the areas listed, one fifth or more of the rural labor force is engaged primarily in nonagricultural activities. However, for at least two reasons, these figures underestimate the importance of rural nonagricultural activities.

1.03 First, the share of the rural labor force engaged in nonagricultural activities is very sensitive to the definition of "rural." Usually, "rural" is defined to exclude small- and medium-sized market towns (settlements of 20,000-30,000 people), but these towns are closely linked to agriculture and provide essential services to the rural population, that is to say, they are effectively part of the rural sector. Thus it may be appropriate to broaden the definition of "rural" to include market towns. With this broader definition, the shares of rural nonagricultural employment are much larger, namely, between 25 and 45 percent.

1.04 Second, Table 1 does not include workers (mostly members of farm households) who participate in rural nonagricultural activities as a secondary occupation on a part-time or seasonal basis. This underestimation may be substantial. The available evidence suggests that 10-20 percent of the rural male labor force participate in nonfarm work as a secondary occupation (Chuta

and Liedholm 1979). However, because of the seasonal nature of agricultural activity, part-time nonfarm work varies significantly throughout the year (World Bank 1983).

Table 1. PERCENTAGE OF RURAL LABOR FORCE WITH PRIMARY EMPLOYMENT IN NONFARM ACTIVITIES, ASIA

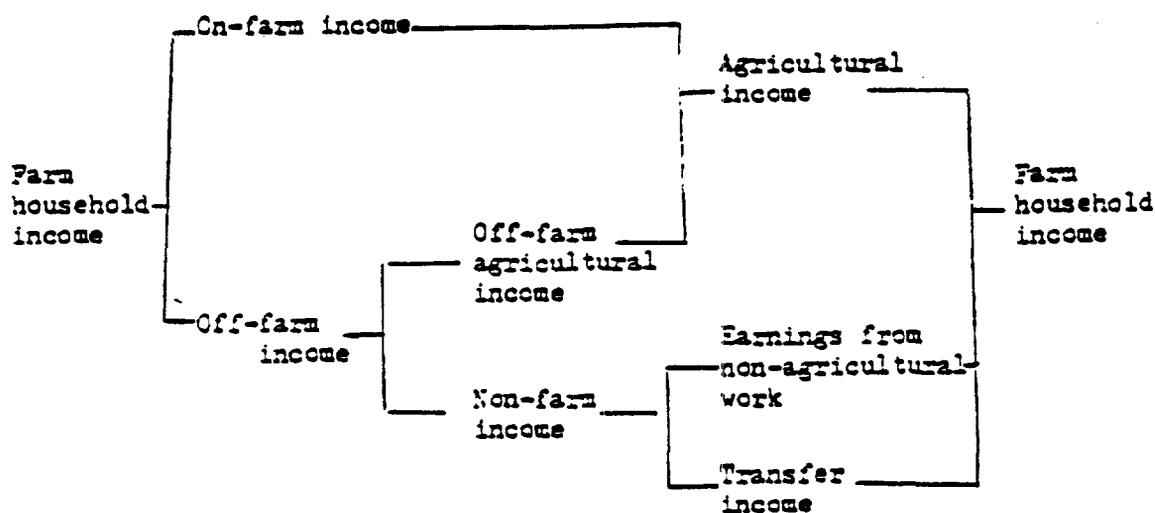
Country or area	Year	Percentage in rural nonfarm activities
<u>Rural</u>		
Bangladesh	1951	14
	1961	14
Thailand	1972	18
India	1961	18
	1966/67	20
Republic of Korea	1970	19
Pakistan	1951	27
	1961	31
Indonesia	1971	28
Philippines	1970	28
West Malaysia	1970	32
<u>Rural, Including Rural Towns</u>		
India	1966/67	24
Korea	1970	25
West Malaysia	1970	37
Philippines	1970	40

Sources: Bangladesh, India, and Pakistan (Singh 1981); all others (Anderson and Leiserson 1980).

1.05 If "rural" is defined to include small- and medium-sized rural towns and if secondary employment is also included, then perhaps 35-65 percent of the rural labor force is involved in rural nonfarm activities, on either a full-time or part-time basis. Thus, in terms of employment, nonfarm activities are certainly important in rural areas.

1.06 The surveys of farm households, which exclude rural nonfarming families, have somewhat narrower coverage than the population censuses. However, they can tell us more precisely the degree to which farm households are involved in nonagricultural work, by measuring either the employment time allocated to nonfarm activities or the income earned from nonfarm work. The two measures tell more or less the same story, but because income data are usually more detailed, only this measure is reviewed below.

1.07 Farm household surveys usually divide farm household income into on-farm income and off-farm income. On-farm income is defined as the net earnings from crop and livestock production on a family's own farm. Off-farm income refers to income received from sources other than a family's own farm, and is composed of off-farm agricultural income (earnings from work on another farm, such as earnings of hired-out family labor, draft animals, and agricultural assets such as machinery) and nonfarm income. Nonfarm income may be further disaggregated into gainful earnings from nonagricultural activities and transfer income (subsidies and remittances). The relationship among these categories is illustrated below:



Farm households' involvement in nonagricultural activities is best measured by their gainful earnings from nonagricultural work. However, many surveys have information only on off-farm income or nonfarm income and must be interpreted with caution. Where transfer income is unimportant, nonfarm income will, of course, approximate gainful earnings from nonagricultural activities.

1.08 Table 2, based on farm household surveys in various parts of Asia, indicates that nonfarm income makes up between 25 percent and 70 percent of total farm household income. Except for Korea, where transfer income, mostly remittances from farm household members working in urban areas, accounted for about 20 percent of total farm household income in 1981, transfer income appears to be relatively unimportant. Once transfer income is taken into account, the relative importance of gainful earnings from nonagricultural activities in Asia ranges from a low of 13 percent to a high of over 60 percent. Farm households in Japan have exceptionally high shares of income from nonagricultural sources, while in most other areas, this share is probably 20-30 percent.

1.09 Table 2 also documents a widely observed phenomenon in agriculture, the strong inverse relationship between farm size and off-farm activities, that is, as the farm size declines, the farm household becomes more involved in off-farm activities, in terms of both income earned from, and employment time allocated to, off-farm activities. A strong inverse relationship is also observed between farm size and nonfarm income (as well as gainful earnings from nonagricultural activities).

1.10 It is to be expected that off-farm (nonfarm) employment and income are particularly important for small and landless farm families, since access to land is the most important determinant of on-farm employment and income.

Table 2. SHARES OF OFF-FARM INCOME AND NONFARM INCOME IN TOTAL FARM HOUSEHOLD INCOME, ASIA

Country/area and farm size	Year	Percentage of off-farm income in total farm household income	Percentage of nonfarm income in total farm household income	
			Including transfers	Excluding transfers
<u>Japan /a</u> 1978				
<u>Average</u>		73.0	n.a.	n.a./b
0.1-0.5 ha		94.1	n.a.	n.a.
0.5-1.0 ha		80.7	n.a.	n.a.
1.0-1.5 ha		61.2	n.a.	n.a.
1.5-2.0 ha		48.5	n.a.	n.a.
2.0+ ha		29.2	n.a.	n.a.
<u>Thailand</u> 1978/79				
<u>Average</u>		43.3	34.7	n.a./c
<u>Korea</u> 1981				
<u>Average</u>		n.a.	32.8	12.9
below 0.5 ha		n.a.	64.0	32.6
0.5-1.0 ha		n.a.	36.6	14.1
1.0-1.5 ha		n.a.	26.1	8.5
1.5-2.0 ha		n.a.	20.9	5.8
2.0+ ha		n.a.	17.8	5.3
<u>Indian Punjab</u> 1974/75				
<u>Average</u>		n.a.	n.a.	n.a.
Below 0.1 ha		64.8	32.4	n.a.
1.0-2.0 ha		36.9	16.1	n.a.
More than 10.0 ha		12.8	2.5	n.a.
<u>Five Villages in Pakistan</u> 1968				
<u>Average</u>		n.a.	23	n.a.
Below 2.53 ha		n.a.	39	n.a.
2.53-5.05 ha		n.a.	22	n.a.
5.05-7.48 ha		n.a.	22	n.a.
7.48-10.11 ha		n.a.	8	n.a.
10.11+ ha		n.a.	6	n.a.

/a Excludes Hokkaido and remittances and other transfer income.

/b Nearly all off-farm income is believed to be from nonfarm income.

/c The evidence suggests that transfer income is negligible.

Sources: Japan: Kada 1983, Table 3; Thailand: World Bank 1983, p. 41;
Korea: Park 1983, Tables 5 and 6; Indian Punjab: Chadha 1983, Tables
4 and 5; Pakistan: Anderson and Leiserson 1980, Table 3.

But increased involvement in nonfarm activities may be either a symptom of distress or a sign of progress. In other words, in some densely populated agricultural areas, increased involvement in off-farm and nonfarm activities may be a sign of "distress adaptation to growing poverty and landlessness" (Islam 1983, p. 16) since these activities may be undertaken only as a last resort. Whether nonfarm employment is a symptom of distress or a sign of progress therefore depends very much on the types of nonfarm employment available to farm households.

1.11 What happens to rural nonfarm activities in the process of economic development? Do farm households become more involved in nonagricultural activities as the economy becomes more developed? The few aggregate time series data available suggest that the percentage of the rural labor force engaged in gainful nonagricultural work has increased over time (Leiserson 1974, Ho 1982). Cross-sectional evidence also suggests a positive relationship between the share of the rural labor force engaged in nonagricultural work and the level of per capita income (Chuta and Liedholm 1979, and Table 1).

1.12 How farm households' involvement in nonagricultural activities has changed over several decades can be documented only for parts of East Asia (Table 3). In Japan, the data suggest that, as the economy developed, farm households have become increasingly involved in nonagricultural activities. For example, in Japan, off-farm income as a share of total farm household income increased from 12 percent in 1921 to nearly 80 percent in 1980. Indeed, in Japan, farming has become a part-time activity for an increasing number of farm households. However, in Korea, even though economic development has been very rapid, farm households have not significantly increased

Table 3. GROWTH OF FARM HOUSEHOLDS' INVOLVEMENT IN OFF-FARM/NONFARM ACTIVITIES, EAST ASIA

Country/area and year	Total number of farm households ('000)	Percentage of part-time farm households		
		Total	Type I /a	Type II /b
<u>Japan</u>				
1910	5,417	31.8	n.a.	n.a.
1920	5,445	29.8	n.a.	n.a.
1930	5,511	28.0	n.a.	n.a.
1940	5,390	31.4	n.a.	n.a.
1950	6,176	50.0	28.4	21.6
1960	6,087	65.7	33.6	32.1
1970	5,402	84.4	33.7	50.7
1980	4,661	86.6	21.5	65.1

	Percentage of farm household income from:		
	<u>Off-farm</u>	<u>Nonfarm</u>	<u>Nonfarm excluding transfer income</u>
<u>Japan</u>			
1921	12.2	n.a.	n.a.
1930	21.2	n.a.	n.a.
1940	17.4	n.a.	n.a.
1950	32.5	n.a.	n.a.
1960	47.8	n.a.	n.a.
1975	67.8	n.a.	n.a.
1980	78.9	n.a.	n.a.
<u>Korea</u>			
1962	n.a.	20.4	13.2
1965	n.a.	20.8	12.4
1970	n.a.	24.1	14.2
1975	n.a.	18.1	11.9
1978	n.a.	28.1	14.7
1981	n.a.	32.8	12.9

/a Farm households whose on-farm income exceeds off-farm income.

/b Farm households whose on-farm income is less than off-farm income.

Sources: Japan: Kada 1980, Tables 3.6 and 3.7a; and Kada 1983, Tables 1 and 2. Korea: Park 1983, Table 5.

their involvement in nonagricultural activities; the rise in the share of nonfarm income in total farm household income is explained by the rapid increase in remittances. In fact, since the early 1960s, the share of gainful earnings from nonagricultural activities has remained nearly constant in Korea at 12-13 percent (Table 3). This raises two questions: (a) why farm households in Korea have not become as involved in nonagricultural activities as those in Japan; and (b) more generally, what determines the level of rural nonagricultural activities. The latter question is discussed in a later section.

Rural Nonagricultural Activities, Agriculture, and Urban Industries

1.13 The relationship between agriculture and rural nonagricultural activities is an intimate one. Agriculture is related to rural nonagricultural activities directly through its forward and backward production linkages,^{1/} and indirectly through the consumption demands of farm households. Each of these linkages is examined briefly below.

1.14 The weight of empirical evidence suggests that agriculture's forward linkages are quite important. For example, Falcon's (1967) study of Pakistan shows that the flow of crops to small-scale processing establishments (mostly located in rural areas) is more than five times that to urban, large-scale

^{1/} Many input-output studies have examined the production relationship between agriculture and industry, but have either ignored most rural nonagricultural activities or lumped them with agriculture or with urban-based industries. Consequently, direct evidence on the production linkages between agriculture and rural nonagricultural activities is quite limited. When rural nonagricultural activities have been treated separately, the production linkages between these activities and agriculture have been found to be fairly significant.

processing plants. There are also good a priori reasons to believe that forward linkages are strong. Because agriculture is a spatially dispersed activity, because crops are generally bulky and heavy, because some crops are highly perishable (for example, sugarcane must be processed within one day of harvest), and because there is usually considerable reduction in weight and volume during processing, transport costs can be greatly reduced if agricultural processing is done close to the source of supply. For this reason, most agricultural processing activities are dispersed in rural areas. Agriculture also provides strong forward linkages to rural transport and rural marketing activities.

1.15 The available evidence suggests that backward linkages may be important in some instances. In India, Pakistan and Thailand, traditional tools and farm equipment are usually made by rural craftsmen (Johnston and Kilby 1975). There is also evidence that some modern farm implements (pumps and motors) are produced in rural towns. Many modern agricultural inputs, such as chemical fertilizers and tractors, are either imported or produced by urban-based industries, but even for these, distribution and servicing may create rural nonagricultural employment opportunities.

1.16 Perhaps the most important linkage between agriculture and rural nonagricultural activities is consumer demand. In developing countries, farm households "spend about 30-40 percent of their incomes on nonfood items and around 10-15 percent on foods requiring substantial processing" (Anderson and Leiserson 1980, p. 236). It is not known to what extent the rural demand for nonfood goods and services results in rural nonagricultural activities, but there are good a priori reasons to believe that this demand contributes significantly to rural nonagricultural activities. Anderson (1982), Ho

(1982), and others have noted that for many nonfood goods, the transport and marketing costs between urban and rural areas are high (though falling) in many developing countries, so that local manufacturing on a small scale may be more efficient than large-scale production in urban centers. Of course, transport and marketing costs may never fall sufficiently to justify centralized, large-scale production of some goods (such as bulky and heavy goods such as building materials or highly perishable goods such as ice or soybean curds). Furthermore, there is sometimes a strong need for frequent face-to-face contact between producers and consumers of some goods, which tends to favor local, small-scale production. Finally, service activities (transport, trade, construction, and personal services) are, by their nature, linked to local markets.

1.17 These direct and indirect linkages with agriculture are reflected in the structure of rural nonagricultural activities in most developing countries. Anderson and Leiserson (1980) report the general composition of rural nonagricultural employment to be about one third in manufacturing and the remaining two thirds in services of all types. "Within manufacturing most rural employment is accounted for by four broad groups of activities: food processing; textiles and wearing apparel; wood, including sawmilling, furniture making, and general carpentry; and metalworking, including blacksmithing, welding, fabrication and assembly work for buildings, machines, tools and equipment. All four categories appear to have retained their importance in countries which have reached quite different levels of development.... In construction, half of the employment is typically in the construction of dwellings and farm buildings; the remainder is largely in roads and civil works. In commerce, retail trade accounts for three quarters of total

employment; the other quarter is in trade and financial services.... Half of the employment is typically in business, repair, community, personal, and various recreational services" (Anderson and Leiserson, 1980, pp. 233-234).

1.18 Rural nonagricultural activities sometimes exist to serve external (both foreign and domestic) markets. In some economies, a substantial proportion of the handicraft commodities produced in rural areas is for urban and international markets. For example, in Iran, handicrafts (the most important being carpets) are the largest export category after petroleum, and 60 percent of handicraft production is done in rural areas (Dhamija 1976a). In India and the Chiangmai area of northern Thailand, production of rural handicrafts is also particularly important for export or urban consumption. The limited evidence available suggests that the export market for handicrafts is likely to expand fairly rapidly as income in the developed countries increases (Huddle and Ho 1972). But this does not necessarily mean strong export opportunities for rurally produced handicrafts.

1.19 There are also production linkages between urban industries and rural nonagricultural activities, the most important probably being subcontracting arrangements between wholesalers (and sometimes manufacturers) and individual households and cottage enterprises in both rural and urban areas. Many of these arrangements do not involve rural nonagricultural activities, but some do provide employment and income to rural households. In Asia, subcontracting arrangements have been particularly important in Japan (Kaneda 1980). They have been declining, but are still important in rural Japan, particularly in remote villages (Kada 1980). The limited evidence available suggests that subcontracting in other parts of Asia is less pervasive than in Japan (Chuta and Liedholm 1979).

1.20 Some rural nonagricultural activities involve more than just traditional skills and rudimentary cottage manufacturing. Factories, shops and offices (such as government offices) located near villages offer year-round, "urban-type" employment on a regular basis. In Japan and the Indian Punjab, an increasing number of industrial enterprises has appeared in rural areas alongside the main railroads and highways, and apparently a significant proportion of their work force comes from rural households. While these factories can be defined as "rural" because they provide employment and income to rural households, operationally they are urban. Sometimes farm household members commute to jobs in urban areas. The very rapid growth in farm household income in Japan can be attributed largely to the increased involvement of farm households in "urban-type" or "urban-related" jobs. For example, Kada has noted that in Japan, "the variety of off-farm jobs, in the postwar period especially, has widened from rural or agriculture-related employment to include urban manufacturing or service-related jobs" (Kada 1983, p. 2).

