THE ROLE OF RURAL NON-FARM EMPLOYMENT IN PHILIPPINE DEVELOPMENT

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THE ROLE OF RURAL NON-FARM EMPLOYMENT IN PHILIPPINE DEVELOPMENT

by

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I. Introduction

Increasing interest in rural non-agricultural development, especially among researchers and policymakers, has brought about an increased awareness of the significance of rural non-farm employment in development. Consequently, in most developing economies, the development of rural non-farm activities has become an integral part of their general development program. It is even considered an alternative to past development strategies which failed to generate employment, improve income distribution, and alleviate poverty.

There are various reasons for this increasing interest. Binswanger (1982) cites the following:

1. An apprehension that the agriculture and the urban industrial sectors may not be able to provide sufficient employment opportunities for rapidly growing labor forces in many parts of the developing world.
2. A concern about alleviation of poverty in regions with limited agricultural potential and rapidly growing population.
3. A concern about creation of employment opportunities to avoid apparent or real excess urbanization.
4. A concern about the decline of rural crafts and, correspondingly, of income-earning opportunities, which accompanies the transformation of subsistence-oriented economies into exchange economies.

Ho (1986) suggests that the non-farm sector has become important in recent years because economic development based on large-scale, urban-concentrated, and capital-intensive industries has not provided the desired impact on employment and equity. At the same time, Shand (1983) argues that there are "severe limitations on the capacity of the agricultural sector to absorb the existing supply of rural labor and to satisfy even the minimum subsistence requirements of a large proportion of the rural population."

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There is growing realization that the favorable impacts of the "Green Revolution" observed in Japan and Taiwan will probably not be realized in the developing economies due to rapid population growth and to the apparent bias of government policies toward low labor absorption in agriculture (Jayasuriya and Shand 1983). Further, rural non-farm activities are "surprisingly important and dynamic and appear to respond to economic opportunities." Thus they deserve serious attention and consideration, especially in the design of rural development strategies (Ho 1986).

It has been observed empirically in several countries that rural non-farm activities are fast becoming important sources of employment and income for a significant number of rural workers, especially the small and landless farmers. Although initially considered a temporary measure to accommodate and provide secondary employment to agricultural workers during slack seasons, rural non-farm activities have, over the years, become a major source of growth not only for the rural sector but for the whole economy. Kilby and Liedholm (1986) found out that in about 16 countries in Asia, Latin America, and Africa, the proportion of rural labor force primarily employed in the non-agricultural sector ranged from 18 to 33 percent, or an average of 23.4 percent in the late 1960s and early 1970s. Similarly, Haggblade, Hazell and Brown (1987) suggested that the employment share of rural non-farm activities in Sub-Saharan Africa ranged from 10 to 20 percent, and income share from 25 to 30 percent.

In Asia, the figures are even higher. Rural non-farm activities account for more than half of all rural employment (World Bank 1978). And the share of non-farm income to total rural income is significantly larger than that of "primary occupation" (Liedholm 1988). This is especially true in South Korea, Thailand, and Malaysia, where non-farm income shares are 34 percent (Korea 1981), 43 percent (World Bank 1983), and 50 percent (Shand *et al.* 1983), respectively. If these figures are indicative, one may conclude that one-third to one-half of rural activities in the Asia-Pacific region come from the non-farm sector (Liedholm 1988).

There is evidence that rural non-farm activities are increasing. According to Anderson and Leiserson (1980), the employed rural labor force increased faster than the agricultural labor force in the Asia-Pacific region between 1959 and 1970. In an earlier study, Anderson and Leiserson (1978) observed that historical data of most developing countries revealed a rising share of rural labor force engaged in non-farm work. This was attributed to slow labor absorption in agriculture and to an increasing division between farm and non-farm work induced by high elasticities of demand for non-food goods and services as a result of changes in rural income and agricultural output.

Chuta and Liedholm (1979) also reported that in nine countries included in their study, the rural labor force engaged in non-farm work has grown. For instance, the annual growth rates of non-farm employment in the following countries were: Korea, 3.2 percent in 1960-1974; Taiwan, 9.4 percent in 1955-1966; Philippines, 8.5 percent in 1961-1971; India, 4.0 percent in 1953-1960; and Indonesia, 5.5 percent in 1961-1971. For alter periods, a similar trend was observed. In 1960-1980, rural non-farm employment in Taiwan grew by six percent annually, and its share to total rural employment increased from 47 to 66 percent (Shih 1983). In India, rural non-farm employment increased by three percent annually in 1971-1981 (Deshpanade and Deshpanade 1985).

More recent literature give the same conclusion about the importance of non-farm employment in development. Oshima (1984) showed a striking similarity in the development experiences of post-war East Asian countries. In Japan and Taiwan, the slow growth of on-farm incomes during the early stages of their industrialization was offset by the sustained growth of off-farm and non-farm incomes. In South Korea, non-farm incomes grew faster than on-farm incomes despite their low proportion relative to other countries. This trend is attributed to the demographic shift from agriculture to industry during the process of economic development of monsoon Asia (Oshima 1986).

Shand (1986) also provides studies that show high incidence of non-agricultural income over total rural income in most Asian countries. According to his studies, off-farm and non-farm incomes helped lower seasonal underemployment in the rural areas. Consequently, the expansion of the non-agricultural sector served as an anti-poverty strategy and offered opportunities to improve income distribution. Interestingly, the studies also observed that the incidence of off-farm and non-farm incomes was highest among the poorest in the rural sector.

Although the figures in Shand's studies already point to a high and increasingly significant employment and income shares of the non-farm sector, other researchers say the figures may be higher. Anderson and Leiserson (1978) said non-farm incomes are greatly understated especially in studies that use census data. This is because, in the census classification of rural households, two things are excluded: the incomes of rural towns that serve regional and local markets, and the household members and family workers who take supplementary non-farm employment.

Ho (1986) pointed out similar problems. In several Asian countries, rural laborers engaged in non-farm activities comprised at least one-fifth of the total rural labor force for various years, but this figure increased to about 25-45 percent when a broader definition of "rural" was used. Ho further said the figures would be even higher if workers engaged in rural non-agricultural activities on a part-time basis were included in the count. This observation is supported by Chuta and Liedholm (1979). They said about 10-20 percent of rural male labor force engage in non-farm activities as a secondary occupation. If both factors are included, the figures, when adjusted, would indicate a much higher involvement (about 35-65 percent) in rural non-farm activities (Ho 1986).

In terms of income, the problem is the same. Most available data, especially from censuses, consider only off-farm or non-farm works whose transfer income is significantly large. Thus, income from purely non-agricultural or non-farm activities can be overstated. However, Ho (1986) suggests that in most Asian countries, except South Korea, transfer income may be unimportant. In these countries, remittances from farm household members working in urban areas accounted for about 20 percent of total farm household income in 1981.

In the Philippines, studies undertaken to determine the increasing importance of the non-farm sector have mostly been micro in approach, concentrating the analyses on specific provinces or towns. Except for the study of Fabella (1983 and 1986), which looked at the composition, growth, and seasonality of rural non-farm employment using census data until 1975, most of these micro studies generally looked only at the relationship between agricultural growth and non-farm employment, i.e., to what extent agricultural development encourages the growth of the non-farm sector. For instance, Gibb (1984) observed that an 8.2 percent growth in agricultural production in a rice-producing area in Nueva Ecija for the period 1967-1971 generated a 7.8

percent increase in non-farm employment. Alburo (1980) also made similar observations. In two towns in Iloilo, a 12 percent and nine percent change in agricultural modernization resulted in a 13 percent and 10 percent increase in non-farm establishments, respectively. While no time series was presented in Alburo's paper, the differences in the growth levels of non-farm activities in the said towns provided insight about the role of these activities.

Finally, Kikuchi and Castillo *et al.* (1986), showed that off- farm employment and incomes have brought changes in the patterns of farm household decisions. Of particular interest is the increasing significance of non-farm activities in both the employment and income structures of the rural households surveyed in Laguna from 1976 to 1981.

The rise in rural non-farm activities has been attributed to the state of development in the agricultural sector. Anderson and Leiserson (1978) observed that the growth of rural labor force engaged in non-farm work was due to slow labor absorption in agriculture and to the high income elasticities of demand for non-food goods and services in the rural areas. They also pointed out that the rise in agricultural output increases the demand for non-farm output due to the agricultural sector's forward and backward linkages.

Oshima (1984 and 1986) emphasized the role of the pronounced seasonality and labor-intensity of farm work in lowering farm family income and in increasing the demand for non-farm work in monsoon Asia. Other studies, like those of Bautista (1986) and Hazell and Roell (1983), also recognized the role of agricultural growth in the development of non-farm employment and income.

This study analyzes the nature and role of rural non-farm employment in development. It also traces the growth of non-farm activities in the Philippines and determines the extent of their contribution to the transformation of the rural sector. In particular, the study will describe the structure of non-farm activities in the rural sector and how this structure changed over time. The study will also assess the impact of non-farm employment on the rural economy in terms of changes in the structure of labor utilization, production/output, and household income. Further, it will determine the increasing commitment of rural workers to non-farm work and identify possible bottlenecks which may hinder the growth of non-farm activities. Overall, the paper hopes to provide a more systematic basis for a stronger advocacy of non-farm activities in the rural areas.

This report is organized as follows: Section 2 gives a background of the rural economy. The emergence of the non-farm sector must be understood in the context of how the rural sector in general, and the agricultural sector in particular, underwent any transformation as a result of various socioeconomic processes and policies. The presentation is made in two parts: a brief history and profile of the rural sector, and trends in labor absorption in the said sector.

Section 3 discusses the trends in the growth of the rural non- farm sector. Basically, it touches on the kind of non-farm work held by the rural folks in terms of industry, occupation, sex, class of workers, and effect on income. This section also looks into the contribution of rural non-farm work to the improvement of employment and income, and discusses its linkages with agriculture.

Section 4 looks into the above developments at a more micro level, with observations from a typical rural economy in Laguna. Finally, section 5 presents the conclusions.

Originally, the study identified the Bicol region for the micro level analysis. Aside from the availability of data which would allow for a two time-period analysis (the Bicol Multi-Purpose Surveys of 1978 and 1983), the choice of the Bicol region would also have made possible a comparison of a seemingly unfavorable area with a more favorable area like Laguna. However, the only available tapes containing the 1983 BMS dataset were found to be defective after several attempts to process them. Hence, the Laguna dataset was used in this study. Previous analysis done using the 1978 BMS dataset and some preliminary and uncorrected data from the 1983 BMS also provided figures which were cited in the micro portion of this study.

Data for this paper were mostly taken from the Census of Agriculture and the Integrated Survey of Households. These are conducted regularly by the National Statistics Office. The data for Laguna were taken from the series of intensive village and household surveys conducted by the group of Dr. Yujiro Hayami of the International Rice Research Institute (IRRI) in Los Banos, Laguna.

II. The Rural Sector in the Philippines

A. *History and Profile*

The Philippine economy has remained predominantly rural. In 1988, almost 60 percent of the population still lived in the rural areas (Table 1). Apparently, no significant structural transformation took place in the economy over the last 25 years. Agriculture continued to employ half of the labor force, accounting for more than a quarter of gross domestic production (GDP), and earn about two-fifths of export revenues (Agricultural Policy and Strategy Team 1986).

Rural population remained high despite massive outflow of people to the urban centers. From 68.2 percent in 1970, the share of population living in the rural areas went down to 62.7 percent in 1980, a decline of 8.1 percent in a span of 10 years. Estimates of the National Economic and Development Authority (NEDA) place this share at 59 percent in 1987. It is expected to go down further to about 57 percent over the period 1988-1992.

The production structure of the economy did not change much during the last 27 years. Agriculture accounted for about a third of GDP in the 1960s (Table 2). This share decreased slowly (Table 3). In fact, it went down slightly to about a quarter of GDP after 20 years. On the other hand, industry increased its share to more than 36 percent from about 28 percent in 1961. The service sector maintained a share close to 40 percent.

The relative importance of agriculture resurfaced after the mid-1980s when its share increased to more than 28 percent. This was matched by a significant decline in industry's share of about 11.5 percent from 1980 to 1987. This drastic decline was attributed primarily to the economic crisis which beset the economy during the first half of the 1980s.

In terms of employment, the distribution still remained skewed towards agriculture (Table 4), whose share to total employment remained fairly high at 46.1 percent in 1988. Actually, its share declined from over 60 percent in 1960 to 46 percent in 1988. In contrast, the employment share of the services sector increased sharply from 23 percent in 1960 to 38 percent in 1988. This was corroborated by the relatively constant share of the industrial sector.

Table 1

Rural Population, 1970-1980 a/

Year	Population	% of Total Population
1970	25,006,666	68.2
1971	25,676,296	67.8
1972	26,874,768	68.0
1973	26,269,550	66.7
1974	27,492,112	67.6
1975	28,024,138	66.6
1976	28,533.531	65.7
1977	28,965,114	65.0
1978	29,391,205	64.2
1979	29,810,789	63.4
1980	30,154,563	62.7
1981	30,855,766	62.3
1982	31,853,401	62.1
1983	31,852,090	61.2
1984	32,350,340	60.6
1985	32,846,572	60.1
1986	33,338,946	59.5
1987	33,825,738	59.0
1988	34,305,163	58.4
1989	34,665,388	57.8
1990	35,234,612	57.3

a/ Data for 1971 to 1990, except 1975 and 1980 are intercensus estimates.

Source: NEDA 1989 Philippine
Statistical Yearbook

Table 2

Percentage Share to GDP by Industry, 1961-1987
(in percent)

	1961	1970	1980	1987
Agriculture	31.40	28.88	25.62	28.48
Industry	28.40	29.50	36.10	31.95
Mining and Quarrying	1.46	2.14	2.40	1.58
Manufacturing	22.23	23.18	25.00	24.24
Construction	4.00	3.41	7.00	4.13
Electricity, Gas and Water	0.71	0.77	1.00	1.99
Services	40.20	41.62	38.30	39.56
TOTAL	100.00	100.00	100.00	100.00

Source: NEDA Philippine Statistical Yearbook, various years.

Table 3
Average Annual Change in Share to GDP by Industry
(in percent)

	1961-1970	1970-1980	1980-1987
Agriculture	(.8)	(1.1)	1.6
Industry	0.4	2.2	(1.6)
Mining and Quarrying	4.7	1.2	(4.8)
Manufacturing	0.4	0.8	(0.4)
Construction	(1.5)	10.5	(5.8)
Electricity, Gas and Water	0.8	3.0	(14.1)
Services	0.4	(0.8)	0.5

Source: NEDA 1989 Philippine Statistical Yearbook.

Table 4

Employment by Major Sector, 1960-1980

Year	Total Employment (000)	Agriculture No. (000)	Agriculture %	Industrial No. (000)	Industrial %	Service No. (000)	Service %	Activity not Defined No. (000)
1960	8,539	5,224	61.2	1,316	15.4	1,953	46	0.5
1965	10,101	5,514	60.6	1,306	14.4	2,236	39	0.4
1970	11,358	5,100	53.7	1,876	16.5	3,198	184	1.6
1975	14,517	7,768	53.5	2,207	15.2	4,504	39	0.3
1980	16,433	8,453	51.4	2,554	15.5	5,421	6	0.04
1985	19,801	9,698	49.0	2,812	14.2	7,292	-	-
1986	20,595	10,289	50.0	2,746	13.3	7,561	-	-
1987	20,795	9,940	47.3	3,045	14.6	1,810	-	-
1988	21,497	9,920	46.1	3,348	15.6	8,229	-	-

Source: Labor Force Survey, National Statistics Office.

The continuing importance and favorable trade position of the agricultural sector, notwithstanding the heavy bias of past economic policies toward industrialization, clearly suggests comparative advantage in agricultural production. For example, it was found that both macroeconomic and sector-specific policies have suppressed the country's comparative advantage in agriculture by creating an incentive structure that tended to penalize rather that promote the sector (APST 1986). In fact, penalty in the form of an implicit tax had been estimated to amount to more than 20 percent of agricultural value added, a significant drain in the sector's resources. Moreover, the inherent bias of the government's industrialization program toward capital-intensive industries slowed down the absorption of more labor in the industrial sector. Subsequently, agriculture had to take the burden of absorbing a growing surplus labor. Despite this, the agricultural sector was found to be a more efficient earner and saver of foreign exchange than the industrial sector (APST 1986).