Main Determinants of Rural Nonagricultural Activities

1.21 Research on the determinants of rural nonagricultural activities is in its infancy. Thus, many of the points raised in the following discussion are conjectural and need to be tested empirically.

1.22 The extent of rural involvement in nonagricultural activities is determined by a combination of "push" and "pull" factors. The most important "push" factor is the limited capacity agriculture has to absorb labor with a given amount of arable land. Thus, when population density rises and farm size falls, farm households come under increased pressure to find ways of supplementing farm income. The "pull" factors are related to the availability

of attractive, off-farm nonagricultural job opportunities. The relative importance of these two sets of factors depends partly on the stage of economic development and partly on the intensity of population pressure on land resources.

1.23 In the very early stage of development, when the economy is predominantly agricultural and when agriculture is traditional and mainly for subsistence, the rural sector is essentially a self-contained, "closed" economy. In this environment, most farm households produce both agricultural and nonagricultural goods for their own consumption. There is limited division of labor, because rural markets are small and isolated. Thus, any non-agricultural activities outside the farm household are mainly small, family-operated cottage industries. On the whole, these activities remain subordinate to agricultural activities and are undertaken only after the labor requirements of agriculture are met. They are characterized by seasonal fluctuations, primitive technology, and low productivity (on average, lower than agricultural productivity). Thus, in a subsistence economy, rural nonagricultural employment is "supply determined," that is to say, it is the residual labor after the needs of agricultural production are satisfied. If rural non-agricultural employment is "supply determined," its growth (that is, when a larger proportion of the rural population becomes dependent on low-productivity, nonagricultural activities), in the absence of agricultural development, is probably a sign of rural distress, since it is largely the result of "push" factors.

1.24 Once the economy progresses beyond the subsistence stage, the demand or "pull" factors become more important in determining the extent of rural involvement in nonagricultural activities. Because of the many direct and

indirect linkages between agriculture and rural nonagricultural activities (discussed in the previous section), the development of nonagricultural activities is believed to be closely related to agricultural development, because agricultural growth and rising farm incomes create a favorable demand environment for the development of rural nonagricultural activities. There is considerable evidence to support this position in Asia. In Pakistan and India, for example, the production of diesel and electric tubewell pumpsets has grown rapidly in regions that have adopted improved agricultural practices (Child and Kaneda 1975, and Cartillier 1975). Studies of farm household expenditure have also shown that the consumption of many nonfood items tends to increase at a faster rate than household income. For example, in the Indian Punjab, for every 1 percent rise in farm household income, clothing consumption increases by 1.76-1.92 percent, footwear consumption by 1.54-1.57 percent, and miscellaneous goods and services by 1.23-1.30 percent (Bhalla and Chadha 1981). In the Philippines, "studies in barrios where improvements in rice production have taken place in the past five or six years show that substantial proportions of farm households have improved their houses, built new ones and purchased household furnishings and equipment.... Expenditure on education, food, farm tools and equipment and transport also increased" (ILO 1974, p. 511). Thus agricultural growth and rising farm household income are likely to generate considerable demand for nonagricultural goods and services in rural areas.

1.25 Agricultural development and increased commercialization are likely to affect farm households in different ways. For some, perhaps many, farm households, agricultural development may actually decrease their involvement in rural nonagricultural activities. One consequence of agricultural develop-

ment is increased trade both within the rural sector and between the rural and the urban sectors. Increased commercialization increases the size of the market and permits greater specialization within the rural sector. For some farm households, this means a reallocation of resources (primarily labor time) from handicrafts and other nonagricultural activities to crop and livestock production; for others, it means specializing in rural nonfarm activity. Thus, other things being equal, increased rural commercialization and specialization are likely to reduce rural nonagricultural activity as a part-time or secondary occupation, but to encourage rural industry as a specialized activity.

1.26 Despite its importance, agricultural development cannot, by itself, explain why rural involvement in nonagricultural activities continues to rise in some parts of Asia, for example, in Japan. Indeed, one would expect rural nonagricultural activities to be adversely affected by continued economic development and increased domestic and international trade. New products, introduced to the countryside by rural-urban trade, frequently replace traditional products produced in rural areas (World Bank 1983a). In time and with continued development, the transport and the marketing costs of many goods also decline to the point where small local manufacturers no longer have a cost advantage in competing with imports and the larger urban-based industries (Anderson 1982). When this occurs, some traditional manufacturing activities in rural areas decline and others disappear. Thus, as an economy becomes more developed and industrialized, rural nonagricultural development will continue only if rural nonagricultural activities diversify, by becoming less dependent on rural-type and agriculture-related employment and more dependent on urban-type and urban-related jobs. In other words, in the more

advanced developing countries, the extent of rural nonagricultural development is likely to be determined by rural households' access to urban-type jobs, which in turn is closely related to their distance from urban areas.

1.27 Considerable evidence supports the view that proximity to urban areas is an important determinant of both the extent of rural involvement in nonagricultural activities and the quality of that involvement (as measured, for example, by the average income earned from nonagricultural sources). In Thailand, for example, farm households close to urban areas (particularly Bangkok) have broader opportunities for home production as well as other nonagricultural activities but particularly for salaried employment (World Bank 1983a).

1.28 The evidence from Japan suggests that both "pull" and "push" factors are at work. Table 4 shows the involvement of farm households in off-farm activities and the types of employment taken in four types of villages in Shiga Prefecture. The data indicate that while both location (namely, proximity to urban areas and therefore to the more attractive off-farm employment opportunities) and the availability of agricultural resources influence the share of off-farm income in total farm household income, the latter appears to be the more important factor. Although a remote location does not significantly reduce the share of off-farm income, it does lower the absolute level of off-farm income. In other words, the "quality" of rural involvement in off-farm activity appears to be higher in villages closer to urban areas. In remote villages, 64-80 percent of family heads involved in off-farm activities were either self-employed or employed as unskilled laborers, but in villages close to urban areas, 53-63 percent held jobs as professional, clerical, or skilled workers and only 33-47 percent were self-employed or employed in unskilled blue-collar jobs.

Table 4. OFF-FARM EMPLOYMENT AND INCOME CHARACTERISTICS
OF FOUR TYPES OF VILLAGES: SHIGA PREFECTURE, 1976 /a

Employment or income characteristics	Proximate-abundant	Proximate-scarce	Location - resource type	
			Remote-abundant	Remote-scarce
Heads working off-farm (%)	82.8	87.0	80.0	94.8
Spouses working off-farm (%)	42.4	56.3	85.3	90.8
Off-farm jobs taken by family head (%)				
Professional managerial	7.5	10.0	0.0	1.4
Clerical/sales service	22.6	23.3	7.1	12.3
Blue-collar				
Skilled	0.0	3.3	0.0	1.4
Semiskilled	22.6	30.0	14.3	20.5
Unskilled	34.0	23.3	39.3	27.4
Self-employed	13.2	10.0	39.3	37.0
(N=) /b	(53)	(60)	(28)	(73)
Mean family income ('000 yen)				
Net farm income	988	453	1,099	380
Off-farm income	2,445	3,097	2,067	2,184
Total family income	3,433	3,550	3,166	2,564
Per capita family income	798	790	660	649
Share of off-farm to total family income (%)	71.2	87.2	65.3	85.2
(N=) /b	(64)	(69)	(35)	(77)

/a Shiga is located in central Japan. It was chosen for the survey because it is a typical rice-growing area, contains a variety of topographical and geographical conditions, and has had a variety of off-farm employment opportunities, especially since the 1960s.

/b Figure in parentheses is the number of farm households in each category.

Source: Ryohei Kada, Part-Time Family Farming (Tokyo: Center for Academic Publications Japan, 1980), Table 8-7.

1.29 In villages close to urban areas (particularly where agricultural resources are also abundant), a much smaller percentage of wives participate in off-farm work, which "implies a significant contribution of housewives to the relatively larger-size farm operations ..." (Kada 1980, p. 206). And, of

those who had off-farm employment, about half were self-employed at home, so that they could take more responsibility for the farm work. In areas where off-farm employment opportunities are attractive, women are apparently substituting for men in doing farm work so that the men can get the better off-farm employment.

1.30 Given that proximity to urban areas appears to be an important determinant of the level and the quality of rural involvement in nonagricultural activities, the pattern of urbanization/industrialization--whether it is concentrated or decentralized--will also affect rural nonagricultural development. That urbanization/industrialization has been concentrated in Korea appears to be a major reason rural involvement in nonagricultural activities has remained essentially unchanged in Korea since the early 1960s (Table 3), even though its pace of agricultural development and industrialization has been rapid (Ho 1979, 1982, and 1983). In contrast, decentralization of industry and development of roads and public transportation explain the extremely high involvement of Japanese farm households in nonagricultural activities (Kada 1980 and 1983). In the Indian Punjab, where cities and towns are well distributed, many workers also commute to industrial or urban-related jobs from their rural residence (Chadha 1983 and Singh 1981). It appears that when urbanization is decentralized and when a fairly efficient transport system exists, farm household members are able to accept full-time nonagricultural employment by commuting or to participate in nonagricultural activities on a part-time basis while continuing to work on the family farm. In other words, a decentralized pattern of industrialization has enabled many farm household members to shift from agricultural to nonagricultural employment without changing their residence.

1.31 Access to urban-type jobs explains not only the greater involvement of Japanese farm households in nonagricultural activities, but it also helps to explain the enormous difference in the absolute level of nonagricultural income earned by the average farm household in Japan and that earned in Korea and Southeast Asia. Oshima (1983) estimates that the absolute level of income earned from nonagricultural sources by the average farm household in Japan is 30 times that of Korea and 40-50 times that of Southeast Asia. The difference is due in part to the greater involvement of Japanese farm households in nonagricultural activities, but also to the much greater number of Japanese farm household members employed in modern urban-type jobs.

1.32 Supply factors are also important. One, the relationship between population pressure and the need and willingness of farm household members to seek nonagricultural employment, has already been mentioned. Two other aspects of rural labor markets are noted below.

1.33 The willingness of farm households to supply labor for off-farm employment is in part influenced by whether such employment competes or conflicts with farm work. Since seasonality is a basic characteristic of agricultural production, the availability of farm household labor for non-agricultural activities is also likely to fluctuate seasonally. While some rural nonagricultural employment opportunities are available on a seasonal basis (probably mostly self-employed activities), many are not. Since most enterprises cannot afford to leave their capital unused or underutilized for parts of the year, their demand is for year-round workers. Thus, the pace of rural nonagricultural development is likely to be influenced by the ability of farm households to release labor for nonagricultural employment on a year-round basis. This ability can be enhanced by the substitution of capital for

labor in agriculture. Indeed, the rapid mechanization of agriculture in Japan, made possible in part by the declining cost of these labor-saving innovations, is one reason why so many farm household members (including male family heads as well as women and children) have been able to work in nonagricultural activities on a regular basis, while helping on the farms on a part-time basis (Oshima 1983 and Kada 1980 and 1983). Thus, in areas where agricultural and nonagricultural activities compete for rural workers, the availability of labor-saving innovations to agriculture and the speed and effectiveness with which they are used will largely determine whether part-time farming can be sustained and rural involvement in nonagricultural activities increased.

1.34 Another factor often cited as a determinant of rural involvement in off-farm employment is education, since education not only improves an individual's qualifications for nonagricultural jobs, but also increases his ability to allocate his worktime efficiently among income-producing activities (Huffman 1980). The impact of education on off-farm employment has been studied in developed countries. These studies have shown that farm household members who participate in off-farm work are generally those with higher education (Gisser 1965) and that farmers with more education also tend to reallocate their labor from farming to off-farm employment faster than those with less education (Huffman 1980).

1.35 The importance of education in determining rural involvement in nonagricultural activities in less developed countries has not been carefully studied. However, since in the early stage of development many rural nonagricultural activities require only unskilled labor, education probably only becomes important once "high-quality" and urban-type employment opportunities

are available. Thus, education is probably more important in economies that have experienced some years of development than in those that are still in the early stages of growth. In developing countries, the younger generation is usually significantly better educated than the older generation. Thus, the effect of education on the participation rate in nonagricultural activities among the rural young is probably also more significant (Castillo, Gascon, and Jayasuriya 1983).

Some Implications of Rural Nonagricultural Development

1.36 In this section we examine the implications of rural nonagricultural development on the distribution of farm household income and on agriculture.

1.37 Access to farm land is probably the single most important determinant of farm income. Surveys of farm households have consistently found that the average level of farm income and of per capita farm income increases with farm size. Since both off-farm income and nonagricultural income vary inversely with farm size, one of the most striking contributions of off-farm (nonagricultural) income is its tendency to equalize average total farm household incomes across farm size groups. Opportunities for nonagricultural employment permit farm households with small farms to raise their income by using labor to compensate for their lack of land.

1.38 Because off-farm income increases total farm household income and tends to equalize average total farm household incomes across farm size groups, it is commonly believed to help improve income distribution, both within the rural sector and between the urban and rural sectors. However, the limited evidence available does not completely support this view. In

Kelantan, Malaysia, Shand and Chew (1983) found that while off-farm income probably reduced the urban-rural income gap, it did not improve the distribution of income within the rural sector (even though small and marginal farmers and tenants benefited most from off-farm earnings). This was because the distribution of off-farm income was more unequal than that of net farm income, so that "while the addition of off-farm income largely eliminated the inequalities of income distribution from farm sources, those earnings themselves introduced another source of distributional inequality, which ... proved to be more substantial than those influencing total net farm income distribution. This can be attributed to the fact ... that off-farm income was the dominant income source for the great majority of Kemubu households" (Shand and Chew 1983, p. 21). Thus, the effect of off-farm employment on the distribution of total farm household income depends on how equally net farm income and off-farm income are distributed and their relative importance.

1.39 Rural nonagricultural activities may affect agriculture directly, through a reallocation of resources, and indirectly through investment. Increased involvement in nonagricultural activities by farm households can affect agriculture adversely for several reasons: nonagricultural activities may attract the more able and productive family members, they may prevent some family members from working on the farm during the peak agricultural seasons, they may divert scarce supervisory skills from farming, and by attracting labor from farming, they will also reduce the application of agricultural inputs that are complementary to labor. In other words, the growth of off-farm nonagricultural employment may reduce both the quantity and the quality of inputs to agriculture. However, these adverse effects may be offset by the indirect impact of off-farm employment. Participation in nonagricultural

activities increases total farm household income, and some of the increase may be used for labor-saving and yield-raising investments in agriculture.

1.40 The Asian experience suggests that the importance of each effect depends on the stage of development of the rural nonagricultural sector and the availability of surplus labor in agriculture. In Japan, the multiple cropping index is much lower for part-time type II farm households (see Table 3 for definition); land productivity (as measured by net agricultural product per unit of land) realized by full-time and part-time type I farm households is nearly twice that of part-time type II farm households (Kada 1980 and 1983). Similar evidence is also found elsewhere (Ho 1983). Because rice farming in Japan and other parts of East Asia is now highly mechanized, even those who are fully employed in nonagricultural activities can continue to grow rice by working on weekends and during holidays. For this reason, part-time farm households, particularly the type II households, are involved primarily in rice cultivation. By contrast, full-time farm households have tended to select the more labor-intensive (and in some cases also the more capital-intensive) farm operations that yield higher agricultural income (such as livestock and vegetables). Thus, the growing involvement of rural households in nonagricultural activities in Japan, through its effect on rural labor allocation and on the agricultural output-mix, has apparently affected agricultural production adversely.

1.41 In South and Southeast Asia, partly because the rural nonagricultural sector is not as well developed and partly because there is still some slack in the rural labor market, off-farm nonagricultural employment does not appear to have had the same adverse effects on agriculture. However, labor shortages are beginning to occur during the peak seasons. Nevertheless,

because the rural population in South and Southeast Asia is still growing rapidly and because there are still many adjustments farm households can make to meet the peak demand for agricultural labor (such as institutional adjustments like labor exchange and the introduction of labor-saving devices), continued rural nonagricultural development is not likely to affect agriculture adversely in the near future (conclusion of the Conference on Off-Farm Employment in the Development of Rural Asia, 1983).

Government Policies and Rural Nonagricultural Development

1.42 Rural nonagricultural activities have, until quite recently, been largely neglected by policymakers, though of course not unaffected by government policies. Indeed, agricultural, industrial, regional development, urban, and trade policies have all indirectly influenced rural nonagricultural development.

1.43 In most developing countries, particularly the poorer ones, rural nonagricultural development is constrained primarily by a lack of demand. Because of the close linkages between agriculture and the rural nonagricultural sector, agricultural development, especially when the benefits are widely shared, is probably the most effective way to stimulate the demand for rural nonagricultural goods and services. But some developing countries have ignored agricultural development, while others have adopted conflicting policies--on the one hand promoting agricultural development through direct investment and on the other pursuing price, trade, industrial, and exchange rate policies that distort incentives and discourage agricultural development.

1.44 Distorted prices have also influenced industries to expand along a more capital-intensive growth path, a bias that has been reinforced in some countries by an excessive preoccupation with heavy industry. Measures introduced to promote industrial development have discriminated against the small/medium enterprises. For example, in some countries, tax incentives and subsidies are available only to enterprises above some minimum size (Chuta and Liedholm 1979). Foreign trade regimes that employ rationing schemes for imports, combined with overvaluation of the exchange rate, tend to favor large enterprises that have greater access to political power, as does a policy of low interest rates coupled with credit rationing. Complicated administrative and registration procedures also tend to work against the development of small enterprises. The consequence is a pattern of industrialization that favors the growth of large-scale, urban-based industrial enterprises rather than small/medium enterprises that are more likely to be located in small towns and rural areas. In some countries, another consequence of the urban, large-scale, and capital-intensive bias is a pattern of concentrated industrialization/urbanization. Given this regional imbalance, most rural households can only participate in the increased nonagricultural activities by migrating to the cities.

1.45 Therefore, much can be done to promote rural nonagricultural development indirectly: such as adopting a more favorable policy towards agriculture; designing agricultural development programs that benefit a larger number of small-scale, low-income farmers who are more likely to generate demand for rural nonagricultural goods and services; reducing price distortions and thus creating a less hostile economic environment for rural development and for small/medium enterprises; and planning regional development with

greater care so as to avoid excessive urban and industrial concentration. In other words, a great deal of rural nonagricultural employment may be created if agriculture and the rural nonagricultural sector are encouraged to grow in a mutually reinforcing manner. This conclusion is supported by the exceptionally rapid rural nonagricultural development experienced in recent decades by regions that have followed a more balanced development policy (Binswanger 1983).

1.46 What can governments do directly to assist rural nonagricultural development? Various types of direct assistance have been suggested and tried (World Bank 1978b, Chuta and Liedholm 1979, Dhamija 1976, Ho 1977, and Gupta n.d.). They fall roughly into three categories: credit, training-technical assistance, and infrastructure-common facilities.

1.47 Credit. Because the rural nonagricultural sector usually has access only to the highly imperfect, informal money market, where interest rates are exorbitant, the provision of credit is often suggested as one way of providing assistance. An important issue is whether the demand for credit is likely to be substantial. Evidence suggests that establishment and expansion of rural enterprises are usually self-financed, either from family savings or from reinvested profits (Ahmed et al. 1978). While this could mean that self-financing and informal credit sources are sufficient to satisfy the capital needs of rural enterprises, it could also be an indication of the scarcity of formal credit in the rural nonagricultural sector. Supporting the latter view, rural nonfarm entrepreneurs invariably identify credit shortages as their greatest perceived problem (Chuta and Liedholm 1979 and Ho 1977).

1.48 On the supply side, the issue is how to provide credit. Because rural enterprises are diverse and widely dispersed, many types of credit

schemes may be necessary. Banking institutions and credit cooperatives can be useful channels for providing credit, as are extension agencies and trade associations. To ensure efficiency, credit must be allocated to the rural nonagricultural sector at competitive, and not preferential, rates. Indeed, because of higher administrative costs and perhaps greater risks, the interest charged to rural enterprises may need to be higher than that charged to large-scale enterprises. However, most of the existing schemes provide credit to rural enterprises at subsidized rates (Gupta n.d., Park 1983, and Ho 1977) because lower rates are needed to offset existing distortions, namely, the subsidies, low interest rates, and protection given to large-scale, urban-based enterprises. Requirements for collateral need to be flexible, since most small rural establishments are unable to satisfy the strict requirements used by banks in developing countries. Rather than judging a loan application by the soundness of the collateral offered, attention needs to be given to the quality of the venture and the ability of the entrepreneur-borrower.

1.49 Training and Technical Assistance. In some developing areas, illiteracy, shortages of basic skills, and lack of technical and management know-how are the main obstacles to rural nonagricultural development. One common method used to combat illiteracy while developing basic skills is to mix vocational training with formal education. Programs to upgrade traditional skills are also popular. India, for example, has been fairly successful at developing traditional village industries and keeping them competitive by providing modern power tools and by training artisans and craftsmen in improved techniques (Gupta n.d.). But it is also important to provide training in skills that are unrelated to traditional rural industries but useful in rural development (such as repair of bicycles, motorcycles, and agricultural

machinery) and to provide technical assistance and management training (such as advice on quality control, product design, and equipment, as well as training in bookkeeping and other simple management techniques) to rural entrepreneurs interested in new lines of activity. The cost of training and extension services may be quite high; ways of lowering the cost include use of mobile units and providing some services through the existing agricultural extension system.

1.50 Rural Infrastructure and Common Facilities. Well-developed rural infrastructure is essential to rural nonagricultural development. Among the main beneficiaries of rural electrification are small manufacturing and processing enterprises, shops, and service establishments. Rural roads facilitate the movement of raw materials to factories in rural towns and of final products to central markets, enlarge the size of the rural markets and the area from which rural enterprises can attract labor, and improve rural households' access to education, training, health, and social services. Improved infrastructure also encourages nonfarm activities to concentrate in small towns, leading to economies of scale and external economies. The return on investment in rural infrastructure can be quite high, since it not only facilitates the development of small towns and rural nonagricultural activities, but also serves the production and marketing needs of agriculture.

1.51 Two observations are frequently made about cost. The first is that "costs can be cut substantially by simplifying or reducing the quality of infrastructure" (World Bank 1977, p. 30), for example, installing small hydro or diesel generators instead of relying on electricity from the grid, and building lower-grade roads. Since high-quality infrastructure is not always required or justified, it is important to know and to consider carefully the

trade-off between quality and cost. The second observation is that the cost of constructing rural infrastructure may be reduced by using underemployed farm workers during their slack seasons. This has the additional advantages of increasing rural income directly in the short run, and in the long run of improving farm households' income indirectly, by making additional income streams more accessible.

1.52 Providing rural enterprises with common facilities is another way of promoting rural nonagricultural development. Perhaps the best-known common facility is the rural industrial estate. Typically, the estate provides sites for manufacturing enterprises along with the supporting infrastructure (such as electricity, water, communications, and sewage treatment). Some estates also provide common heat treatment and testing facilities. Rural estates have been established in various parts of Asia; some have been successful but many are underutilized (World Bank 1977, Gupta n.d., and Ho 1977). Many nonfarm activities (such as agricultural processing and service-oriented activities) are best located outside industrial estates. Problems experienced by enterprises in rural industrial estates are lack of access to markets and supplies, and difficulties in attracting sufficient workers from the surrounding rural areas. When rural infrastructure is rudimentary, the economic justification for establishing rural industrial estates seems to be rather weak; but when it is well developed and enterprises have better access to central markets and specialized services and rural workers can more easily commute to work, rural industrial estates may be an effective way of attracting to the countryside industries that depend on cheap land and labor.

1.53 How effective are these direct assistance programs? The evaluation of one such project in Northern India concludes that "the investment was

socially beneficial," and the general assessment of government policies and programs to promote rural industrialization in the provinces of Punjab and Haryana is that "while [they] seemed to have generally helped the development and growth of village and artisan-oriented industries, their contribution to the modern small-scale industries is limited" (Gupta n.d., p. 112). But the available evidence is too limited to permit firm conclusions.

1.54 On a more general level, the following observations may be made:

- (a) Given that the rural nonagricultural sector is composed of many small, widely dispersed establishments, direct intervention by governments is likely to be difficult. It is even more difficult without an institutional system responsive to local needs and capable of delivering assistance.
- (b) The impact of direct assistance projects on rural nonagricultural development is likely to be greater the more favorable the macro-economic environment for rural nonagricultural activities. As one report puts it, "whether ... projects (to provide development assistance directly to rural nonfarm activities) are economically feasible, and what form they should take, cannot be determined without an examination of the macroeconomic context in which they must function. In situations where this context acts to depress the growth of rural small-scale activities, it follows that the demands for various supporting services provided by the projects--in the form of credit, training, trading, research, and even infrastructural services--are correspondingly depressed, with the result that the projects are difficult to justify on economic or social grounds. The converse is true when the macroeconomic context is

more conducive to stimulating employment and a balanced development of large- and small-scale enterprise" (World Bank 1977, p. 28).

- (c) The appropriate policy package for promoting rural nonagricultural development depends on the level of development. In backward areas, developing agriculture is probably the most effective way of stimulating rural nonagricultural activities, so a strong agricultural policy is also a favorable policy for rural nonagricultural development. In more developed areas, the geographic and sectoral patterns of industrialization are more important. The kind of direct assistance needed also depends on the level of development and actual local conditions.

2. RURAL NONAGRICULTURAL ACTIVITIES IN CHINA

Incidence and Composition

2.01 Table 5 presents the composition of China's rural labor force as reported by the 10 percent sample tabulation of the 1982 population census. Rural excludes shi (cities) and zhen (statutory towns) but includes small towns not formally organized as zhen and market towns. This definition appears to be close to the broad definition of rural used in Table 1. The proportion of China's rural labor force that is engaged primarily in nonagricultural activities was 12.2 percent in 1982, significantly below the 20-40 percent found in most other parts of Asia (Table 1).

2.02 As in Table 1, the figures in Table 5 do not include workers who participate in rural nonagricultural activities as a secondary occupation on a part-time or seasonal basis. Part-time workers are sometimes used by commune-

Table 5. STRUCTURE OF RURAL LABOR FORCE CHINA, 1982

	All counties (excluding towns)	
	Million	Percentage of total
Total labor force	407.2/a	100.0
Agriculture	357.5	87.8
Nonagricultural activities	49.7	12.2
Industry	24.9	6.11
Construction	4.1	1.00
Transport and communication	2.1	0.52
Commerce and commercial services	6.6	1.61
Education, health, social services	6.6	1.61
Government	2.4	0.60
Others	0.1	0.02

/a Sample figure times 10.

Source: "Main Figures from the 10% Sample Tabulation of the 1982 Population Census of the People's Republic of China," pp. 342-347.

brigade enterprises (CBEs).^{2/} Extensive part-time employment also exists in such nonagricultural sideline activities as trade, food and drink, and services (e.g., barbershops, bathhouses, laundry shops, and repair services). There may be other nonagricultural activities where part-time participation is important. For example, rural residential construction and the construction and maintenance of rural roads are generally done by agricultural workers working on a part-time basis during the slack season (World Bank 1982). It is estimated that the annual level of rural residential construction in the past

^{2/} Not all CBEs are in nonagricultural activities. In early 1984, shedui qiye (CBEs) were renamed xiangzhen qiye (township-town enterprises). Sometimes they are also called xiangcun qiye (township-village enterprises). For elaboration, see para. 3.08.

several years, if done by full-time construction workers, would have required a work force of 10 million. Part-time work undoubtedly also exists in education, public health, and public services. The inclusion of this secondary employment would probably increase significantly the proportion of China's rural labor force involved in nonagricultural activities. But there is no reason to believe that secondary employment in nonagricultural activities is more extensive in China than in other parts of Asia.

2.03 The above assessment does not consider the rural labor mobilized annually in the winter to construct water conservancy and land improvement projects. In the past, such activities have absorbed vast amounts of manpower during the slack winter months. Perhaps over 100 million people were mobilized each winter during the mid- and late 1970s. For example, Rawski (1979) estimates that rural workers contributed about 3.3 billion work-days of labor during the winter construction campaign in 1975. The winter construction campaign has declined in intensity in recent years, but may continue to absorb a fair amount of labor. Because these massive water conservancy and land improvement projects are unique to China and because they are so closely related to agriculture, it is probably appropriate to exclude them from the rural nonagricultural sector. (Others have come to the same conclusion, see Rawski 1979.)

2.04 Rural involvement in nonagricultural activities may also be gauged from the viewpoint of rural income. In 1981, approximately one third of the gross receipts/revenue (zong shouru) from all levels of the commune sector (i.e., the commune, the brigade, and the production team) was generated by the commune- and brigade-operated enterprises (Statistical Yearbook of China 1981, p. 198). This frequently used measure of rural nonagricultural activities is

misleading, however, because it reflects gross receipts rather than net earnings, because not all commune and brigade enterprises are involved in nonagricultural activities, and because peasants households are also involved in activities outside the collective sector. For a more accurate picture, information is needed about the source of peasant household income.

2.05 Each year the State Statistical Bureau surveys a large number of peasant households selected from China's 29 provinces, municipalities and autonomous regions. Unfortunately, the average share of peasant income derived from nonagricultural sources cannot be estimated from the published data (Beijing Review October 24, 1983). However, it is possible to deduce this information for Hubei, a province that is neither very prosperous nor very poor. In 1981, the per capita gross value of industrial and agricultural output was Y 760 in Hubei and Y 752 nationally. In the same year, the gross value of agricultural output per person in rural areas was Y 278 in Hubei and Y 270 nationally. Given its "average" economic status, Hubei is probably not a bad proxy for China as a whole.

2.06 Table 6 presents the per capita income of peasant households in Hubei by source. The Chinese distinguish three main categories of income: (i) distribution from the collective sector, (ii) sideline income (i.e., net earnings from own-account activities), and (iii) other nonborrowed income (e.g., remittances, gifts, state subsidies, salaries of staff and workers, receipts from secondhand sales and, most recently, the distribution of "income" from the difference between the actual price received from the sale of agricultural goods and the internal price used to calculate the distribution of collective income). Table 7 identifies gainful earnings from nonagricultural activities for these three income categories. Of course, not all

**Table 6. PER CAPITA INCOME OF PEASANT HOUSEHOLDS
BY SOURCE OF INCOME, HUBEI
(Y)**

	1954	1956	1964	1974	1979	1982	
A. Income from collectives	1.10	59.90	74.50	91.10	114.46	161.85	
1. Commune/brigade enter- prises	-	-	1.12	1.82	3.36	6.31	
a. (Nonagric. enterpr.)	-	-	(1.01)/a	(1.64)/a	(3.10)/b	(5.98)/c	
2. Others /f	-	-	73.38	89.28	111.10	155.54	
B. Net sideline earnings	75.80	27.40	34.20	11.57	38.96	100.21	
1. Agriculture, forestry, fishing, hunting	69.85	23.56	31.53	10.65	36.50	75.98	
a. Revenue	76.40	28.20	37.60	22.35	47.97	98.26	
b. Expenses /g	6.55	4.64	6.07	11.70	11.47	22.29	
2. Nonagricultural activities	5.95	3.84	2.67	0.92	2.46	24.22	
a. Revenue	6.50	4.60	2.90	1.19	3.78	27.37	
(i) handicrafts	4.60	1.40	1.50	1.19	1.19	3.37	
(ii) construction & transport	1.50	3.10	0.60	-	} 2.59	19.12	
(iii) commerce & restaurants	} 0.40	0.10	0.80	-		}	2.92
(iv) others							1.96
b. Expenses /g	0.55	0.76	0.23	0.27	1.32	3.15	
C. Other income (excludes borrowing)	6.60	3.60	9.30	3.59	8.39	24.03	
1. Salaries & wages	0.80	1.30	1.70	1.50/d	1.70/e	3.33	
2. Others (mostly remit- tances & transfers)	5.80	2.30	7.60	2.09	6.69	20.70	
D. Total income (A + B + C)	83.50	90.90	118.00	106.26	161.81	286.09	
E. Nonagricultural income (A.1.a + B.2 + C.1)	6.75	5.14	5.38	4.65	7.26	33.53	
F. F/D (%)	8.1%	5.6%	4.6%	4.4%	4.5%	11.7%	
G. B.2/E (%)	88.1%	74.7%	49.6%	19.8%	33.9%	72.2%	

/a Assumed to be 90 percent of the income from all commune/brigade enterprises.

/b Assumed to be 92.16 percent of the income from all commune/brigade enterprises. In 1979, commune- and brigade-operated nonagricultural enterprises accounted for 92.16 percent of the total revenue earned by all commune/brigade enterprises.

/c Assumed to be 94.81 percent of the income from all commune/brigade enterprises. In 1982, commune- and brigade-operated nonagricultural enterprises accounted for 94.81 percent of the total revenue earned by all commune/brigade enterprises.

/d Assumed to be 1.5.

/e Assumed to be 1.7.

/f Includes the distribution received from the basic accounting unit (usually the production team), welfare, bonus, and other collective income.

/g Taxes are distributed to agricultural and nonagricultural activities according to their shares in total revenue from sideline activities.

Sources: Hubei Statistical Bureau, Hubei Sheng Nongmin Jiating Jingji Diaocha Ziliao 1954-80 [Data from economic investigation of farm households in Hubei province 1954-80].

nonagricultural income could be identified and some transfer income could not be excluded, for instance, salaries and wages (Table 6, row C.1) include pension payments from state and collective units. But despite these shortcomings, the figures in row E (Table 6) present a fairly accurate estimate of income earned from nonagricultural activities by Hubei peasants.

2.07 In 1982, the per capita income of Hubei peasants was Y 286.09, of which gainful earnings from nonagricultural activities accounted for Y 33.53, or 11.7 percent. This level of involvement in nonagricultural activities is quite low compared to the 20-30 percent found in other parts of Asia (excluding Japan), but, for China, 11.7 percent is actually an all-time high. During the 1960s and 1970s, earnings from nonagricultural activities probably accounted for less than 5 percent of the per capita income of Hubei peasants.

2.08 The composition of both rural nonagricultural employment and rural income suggests that nonagricultural activities other than manufacturing are relatively underdeveloped in rural China. Table 7 presents the structure of rural nonagricultural employment in China and that in other Asian developing countries. In most developing countries, nonmanufacturing activities account for more than two thirds of the rural nonagricultural employment. In rural China, only 55 percent of its nonagricultural employment are engaged in non-manufacturing activities, and commerce, transport and other services appear to be particularly underdeveloped.

2.09 The underdevelopment of the tertiary sector is also reflected on the income side. In 1981, of the gross revenue received by commune- and brigade-operated nonagricultural enterprises, 80.5 percent came from industrial enterprises, 4 percent from transport enterprises, 8.3 percent from construction enterprises, and only 6.8 percent from other enterprises (mostly in trade and

Table 7. COMPOSITION OF RURAL NONAGRICULTURAL ACTIVITIES
(Percentage of total)

	China <u>/a</u>	Other Asian develop- ing countries <u>/b</u>
Total nonagricultural activities (excluding mining)	100.00	100
Manufacturing	45.15	15-39
Construction	8.90	4-14
Commerce and commercial services	12.02	12-29
Transport and communication	4.63	5-10
Services (including govt.)	28.12	24-43
Others	0.20	1-30

/a Based on data in "Main Figures from the 10% Sample Tabulation of the 1982 Population Census of the People's Republic of China," pp. 342-347.