Over the years, the rural sector maintained a predominantly subsistence character. In particular, agricultural areas remained the major locus of poverty. Farm sizes were small. In fact, the number of farms with size less than three hectares increased by 58.8 percent over a three-decade period (Table 5). The majority of rural workers were farmers engaged in crop production. Table 6 reveals the pattern of agricultural land utilization by kind of crop from 1960 to 1980. In 1960, about two-thirds of all farms were planted to food crops; this did not change very much in 1980.

In the 1960s, about 62.4 percent of the 2.17 million farms were less than 3 hectares (Table 7). This figure slightly declined to about 61.1 percent in 1971, but increased again in 1980 to about 69 percent. These figures conform very well with the average size of farms, which continued to decline from 3.59 hectares in 1960 to 2.83 hectares in 1980, or a decline of about 21 percent.

This observation, of course, varies by crop as observed by Castillo (1979). In 1971, 80 percent of tobacco farmers, 69 percent of rice farmers, 65 percent of corn farmers, and 79 percent of pineapple growers operated farms of less than three hectares; only about 44 percent among sugarcane and coconut farmers belonged to this category.

While these figures indicated the predominance of small farmers, total farm area operated remained largely in the hands of large farm owners (i.e., those owning five hectares or more). For instance, only about 15 percent of the farms in 1971 were five hectares or larger, but more than 50 percent of the total area were operated by farms of five hectares or more. This was prevalent in farms planted to pineapple, sugarcane, and banana.

Figures cited in Castillo (1979) give the following observations: 70 percent of pineapple farms were less than three hectares, but about 93 percent of pineapple farmlands were being operated in units of 50 hectares or more; for sugarcane farms, about 44 percent were less than three hectares, but 66 percent of sugarlands were in 50-hectare or larger farms; in banana farms, about 82 percent were less than five hectares, but 47 percent of the total area was in farms of 10 hectares and above. In the case of rice farms, 90 percent were less than five hectares, but 35 percent of rice lands were cultivated in farms of five hectares or more; for corn, 87 percent were less than five hectares, but 42 percent of corn lands were in farms of five hectares or more.

These figures obviously mean that although the majority of farms in the Philippines are small, some areas are concentrated in larger farms. In fact, the data on farm sizes indicate that although

Table 5

Number and Distribution of Farms by Size, Philippines, 1960, 1971 and 1980

	1960 Number	%	1971 Number	%	1980 Number	%
ALL FARMS	2,166,216	100.00	2,354,469	100.00	3,420,323	100.00
Under 1.00 ha	249,773	11.53	319,363	13.56	775,791	22.68
1.00 to under 3.00 ha	1,100,974	50.82	1,117,581	47.47	1,578,044	46.14
3.00 to under 5.00 ha	404,882	18.69	558,347	23.71	588,151	17.20
5.00 to under 10.00 ha	289,730	13.37	243,847	10.36	360,006	10.53
10.00 ha and over	120,857	5.58	115,331	4.90	118,331	3.46

Source: Census of Agriculture, National Statistics Office, various years.

Table 6
Number of Farms by Types, 1960-1980

	1960		1980	
	No.	%	No.	%
All Types	2,166,216		3,420,323	
Palay	1,041,882	48.1	1,610,529	47.1
Corn	378,803	17.5	753,632	22.0
Sugar Cane	17,779	0.8	34,634	1.0
Abaca	35,991	1.7	16,054	0.5
Tobacco	22,877	1.1	5,302	0.2
Vegetable	5,520	0.2	28,580	0.8
Root Crop	36,137	1.7	76,765	2.2
Coconut	440,252	20.3	709,626	20.7
Fruit	29,131	1.3	28,549	0.8
Coffee	10,625	0.5	37,301	1.1
Hog	1,569	0.07	23,127	0.7
Livestock	3,444	0.2	14,425	0.4
Poultry	12,287	0.6	14,659	0.4
Others	120,919	6.0	67,140	2.0

Source: Census of Agriculture, National Statistics Office, various years.

Table 7
Selected Characteristics of Farms, 1960-1980

		1960	1971	1980
No. of Farms		2,166,216	2,354,469	3,420,323
Area of farms		7,772,484.6	8,493,735	9,725,200
Farm Population		12,997,296	15,739,970	19,012,788
% of Rural Population			61.3	63.05
Average Size of farm		3.59 ha	3.61 ha	2.84 ha
No. of farms under 3 ha		1,350,747	1,436,944	2,353,835
Proportion of farms under 3 ha		62.40%	61.10%	68.80%
Tenure: (%)	full owner	44.70%	57.90%	58.30%
	past owner	14.40%	11.40%	10.70%
	tenants	39.90%	29.00%	25.50%

Source: Census of Agriculture, National Statistics Office, various years.

about three-fourths of the Philippine farms were less than five hectares in 1971, 52 percent of the total farm area was occupied by farms larger than five hectares (Table 8).

The situation did not improve in 1980. With average farm sizes declining and rural population increasing, the pressure on land increased. About 85 percent of total farms were below 5 hectares, while 57 percent of total farm area was still being operated by farms of more than 5 hectares (Table 8).

In terms of tenure, the majority of farms were either fully or partly owned by farm operators (Table 9). In 1960, the proportion of farms fully or partly owned was about 59 percent of the total farms reported, and about 40 percent was tenanted under various arrangements.[1] This proportion increased to 69.3 percent in 1971 and 74.4 percent in 1980. Such increase amounted to about 26 percent for the period 1960-1980.

The share of tenanted farms declined to 26.5 percent in 1971 and to 25.5 percent in 1980. The substantial increase in the share of owner-operators may be attributed to the increasing rural population and the corresponding household expansion. The practice of allowing a son or relative considered heir to a piece of property to work on the farm is quite common in Philippine agriculture. This is done even without the benefit of legally transferring the rights to the farm operator.

The case of rice and corn is particularly interesting since these are the only crops covered by the land reform program of the past government. In 1971, tenanted rice farms were 36.8 percent of total while tenanted corn farms were 30.4 percent of total. In terms of overall farm situation, only 15.1 percent of rice lands and 6.8 percent of corn lands were under tenancy.

On the whole, this tells us that as of 1971 only 21.9 percent of total number of farms were subject to land reform. In terms of land area, the proportion was even lower--13.2 percent. On the basis of these figures and some additional information, Castillo (1979) doubted whether the land reform program could really change the patterns of land ownership in the country. She said:

> *Considering that almost half of the tenanted rice and corn landholdings that are operated by 57% of the tenants are owned by landlords who have only 7 hectares or less and, therefore, are not likely to be included in land transfer to the tenants, the total effective hectarage for redistribution may be only about one-half of the tenanted rice and corn area, which roughly means less than 10% of total farm area. Land transfer, although regarded as a major instrument for achieving greater income equality, is not likely to drastically shake up the prevailing patterns of landownership because about three quarters of the farm area is operated by full or part-owners whose holdings are not part of the redistribution plan. Furthermore, their farms are larger than the tenanted farms. These data underscore the reality that the present land reform program cannot be expected to bring about equality or solve poverty in a major way (p. 41).*

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1. The different types of tenancy used in the Census include the following:
   cash rent - where a fixed amount of money is paid to the landowner as rental for the land worked by the holder.
   share of produce - a share of the harvest is paid to the landowner as rental for the land worked by the holder.
   fixed amount of produce - a specific quantity of crops agreed upon by both landowner and tenant and is paid by the farmer for the rent of the land. The tenant or renter is obliged to deliver to the landowner the quantity of produce agreed upon, whether or not he gets any harvest from the land.
   rent free - the holder or farm operator does not pay any rent for the use of the land he operates.
   other forms - refers to a rental agreement in any form or a combination of the above such as a fixed amount of money and some share of produce.