/b World Bank, Rural Enterprise and Nonfarm Employment, January 1978, p. 24.

services). Commerce and services also provide only a relatively small share of peasants' sideline income. For example, in 1982 less than 18 percent of the per capita sideline revenue earned by Hubei peasants came from commerce and services (Table 6). Even if service activities are concealed within manufacturing and agriculture and some are underground and therefore not reported, these figures suggest that the amount of resources allocated to the rural tertiary sector, particularly to commerce and services, is very low by international standards. A major reason for this is the past government policy of discouraging own-account activities, which tend to have a sizable service component.

Development of Rural Industry

2.10 An official Chinese definition of rural industry does not exist. In the Western literature on China, rural industry generally includes the commune-brigade enterprises (CBEs) and the state enterprises (including large

collectives) at the county level. Rural industry differs from urban industry because it exists primarily to serve agriculture and local markets, consists mostly of small plants using primitive or intermediate technology, and depends on local resources. Because the Chinese statistical reporting system does not have a category for rural industry, discussing its size and its historical development is difficult and sometimes confusing. In what follows, the focus is on two important but overlapping components of rural industry: the CBEs and the five small industries (wuxiao gongye). The five small industries are iron and steel, fertilizers, cement, coal and hydroelectric power, and machine building. The extent of overlap between the five small industries and the CBEs is uncertain, but county enterprises form the backbone of the five small industries and they are, of course, not CBEs. Some of the county enterprises in the five small industries are located in fairly large towns and, therefore, are also not strictly rural.

2.11 The promotion of rural industry began during the Great Leap Forward, when large numbers of small iron and steel works were established in the countryside as a part of the "walking-on-two-legs" strategy and continued intermittently in the 1960s and the 1970s with the policy to expand the five small industries. The purpose of creating the five small industries was to provide agriculture with needed modern inputs. Important points in the rationale for using rural industries to support agriculture are (Riskin 1971, Sigurdson 1977, Saith 1980, American Rural Small-Scale Industry Delegation 1977): (a) China's inadequate transport system, which makes the dispersed production of agricultural inputs by small/medium enterprises more reliable and less expensive than concentrated production by large enterprises; (b) the generally low opportunity cost of developing rural industrial enterprises,

since they are not supposed to compete with the modern sector for scarce resources; (c) the shorter gestation period for investment in rural industrial enterprises than for larger projects; (d) the location of rural enterprises closer to their markets; and (e) the dynamic argument that rural areas benefit from rural industries, as they encourage and provide learning-by-doing.

Obviously, these justifications do not apply to all industries nor to all localities. Indeed, many of the five small industries (mostly county enterprises) are facing serious difficulties today because of the indiscriminate development of the past, in part rationalized by these justifications.

2.12 The level of development achieved by the five small industries is indicated in Table 8. By the 1970s, they gave rural China a substantial industrial capacity, but it is unclear how much of this capacity is an economic asset from the viewpoint of the national economy. It is now apparent that many of the enterprises in the five small industries may not be technoeconomically viable and probably should never have been established. For example, in 1979, small synthetic ammonia plants had unit production costs that averaged 3.6 times that of large ammonia plants and, not surprisingly, 70 percent of the 1,539 small synthetic ammonia plants sustained losses in that year (Ma and Sun 1981, p. 360). In the 12 years between 1968 and 1979, local small- and medium-scale iron and steel works lost a total of Y 6.0 billion (Jingji Diaocha Series 2, 1983, p. 18). Indeed, enterprises in the five small industries accounted for 53 percent of the total losses sustained by all state industrial enterprises in 1978 (Wong 1982). The indiscriminate expansion of the five small industries during the Cultural Revolution--when self-reliance and self-sufficiency were given greater emphasis than comparative advantage, availability of local resources, and scale economies--is

blamed for the high costs, low quality and marketing problems the sector is currently facing. But high prices for producer goods, a cumbersome and inefficient allocation system, and the principle that "whoever builds and manages a plant has the use of its products" have also encouraged the establishment of small and inefficient plants in dispersed locations and permitted their continued existence (Wong 1983).

Table 8. SHARE OF FIVE SMALL INDUSTRIES IN TOTAL OUTPUT, 1978/79 /a

Product/sector	Share produced by the five small industries
Farm machinery (1978)	All simple farm tools, nearly all small and medium farm machines
Nitrogenous fertilizer (1979)	55
Phosphorous fertilizer	50+
Cement (1979)	67
Iron and steel (1978)	31.6
Electricity	4-5
Coal (1978)	45

/a For sources, see Christine Pui Wah Wong, "Rural Industrialization in the People's Republic of China: Lessons from the Cultural Revolution Decade," in Joint Economic Committee, China Under the Four Modernizations, Table 1.

Commune/Brigade Enterprises

2.13 In the early 1950s, perhaps as many as 20 million Chinese were engaged in small-scale (fewer than 10 workers), nonmechanized industrial production either on a full-time basis or as sidelines (Ma and Sun 1981, pp. 172-173). Of this number, 12 million were located in rural areas--about

10 million were peasants with commercialized nonagricultural sidelines and the remaining 2 million were rural workers involved in full-time, small-scale industrial production. In the first five-year plan period, these rural nonagricultural activities were collectivized, and then in 1958 they were transformed into commune-brigade enterprises (CBEs). Subsequently, in the 1960s and the 1970s, with the periodic emphasis on self-reliance and self-sufficiency, the number of CBEs increased.

2.14 In 1978, over 1.5 million CBEs operated in rural China, employing over 28 million workers and earning gross revenue in excess of Y 43 billion. Of these enterprises, 21 percent were commune-operated and the rest brigade-operated. The average size of the commune enterprises, at 39.3 workers, is three times that of brigade enterprises. Because of their larger size, the commune enterprises accounted for about 45 percent of the employment and 56 percent of the gross revenue of all CBEs. In 1978, only slightly more than half of the CBEs were industrial enterprises; the others were in agriculture (32 percent), transportation (4.3 percent), construction (3.1 percent), and various services (8.1 percent). However, the commune- and brigade-operated industrial enterprises (CBIEs) employed about two thirds of the workers and earned three quarters of the gross revenue. Clearly, the CBIEs constituted a most, if not the most, important component of the collective rural nonagricultural sector.

2.15 Serving agriculture is the primary objective of CBEs in China; this is clearly reflected in the types of industry that developed. Table 9 presents the output of commune-operated enterprises arranged according to the 12 industrial categories used in China. Seven of the 12 industries (metallurgy, power, coal, petroleum, chemicals, machine building, and building materials)

supply inputs and capital goods to agriculture, and together they accounted for 70 percent of the gross value of output produced by commune-operated industrial enterprises in 1978. Two of these industries, machine building and building materials, were particularly important, accounting for over 50 percent of the output by gross value. The former has been an important source of farm machinery and equipment, while the latter has provided many of the construction materials needed to expand and improve China's agricultural infrastructure. The remaining five commune-run industries (forest products, foodstuffs, textiles and apparel, paper and stationery, and other) produced 30 percent of the gross value of output in 1978, and were mainly involved in agricultural processing and the production of consumer goods. As can be seen in Table 10, in several areas the production of CBEs represents a significant share of total production and since 1978 the relative importance of CBEs in these areas has been generally on the rise.

2.16 The composition of commune enterprises suggests that while the "backward linkage" industries are well-developed in rural China, the "forward linkage" industries and industries that serve consumer demand are less well developed. (It is useful to recall that, because of the emphasis given to the development of the five small industries in the past, many of the county enterprises also belong to the "backward linkage" category.) The inclusion of brigade enterprises (many of which may be involved in agricultural processing) in Table 9 probably would reduce the relative importance of the "backward linkage" industries. But, since 57 percent of the total gross output value of the CBEs in 1980 was in the "heavy industry" sector (Zhongguo Jingji Nianjian 1981), including brigade enterprises would still leave the "forward linkage" and the consumer goods industries underrepresented in rural China compared

Table 9. COMPOSITION OF GROSS VALUE OF OUTPUT
COMMUNE-OPERATED INDUSTRIAL ENTERPRISES
(Percentage of total)

	1978	1980	1982
Metallurgy	1.90	2.30	2.41
Power	0.47	0.60	0.69
Coal and coking	5.66	4.61	5.46
Petroleum	0.10	0.14	0.08
Chemicals	8.32	8.45	8.21
Machine building	33.51	29.12	24.80
Building materials	19.48	19.61	20.69
Forest products	1.82	2.92	2.50
Foodstuffs	5.04	7.05	8.30
Textiles, apparel, leather goods	9.54	14.25	16.68
Paper, stationery, cultural goods	2.26	3.59	4.29
Others	11.90	7.36	5.89
<u>Total</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

Sources: Ministry of Agriculture, Animal Husbandry and Fishery, Bureau of Commune and Brigade Enterprises, Zhongguo Nongye Nianjian 1981 (Agricultural Yearbook of China 1981), p. 50.

Table 10. SHARE OF CBEs IN TOTAL OUTPUT, 1978 AND 1982
(Percentage)

Product/sector	Share produced by CBEs	
	1978	1982
Phosphorous fertilizer	34.0	43.0
Cement	5.0	12.8
Coal	14.7	20.7
Machine-made paper and paperboard	9.8	19.4
Silk textile	11.3	15.7
Sugar	7.9	4.0
Salt	7.6	9.2

Source: Ministry of Agriculture, Animal Husbandry and Fishery.

with rural areas elsewhere. This is confirmed by the 10 percent sample tabulation of the 1982 population census which reports that only 24 percent of the manufacturing workers in counties (excluding towns or zhen) are employed by the food processing, textiles, and apparel industries. By contrast, in other Asian countries, these industries usually employ 40-60 percent of the manufacturing workers in rural areas (World Bank 1978).

2.17 As in other developing countries, rural industries are not distributed evenly throughout China. CBEs have generally developed more rapidly in regions that are economically more advanced (Table 11). In 1982, CBEs generated revenue of Y 104 for every rural person in China. However, the amount of revenue generated per rural person is directly related to each region's per capita gross agricultural and industrial output. Thus, in the least developed regions (where the per capita gross agricultural and industrial output is below Y 600), CBEs generated revenue of only Y 47 per rural person in 1982. But in the most advanced regions (where per capita gross agricultural and industrial output exceeds Y 2,500), CBEs generated revenue per rural person of Y 735, nearly 16 times the level in the least developed areas. The distribution would be even more uneven if nonagricultural CBEs are considered by themselves since a higher proportion of the CBEs in the less developed areas are agricultural enterprises. The uneven distribution of CBEs exists within provinces as well (World Bank 1982). This is illustrated by the spatial distribution of CBEs in provinces as different as Jiangsu and Gansu. In 1980, 76 percent of the output value produced by CBIEs in Jiangsu came from the four prefectures in the more prosperous southern part of the province (Zhongguo Shedui Qiye Baoshe 1982, p. 21). Lanzhou, one of 13 administrative districts in Gansu, accounted for nearly 40 percent of the output value produced by CBIEs in that province in 1983.

2.18 Table 11 also shows that in the more developed areas not only is a higher share of the rural population employed by CBEs, but also the productivity of workers so employed (as approximated by gross revenue per worker) is substantially higher. This suggests that the more developed areas not only have more CBE activities than the less developed areas, but also that the composition of such activities is different, namely, of a higher quality. Insufficient evidence is available to break down CBEs by industry at the provincial level, but it is likely that in the more developed areas, more CBEs are engaged in "urban-type" industrial activities (such as subcontracting to large industrial enterprises and producing for the urban and export markets), and that they are better integrated into the industrial sector.

Table 11. CBE DEVELOPMENT BY AREAS RANKED BY PER CAPITA GROSS AGRICULTURAL AND INDUSTRIAL OUTPUT, 1982

	Per capita gross agricultural and industrial output	Gross agricultural output per rural person	Gross revenue of CBEs per rural person	Percentage of rural population engaged in CBEs	Gross revenue of CBEs per worker employed
National	Y 808	Y 270	Y 104	3.9	Y 2,700
By areas ranked by per capita gross agricultural and industrial output					
Above Y 2,500 /a	4,095	766	735	15.1	4,870
Y 1,000-2,500/b	1,287	457	223	6.6	3,354
Y 600-1,000 /c	743	340	114	4.6	2,507
Below Y 600 /d	511	269	47	2.2	2,147

/a Beijing, Tianjin, Shanghai.

/b Liaoning, Heilongjiang, Jiangsu.

/c Jilin, Zhejiang, Hubei, Shandong, Hebei, Shanxi, Guangdong, Nei Monggol, Hunan, Shaanxi.

/d Fujian, Jiangxi, Gansu, Qinghai, Ningxia, Xinjiang, Henan, Guangxi, Sichuan, Guizhou, Yunnan, Anhui.

Source: Ministry of Agriculture, Animal Husbandry and Fishery.

2.19 CBEs are better developed and more active in the more advanced areas partly because industries in these areas are more developed and therefore better able to help rural industry with technical assistance, used equipment, and market outlets. The demand for CBE products is also stronger where agriculture is more developed. Furthermore, it is easier to mobilize the necessary funds to finance the start-up and expansion costs of CBEs if the economy, particularly the agricultural sector, is more developed.

2.20 The economic environment in the 1960s and 1970s was often unfavorable to the balanced development of rural nonagricultural activities. Chinese economists have argued that past policies have obstructed and distorted rural industrial development (for example, see Xue Muqiao 1980). For instance, the policy of stressing grain production even in areas unsuited to grain reduced the production of cash crops and discouraged agricultural sideline production. This has, in turn, eliminated opportunities for the development of "forward linkage" industries. At the same time, the five small industries were promoted even when their development was not justified. Furthermore, the overall development strategy, of which rural industrialization was a part, required rural industry to refrain from competing against the modern sector for resources. This resulted in discrimination against rural enterprises in the allocation of materials and equipment and in minimizing interaction between rural industry and the modern sector. In other words, rural industry and modern industry in urban areas coexisted rather than were interdependent. During the Cultural Revolution decade, rural sideline activities and CBEs were also subjected to criticism for being "tails of capitalism," and consequently were restricted from developing in a normal manner (Zhongguo Shedui Qiye Baoshe 1982, p. 15). Finally, because it is difficult to include

small enterprises in the state plans, CBEs have generally been left out of the supply system. But, in an administratively managed economy, this exclusion creates considerable supply as well as marketing problems for CBEs.

2.21 Chinese policymakers are now attempting to restructure the rural nonagricultural sector--to make rural enterprises more efficient and productive and to develop new directions and purposes for rural enterprises, particularly CBEs. They are questioning how the "overdevelopment" of heavy industry at the county level can be corrected; how CBEs can be integrated into the national economy; how large and small enterprises can become more interdependent; how the allocation of materials to CBEs can be improved; how they can best support and give guidance to CBEs; how CBEs can be more evenly distributed in rural areas; and how they can best promote rural industry in the less developed areas. In the next section, recent trends and policy changes affecting rural nonagricultural development are examined.

Recent Developments

2.22 A major turning point for rural nonagricultural development came in December 1978. The Third Plenary Session of the 11th Central Committee of the Chinese Communist Party adopted "The Decisions on Some Questions Concerning the Acceleration of Agricultural Development," which was formally approved at the Fourth Plenary Session in September 1979. Three of the decisions are particularly important for rural nonagricultural development, that is, those (i) permitting more diversified agriculture; (ii) allowing the individual economy greater flexibility to develop in rural areas; and (iii) promoting the vigorous and systematic development of CBEs.

2.23 Instead of concentrating on grain production and self-sufficiency, communes are now required to carry out "the simultaneous development of farming, forestry, animal husbandry, sideline occupations, and fishery" and to ensure "an all-round development, suiting measures to local conditions and concentrating on a certain line of production when appropriate" (Beijing Review March 24, 1980, p. 19). This means that China's agriculture is now likely to produce a more rational and diversified output mix. Extension of the responsibility system in rural China--under which production teams and individual commune members have greater decision-making authority and increased specialization (by teams, households, and individuals) is allowed--has also helped to improve resource allocations and to create a more diversified rural economy. The greater diversity has, in turn, strengthened agriculture's forward linkages. For example, the development of animal husbandry has created opportunities for the processing of animal and dairy products. Increased production of cash crops, fish culture, fruits, and vegetables has also created employment and income in processing, storage, and transportation. Thus, the decision to diversify agriculture, when combined with the increase in the purchase prices of agricultural products, has created a more favorable environment for nonagricultural development in rural China.

2.24 In rural areas, the individual economy is confined to the sideline occupations of farm households. The decision of the Third Plenum increased the scope of the individual economy in three main ways. First, communes may now allocate up to 15 percent of the total cultivated area to private plots. (The area allocated to private plots as a share of the total cultivated area was 5.7 percent in 1978 and 7.1 percent in 1980.) If local circumstances permit, commune members may devote all their time to sideline occupations.

Second, the scope of sideline occupations has been broadened. Regulations restricting the types of crops that may be raised on private plots have been abolished. Commune members may also plant fruit trees and bamboo on land adjacent to their houses. Traditional family handicrafts (such as sewing, embroidering, and bamboo crafts) are now encouraged. Furthermore, commune members may now engage in certain types of service activities, such as food and drink preparation and sales, and repairs. They may sell goods in urban areas and engage in transporting sideline products to markets. Third, new marketing channels have been opened. All products from sideline activities (except those contracted to the state) may be sold directly to consumers. This has necessitated reviving the rural markets. At the end of 1980, there were more than 37,000 rural markets and more than 2,900 sideline product markets in urban areas. The Government's position is that as long as sideline activities do not adversely affect the collective sector, no unit or individual may interfere with the right of commune members to participate in sideline production.