Table 8

Area and Distribution of Farms, by Size of Farm, by Tenure
Philippines, 1960 and 1980 (area in hundred hectares)

	Total Farm Area		Owned or Held in Owner like Possession		Rented or Leased from others		Other Farms	
	1960	1980	1960	1980	1960	1980	1960	1980
ALL FARMS	77,725	97,252	52,732	70,411	20,002	24,116	4,991	8,724
Under 1.00 ha	1,244	3,690	631	2,023	601	1,503	12	165
1.00 to under 3.00 ha	17,960	25,222	9,488	15,253	8,339	9,242	133	727
3.00 to under 5.00 ha	14,265	20,667	8,891	14,710	5,248	5,453	125	504
5.00 to under 10.00 ha	18,453	22,429	14,668	17,643	3,535	4,188	249	599
10.00 ha and over	25,803	25,242	19,053	20,781	2,278	3,730	4,472	730

Source: Census of Agriculture, National Statistics Office, various years.

Table 9

Number and Distribution of Farms by Tenure, Philippines, 1960, 1971 and 1980

	1960		1971		1980	
	Number	%	Number	%	Number	%
ALL FORMS	2,166,216	100.00	2,354,469	100.00	3,420,323	100.00
Owned	967,725	44.67	1,364,990	57.97	1,993,293	58.28
Partly-owned	310,944	14.35	268,665	11.41	367,304	10.74
Tenanted/leased	864,538	39.91	624,821	26.54	871,536	25.48
Other Farms	23,009	1.06	95,993	4.08	188,190	5.50

Source: Census of Agriculture, National Statistics Office, various years.

This observation was proven correct by the situation in 1980. Tenanted rice and corn farms captured 47 and 35 percent, respectively, of total farms. On the whole, 29.9 percent remained tenanted (Table 10).

The situation in the agricultural farms also reflects the overall income situation in the rural areas. In 1971, using the definition P3,000 and below as low-income, about 59 percent of all families in the country were classified as low-income. Of these families, 82 percent lived in the rural areas, and 69 percent were engaged in agriculture (Castillo 1979).

The urban-rural income gap remained large, and in fact widened, in the 1980s. In 1971, for example, urban incomes were more than twice as high as rural incomes. But in 1975-1982, real income of rural family grew only at a low rate of 3.6 percent (NEDA 1984).

A World Bank (1985) study estimated that in 1975 about 61 percent of the total number of families lived in poverty, and about three-quarters of them were found in the rural areas. Actual count indicates that the number of poor families in the rural areas increased from 2.5 million in 1971 to 2.8 million in 1980-1983.

The NEDA study also revealed that urban-rural disparity widened as (1) underemployment in the rural areas increased, (2) profit margins accruing to farmers decreased, and (3) agricultural productivity declined.[2]

Using the "bottom 30 percent" definition and the per capita income cut-off of P1,269 based on FIES 1985, around 3.1 million families were identified to be at the bottom 30 percent of the income ladder, and 72.8 percent of them were in the agricultural sector (NEDA 1989).

In 1988, a rural family earned an average income of P2,041 a month, 25 percent lower than the poverty line established by NEDA (DA 1989).[3] In 1985, total family income of the bottom 30 percent reached P16.1 billion, of which 71.4 percent was accounted for by those in agriculture. For the same period, average income of the lowest 30 percent of all agricultural families was P5,151, lower than the national average of P5,252 and that of their non-agricultural counterparts. Their income was derived mainly from entrepreneurial activities, of which crop farming was the major source. Salaries and wages accounted for 25 percent of their total income.

Of the rural poor, the families of corn and coconut farmers, subsistence fishermen, and landless laborers comprised the biggest group (DA 1989). It was relatively easy to get actual figures for the first group of farmers, but the size of the last two groups was more difficult to estimate because available census and survey data could not give a direct way of measure.

Nevertheless, there have been attempts to study these latter groups, especially the landless laborers, but only on a very micro basis (see studies cited in Castillo 1979). Based on the 1968 National Demographic Survey, Castillo estimated that these groups comprised 10 percent of all

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2. Reyes et al. 1980 show that labor productivity in agriculture declined at an average rate of 0.53 percent from 1980 to 1985. This was a drastic decline from an average growth rate of 4.92 percent in 1975-1980. In 1985-1987, the level of productivity has improved slightly with annual growth rate averaging at 0.78 percent.

3. NEDA's poverty line was P2,700 for 1988.

Table 10
Farms - Number by Type and by Tenure

	Total Number of Farms		Owned		Partly-Owned		Tenanted/Leased		Other Forms	
	1960	1980	1960	1980	1960	1980	1960	1980	1960	1980
ALL TYPES	2,166,216	3,420,323	967,725	2,028,486	310,944	504,116	864,538	1,314,031	23,009	185,610
Palay	1,041,882	1,610,529	385,170	901,471	164,557	268,390	479,143	756,104	13,012	82,051
Corn	376,803	753,632	136,626	426,200	47,835	98,050	191,733	265,681	2,609	56,179
Sugar Cane	17,779	34,634	3,200	15,488	2,091	3,095	12,143	20,883	345	863
Abaca	35,991	16,054	25,173	11,777	3,805	2,423	6,628	3,732	385	556
Tobacco	22,877	5,302	7,789	3,284	5,637	877	9,301	3,334	150	505
Vegetables	5,520	28,580	2,720	16,449	436	5,105	2,260	8,597	104	2,883
Root Crop	36,137	76,765	24,657	45,131	2,601	13,758	8,040	17,886	839	11,515
Coconut	440,252	709,626	266,568	479,887	55,872	87,749	115,456	209,893	2,356	14,314
Fruit	29,131	28,549	17,544	18,661	1,972	4,023	9,050	5,876	565	2,714
Coffee	10,625	37,301	7,977	30,253	786	3,800	1,763	3,459	99	2,223
Hog	1,569	23,127	937	15,189	137	3,411	433	1,731	60	2,865
Livestock	3,444	14,425	2,190	8,836	284	2,074	535	2,198	435	1,723
Poultry	12,287	14,659	7,909	10,079	298	1,783	3,659	1,062	421	1,809
Others	129,919	67,140	79,265	45,781	24,631	9,578	24,394	13,585	1,629	5,410

Source: Census of Agriculture, National Statistics Office, various years.

Filipino households. Further, if the Census figures on paid agricultural workers were indicative at all, there was a total of 850,293 landless farmers in 1980.[4]

Various studies have cited the severity of poverty among landless farm laborers. The USAID (1981) showed that in the Bicol region poverty incidence was highest among farm laborers and among farmers cultivating crops other than rice, corn, and coconut (Table 11).

B. *Trends in Labor Absorption in the Rural Sector*

On the average, total labor force in the rural sector increased by about five percent annually, roughly three times as much as the expansion of rural population from 1975 to 1988 (Table 12). Labor force participation rate (LFPR) also increased. In 1988, rural LFPR was 67.7 percent. Unemployment rate did not seem to be quite a problem in the 1970s, although it showed an increasing trend until 1982. Obviously, the crisis in the 1980s did not adversely affect the sector as it did the industrial sector. After 1983, however, unemployment increased especially toward the end of the 1980s.

While unemployment was not quite severe in the rural sector, underemployment increased rapidly and hit alarming levels. From a relatively low 9.5 percent in 1975, underemployment rate rose to 37 percent in 1984.

The rise of underemployment in the rural sector had traditionally been attributed to the seasonality of work in agriculture, which is characteristic of most monsoon areas in Asia (Oshima 1984; 1987). However, the sharp increases in 1983 and 1984 may have been more pronounced because of the economic crisis which plagued the economy, forcing more people to take on jobs, mostly outside of agriculture, on a part-time basis. This is shown by sharp increases in the LFPR during the second half of the 1980s (Table 12), especially for women (Table 13), and the increasing proportion of women getting employed in the 1980s (Table 14). The decline in household income during the period may have forced women to work in order to augment family income.

In terms of industrial distribution, the agricultural sector was still the dominant employer in the rural areas, but its share declined by about 12 percent over a period of 23 years (Table 15). From about 74 percent of total employment in 1965, agriculture's share went down to 64 percent in 1988. Apparently, employment shifted to non-agricultural activities, specifically services (6.2 to 10.6 percent), wholesale and retail trade (6.9 to 9.6 percent), and transportation, storage and communications (1.9 to 3.1 percent). Construction showed a very minimal increase. The share of manufacturing declined, especially during relatively troubled years, i.e., in 1975 (immediately after the first oil crisis) and in 1985 (part of the crisis period).