2.25 Some rethinking of rural industry's role in China's development has also taken place. Grossly inefficient enterprises in the five small industries are to "close down, suspend operation, merge, or shift to other work" (guan, ting, bing, zhuan). However, at the same time, CBE development is to be encouraged not only to help improve agricultural production and the people's livelihood, but also to meet the needs of large-scale urban industry and to increase exports. Nonagricultural activities singled out for CBE development include the processing of agricultural and sideline products, small- and medium-sized establishments to manufacture and repair farm tools and spare parts, production of humic acid and bacterial fertilizers, and of

insecticides and herbicides, hydro- and thermal-power stations with generating capacities below 12,000 kW, subcontracting for large enterprises, construction, transportation, and selected services (sewing, repair, hotels, and restaurants). Local governments are called upon to work out long-term plans for CBE development, taking into account local developments in agriculture, forestry, fishery, animal husbandry, rural and urban construction, and transportation, to consolidate the existing CBEs and to prevent the "blind" creation of new CBEs. The medium-term target is to increase the share of CBEs' revenue in total rural collective revenue to one half by 1985.

2.26 To implement the above policy, the government has adopted a series of measures designed to guide and aid CBE development (see "Regulations on Some Questions Concerning the Development of Enterprises Run by Rural People's Communes and Production Brigades," July 3, 1979). A CBE Administrative Bureau has been established in the Ministry of Agriculture to provide guidance and institutional support for CBEs and to administer the funds, materials, and equipment allocated to CBEs by the State Planning Commission and the State Bureau of Supplies. Local governments have also been directed to strengthen their institutional support for CBEs and to take a more active role in CBE development. Although CBE development is to be mainly financed internally from retained earnings or from reserve funds of communes and brigades, some state funds are being made available. For example, "not less than half of the investment made by the state to support rural people's communes must be allocated to the departments in charge of commune- and brigade-run enterprises to support the poorer brigades in their effort to set up enterprises." The Agricultural Bank of China has also been directed to allocate a proportion of its annual agricultural loans to support CBEs. As a consequence, between 1979

and 1980, the amount of loans given by the Agricultural Bank of China to CBEs increased by more than 80 percent.

2.27 Urban industries have been directed to "farm out" production to rural areas by subcontracting to CBEs when possible (however, "farming out" production has sometimes resulted in the underutilization of state enterprises). Urban enterprises are also urged to provide CBEs with technical advice and to transfer special equipment to rural areas at fixed prices. Government departments involved in industry, transportation, credit, construction, and marketing have all been directed to support CBE development and to help CBEs to improve their products, planning, and management. Most important, the state sector has been asked not to set up "new factories to produce products which can be produced by commune- and brigade-run industries." Nationalization of CBEs is now forbidden and those nationalized after the First National Conference on "In Agriculture, Learn from Dazhai" are to be returned to the communes and brigades. To expand the marketing channels for CBEs, supply and marketing corporations have been established at the county level, and some counties, communes and brigades are experimenting with combined (or integrated) agricultural, industrial, and commercial enterprises (frequently these take the form of supply, joint production, or marketing arrangements between CBEs and state or collective enterprises).

2.28 Of greater immediate impact are the tax concessions offered to qualified CBEs. Three of the more important incentives are: (i) CBEs directly serving agriculture or people's livelihood may apply to have specific products and services exempt from income taxes; (ii) small iron mines, coal mines, power stations, and cement plants are exempt from industrial, commercial, and income taxes for three years; and (iii) new CBEs experiencing start-

up difficulties may apply for exemption from industrial, commercial, and income taxes for two to three years.

2.29 Much has happened in rural China in the six years since the Third Plenum. In the more favorable economic environment, agricultural specialization, commercialization, and sideline activities have all expanded rapidly. Specialized households (those involved mainly in commodity production, namely, highly commercialized) now account for between 20 percent and 30 percent of all farm households (China Daily April 23, 1984). In 1983, some 500,000 joint undertakings involving commune members were in operation, of which more than half were in industry with a total estimated output value of over Y 3 billion (Renmin Ribao March 18, 1984). Indeed, it is the resurgence of these activities that explains much of the recent rise in per capita peasant income and in the share of nonagricultural income in the total income of Chinese farmers. Between 1979 and 1982, the per capita income of peasants increased by nearly Y 110, of which increases in sideline earnings accounted for 55 percent (Beijing Review October 24, 1983). In 1979, net earnings from sideline production accounted for slightly more than 27 percent of the total per capita income of Chinese peasants; by 1982, this share had increased to over 38 percent. A considerable share of the increase in sideline earnings came from nonagricultural activities. In Hubei, for example, net sideline earnings increased by Y 39.48 from 1979 to 1982, and of this increase, 55 percent was from increases in net sideline earnings from nonagricultural activities, the most important being transportation and construction (Table 6). In the same year, 70 percent of the nonagricultural income earned by Hubei peasants came from sideline activities.

2.30 Attempts to consolidate and rationalize the five small industries and to encourage and give new direction to CBEs have also met with some success. Of the five small industries that were developed in the 1960s and 1970s, the local small iron and steel and the machine building industries were apparently the least efficient. Beginning in 1978, many of these were closed, merged, or forced to change their output mix. For example, between 1978 and 1981, 365 small local iron and steel plants were shut down (Jingji Diaocha Series 2, 1983, p. 15). In the farm machinery industry, all small, local plants producing hand tractors and diesel engines were reorganized under provincial direction and switched to producing components and parts as subcontractors to large enterprises (Wong 1982).

2.31 Consolidation and adjustment reduced the number of CBEs from over 1.5 million in 1978 to about 1.3 million in 1981 (Table 12), with most of the decline occurring among the smaller brigade enterprises. Virtually the whole reduction was in agricultural enterprises, whose number decreased from 495,000 in 1978 to 293,000 in 1982. Sideline activity undoubtedly replaced some of these enterprises. Of the nonagricultural enterprises, only the number of industrial enterprises declined, falling from 794,000 in 1978 to 726,000 in 1981. CBEs involved in machine building also altered their output mix, shifting from producing agricultural machinery and machine tools to consumer appliances, everyday hardware, and parts and components for large enterprises. For example, in 1979, CBEs produced 34,000 machine tools, 520,000 pieces of agricultural machinery, 7.2 million agricultural machinery parts, and 8.1 million automobile parts. In 1981, CBEs produced 1,500 machine tools and 0.8 million agricultural machinery parts, but no agricultural machinery or automobile parts (Zhongguo Jingji Nianjian 1982). In 1978, commune-operated machine

Table 12. COMMUNE AND BRIGADE ENTERPRISES:
NUMBERS, EMPLOYMENT, AND GROSS REVENUE

	1978	1979	1980	1981	1982
Total number of enterprises (thousand)	1,524	1,480	1,425	1,338	1,362
By level of ownership					
Commune	320	320	338	336	338
Brigade	1,204	1,160	1,087	1,002	1,024
By sector					
Agriculture	495	444	378	319	293
Industry	794	767	758	726	749
Transportation	65	82	89	89	96
Construction	47	49	51	48	54
Others	127	138	149	156	170
Total employment (million)	28.26	29.09	30.00	29.70	31.13
By level of ownership					
Commune	12.58	13.14	13.94	14.18	14.95
Brigade	15.69	15.95	16.06	15.52	16.18
By sector					
Agriculture	6.08	5.33	4.56	3.80	3.44
Industry	17.34	18.14	19.42	19.81	20.73
Transport	1.04	1.17	1.14	1.07	1.13
Construction	2.36	2.98	3.34	3.49	4.21
Others	1.44	1.47	1.53	1.53	1.62
Total gross revenue (billion yuan)	43.15	49.11	59.61	67.04	77.18
By level of ownership					
Commune	23.97	26.99	33.22	37.90	43.82
Brigade	19.17	22.12	26.39	29.14	33.35
By sector					
Agriculture	3.62	3.85	3.94	3.90	4.01
Industry	32.61	37.22	45.56	51.10	57.69
Transport	1.87	2.30	2.45	2.50	2.82
Construction	2.60	3.50	4.49	5.26	7.51
Others	2.44	2.24	3.17	4.28	5.04

Sources: China: Recent Economic Trends and Policy Developments, World Bank Report No. 4072-CHA, pp. 168-169; Statistical Yearbook of China 1981, p. 193; Statistical Yearbook of China 1983, p. 206.

building enterprises produced one third of the gross value of output from all commune enterprises; in 1981 they produced less than one fourth (Table 9).

During this period, light industry (such as foodstuffs, textiles and apparel, and paper and stationery) increased its share in the gross value of output.

2.32 The adjustment of CBEs has been tailored to local conditions. Areas adjacent to major industrial centers and those closer to market opportunities have generally found it easier to adjust. In Beijing, Tianjin, and Shanghai, many CBEs have become subcontractors to nearby large enterprises. In 1981, subcontracting work done by CBEs as a percentage of their total gross value of output was 45 percent in Beijing, 60 percent in Tianjin, and 62 percent in Shanghai. The "open door policy" has created additional opportunities for CBEs in the coastal areas, particularly in Guangdong, where a large number of processing, assembly and compensation trade contracts have been signed between CBEs and foreign firms. In the more isolated and less developed areas, CBEs have generally turned to agricultural processing, manufacture of light industrial goods for local consumption and the production of building materials.

2.33 Table 12 also suggests that in the past four years CBEs have become more productive and profitable. Between 1978 and 1982, despite a decline in their number and near constant employment, the gross revenue earned by CBEs increased by 78 percent. Many factors have contributed to this improvement: closure of the most inefficient CBEs, the shift in production from low-price to higher-price goods with larger profit margins, and the introduction of the "job responsibility system." The latter is an attempt to solve "the grave problem of egalitarianism with 'everybody eating from the same big pot'" by increasing labor incentives with a wage system that ties rewards more closely to productivity. The system takes many forms, using piece rates, above-quota piece rates, specialized contracting, profit contracting, floating wage rates, and bonuses (Zhongguo Jinji Nianjian 1982). At the end of 1981, 80 percent of CBEs had adopted some form of "job responsibility system."

2.34 The new liberal policy towards CBEs has also created some problems. One is that the geographic distribution of CBEs has become even more unequal. In 1982, the six most developed provinces and municipalities accounted for one quarter of CBE employment and one third of CBE output by value, while the 12 least developed provinces accounted for only 25 percent of the employment and 20 percent of output (Table 13). Even more striking is the uneven distribution of recent increases in employment. Between 1978 and 1982, the six most developed regions accounted for 54 percent of the increase in CBE employment, while the 12 least developed provinces accounted for only 5 percent of the increase in employment. Actual distribution is more uneven than the data in Table 13 suggest since between 1978 and 1982, fully 43 percent of the increase in CBE employment and nearly 80 percent of the increase in CBE output are accounted for by Shanghai and the two provinces adjacent to it (Jiangsu and Zhejiang). Part of the reason for this unequal growth is that many of the CBEs in less developed areas, because they were relatively less efficient, found it difficult to make the adjustments required by the new policy. But the earlier discussion of international experience also suggests that, even under normal circumstances, rural industries are likely to develop more rapidly in the economically advanced areas. Accelerated development of CBEs may thus widen regional income disparities.

2.35 Other problems that have emerged include: (a) in some localities, new CBEs have been created "blindly," that is, without paying sufficient attention to "economic effectiveness," market size, and the availability of resources; (b) some new CBEs are competing with established state enterprises for agricultural raw materials; (c) some production teams and individuals are not receiving sufficient direct benefits from CBEs; and (d) the growth of the

CBEs is hampered by a lack of competent managers and technicians in rural areas (Zhongguo Jingji Nianjian 1982, p. III-13).

Table 13. DISTRIBUTION OF COMMUNE AND BRIGADE ENTERPRISES, 1982 (percentage)

	Distribution of		Distribution of changes in employment 1978-82
	Employment 1982	Output value 1982	
National	100	100	100
By areas ranked by per capita gross agricultural and industrial output			
<u>Above Y 2,500</u> (Shanghai, Tianjin, Beijing)	5.1	9.2	6.0
<u>Y 1,000-2,500</u> (Liaoning, Heilongjiang, Jiangsu)	19.6	24.3	48.1
<u>Y 600-1,000</u> (Jilin, Zhejiang, Hubei, Shandong, Hebei, Shanxi, Guangdong, Nei Monggol, Hunan, Shaanxi)	50.0	46.5	40.8
<u>Below Y 600</u> (Fujian, Jiangxi, Gansu, Qinghai, Ningxia, Xinjiang, Henan, Guangxi, Sichuan, Guizhou, Yunnan, Anhui)	25.3	20.0	5.1

Source: Ministry of Agriculture, Animal Husbandry and Fishery.

2.36 In response to these problems, the government moved to tighten its control of CBE development and to remove some of the incentives granted to CBEs only a few years earlier. At the end of January 1981, new tax regulations for CBEs were issued that rescinded some of the tax concessions granted

to CBEs in 1979. To arrest the "blind expansion" of CBEs, the two- to three-year tax holidays for new CBEs will now be granted only on a case-by-case basis. Specifically, localities are now forbidden to grant income tax reductions or tax holidays to CBEs that compete with state enterprises for raw materials. Furthermore, CBEs that produce cigarettes, wine, sugar, cotton textiles, and watches are no longer eligible for a reduction of or exemption from industrial and commercial taxes (Zhongguo Jingji Nianjin 1982 p. III-55).

2.37 The primary method used by the Government to control CBE development is its power to approve or refuse to approve applications to establish CBEs. And, in May 1981, the State Council issued a 16-point program for the readjustment of CBEs (Zhongguo Jingji Nianjian 1982, 1982, pp. III-13 - III-15), which gives new guidelines for the approval of new CBEs. Since then, new CBEs cannot be established or CBE production capacity expanded in areas where the state sector has excess processing capacity. At the same time, the state sector is to refrain from expanding its capacity to process agricultural and sideline products in urban areas. More specifically, communes are not to establish textile mills, cigarette factories, and salt processing plants. Furthermore, all commune-operated cigarette factories and certain commune-operated textile mills must either close down or switch to other work. The program also called on CBEs to protect the country's natural resources, to reduce pollution, to give greater technical, supply, and marketing support to sideline activities, and to provide more direct benefits to individual commune members. County enterprises and CBEs are encouraged to cooperate in production, supply, and marketing. Finally, the program stressed the need for better coordination of CBE development and small town development, for implementing a rational land policy (apparently cultivated land was being used for

factory sites), and for communes to establish not only industrial enterprises, but also social and personal service enterprises.

3. RURAL NONAGRICULTURAL DEVELOPMENT IN CHINA:
PROSPECTS AND POLICY OPTIONS

3.01 About 80 percent of China's one billion people live in rural areas.^{3/} Chinese policymakers are very conscious of the fact that the goal of quadrupling the national output by the year 2000 cannot be achieved unless the country's 800 million rural population become substantially more productive and prosperous. With population density in rural areas already high and with cultivated area not likely to increase, it is also clear that rural prosperity cannot be attained on the basis of agricultural development alone. If China is to become a middle-level developing country, a substantial share of its rural labor force will need to move from the relatively less productive agricultural activities to the more productive nonagricultural activities. Non-agricultural activities are also needed to absorb the rural surplus labor that Chinese policymakers believe exists in large numbers. In the past, surplus labor had remained largely hidden through extensive work-sharing, but with the widespread adoption of the production responsibility system, it has become more open. However, the extent of the labor surplus in rural China is not known precisely. Probably much of it is concentrated in high population density areas (such as the coastal provinces) and appears in the form of seasonal unemployment. It is estimated that currently agriculture provides

^{3/} Many of China's rural population would be classified as urban in other countries. If the Chinese used definitions similar to those in other countries, the share of its population in rural areas would probably be reduced to 75 percent, or perhaps even lower.

employment to peasants for only one third of each year in the Northeast and for between two thirds and three quarters of each year in the South.

3.02 International experience also suggests that the transition from a low-income to a middle-income country is accompanied by a shift in the sectoral composition of employment away from agriculture to nonagricultural activities, particularly services. This occupational shift is usually accompanied by significant population movements from rural areas to cities so that a strong relationship exists between economic development and urbanization. However, for various reasons, Chinese leaders are reluctant to permit the same degree of urbanization to occur in China as it develops from a low-income to a middle-income country. They point to the fact that Chinese cities are already congested, with grossly inadequate infrastructure and housing, and that the funds available for urban construction are very limited. Chinese policymakers are also concerned about the environmental costs of rapid urbanization. That the state is responsible for urban residents' grain rations is yet another reason why the government would not like to see urban population grow. Undoubtedly the government is also worried that rural-urban migration, once permitted, may be difficult to control.

3.03 Thus, while the government wants to shift rural workers from agriculture to nonagriculture activities, it also wants to achieve this with only a limited amount of rural-urban migration. This objective is probably best expressed by the government's own slogan: "leave the land but not the countryside, enter the factory but not the city (litu bu lixiang, jinchang bu jincheng)." It would appear that rural nonagricultural development has become a key component of China's development strategy. The stress on developing nonagricultural activities in the countryside is motivated by the hope that

they will promote agricultural production, generate funds for agricultural mechanization, create employment opportunities, help narrow rural-urban income differences, and avoid an overly concentrated pattern of industrialization and urbanization.