Similar observations emerge when rural employment by occupation (Table 16) is looked at. In 1988, about 66 percent of all employed workers were still in agriculture, animal husbandry, forestry, fisheries, and hunting. This share was about 74 percent in 1965. The shares of sales and service occupations to total employment increased significantly from 8.2 percent in 1965 to 13.2 percent in 1988. Production workers, including transport workers and laborers, increased only slightly.

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4. This is the average for four quarters and includes only permanent workers. The size of temporary or seasonal workers was even larger, i.e., 9,515,538.

Table 11

Incidence of Poverty in Selected Agricultural Occupation and Sub-Sectors (Bicol, 1971)

Selected Agricultural Occupation	% Poor
Farmer owner	59.5
Farmer part-owner	57.8
Farmer tenant	66.1
Farmer not specified and tuber gatherers	73.9
Farm laborer	80
Fishermen	55.6
Sector	
Rice and corn Farming	60.8
Coconut farming	70.3
Other Crops	76.6
Fishing	55.6

Source: United States Agency for International Development, (1981) Households Poverty profile, Bicol region (Region V), p. 6.

Table 12
Labor Force Participation Rate Employment Status Rural 1975 1988
(Number of persons in the labor force in thousands)

Year	LFPR (%)	LF Total	Employed No	Employed %	Unemployed No	Unemployed %	Underemployed No	Underemployed %
1975	52 8	10 339	10 073	97 4	266	2 6	957	9 5
1976	61 7	10 045	9 690	96 4	355	3 5	2650	27 35
1977	59 6	10 049	9 739	96 9	310	3 1	1801	18 49
1978	65 1	11 390	11 020	96 8	370	3 2	2158	20 06
1980	62 2	12 056	11 614	96 3	442	3 7	2691	23 17
1981	64 4	12 847	12,339	96 0	508	4 0	3182	25 79
1982	62 0	12 751	12,211	95 8	540	4 2	3201	26.21
1983	67 3	14 243	13 709	96 3	534	3 7	4086	33 45
1984	66 9	13 202	12 738	96 5	464	3 5	4714	36 96
1985	66 0	13 426	12 841	95 6	585	4 4	3218	25 06
1986	66 3	14 030	13 480	96 1	549	3 9	3986	32 36
1987	68 2	14 316	13 339	93 2	978	6 8	3661	27 35
1988	67 7	16 631	13 766	94 1	865	5 9	3593	26 1

Note Data on years 1975 1986 were based on the past third quarter reference period and 1987 based on past week reference period

Source NEDA 1989 Philippine Statistical Yearbook

Table 13
Labor Force Participation Rate, 1970-1980

Year		Total Working Age Population	Total Labor Force	Labor Force Participation Rate
1970		12,831	3,929	30.60
1971		13,208	4,247	32.20
1972		13,607	4,339	31.90
1973		14,509	4,909	33.80
1974		14,506	4,614	31.80
1975		15,061	5,168	34.80
1976		12,595	5,054	40.10
1977		13,050	4,830	37.00
1978		13,626	6,107	44.80
1979	1/	a/		a/
1980		14,581	6,126	42.00
1981		15,008	6,763	45.10
1982		15,462	6,751	43.70
1983	1/	15,967	7,937	49.70
1984		16,623	8,182	49.20
1985		17,079	8,083	47.30
1986		17,511	8,490	48.50
1987		17,532	8,464	48.30
1988		18,090	8,666	47.90

a/ - no breakdown available.

1/ - Preliminary only.

Source: Yearbook of Labor Statistics, various years.

Table 14
Rural Employed Persons by Sex, 1965-1985

		Number (in thousands)	%
1965		7,527	100.0
	Male	5,273	70.1
	Female	2,254	29.9
1975		9,491	100.0
	Male	6,865	72.3
	Female	2,626	27.7
1980		11,614	100.0
	Male	7,938	68.3
	Female	3,676	31.7
1985		12,841	100.0
	Male	8,431	65.7
	Female	4,411	34.4

Source: National Statistics Office.

Table 15
Rural Employment by Industry, 1965-1988
(number in thousands)

	1965		1975		1980		1985		1988	
Major Industry Group	No.	%	No.	%	No.	%	No.	%	No.	%
Agriculture, Fishery and Forestry	5,545	73.7	7,053	74.3	7,885	67.9	8,546	66.6	8,885	64.5
Mining and Quarrying	20	0.3	27	0.3	80	0.7	100	0.8	121	0.9
Manufacturing	653	8.7	711	7.5	925	8	931	7.1	1,026	7.4
Electricity, Gas and Water	-		9	0.1	27	0.2	28	0.2	31	0.2
Construction	162	2.2	200	2.1	313	2.7	322	2.5	399	2.9
Wholesale and Retail Trade	522	6.9	614	6.5	839	7.2	1,112	8.1	1,326	9.6
Transportation, Storage and Communications	144	1.9	241	2.5	336	2.9	407	3.2	430	3.1
Financing, Insurance, Real Estate and Business Services	-		-		87	0.7	86	0.7	87	0.6
Commercial, Social and Personal Services	468	6.2	620	6.5	1,118	9.6	1,309	10.2	1,459	10.6
Industry not Adequately Defined	(a)		16	0.2	4	0.03	-		1	
Total	7,527		9,491		11,614		12,841		13,766	

(a) - Not available
Source: National Statistics Office .

Table 16

Rural Employment by Occupation, 1965-1988.
(Number in thousands)

Major Occupation Group	1965 No.	1965 %	1975 No.	1975 %	1980 No.	1980 %	1985 No.	1985 %
Professional, technical & related workers	118	1.6	241	2.5	460	4.0	504	3.9
Administrative, executive & managerial workers	170	2.3	29	0.3	37	0.3	42	0.3
Clerical workers	99	1.3	100	1.1	230	2.0	268	2.1
Sales workers	331	4.4	590	6.2	844	7.3	1,100	8.6
Service workers	282	3.8	292	3.1	467	4.0	597	4.6
Agricultural, animal husbandry & forestry workers, fishermen and hunters	5,531	73.6	7,025	74.0	7,838	67.5	8,466	65.9
Production and related workers, transport equipment operators and laborers	988	13.1	1,199	12.6	1,735	14.9	1,865	14.5
Occupation not adequately defined	-	-	16	0.2	2	-	-	-
Total	7,519		9,491		11,614		12,841	

Source: National Statistics Office.

It appears that the majority of workers in the rural areas are own-account workers, mostly in agriculture (Table 17). But it is interesting to note that there is a continuing decline in the shares of own-account and unpaid family workers, and an increase in the shares of wage and salary workers. The latter group's shares have increased from 24 percent in 1965 to 36 percent in 1988, or an increase of 51 percent in a span of more than 20 years. The pressure on land exerted by an expanding rural labor force may have forced people to seek employment outside of their own farms, either doing farm or non-farm work for wages.

III. Growth of the Rural Non-Farm Sector

A. *Some Conceptual Issues*

The rural non-farm sector has evolved in many ways. Development scientists have used various models to capture how the rural economy transformed and how the non-farm activities grew and expanded. Hymer and Resnick (1960) pioneered in theorizing in this area with the introduction of the so-called Z-goods sector.

The major proposition of the H-R paradigm is that in a two-sector agrarian economy, non-agricultural activities (Z-activities) decline as the economy grows. The critical assumption is that Z- activities producing Z-goods are basically small household or village activities primarily geared for home consumption, and that these goods are of inferior quality compared with goods produced in the urban/metropolitan areas, the supply of which tends to increase as the economy expands. Others, including Mellor (1976), proposed that increasing agricultural productivity and the resultant increase in rural incomes affect the growth of non-agricultural activities through backward and forward linkages. They generate demand for manufactured consumer goods and agricultural inputs such as fertilizers and semi-mechanized equipment. Increases in rural incomes are expended by households on non-food consumer goods since food is generally income inelastic. This in turn creates income-generating opportunities for non-farm activities that produce these consumer goods and inputs. The subsequent adoption of semi-mechanized and mechanized inputs in agriculture releases more labor for non-farm activities. These linkages consequently allow for a mutually reinforcing growth of rural industry and agriculture. The studies of Gibb (1974), Alburo (1980), and more recently Ranis, Stewart and Reyes (1990) empirically probed and substantiated these propositions.

Attempts to study further the displacement phenomenon espoused in the H-R model resulted in other propositions. Bautista (1971), utilizing a small, open two-sector model composed of an agricultural sector and the Z-goods sector, pointed out that inferiority of the Z-goods is not sufficient to bring about a decline in the sector. Fabella (1985) showed that "in a rural economy model with a food sector, a more dynamic manufacturing sector, and a Z-goods sector, it is specialization in commodities where the rural economy has some comparative advantage rather than inferiority that dictates the rise of the more dynamic manufacturing sector and augurs the demise of the Z-goods sector" (Fabella 1985, p. 499).

The experience of the East Asian countries provide an exception to the conclusion of the H-R model. Oshima (1984) showed that off-farm incomes in Japan, Korea and Taiwan experienced substantial increases in both levels and shares as these countries moved through various stages of

Table 17

Rural Employment by Class Worker
(Number in thousands)

Class of Worker	1965		1975		1980		1985		1988	
	No.	%	No.	%	No.	%	No.	%	No.	%
Wage and Salary	1,774	23.6	2,548	26.8	3,498	30.1	4,315	33.6	4,903	35.6
Own-Account Workers	3,509	46.6	4,210	44.4	5,761	44.5	5,845	45.5	6,013	43.7
Unpaid Family Workers	2,237	29.7	2,720	28.7	2,954	25.4	2,681	20.9	2,850	20.7
Total	7,527		9,491		11,614		12,841		13,766	

Source: National Statistics Office.

development. Oshima (1986) offered a model involving different stages of growth. That model aptly captured the growth experiences of the Asian countries, with emphasis on the role of the non-agricultural activities and incomes. Oshima argued that historically it is low income in monsoon settings that have held back Asia. Transition from agriculture to industry is not possible without substantial and sustained rise in income. Family incomes must rise not only with more yields per hectare, but also with multiple cropping and diversification and with non-agricultural activities.

Oshima's framework says there are three major stages involved in the transition and movement of an agro-industrial economy into a service-oriented economy. In the early stage of agro-industrial transition, supposedly the longest to attain, non-agricultural activities are largely traditional, and supply of labor is largely seasonal. The volume of non-agricultural activities is large in terms of employment but low in terms of value because of low productivity and low earnings, which on a per day basis are lower than in agriculture. Non-agricultural opportunities are mostly in transport, construction and services.

In the middle stage, there is a rise in semi-modern industries and further improvement in infrastructure facilities. As farm incomes rise, demand for non-agricultural goods expands. These goods are easily supplied by the growing import-substituting industries in cities. The semi-modern industrial activities have higher value because they use more capital-intensive technologies. Therefore, they are larger than the household-based traditional handicraft production. This is particularly true in the case of labor-intensive factories in the urban centers. Farm workers are willing to commute to these factories for jobs with longer duration. Better roads and transportation facilities encourage them to seek non-farm work.

In later stage of the first transition, off-farm work in manufacturing takes the lead over that of construction and services. Handicraft industries continue to decline, while factories continue to expand. The labor-intensive industries may develop export capability. Crop diversification expands and commercial agriculture replaces subsistence farming.

The second transition is marked primarily by faster increase in non-agricultural incomes. Labor scarcities emerge as full employment is attained. Migration to big cities in response to higher wages slows down. As the cities expand, smaller firms start to move to areas heavily populated by farm workers. As educational opportunities expand to these areas, firms are able to get more workers at lower wages than in the big cities. The proliferation of smaller enterprises in rural areas increases the non-agricultural income of rural workers.

In the third stage of transition, society finally moves toward a service economy. Trade declines and personal services become the dominant activities in the services sector. Higher-valued services in education, health, recreation and culture increase significantly.

These various development stages summarize what happened especially to Japan, Taiwan, and Korea. Other Asian countries like the Philippines and Thailand are supposed to be in various stages of this development process.

Ranis and Stewart (1990) also tried to develop variants of the H- R model, which were then used to describe the experiences of the Philippines and Taiwan. The authors came up with both colonial and post-colonial archetypes, each having both favorable and unfavorable cases. In

doing this, they pointed out the major departures from the H-R model, which generally included the following:

1. The Z-goods sector--which the H-R model considered to be broadly homogeneous and which are traditionally carried out in individual households or at the village level--is not really homogeneous. Non-agricultural activities range from small-scale household and village production to small factories using modern technology and producing higher quality products. Hence, the Z- sector is divided into a sector covering the traditional household and village production and another sector covering the non-traditional modern rural industries.
2. The existence of a U-sector, which is a modem industrial sector located predominantly in urban areas, results in a U-displacement (the U-sector displacing the Z-goods). This is more dominant than the displacement of Z-goods by imports.
3. The agricultural sector is to be divided into two sub-sectors: the cash crop export sector and the domestically-oriented food producing sector. The latter is assumed to have potential for dynamic growth because of its ability to release land and labor for other uses. It also has the ability to create stronger linkages between domestic agriculture and rural non-agriculture, something which the export sector does not provide.
4. The H-R model's assumption of improving terms of trade or opportunities for export agriculture does not seem to hold true in the post-colonial era. Most LDCs' terms-of-trade have either remained constant or deteriorated.

The application of this model puts the Philippines under the unfavorable colonial category which basically resembles the H-R case. In the post-colonial era, the Philippines exhibits both favorable and unfavorable characteristics.

B. *Trends in Growth of Rural Non-farm Employment*

Various estimates of the size of the non-farm sector use either rural non-farm employment or income as indicator. For example, Fabella (1985) and Oshima (1986) estimated the share of off-farm income of Philippine farm households to be over 30 percent of family income. Medalla (1986), using a less liberal definition of farm households and distinguishing specifically between farmers and part-time farmers, suggested that average share of strictly off-farm incomes could be lower than 10 percent or less than one third of the estimates of Fabella and Oshima.

This section will review the trends in non-farm activities using both aggregate employment figures taken from the Integrated Survey of Households and income figures from the Family Income and Expenditure Surveys of NSO.

Obviously, the share of non-farm employment to total employment in the rural sector has been increasing but at a relatively slow pace (Table 18). The share of agriculture remained more than 60 percent as of 1988. That same year, the proportion of workers engaged in non-agricultural activities was close to 36 percent, an increase of about 35 percent over a period of 23 years. This contrasts well with Taiwan, whose share of labor force in non- agricultural

Table 18

Distribution of Rural Employment Agricultural and Non- Agricultural Activities

	Agricultural	Non-Agricultural
1965	73.7	26.3
1975	74.3	25.7
1980	67.9	32.1
1985	66.6	33.4
1988	64.5	35.5

Source: Labor Force, National Sample Survey of Households, various issues.

activities increased from 29 percent in 1956 to 67 percent in 1980. This is an increase of 131 percent in a span of about 24 years (Ranis and Stewart 1990).

The relatively small proportion of rural labor engaged in non- agricultural activities includes only those who indicated non-farm work as their primary occupation. Considering the seasonality of farm work and the more flexible work arrangements in the rural areas, a good number of rural workers may also be engaged in non-farm work as a secondary occupation, but census or national surveys fail to consider this.

A closer look at the industrial distribution of workers doing non-agricultural work revealed that most of them were in manufacturing, trade, and services in 1965 (Table 19). By the 1980s, the share of manufacturing declined, but this was offset by the significant increase in the shares of services and trade. Labor share of transportation and communications also increased from 1.9 percent to 3.1 percent. Construction's share increased slightly, while the utilities remained an almost insignificantly small sector in terms of rural employment. These observations seem to place the country towards the end of the first transition espoused by Oshima.

The participation of females in the rural labor market also increased. Female employment went up to about 40 percent in 1988 from about 30 percent in 1965 (Table 19). This was mostly evident in services, trade, utilities, mining and quarrying, and slightly in agriculture.

Previous studies claimed that most non-agricultural employment in rural areas were temporary because agricultural work was basically seasonal, leaving a large proportion of farm workers idle during certain parts of the year. The extent of idleness was also high because of the high labor-intensity of farm work. This means that during peak seasons it is expected that less employment in non-agricultural activities as labor is drawn to farming activities.

Fabella (1985) demonstrated some seasonal variations in the labor share of non-agricultural activities in the Philippines. Slight variations were evident for males, whose non-agricultural employment share during peak agricultural season was lower than during slack season. This was also evident among females and wage and salary workers, whose non-agricultural employment shares tended to fall during the peak month.