Rural Nonagricultural Development: Current Chinese Views and Policies

3.04 The future pace and direction of rural nonagricultural development will be strongly influenced by government policy towards agricultural development, rural commerce, CBE development and urbanization. In recent years the government has emphasized repeatedly (most recently in the 1984 No. 1 document of the Central Committee of the Chinese Communist Party) its intention to continue to promote all-round agricultural development and commercialization so as to transform China's agriculture from its present stage of "self-sufficient and semiself-sufficient (zigei banzigei)" production to "large-scale commodity production (da guimo shangpin shengchan)." This means that specialized and "key-point" households in cultivation will become substantially more important in the future. The Chinese estimate that, when one person cultivates one mu of land, he can only be self-sufficient, but if he cultivates six mu of land, his commercialization rate can reach as high as 80 percent. Thus, to promote commercialization, land must be allowed to become more concentrated in those households that are willing and able to specialize in crops (grains as well as industrial crops). The government is now permitting and encouraging households to transfer their allotted responsibility (or contract) land to others. Therefore, some land concentration has already occurred and more will occur in the future. The expectation that farms will be substantially larger in the future, with perhaps many as large

as 50+ mu, has prompted Jiangsu's Bureau of Agricultural Machinery to project a 39 percent increase (from 18,700 to 26,000) in the province's stock of medium/large tractors between 1983 and 1990, while that of walking tractors will rise by only 16 percent (from 386,000 to 450,000). To work these larger farms, hired labor will be needed to supplement family labor. Farm households are now permitted to use hired workers, although the number of workers that can be hired has not yet been officially announced. But, if what is now permitted in rural industrial and commercial activities is used as a guide, the number may be as high as seven.^{4/}

3.05 If farm size is to increase, a substantial share of the agricultural population will need to be moved out of cultivation. Thus, the implication of large-scale agricultural commodity production is not only that more farm households will specialize in crop production, but also that many will need to become specialized households in forestry, fishery, livestock, and sideline production. The current policy of promoting all-round agricultural production has already produced many of these specialized households and existing regulations will encourage more to emerge. For example, specialized households in livestock are given preferential access to mixed feed and can purchase at least a part of their required needs at the lower official prices. There are also plans to increase the supply of equipment needed by noncultivating but agriculturally related activities. For example, the No. 2 Farm Machinery Plant in Taichang has been assigned to develop and produce air pumps for fish

^{4/} In occupations where skills are involved, industrial and commercial proprietors may use, in addition to family members, two helpers and five apprentices. See "State Council Regulations Concerning Private Industrial and Commercial Undertakings in Rural Areas."

culture, and its target is to increase its annual capacity to 30,000 units by 1990.

3.06 Also encouraged are the nonagricultural sideline activities. In February 1984, the State Council issued regulations governing the development of private industrial and commercial activities in rural areas. Individuals are now permitted to operate all "industrial, handicraft, commercial, food and beverage, services, repairs, transport, and house renovation undertakings that can be appropriately handled by rural residents" as long as they have the approval of the production brigade or the village committee and are properly registered with the local Bureau of Industrial and Commercial Administration. Local governments are urged to help those private undertakings with start-up difficulties with credits, tax concessions, technical assistance, and favorable prices. To develop skills lost in past decades when private activities were discouraged, retired workers who have returned to rural areas are now permitted to engage in private businesses without fear of losing their pension as long as they pass on their special skills to apprentices or can restore or develop special or "famous-brand" products. The regulation also permits rural residents to set up stalls or operate services in towns, provided they supply their own food rations.

3.07 Commodity production depends on commerce, so it is significant that the State Council issued new regulations liberalizing rural trade in 1984. Rural residents are now permitted to engage in the transport and sale of goods (including small-scale wholesale activities) between towns and the countryside as long as they limit their activities to third-category farm and sideline products, third-category everyday industrial consumer goods, and other

permitted products after the state purchase plan has been fulfilled.^{5/} One major obstacle to the development of private commerce has been the lack of transport, so it is significant that the State Council also issued regulations permitting peasants, either individually or jointly, to purchase and own motor vehicles and boats for the purpose of transporting either goods or passengers. Previously, the transport of goods on waterways by private individuals and CBEs was prohibited and what could be transported by trucks was restricted. Furthermore, CBEs and other rural producers can now transport goods by railroads by arranging it directly with the local railroad depot without the prior approval of the government department in charge of the product in question. The private transport of goods is not limited with respect either to distance or administrative boundaries, namely, private traders may transport goods across county as well as provincial lines. Finally, the prices of goods transported and sold by private traders may be negotiated but must remain within the range stipulated by state ordinances. Thus, while price determination will not be left completely to market forces, some flexibility is permitted.

3.08 Recent experience suggests that while CBEs and state enterprises are sometimes in competition for raw materials and markets, they also complement one another. Thus, even though the government recognizes the contradiction between CBEs and state enterprises, it decided in early 1984 to continue its policy of developing CBEs, arguing that, with competition, development in both

^{5/} Rural products excluded from private rural trade include timber, flue-cured tobacco, and vegetables produced on "supply bases" in cities or industrial and mining areas.

sectors will be healthier and more rapid.^{6/} CBE development is, of course, expected to create new employment opportunities for some of the workers who will be leaving the land. As was noted earlier, the consolidation of CBEs has been underway for two years. The expectation is that this phase will be completed by the end of 1985, at which time CBEs will have perfected and fully implemented the responsibility system and also put in place some form of workers' representation in management.

3.09 The ownership of CBEs has also changed. Originally, CBEs were owned collectively by members of a commune or members of a brigade. If individuals or production teams contributed labor or materials to a CBE, such contributions received no compensation in the past. Now they are compensated. One practice is to give "shares" in the enterprise to those households or teams that contributed capital (either in the form of funds or labor), and "dividends" are distributed according to the share of "equity" owned. Other types of ownership arrangements have also emerged, such as joint ownership by individual households and ownership by several brigades or communes. One enterprise in Taichang county was owned one fifth by the county, two fifths by the three county towns and two fifths by the 22 communes in the county. The 1984 No. 1 document of the Central Committee of the Chinese Communist Party gave formal sanction to these different forms of ownership arrangements. Hereafter, all forms of economic cooperation in the countryside, whether they are between individuals and collectives, or between collectives, will be permitted. With the government now encouraging different forms of ownership

^{6/} The government's position is outlined in "The Report on a New Phase in CBE Development", prepared by the Ministry of Agriculture, Animal Husbandry and Fishery. The major points are summarized in Renmin Ribao March 18, 1984, pp. 1-2.

and with communes being changed to townships and brigades to villages (to formally separate economics and administration), the term CBE was considered inappropriate, and in early 1984 it was replaced by xiangzhen qiye (township-town enterprises). An alternative name that is also used is xiangcun qiye (township-village enterprises, TVEs).^{7/} To reflect these changes in the countryside, the administrative scope of the local department in charge of TVEs has also been enlarged to include industrial sideline activities of production teams as well as the joint undertakings of individuals.

3.10 A modest relaxation of restrictions on rural-urban labor mobility rounds out the Chinese Government's policy for promoting rural nonagricultural development. For reasons stated earlier (para. 3.02), the government has imposed strict control on rural-urban migration. In China, there is perhaps nothing more difficult than to transfer one's household registration from the countryside to a town or city. But Chinese leaders also realize that if large-scale commodity production is to become a reality in rural areas, existing restrictions on labor mobility need to be relaxed. An important move in this direction is the 1984 decision to experiment with permitting peasants who are involved in commerce, service or industry to establish household registration in market towns (jizhen) but to continue to be responsible for their own grain rations (1984 No. 1 Document of the Central Committee of the Chinese Communist Party). This is part of a general policy to encourage the revival of market towns. Agricultural commercialization, rural nonagricultural development, and market town development are in many ways inseparable. Market towns provide essential services to agriculture and the rural

^{7/} Hereafter we shall refer to CBEs as township-village enterprises, TVEs.

population; they are at the center of rural commerce and are critical to rural-urban trade; and they are, as well, the sites for most of China's TVEs.

3.11 It is revealing that Chinese policymakers, when discussing rural market town development, speak of it as the construction of "dams" to keep back the flood of rural population that is expected to leave agricultural cultivation. They emphasize that market towns not only will be centers of commercial, service, and industrial activities and thus provide employment to some of the agricultural workers soon to be released from cultivation, but will also provide some of the "urban amenities" (such as better schools, cultural activities, and entertainment) that the rural population finds so attractive. Much emphasis has been placed on the cultural aspect of market town development, and by the end of 1983 some 6,000 "cultural centers" had been constructed in market towns. By permitting peasants to register their residence in market towns, Chinese policymakers have taken the first step to put these "dams" into operation.

3.12 The 53,000 market towns that now exist in China are not classified as urban areas so that population movements from villages to market towns are not considered officially as rural-urban migration. Can rural residents move to officially designated urban areas? Currently, a rural resident may move to an urban area if he has employment and if he supplies his own grain ration. But he cannot bring his family nor change his residence to the urban address. Indeed, on this basis, hundreds of thousands, if not millions, of rural residents are now working in cities as construction workers and temporary contract

workers in factories.^{8/} There is some evidence that the regulations governing rural-urban migration may be further relaxed in the future. Chinese policy-makers have announced recently the basic principles that will guide China's future urbanization, and these are "control the size of large cities, rationally develop medium cities, and actively develop small towns (kongzhi dachengshi, heli fazhan zhongdeng chengshi, jiji fazhan xiao chengshi)."^{9/} One implication of these guidelines is that future urban growth will come primarily from the 126 cities with nonagricultural population between 20,000 and 200,000 in 1982 and the 3,000+ statutory towns (zhen) and county towns (xian cheng).^{9/} Natural increases in population will be one source of growth for these small cities and towns, but migration will undoubtedly be the more important source. Some migrants will come from larger cities, which Chinese policymakers believe are already overcrowded, but some may also be permitted to trickle in from market towns and villages.

3.13 China's rural sector is probably now more diversified, more commercialized, and more dependent on markets than at any time since the 1950s. Work effort, personal initiative, and risk-taking are now rewarded. Factors of production are permitted greater mobility between occupations as

^{8/} In 1982, township-village-operated construction enterprises employed some 4.2 million workers, most of whom were engaged in construction activities away from their home counties but not necessarily in cities.

^{9/} In 1982, the size distribution of cities in China was:

<u>Size by nonagricultural population</u>	<u>Number of cities</u>
"large" Over 1 million	20
500,000 - 1 million	28
"medium" 200,000-500,000	71
"small" 20,000-200,000	126

well as locations. No longer is "large and collective (yida ergong)" the preferred form of organization. Capital and labor can now be brought together in a variety of ways: individual undertakings, joint enterprises, as well as various forms of cooperation between individuals, collectives and state enterprises.

3.14 China's population in 1982 was roughly 1 billion, of which about 200 million resided in urban areas (defined as all cities and statutory and county towns) and the remaining 800 million in the countryside. Of the approximately 340 million rural workers, 89 percent were engaged in agriculture and 11 percent in nonagricultural activities. What changes can be expected in the next two decades? How many peasants will cease to depend on the land for their livelihood? And what will they do instead? How will China's rural economic structure change? Table 14 presents some current Chinese thoughts on these questions. The "projections" were made on the following implicit assumptions: (i) the current birth control program is successful so that total population by the year 2000 will not exceed the target of 1.2 billion; (ii) by the year 2000 rural population will increase to 900 million and rural labor force to 450 million; and (iii) in 2000 farming will absorb approximately one third of the rural labor force and forestry, fishery, livestock, and other agricultural sidelines another 20+ percent. The implicit assumption is that grain and industrial crops will be produced largely by specialized households so that, on average, farm mechanization will increase to the level that now exists only in the more developed agricultural regions and that farm size will be significantly larger.^{10/} The implication

^{10/} Apparently this is what Chinese policymakers have in mind when they speak about the 100 million agricultural workers who are currently in "surplus" and therefore can be removed from cultivation.

Table 14. PRELIMINARY PROJECTIONS OF CHINA'S
RURAL POPULATION AND LABOR FORCE, 2000

	1982		2000	
	Million	Percentage	Million	Percentage
Total population	1,000		1,200	
Urban <u>/a</u>	200		300	
Rural	800		900	
Rural labor force	341	100	450	100
Agriculture	304	89	250	56
Farming	n.a.		150	34
Forestry, fishery, livestock, agric. sidelines	n.a.		100	22
Nonagricultural activities	37	11	200	44
Collective sector	31	9	120	26
Individual activities	-	0	45	10
Contract labor	6	2	35	8

/a All cities and statutory and county towns.

Sources: Ministry of Agriculture, Animal Husbandry and Fishery, Ministry of Urban and Rural Construction and Environmental Protection, Renmin Ribao March 18, 1984, p. 2.

of these assumptions is that some 200 million rural workers will need to be employed in nonagricultural jobs. Of this number, 120 million will be absorbed by the collective sector, about 45 million will be engaged in individual activities, and the remaining 35 million will be working as contract labor in urban areas. Unfortunately, how the distribution of rural nonagricultural employment was determined is not fully explained.^{11/}

^{11/} One of these assumptions is that 3.8-3.9 workers are needed in commerce and services for every 100 rural persons.

3.15 These Chinese projections suggest a dramatic decline in the share of rural workers engaged in agriculture, falling from 89 percent in 1982 to 56 percent in 2000. No country has ever experienced such a large shift in only two decades. Thus, we probably should not consider these projections as realistic targets for the year 2000 but as what Chinese policymakers hope will happen sometime in the early part of the next century. However, there is no doubt that the Government wants to see a shift in the rural economic structure away from agriculture, particularly cultivation. To achieve this objective, the Government is now encouraging large-scale commodity production, specialization, rural commerce, TVE development, individual activities, and the development of small towns and rural market towns. What is the prospect of rural nonagricultural development? What changes can be expected in the rural employment structure in the next two decades? We turn to these issues in the next section.

Prospects and Options

3.16 International experience suggests that rural nonagricultural development is closely related to the pace of agricultural development, the pattern of industrialization, the extent of internal and external trade, and the spatial pattern of small town and urban development. Because of this interdependence, projecting rural nonagricultural development is fraught with difficulties. In what follows, some of the more important factors that will determine the pace and direction of rural nonagricultural development in China are discussed.

3.17 Given China's diversity, population distribution, and regional differences in agricultural and industrial development, it would be naive to believe that all regions have the same prospects for rural nonagricultural

development. Contrast the conditions in Jiangsu with those in the poorer and more remote province of Gansu (Table 15). Jiangsu, situated in the most developed region in China, has a per capita net material product (NMP) that is 32 percent higher than the national average and 73 percent higher than that of Gansu. Agricultural yields in Jiangsu are among the highest in China--both grain and industrial crop yields are about two and a half times those in Gansu. Located in the densely populated coastal region and served by numerous waterways and a well-developed rail system, Jiangsu, in contrast with Gansu, has the advantage of easy access to both domestic and international markets and proximity to China's premier industrial center, Shanghai. In 1982, one fifth of China's industrial output value was produced in the Jiangsu-Shanghai area while Gansu accounted for only 1.5 percent. Since agricultural development and proximity to urban-industrial areas are two powerful factors stimulating the growth of rural nonagricultural activities, prospects for rural nonagricultural development are substantially brighter in Jiangsu than in the less developed and more remote Gansu. Indeed, these differences are already reflected in the pace of rural nonagricultural development in the two provinces (Table 15). In 1982, TVEs employed one out of every 12 commune members in Jiangsu but only one out of every 74 in Gansu, and in Hubei, a more average province, it was one out of every 27 (the national average was one out of every 26). Even more striking is that the value of industrial output produced by TVEs per rural population in Jiangsu, at Y 256, was 16 times that in Gansu, 4.6 times that in Hubei, and over 3 times the national average.

Table 15. COMPARISON OF CONDITIONS FOR RURAL NONAGRICULTURAL DEVELOPMENT
JIANGSU, GANSU, AND HUBEI (1982)

	National	Jiangsu	Gansu	Hubei
Population density (persons/sq km)	106	593	43	256
Arable land per rural population (<u>mu</u>)	1.86	1.36	3.21	1.42
Per capita NMP (<u>Y</u>)	420	553	319	454
Relative grain yield (national = 100)	100	143	53	122
Relative industrial crop yield (national = 100)	100	139	54	117
Number of commune mem- bers per TVE worker	26	12	74	27
TVE industrial output per rural population (<u>Y</u>)	80	256	16/ <u>a</u>	55

/a 1983.

Sources: State Statistical Bureau, Statistical Yearbook of China 1983; World Bank "China Agriculture to the Year 2000: Prospects and Options," February 10, 1984, p. 99; and data collected by the Economic Mission.

3.18 In rural China, the demand for nonagricultural goods and services and therefore for rural nonagricultural labor is likely to rise rapidly. Theoretical considerations suggest that household consumption patterns alter in important ways when income rises, the chief being the decline in the expenditure on food, particularly staples, as a share of total outlay. The expected changes are clearly shown in Table 16 where the consumption patterns of surveyed farm families in Gansu are presented by income groups. Farm families with per capita income under Y 200 allocated more than 70 percent of their consumption outlays to food (over 50 percent to staples), while those with per capita income greater than Y 400 allocated less than 60 percent (one third or less to staples). The decline in the share spent on food by higher-

income families implies that the consumption of nonfood goods and services absorbed a larger share of these families' household budgets. Of course, not all categories of nonfood goods and services increased their shares of the budget. For example, the share going to fuel actually declined. But the shares of the following categories showed significant increases with income: clothing (especially above Y 500), housing (above Y 300), articles for daily use (above Y 200), and culture and other services (above Y 200 but declines once per capita income reaches Y 500). In other words, for most nonfood consumption items, the income elasticities of demand are greater than unity, and in many cases substantially greater. Thus, rising rural income is likely to generate growing demands for nonagricultural goods and services in rural China. Of course, it is difficult to say to what extent this increased demand will lead to the growth of rural nonagricultural activities.

3.19 Whether or not a specific nonagricultural activity is economically viable, and therefore likely to develop, in a rural setting depends on a number of techno-economic factors. Activities that serve local needs or produce "nontraded goods," such as commerce, services, and service-type industries, are obvious candidates for dispersed location, and are therefore likely to play an important role in rural nonagricultural development. With the government now encouraging commodity production and the formation of specialized households in rural areas the demand for these "nontraded goods" is bound to rise rapidly. In commerce and transportation, for example, channels other than the state-operated rural marketing and supply system will be needed to satisfy the increased demand. Therefore, the development potential for own-account activities organized by individuals or small groups of individuals in these areas is good, particularly since the government has now

given formal approval to these forms of organization. How quickly these activities will develop in a specific rural location depends largely on the strength of demand, which in turn, of course, is determined by the level of agricultural income and population density in that locality. Thus, one would expect development to be stronger and more rapid in the more prosperous and populated agricultural regions in the coastal areas than in the less developed and more remote regions in the interior.

3.20 The pace of rural nonagricultural development will also depend on the ability of rural areas to attract manufacturing industries. The two most important factors influencing the location of manufacturing industries are transport cost and technology. Weight-reducing, resource-using production processes (for instance, metallurgy, wood products, and agricultural processing) are usually dispersed throughout the economy so as to be near the resources. Industries that produce bulky or heavy products that are costly to transport (for example, building materials and boilers) are also distributed in a decentralized manner. But, because of scale economies, not all of these industries are necessarily suitable for small/medium enterprises. Manufacturing industries that produce standardized products using relatively simple technology are also suitable for dispersion to small/medium towns. They tend to be "footloose" and thus sensitive to the attraction of rural locations where land and labor are cheaper.

3.21 Many of the characteristics just described can be found in the industries identified by Chinese policymakers as having good development potential for TVEs: agricultural processing (foodstuffs and processed feeds), building materials (tile and brick), energy (small coal mines and small hydro power stations), and processing or producing components and parts for large

**Table 16. BREAKDOWN OF CONSUMPTION EXPENDITURE FOR RURAL HOUSEHOLDS
BY INCOME GROUPS, GANSU, 1982
(Percentage of total)**

	All surveyed households	Households with per capita income						
		Under Y 100	Y 101-150	Y 151-200	Y 201-300	Y 301-400	Y 401-500	Over Y 500
Total consumption (Y)	179.8	114.9	137.1	182.0	227.8	290.5	357.8	423.9
Percentage of total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food	67.8	74.3	70.1	71.1	65.3	62.8	58.6	54.4
Staples	48.2	54.0	51.3	53.6	45.9	42.3	33.3	27.2
Other	19.6	20.3	18.8	17.5	19.3	20.5	25.3	27.2
Clothing	11.9	9.5	11.6	11.3	13.0	12.4	12.4	20.0
Fuel	4.0	4.8	5.0	4.6	3.6	2.8	2.1	1.2
Housing	4.3	1.6	3.1	3.5	3.7	7.7	10.7	10.3
Daily use articles	8.8	7.4	8.4	7.2	10.0	9.3	11.1	11.6
Culture and other services	3.2	2.3	1.7	2.2	4.3	5.0	5.1	2.6

Source: Data collected by Economic Mission.

enterprises. In view of the expected shift in consumption patterns away from staples to other food (such as meat, fruit, and generally "high quality" food) and the fact that, of the foods currently consumed in China, only 32 percent are products of the food processing industry and, of the feeds used in animal husbandry, only 10 percent are processed or mixed (Renmin Ribao March 18, 1984), the potential for growth in agricultural processing is obviously good. There is also a clear need for more energy and building materials in rural areas. Energy shortages continue to be a problem in many parts of rural China and are a serious bottleneck to rural development. With the development of small towns and market towns about to begin and with a larger share of farm

families' expenditure going to housing as rural income rises, construction activities in rural areas will rise rapidly, and so will the demand for building materials. Rising opportunity costs of land and labor in urban areas and greater rural demand for manufactured goods also make it economically more attractive to locate the production of standardized products (such as textiles, apparel, simple metal products and machinery parts, plastic products, and simple electrical components) in rural areas. But it is important to recognize that the prospects for TVIE development are not equally good in all of China's rural regions.

3.22 Rural regions with the brightest prospects for TVIE development are those near urban-industrial centers. It is in these areas that urban-rural linkages are strongest and where "footloose" industries producing standardized products are more likely to locate because they offer these industries both the advantages of cheap rural land and labor and proximity to major markets and sources of technology. In the past, economic relationships between cities and their surrounding rural areas could not develop naturally, in part because of restrictions against relationships that would cross administrative boundaries. Now that many of these restrictions have been relaxed or lifted, a surge of such relationships can be expected to develop and this could lead to a very rapid pace of industrial growth in small towns and market towns that have good access to urban-industrial centers.

3.23 Take Taichang County, for example. Located in southern Jiangsu and adjacent to the municipality of Shanghai, Taichang has experienced unprecedented rural industrial growth since the adoption of the new policies towards TVIE development, commerce, and economic relationships between urban and rural enterprises. Between 1978 and 1983, Taichang's agricultural and industrial

gross output value increased at an average rate of 15.3 percent per year. TVIE gross output value increased from Y 106 million in 1978 to Y 372 in 1983, raising its share in the county's total industrial gross output value from 40 percent to 51 percent (Table 17). The county-operated collectives also experienced rapid growth, with employment rising by 57 percent between 1978 and 1983 and gross output value by 4.5-fold to Y 158 million. The increases in employment in TVIEs and the county-operated collectives were of course supplied primarily from the countryside. As a result, Taichang's real economic structure shifted significantly in five years. In 1978, 77 percent of the rural labor force was engaged in farming, animal husbandry and various sidelines (including production team enterprises and some activities that are not strictly agricultural) and 23 percent in nonagricultural activities. By 1983, rural laborers were deployed 63 percent in agriculture and 37 percent in nonagricultural activities. What is important is that many of the new industrial activities had urban links, particularly with Shanghai. Economic cooperation with Shanghai takes three main forms: technical cooperation, the leasing or sale of old equipment to Taichang, and capital contributions from Shanghai. In 1983 Taichang had 716 TVEs--8 were joint ventures with Shanghai enterprises (in the sense that Shanghai had contributed capital to these enterprises and has a role in management) and of the remaining, 170+ had other forms of economic cooperation with Shanghai enterprises. The impact of Shanghai is even greater than these figures suggest because most of Taichang's TVEs sell part of their output to and buy part of their inputs from Shanghai.

Table 17. IMPACT OF RURAL NONAGRICULTURAL DEVELOPMENT
ON TAICHANG COUNTY, JIANGSU

	1978	1983
TVIE gross output value (Y million)	106	372
TVIE production as % of total industrial production	40	51
Rural labor force (thousands)	250	250
% in agriculture <u>/a</u>	77	63
% in nonagricultural activities	23	37
Per capita rural income	Y 206	Y 450
% from farming	75%	38%/b
% from sidelines	15%	32%/c
% from other activities	11%	30%

/a Farming, animal husbandry, fishery, forestry, and other sidelines.

/b Most of the increase between 1978 and 1983 came from earnings in production team enterprises.

/c Most of the increase between 1978 and 1983 came from earnings in township-village enterprise.

Source: Data collected by Economic Mission.

3.24 Rural nonagricultural development has had a dramatic impact on Taichang. Per capita rural income has more than doubled, rising from Y 206 in 1978 to Y 450 in 1983 (Table 17), with most of the increases coming from nonagricultural activities. In 1983, over 80 percent of the industrial workers in Taichang were rural residents. Mechanized equipment in agriculture increased from 172,000 hp in 1978 to 270,000 hp in 1980 and 320,000 hp in 1983, and this undoubtedly helped to release farm workers from cultivation for nonagricultural jobs. Nevertheless, the impact of rural nonagricultural development was still felt. The amount of triple-cropped land declined from

200,000 mu in 1978 to 120,000 mu in 1980 and 80,000 mu in 1983.^{12/} Taichang expects to increase the number of its specialized households in cultivation from 900 in 1983 to about 13,000 in 1990 and to give each more land (perhaps 15-20 mu) to cultivate. This would, of course, release more farm workers for nonagricultural jobs. By 1990, Taichang expects its rural labor force to be deployed as follows: farming, 30 percent; sidelines, 10 percent; industry, 45 percent; and construction and services, 15 percent. Given its favorable location and highly diversified agriculture, there is every reason to believe that Taichang's expectation will be realized. Of course, there is only one Shanghai, so Taichang is somewhat of an exception. But, given the current government policies, nonagricultural activities in rural areas with good access to urban-industrial centers can also expect to develop rapidly.

3.25 Because of their distance from urban areas (often made more inaccessible by poor transportation), many parts of rural China cannot depend on urban-rural linkages to stimulate nonagricultural development. In these areas, prospects for rural nonagricultural development are determined largely by agricultural development and commercialization. Because agriculture and nonagricultural activities are directly linked by the consumption demand of farm households, areas with strong potential for agricultural growth and diversification are also likely to have good prospects for rural nonagricultural development. Rural market towns are the natural locations for many rural nonagricultural activities, so prospects for nonagricultural development have been improved now that the rural population is permitted to move more freely. The revival of market towns as centers of social, cultural and

^{12/} Another reason for the decline was the unusually cold weather in the last few years, which made a second rice crop less profitable.

economic activities will also create new nonagricultural employment opportunities, particularly in services. Of course, if the present urbanization policy ("control the size of large cities, rationally develop medium cities, and actively develop small towns") succeeds in creating a decentralized pattern of urbanization in China, then urban-rural linkages will spread to many parts of rural China where they do not exist today; in which case, the prospects for rural nonagricultural development in these areas will obviously improve considerably.

3.26 What are the prospects for nonagricultural development in rural areas that are remote from urban areas and with little agricultural potential? Such a place is Dingxi county in Gansu. Over 90 percent of Dingxi's population of 372,000 is rural. Dingxi's per capita rural income averaged Y 109 in 1983, which makes it a poor county in an already poor province (per capita rural income in Gansu, excluding "disaster areas," was Y 213).^{13/} But conditions among its 23 townships vary considerably, with per capita rural income ranging from Y 55 to Y 187. Ninety percent of its cultivated area is mountainous fields. Average annual precipitation is 425 mm, and with less than 6 percent of its cultivated area irrigated, drought is a constant threat.^{14/} In 1983, a record year, the average grain yield was only 170 jin/mu (974 kg/ha). Because of the low rural income, there is little demand for nonagricultural goods and services and even fewer resources (capital and skills) to invest in nonagricultural activities. Its agricultural

^{13/} The share of Gansu's population in "disaster areas", where rural per capita income ranged between Y 30 and Y 40, was about 50 percent in 1982 and 10 percent in 1983. The amount of "relief-grain" distributed was 600 million kg in 1982 and 300 million kg in 1983.

^{14/} Dingxi was hard hit by drought in both 1981 and 1982.

yields are too low and too uncertain to support much commercial agricultural processing, and of course its remoteness precludes the development of urban-related industries. These conditions have made TVE development extremely difficult in Dingxi.

3.27 In 1983, Dingxi county claimed 106 TVEs with a total employment of about 4,800 (3 percent of the rural labor force) and a gross output value of Y 8-9 million.^{15/} Industry and construction each accounted for about 45 percent of the employment. Of the Y 109 that the average commune member received as income in 1983, only slightly more than Y 3 were wages from TVEs. There were three times more TVEs (and perhaps 1,800 more TVE workers) in 1978 than in 1983. Mergers and closures to cut losses and reduce duplications had contracted the sector to its present size. However, in 1983, 12 TVEs (mostly industrial enterprises) were still operating in the red, and one suspects that few of the other industrial TVEs were very profitable. An indication of the limited range of business opportunity in Dingxi is the statistic that over 70 percent of the workers in TVEs were involved either in construction or the production of building materials. What about the future? County leaders suggest that construction probably has the best growth potential. This is based on the assumption that construction skills of Dingxi's workers will improve sufficiently in the future that they will be able to compete successfully for construction jobs outside of Gansu. In other words, the hope is to export workers to places where job opportunities are better.

^{15/} These are rough figures because only 95 TVEs actually reported their statistics. The 95 reporting enterprises had 3,804 workers and produced output valued at Y 7.6 million. The 11 TVEs that did not report were in construction with perhaps 1,000 workers and annual receipts of Y 1.5 million.

3.28 Although conditions for rural nonagricultural development may not be as poor in Gansu as a whole as they are in Dingxi, they are still not very favorable. There are some opportunities for developing urban-related activities in rural areas near the main cities, but because Gansu's urban industries are mostly capital-intensive heavy industries (the share of heavy industry, by gross output value, is 75 percent), urban-rural linkages are much weaker than those that exist, for example, between Taichang and Shanghai. There is a severe shortage of fuel in rural Gansu, so where coal is available, small-scale mining is a possibility. Another is the preliminary processing, that is, screening and washing of mineral ores at mine sites. This is a weight-reducing process, so it has the added advantage of economizing on rail transport, a scarce factor in Gansu. Through its unified purchases, the government currently collects nearly the entire output of animal products (such as wool) and industrial crops produced in Gansu for the state sector so there are few agricultural raw materials left for TVEs to process. In fact, to keep its processing facilities operating near full capacity, Gansu must import raw materials from other provinces.^{16/} Therefore, it would appear that, until Gansu is able to increase agricultural production substantially, there is little prospect of TVEs participating in agricultural processing.^{17/} But few areas in Gansu have strong potentials for agricultural growth. Thus, outside the suburbs of the main cities and the mining areas, the prospects for rural

^{16/} For example, Gansu is able to supply only 60 percent of the wool needed by its five woolen factories in Lanzhou.

^{17/} However, one possibility is for TVEs to do some preliminary processing before the state sector does the final processing. For example, currently, the washing and cleaning of wool, a weight-reducing process, is done in Lanzhou at the woolen mills. This could be decentralized to TVEs.

nonagricultural development do not appear to be much better than in Dingxi. Certainly this is suggested by the lack of diversity in the output that is now produced by Gansu's township-operated industrial enterprises (Table 18). In contrast to Jiangsu, Hubei and the national average, the output structure of township-operated industrial enterprises is dominated by one category of products: building materials. In fact, one half of Gansu's TVIE output in 1983 was made up of coal and building materials. Textiles, apparel and leather goods account for less than 6 percent of the output produced by TVIEs in Gansu, but 26 percent in Jiangsu and 17 percent in China as a whole.

Table 18. OUTPUT STRUCTURE OF TOWNSHIP-VILLAGE INDUSTRIAL ENTERPRISES (TVIEs), JIANGSU, GANSU AND HUBEI, 1982

	National/ <u>a</u>	Jiangsu	Gansu/ <u>a</u> ,/ <u>b</u>	Hubei
Total output (Y million)		13,165	160	2,161
Percentage of total	100.0	100.0	100.0	100.0
Metallurgy	2.4	2.6	3.4	1.9
Power	0.7	-	0.6	1.0
Coal and coking	5.4	0.2	11.5	2.0
Petroleum	0.1	0.1	-	-
Chemicals	8.2	10.3	10.5	9.6
Machine building	24.8	27.4	15.7	23.5
Building materials	20.7	18.7	41.4	24.2
Forest products	2.5	0.9	1.4	2.6
Foodstuffs	8.3	3.3	3.5	6.7
Textiles, apparel, leather goods	16.7	25.6	5.7	17.8
Paper, stationary, cultural goods	4.3	3.2	3.3	3.5
Others	5.9	7.7	2.9	7.1

/a Includes only township enterprises. There are very few village-operated industrial enterprises in Gansu.

/b 1983.

Sources: Table 9 and data collected by the Economic Mission.

3.29 In addition to the issues raised by China's regional diversity, the pace of rural nonagricultural development will also depend on the availability of investment for rural nonagricultural activities, the pace of small town and market town development, and the type of economic system that will ultimately emerge in China. These issues are discussed briefly below.

3.30 If the share of rural workers engaged in agriculture is to fall from the current level of 89 percent to 56 percent in 2000, rural nonagricultural activities will need to absorb an additional 160 million workers, approximately 90 million by the collective sector (TVEs) and the remaining 70 million by individual undertakings and contract labor (Table 14). To provide these workers with facilities, tools, equipment, and materials would require vast amounts of fixed and working capital. Assuming that each rural nonagricultural worker requires Y 1,000 of fixed capital, a conservative estimate, then to absorb an additional 160 million workers would require net investments of at least Y 160 billion between 1983 and 2000.^{18/} This is obviously not a trivial sum. China's total investment in fixed assets in 1982 was Y 120 billion, of which only Y 35.5 billion came from the private and collective sectors. Where will the funds come from?

3.31 TVEs are outside the state sector and therefore have only limited access to state budgetary allocations. Thus, they must rely primarily on the following three main sources for capital: their own profits, private and collective rural savings, and credits. At present, retained profit is probably the most important and reliable source of funds for TVEs, and this is likely to continue. The cumulative total of after-tax profits earned by TVEs

^{18/} For all TVEs, the average amount of fixed capital per worker was Y 1,100 in 1982.

between 1978 and 1982 was a substantial Y 45.1 billion, and profits are likely to be even larger in the future. However, the financial demand on TVEs is also substantial. TVEs' profits are distributed according to government guidelines, which vary from province to province to take account of differences in economic conditions. In general, about 40-50 percent of the after-tax profits are retained by the enterprise and the rest is turned over to the township. The bulk (perhaps between 50 and 80 percent) of the retained profits is used by enterprises to expand reproduction, that is to say, used for fixed and working capital, and the rest is used for bonuses and workers' welfare. Profits transferred to the township are used for agricultural investments (purchase of agricultural machinery and land improvements), collective welfare (education and health), market town construction, assistance for poor teams, investments in new TVEs, support for rice production,^{19/} and distribution to commune members. In other words, many rural activities and projects are funded from the profits earned by TVEs. Table 19 summarizes the distribution of after-tax profits for all TVEs in China and those in Jiangsu, Hubei and Gansu. In 1982 TVEs used Y 4.8 billion from their profits to expand reproduction, although how this was divided between fixed and working capital is not clear.^{20/} As a share of after-tax profits, retained earnings used to expand reproduction was 41 percent in China, 47 percent in

^{19/} In Zhitang Township, Jiangsu, for example, the amount of subsidy income (financed from profits earned by TVEs) given to each peasant is determined by the amount of rice he sells to the state. Apparently, without the added inducement of this income, the procurement price, despite recent increases, is still too low to induce peasants in some areas to produce sufficient rice.