On the whole, however, the general observation was that "while there appears to be some competition for labor across seasons, the non-agricultural activities seem to hold their own pretty well" (Fabella, p. 503). The explanation offered was that some components of non-agricultural activities complement rather than compete with agriculture. Further, the existence of surplus labor lessens competition for work between the two sectors.

Table 20 similarly suggests that among wage and salary workers, the share of non-agriculture has been increasing until 1980 and ranged from 60 percent to 69 percent. Even among own-account workers, the non-agricultural share went up to almost 28 percent in 1988. Since the proportion of females among wage and salary workers increased (Table 21), it can be inferred that the number of females receiving wages and salaries from non-agricultural work also increased.

In terms of income, the share of non-agricultural sources also increased from about 49 percent in 1971 to 53 percent in 1985, and further to 57 percent in 1988 (Tables 22, 23 and 24). The bulk of this income were wages and salaries, about half of which come from entrepreneurial sources.

Table 19

A Distribution of Rural Employment by Industry and Sex, 1965-1988 (in percent)

Major Industry Group	1965			1975			1980			1985			1988		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Agriculture, fishery and forestry	73.7	78.2	21.8	74.3	79.6	20.4	67.3	75.7	24.3	66.6	73.8	26.2	64.5	73.6	26.1
Mining and quarrying	0.3	100.0	-	0.3	96.3	0.6	0.7	82.5	13.8	0.8	42.0	7.0	0.9	89.2	10.7
Manufacturing	8.7	32.9	67.1	7.5	41.9	58.1	8.0	46.5	53.4	7.2	43.9	56.1	7.4	47.0	53.0
Electricity, gas and water	-			0.1	100.0	-	0.2	92.6	7.4	0.2	78.6	21.4	0.2	80.6	19.4
Construction	2.2	97.5	2.5	2.1	99.0	1.0	2.7	98.7	1.0	2.5	98.4	1.2	2.9	99.5	0.5
Wholesale and retail trade	6.9	34.1	65.9	6.5	33.6	66.4	7.2	28.1	71.9	8.6	27.2	72.8	9.6	28.7	71.3
Transportation, storage & communications	1.9	96.5	2.5	2.5	97.9	2.1	2.9	98.5	1.5	3.2	97.5	2.5	3.1	97.9	2.1
Financing, insurance, real estate & business services	-	-	-	-	-	-	0.7	74.7	25.3	0.7	70.9	29.1	0.6	70.1	24.9
Commercial, social, and personal services	6.2	45.7	54.3	6.5	43.9	55.8	9.6	44.9	55.1	10.2	39.6	60.4	10.6	44.3	55.7
Industry not adequately defined or reported	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
Total	100.0	70.1	29.9	100.0	72.3	27.7	100.0	68.3	31.7	100.0	65.6	34.4	100.0	66.1	33.9

Source: National Statistics Office.

Table 20

Distribution of Rural Employment by Agricultural or
Non-Agricultural Activities and Class of Worker, 1965-1988
(in percent)

	Wage & Salary Workers	Own-Account Workers	Unpaid Family Workers
Agricultural			
1965	40.36	77.54	94.23
1975	42.03	81.02	94.41
1980	31.05	79.52	91.23
1985	39.17	74.92	92.39
1988	40.28	72.33	89.86
Non-Agricultural			
1965	59.64	22.46	5.77
1975	57.97	18.98	5.59
1980	68.95	20.48	8.77
1985	60.83	25.08	7.01
1988	59.72	27.67	10.14

Source: Labor Force, National Sample Survey of Households, various years.

Table 21

Rural Employed Persons by Class of Worker and Sex
(in thousands)

Major Industry Group	Total	%	Wage and Salary Workers	%	Own-account Workers	%	Unpaid family workers	%
1965	7,527	100.0	1,774	100.0	3,509	100.0	2,237	100.0
Male	5,273	70.1	1,194	67.3	2,825	80.5	1,247	55.7
Female	2,254	29.9	580	32.7	683	19.5	990	44.3
1975	9,491	100.0	2,548	100.0	4,210	100.0	2,720	100.0
Male	6,865	72.3	1,768	69.4	3,501	83.2	1,592	58.5
Female	2,626	27.7	780	30.6	709	16.8	1,127	41.4
1980	11,614	100.0	3,498	100.0	5,161	100.0	2,954	100.0
Male	7,938	68.3	2,386	68.2	4,117	79.8	1,434	48.5
Female	3,676	31.7	1,112	31.8	1,044	20.2	1,520	51.5
1985	12,841	100.0	4,315	100.0	5,845	100.0	2,681	100.0
Male	8,431	65.7	2,852	66.1	4,288	73.4	1,291	48.2
Female	4,411	34.4	1,463	33.9	1,557	26.6	1,390	51.8
1988	13,766	100.0	4,903	100.0	6,013	100.0	2,850	100.0
Male	9,093	66.1	3,299	67.3	4,436	73.8	1,357	47.6
Female	4,673	33.9	1,605	32.7	1,576	26.2	1,357	47.6

Source: National Statistics Office.

Table 22

Total Number of Families, Total and Average Family Income
by Main Source of Income, Rural: 1971

Main Source of Income	Families	% Families	Income	% Families
Philippines - Rural	4,434,000	100.0	12,493,416	100
Wages & Salaries		33.1		35.1
Agricultural		14.0		10.6
Non-Agricultural		19.0		24.5
Entrepreneurial Activities		61.7		48.9
Trading		4.3		5.5
Manufacturing		2.7		2.8
Transport		1.3		2
Other enterprises		0.5		0.6
Practice of profession or trade		0.4		0.7
Farming (livestock & poultry)		47.3		31.8
Fishing, forestry and hunting		5.3		5.4
Other Sources		5.2		15.1
Share of crops & livestock from others		1.9		2.6
Rent received from land and other properties		0.1		0.5
Rental value for owner-occupied house		-		6.6
Interests and dividends		0.0		0.2
Profits from sale of stocks & bonds		-		0
Pension and retirement benefits, etc.		0.6		1.6
Backpay and proceeds from insurance		0.0		0.1
Gifts, support, assistance and relief		1.9		2.5
Net winning from gambling and sweepstakes		0.2		0.4
Inheritance in cash or converted to cash		0.3		0.4
Others		0.1		0.1

Source: National Statistics Office.

Table 23

Total Number of Families, Total and Average Family Income by Main Source of Income, Rural: FIES 1985

Main Source of Income	Families	% Families	Income	% Income	Average Income
Philippines - Rural	6,121,290	100.00	133,905,597,462	100.00	21,875
Wages and Salaries	2,002,528	32.71	45,496,208,589	33.98	22,719
Agricultural	791,007	12.92	13,142,617,167	9.81	16,615
Non-agricultural	1,211,520	19.79	32,353,591,422	24.16	26,705
Entrepreneural Activites	3,103,555	50.70	62,963,744,239	47.02	20,288
Crop Farming and Gardening	2,030,013	33.16	37,998,937,572	28.38	18,719
Livestock and Poultry Raising	65,241	1.07	1,286,552,556	0.96	19,720
Fishing	397,905	6.50	6,958,010,085	5.20	17,489
Forestry and Hunting	51,505	0.84	795,188,888	0.59	15,439
Wholesale and Retail Trade	339,079	5.54	9,320,965,172	6.96	27,489
Manufacturing	106,793	1.74	2,676,018,319	2.00	25,058
Commodity, Social, Recreational and Personal Services	36,144	0.59	1,147,695,453	0.86	31,753
Transportation, Storage and Communication Services	52,648	0.86	2,176,009,361	1.63	41,331
Mining and Quarrying	18,775	0.31	425,567,383	0.32	22,667
Construction	2,758	0.05	89,191,611	0.07	32,339
Entrepreneurial Activities N.E.C. a/	2,894	0.04	88,607,839	0.07	32,891
Other Sources of Income	1,015,208	16.58	25,445,644,634	19.00	25,064
Net Share of Crops, Fruits and Vegetable and Livestock Poultry from Other Households	151,149	2.47	3,200,911,538	2.39	21,177
Cash Receipts, Gifts and other Forms of Assistance from Abroad	224,615	3.67	12,001,663,693	8.96	53,432
Cash Receipts, Support Assistance and Relief from Domestic Source	201,236	3.29	2,779,417,213	2.08	13,812
Rental from Non-Agricultural Lands, Building Spaces and Other Properties	6,742	0.11	195,280,502	0.15	28,965
Interest from Deposits and Loans					
Pension and Retirement, Workman's Compensation and Social Security Benefits	2,717	0.04	334,031,107	0.25	122,941
Dividends from Investment	47,063	0.77	1,463,667,790	1.09	31,100
Imputed Rental Value of Owner-Occupied Dwelling Units	734	0.01	31,106,417	0.02	42,379
Net Receipt fromFamily Sustenance Activities	54,075	0.88	1,064,688,558	0.80	19,689
Goods and Services Received as Gifts	224,466	3.67	2,621,148,587	1.96	11,677
Other source of Income	98,322	1.61	1,674,874,277	1.25	17,035
	4,069	0.07	78,855,014	0.06	19,285

a/ N.E.C. - Not elsewhere classified

Source: National Statistics Office.