^{20/} In Liuhe County, Jiangsu, the division was fixed capital 60 percent, and working capital 40 percent.

Table 19. DISTRIBUTION OF TVE AFTER-TAX PROFIT:
CHINA, JIANGSU, HUBEI, GANSU, 1982

	China /a		Jiangsu		Hubei /b		Gansu /c	
	Y mln	Percent- age of total	Y mln	Percent- age of total	Y mln	Percent- age of total	Y mln	Percent- age of total
Gross profit	12,900		n.a.		395		n.a.	
After-tax profit /d	11,600	100.0	1,441	100.0	360	100.0	45.1	100.0
Expand reproduction /e	4,800	41.4	685	47.5	119	33.1	25.5	56.5
Agricultural investment	1200	10.3	118	8.2	47	13.0	3.3	7.3
Assistance to poor teams	200	1.7	14	1.0	6	1.7	0.3	0.7
Collective welfare	900	7.7	117	8.1	15	4.2	4.2	9.3
Distributed to commune members	-	-	183	12.7	35	9.7	4.6	10.2
Others	} 4,500/f	38.8	324	22.5	138	38.3	7.2	16.0

/a Excludes nonindependent accounting enterprises.

/b The following breakdown is also available for Hubei:

	Y mln
Gross profit	395
Income tax	35
After-tax profit	360
Retained by TVEs	147
Expand reproduction	119
Others	28
Transferred to township/village (commune/brigade)	146
Purchase of farm machinery	21
Land improvement	26
Assistance to poor teams	6
Collective welfare	15
Support TVEs	47
Others	32
Transferred to team	66
Distributed to members	35
Support agricultural production	31

/c 1983.

/d After-tax profit per commune member: China, Y 14; Jiangsu, Y 28; Hubei, Y 9; and Gansu, Y 3.

/e Funds used to expand reproduction per commune member: China, Y 6; Jiangsu, Y 13; Hubei, Y 3; and Gansu, Y 1.5.

/f Derived by subtracting the other items from after-tax profit.

Source: State Statistical Bureau, Statistical Yearbook of China 1983 and data collected by Economic Mission.

Jiangsu, 33 percent in Hubei and 56 percent in Gansu. Because TVEs in Gansu are relatively underdeveloped, they are permitted to retain a larger share of their profits for expanding reproduction than TVEs in other areas. The government also uses some of its share of profits to support TVEs (by subsidizing those in financial difficulties and by investing in new TVEs). Apparently, 1 percent of after-tax profits is earmarked for this purpose (Renmin Ribao March 18, 1984).^{21/} Since TVEs are likely to continue to carry the same financial responsibilities that they now have, it will be difficult to divert more of their profits to investments. In the poorer regions, the problem is made more difficult by the fact that profits from TVEs are still relatively small. For example, in 1982, after-tax profits from TVEs per commune member was Y 28 in Jiangsu but only Y 3 in the much poorer Gansu. If TVEs are to play the role in rural nonagricultural development that is now projected for them, investments must come from sources other than their own profits.

3.32 Collective savings from agriculture and private rural savings are a second source of investment for TVEs. For example, production teams and individuals may now put funds in TVEs and receive dividends on the investment, but funds, once invested, cannot be removed from the enterprise. However, since the widespread adoption of the production responsibility system, "collective accumulation" has declined sharply, falling from Y 8.7 billion in 1979 to Y 5.6 billion in 1980 and Y 4.8 billion in 1981 (Statistical Yearbook of China 1983). Thus private rural savings are probably more important than

^{21/} One percent is probably the minimum. In 1982, the Hubei Government allocated Y 47 million from its share of the profits, or about 13 percent of that year's after-tax profits, for this purpose.

collective savings. Indeed, one suspects that one reason why the government is now promoting different forms of economic organization in the countryside is its recognition that private savings have become important and are likely to become even more important. However, given that privately owned productive assets were collectivized without compensation in the past, the incentives for individuals to invest directly in TVEs must be somewhat limited. Private savers may prefer instead to invest in individual undertakings or small joint undertakings where the time needed to recoup one's investment is relatively short. In any case, it appears that much of the private rural savings in recent years have been used primarily to finance investment in private housing.^{22/} This is hardly surprising since housing is the one asset for which the ownership rights have not been altered repeatedly since 1949. In the near future, therefore, one should not expect private individuals to invest large sums in TVEs. But in the longer run, after rural institutions have stabilized, peasants' behavior may change and private investments may become an important source of funds for TVEs.

3.33 A large share of the funds needed to develop TVEs will have to be financed through bank credits and other financial arrangements. Already credits are financing upwards to 50+ percent of new investment in TVEs. Through the various TVE bureaus, the government is operating a revolving fund from which interest-free loans are made to TVEs, usually repayable in 3-5 years.^{23/} These loans are targeted for specific industries and selected

^{22/} Private investment in housing was Y 18.1 billion in 1982 (Statistical Yearbook of China 1983), and one suspects that most of this was in rural areas.

^{23/} The program began in the late 1970s when the state distributed grants to localities to encourage TVE development. In 1981 the grants were replaced by interest-free loans.

geographic (usually the poorer) areas. As loans are repaid, the funds are recycled to new projects. In recent years, the state has added about Y 300 million of fresh funds each year so the revolving fund has gradually become larger. In Gansu, 80 percent of the repaid loans are retained in the same county and recycled to new projects, and the remaining 20 percent are returned to the prefecture for reallocation to poorer counties. Preferences are also given to the poorer regions when the annual net additions are distributed. Besides the state-operated revolving fund, TVEs obtain credits from two other major sources: rural credit cooperatives (RCCs) and the Agricultural Bank of China (ABC).^{24/} Credits from these sources are, of course, interest-bearing, although the rates are fairly low. For example, ABC loans to TVEs, on average, carry an interest rate of 0.6 percent per month. The total amount of loans from these sources has increased rapidly in recent years. The amount of RCC loans outstanding to TVEs was Y 4.2 billion at year-end 1982 compared with Y 1.4 billion at year-end 1979 (Statistical Yearbook of China 1983). In 1982, experiments began on a new form of financing for TVEs in which ABC and RCCs were commissioned to issue stock and bonds to raise funds for TVEs (World Bank 1982). Recent developments in agriculture, nonagricultural activities and rural commerce are making new demands on the rural financial system. To meet these demands, the government is making efforts to strengthen the role of rural credit institutions in mobilizing and allocating resources in rural areas. The ability of China's rural credit institutions to assess investment proposals is particularly weak and needs to be improved if scarce credits are to be used with better efficiency (World Bank 1982). With production and

^{24/} On occasion, TVEs have also borrowed from the People's Construction Bank.

investment decisions now more decentralized, there is also a need to extend rural credit institutions to below the township level.

3.34 Urban enterprises are also a potential source of investment for TVEs. The government is encouraging urban enterprises and developed areas to interact more with TVEs through profit- or output-sharing arrangements, compensation trade, and joint ventures. In these arrangements, rural areas generally contribute labor and sometimes also natural resources and urban areas capital and technical know-how. Thus far, these arrangements appear to be important primarily in areas where urban-rural linkages are already strong, namely, in rural areas close to urban centers, and where there are undeveloped natural resources that are also in short supply.

3.35 Many of China's rural industries will be located in small towns and rural market towns. Rural commerce will also be closely related to market town development as these towns are not only the center of local trade but also the critical link between urban and rural areas. Therefore, many of the 160 million rural workers Chinese policymakers hope to shift from agriculture to nonagricultural activities between now and 2000 will be moving with their families to the 53,000 market towns that are scattered in the countryside, and many more will be commuting to jobs in small towns and market towns. How quickly market towns can be revived and their ties to both urban and rural areas strengthened will be a main factor influencing the pace of rural non-agricultural development. Crucial to market town development are investment in urban infrastructure (utilities, waterworks, sewerage, etc.) and rural roads that link market towns, villages, and the larger towns and cities. Many rural areas will find it difficult to organize and finance these investment projects.

3.36 The maintenance and construction of urban infrastructure in the larger cities are financed by state grants, taxes on utility fees, surcharges on industrial and commercial taxes, and in a few special cases a share (5 percent) of the profits earned by industrial and commercial enterprises. But these financial sources are not available to the small towns, namely, the statutory and county towns. In fact, at present, the small towns do not have a regular method of raising funds for infrastructure investments. When investments are made, they are usually financed by special provincial government grants and "contributions" from large industrial enterprises that are served by the infrastructure. But these are not assured sources. Under consideration is a county tax to support infrastructure construction and maintenance. The financial base of market towns is even weaker. Its only source of funds is the collective sector. The responsibility for rural roads is shared among the various levels of government. Roads connecting county towns are the responsibility of the provincial bureau of communications. The other rural roads, those connecting market towns and villages to market towns, are mainly the responsibility of brigades. But, in some areas, the work is neglected. In a few places, such as some of the more advanced counties in Jiangsu, the roads are maintained by the county bureau of communications. The average township government is financially weak and does not have the capacity to undertake many investment projects. Social labor, which brigade members are still obliged to contribute, is the main resource available for infrastructure and road construction and maintenance in most rural areas. That local governments in many rural areas are organizationally and financially weak does not augur well for the rapid development of market towns and rural roads. It is important that higher levels of government give these projects

greater financial assistance and technical support and that local governments in rural areas be given greater revenue authority. Now that the production responsibility system is firmly in place and specialization is expected to increase, the obligation to supply social labor may become increasingly inconvenient for many rural residents. Where necessary, replacing the social labor obligation with a tax should be considered.

3.37 Being part of a market-oriented sector in any economy where many goods and factors are administratively planned and allocated presents special problems for the rural nonagricultural enterprise. Unlike its counterpart in the state sector, whose outputs are purchased and whose inputs (fuel, raw materials, and factors of production) are allocated according to state plans, the rural nonagricultural enterprise operates largely outside the state plan and thus must market its own outputs and find its own inputs. This would not be a problem except that the very large state sector is also given priority in the supply of goods and factors. In short, rural industries are discriminated against in the allocation of scarce materials, credits, skills, capital goods and institutional support. If the problems of supply and the lack of access to certain goods and factors (such as graduates of universities and technical colleges) are not solved, the pace of rural nonagricultural development cannot be very rapid.

3.38 TVEs and other rural nonagricultural enterprises have worked hard to overcome some of these difficulties. TVEs have put three million-plus sales and purchase people in the field, and some are maintaining offices in cities to keep tabs on supply and market opportunities. To help TVEs with their marketing and search for supplies, most provincial and county TVE bureaus have established trading companies. Through the use of economic and technical

cooperation arrangements, channels for the barter of goods and the exchange of goods for technical skills and know-how have developed outside the state plan. Since skilled labor, technicians, and professional staff are centrally allocated by either the provincial government or the central government and therefore not available on the market, TVEs have had to train their own staff by sending workers to urban enterprises, vocational schools, and technical colleges and paying for their training and expenses. But many of these problems are systemic and cannot be solved at the enterprise level.

3.39 The government recognizes that rural nonagricultural activities need to be better integrated into the national economy, and it hopes to include TVEs in the state material allocation plan both directly and indirectly through economic contracts. Material supplies required by TVEs to produce goods needed and requested by the state are to be included directly in the state plan and supplied through the material allocation system. Since state enterprises and commercial and foreign trade departments usually provide the major material inputs needed for contract work (for example, processing and the production of parts and components) they assign to TVEs, some of the material needs of TVEs are also included indirectly in the state plan through these contracts. To bring more TVEs into the state material allocation plan, the government is urging the expansion of contract activities between the state sector and TVEs. As for labor allocation, the Ministry of Agriculture, Animal Husbandry and Fishery has requested the government to include TVEs in planning vocational education in the future and in the annual allocation of technical college graduates. But, given their small size and large numbers, involving many TVEs in the state plan, even indirectly, will not be an easy task.

3.40 Rural nonagricultural activities, because they help create rural employment, reduce rural poverty and promote rural development in general, can play an important role in helping China to become a middle-income developing country by the year 2000. However, the above discussion suggests that, for both demand and supply reasons, prospects for rural nonagricultural development can vary widely among regions depending on local economic conditions. In other words, as a development strategy, rural nonagricultural development will not be equally effective in all parts of China. In the populated and fairly industrialized parts of China, rural nonagricultural activities will develop quickly in the current, more liberal, economic environment, and rural nonagricultural development can be expected to play a prominent role. Prospects in areas with good agricultural potential but remote from urban centers are less bright but still relatively favorable. In these areas, rural nonagricultural development can probably best be promoted indirectly through agricultural development, greater agricultural diversification and increased commercialization. But in remote areas with poor agricultural potential, prospects are not promising. In such areas, even a forceful program to promote rural nonagricultural activities is not likely to be successful and may only produce enterprises that cannot survive except with continuous and costly subsidies from the government. Therefore, in remote areas with poor agricultural potential, other policies need to be considered.

3.41 One alternative that deserves serious consideration is migration. Apparently, the government is contemplating the resettlement of people who now live in particularly unfavorable rural areas (such as the poorest townships in Gansu). There are also plans to open and operate mines with rural workers brought in on a rotating basis. But, on the whole, rural labor mobility is

still very restricted and needs to be gradually relaxed. Greater labor mobility is important not only because it gives those living in backward and impoverished areas an alternative, but also because it is one of the main ways to reduce interregional income inequities. With regional inequities expected to grow under the current economic policy, having such mobility is all the more important. The current policy of allowing rural workers to take "temporary" jobs in urban areas but not allowing them to formally establish urban residence should be reconsidered because, if continued, it will have the highly undesirable consequence of creating two classes of people in urban China, since many of the urban amenities and welfare benefits are available only to those with official urban residence.

3.42 Because the concentration of rural nonagricultural activities at nodal points would have the advantage of permitting them to draw from a larger pool of labor and might also lead to important external economies and economies of scale, the revival of market towns must go hand-in-hand with the promotion of rural nonagricultural activities. To ensure and to facilitate rural participation in market town activities, high priority should be given to the development of rural roads. The rate of return of such investments can be quite high, as these roads not only facilitate the development of market towns and industrial sites and allow farm household members to participate more actively in the industrialization process, but also widen the markets for farm and sideline products and improve rural access to education, health, and social services. The development of market towns and rural roads will require substantial resources, but the Government does not appear to have given much thought to how the resources will be mobilized. At present, the revenue base of those governments most directly responsible for rural development, that is,

governments at and below the county level, is woefully weak. Thus, if rural roads and infrastructure in market towns are to be developed, either there will have to be large-scale assistance from higher levels of government or the revenue-raising authority of local governments will have to be increased substantially. These matters require early attention from Chinese policymakers.

3.43 The type of system reform China adopts in this decade will also influence the performance of the rural nonagricultural sector.^{25/} China appears to be moving towards a mixed economy where individual, collective and state ownership will coexist, but with the largest and most important parts of the economy remaining under state ownership. Planning will continue, but it will be supplemented by the market. What is less clear is whether Chinese policymakers intend to continue to rely primarily on material allocation to plan and manage the economy or turn to new policy instruments. Rural nonagricultural activities, as an important component of the market-oriented sector, would of course benefit from any change in the economic system that would allow the market a more prominent role in resource allocation. The state material allocation plan, which now allocates the bulk of China's resources, is a powerful but clumsy management tool, and the economic waste and inefficiency that result from its use are well documented. Some of the most serious problems confronting rural nonagricultural enterprises have to do with their lack of access to materials and resources produced in or controlled by the

^{25/} The current official view is that the remaining years in the current five-year plan should be used to draw up an overall plan to reform the economic system and to work out concrete measures for its implementation and that comprehensive reform of the economic system will take place gradually during the Seventh Five-Year Plan period (1986-90).

state sector. Including more TVEs in the state material allocation plan, either directly or indirectly, as Chinese policymakers have proposed, eases but does not solve these problems. When allocation is done administratively, efficient enterprises cannot bid resources away from the inefficient, and in a system where the state sector is favored, rural nonagricultural enterprises will continue to have difficulties gaining control over resources. An alternative solution is to permit the market to allocate resources to all enterprises. Giving rural nonagricultural enterprises a chance to compete with state enterprises for scarce resources will not only enhance rural non-agricultural development but will also produce a more efficient allocation of resources.

3.44 One important reason why Chinese policymakers appear to be reluctant to give the market a greater allocative role is that the state material allocation plan is now their only effective policy instrument so that discarding it will leave them without an effective way to manage the economy. China is currently considering ways to reform its economic system, and it is important that this opportunity be used to alter the system in such a way that the economy can be managed by macroeconomic instruments (such as interest rates, money supply, taxes, and subsidies). Once other effective policy instruments are available, Chinese policymakers may be more willing to allow the market to play a larger allocative role. Such a change would be favorable to rural nonagricultural development not only because it gives rural nonagricultural enterprises a chance to compete for much-needed resources, but also because competition will ensure that only the more efficient rural nonagricultural enterprises will grow.

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The World Bank

Headquarters

1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

Telephone: (202) 477-1234

Telex: WUI 64145 WORLDBANK
RCA 248423 WORLD BK

Cable Address: INTBAFRAD
WASHINGTONDC

European Office

66, avenue d'Iéna
75116 Paris, France

Telephone: (1) 47.23.54.21

Telex: 842-620628

Tokyo Office

Kokusai Building
1-1 Marunouchi 3-chome
Chiyoda-ku, Tokyo 100, Japan

Telephone: (03) 214-5001

Telex: 781-26838