Table 24

Total Number of Families, Total and Average Family Income by Main Source of Income, Rural: FIES 1988

Main Source of Income	Families	% Families	Income	% Income	Average Income
Philippines - Rural	6,587,279	100.00	183,299,496,813	100.00	27,826
Wages and Salaries	2,441,938	37.07	76,753,736,847	41.87	31,431
Agricultural	879,470	13.35	19,289,837,160	10.52	21,933
Non-agricultural	1,562,469	23.72	57,463,899,688	31.35	36,778
Entrepreneural Activites	3,154,636	47.89	78,999,923,535	43.10	25,042
Crop Farming and Gardening	1,952,691	29.64	44,134,411,075	24.08	22,602
Livestock and Poultry Raising	79,812	1.20	2,249,216,588	1.23	28,539
Fishing	427,673	6.49	9,044,907,599	4.93	21,149
Forestry and Hunting	41,443	0.63	912,524,641	0.50	22,019
Wholesale and Retail Trade	359,461	5.46	13,307,263,120	7.26	37,020
Manufacturing	111,653	1.69	3,331,698,039	1.82	29,840
Commodity, Social, Recreational and Personal Services	61,908	0.94	1,991,446,812	1.09	32,168
Transportation, Storage and Communication Services	72,899	1.11	2,801,456,866	1.53	38,429
Mining and Quarrying	23,996	0.36	585,267,000	0.32	24,390
Construction	17,715	0.27	462,617,804	0.25	26,114
Entrepreneurial Activities N.E.C. a/	6,387	0.10	179,113,993	0.10	28,044
Other Sources of Income	990,704	15.04	27,545,836,431	15.03	27,804
Net Share of Crops, Fruits and Vegetable and Livestock Poultry from Other Households	142,319	2.16	3,109,750,561	1.70	21,851
Cash Receipts, Gifts and other Forms of Assistance from Abroad	269,063	4.08	13,731,174,116	7.49	51,033
Cash Receipts, Support Assistance and Relief from Domestic Source	245,276	3.72	4,274,549,993	2.33	17,426
Rental from Non-Agricultural Lands, Building Spaces and Other Properties	12,427	0.19	455,018,769	0.25	36,615
Interest from Deposits and Loans	4,331	0.07	126,730,884	0.07	29,261
Pension and Retirement, Workman's Compensation and Social Security Benefits	53,165	0.81	1,769,493,642	0.97	33,283
Dividends from Investment	1,274	0.02	21,103,200	0.01	16,565
Imputed Rental Value of Owner-Occupied Dwelling Units	36,909	0.56	838,418,767	0.46	22,716
Net Receipt fromFamily Sustenance Activities	119,040	1.81	1,484,700,059	0.81	12,472
Goods and Services Received as Gifts	102,993	1.56	1,671,374,230	0.91	16,228
Other source of Income	3,908	0.06	63,522,208	0.03	16,254

a/ N.E.C. - Not elsewhere classified

Source: National Statistics Office.

In terms of number of families, a similar trend was observed: the proportion of families earning wages and salaries from non- agricultural work increased by about 25 percent from 1971 to 1988.

On the demand side, there is very little information available which can indicate the size of the rural non-farm sector. A survey of establishments in regions outside Metro Manila conducted jointly by the NEDA and the UPISSI provides very limited information.[5] The survey sample included establishments which were basically rural-based. The survey also included micro, cottage, and small establishments.[6]

Data from the survey revealed that 52 percent of all enterprises were manufacturing. Trading and services comprised 27 and 21 percent, respectively (Table 25). The majority of firms were cottage and small (in manufacturing), and micro (in trading and services). Their actual sizes are revealed by the number of workers they employed. Most manufacturing establishments employed less than 10 workers. About 61 percent of them employed one to three workers (Table 26). The same was true with trading and services establishments--64 percent of trading firms and 71 percent of services firms employed only one to three workers. This clearly indicates the smallness of establishments in the rural areas.

Table 27 further gives information on the type of workers employed in each industry category. Expectedly, most of those employed in manufacturing (about 55 percent) were production workers. The same was true to a lesser extent in trading and services. Among production workers, the regular full-time workers were dominant particularly in manufacturing and trading, although the proportion of contractual and part-time workers (more than 30 percent) was still significant.

C. *Linkages Between Agriculture and Rural Non-Agricultural Sector*

There are two-way linkages between agriculture and the rural non- agricultural sector. The agriculture-to-industry linkages can be classified into consumption, backward, and forward. These linkages attribute significant association between agricultural income and non-agricultural employment and income. On the other hand, the industry-to-agriculture linkages are based on the hypothesis that nearby industrial and urban growth reduces the imperfections in both factor and product markets faced by agriculture. This raises farm income per worker (Ranis *et al.* 1990).

Several micro studies have been undertaken to determine the magnitude and nature of these linkages, particularly the first type, in terms of the effect of agricultural growth on non-agricultural employment and income. The most recent ones include those of Ranis *et al.* (1990), and Ranis and Stewart (1990). The results are summarized in Ranis *et al.* (1990), as follows:

1. The linkage effects from additional agricultural output are very substantial, even where policies are not especially conducive to promoting them. In Gapan, Nueva Ecija, increases in agricultural area of 5.5 percent per annum (1961-1967) and 8.2

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5. The following regions were included in the survey: III - Central Luzon; IV - Southern Tagalog; V - Bicol; VI - Western Visayas; VII - Central Visayas, VIII - Eastern Visayas, IX - Western Mindanao; and XI - Southern Mindanao.

6. The definitions being used by the Department of Trade and Industry was adopted in the survey:
   - Small: total assets amount to P500,000 - P5M and employment size from 10-99.
   - Cottage: total assets amount to P50,000 - P500,000 and employment size of less than 10.
   - Micro: total assets amount to less than P50,000.

Table 25
Number of Enterprises by Type of Business and Size, 1986

	No.	%
Manufacturing	311	52.0
Micro	85	14.2
Cottage	110	18.4
Small	116	19.4
Trading	164	27.3
Micro	65	10.8
Cottage	52	8.7
Small	47	7.8
Services	124	20.7
Micro	61	10.2
Cottage	39	6.5
Small	24	4.0
Total	599	100.0

Source: National Economic and Development Authority - UP Institute for Small-Scale Industries (1987).

Table 26

Distribution of Enterprises by Number of Employees and Industry
(in percent)

	Manufacturing	Trading	Service
None	5.5	9.2	12.2
1-3	60.7	64.2	70.7
4-6	17.7	14.3	9.9
7-10	7.5	6.6	4.2
11-20	4.9	4	1.5
21-50	2.8	1.1	1.5
51-99	0.8	0.6	-
Total	100	100	100

Source: National Economic and Development Authority - UP Institute for Small-Scale Industries (1987).

Table 27

Distribution of Enterprises by Industry and Type of Workers
(in percent)

Type of Worker	Manufacturing	Trading	Service	Total
Management	29.3	35.8	35.4	32.0
Administrative/Sales	15.2	25.2	15.6	17.7
Production workers	55.4	39.0	49.0	50.3
Regular/Full-time	-61.9	-66.2	-58.9	-62.1
Contractual/Part-time	-38.1	-33.8	-41.1	-37.9
Total	100.0	100.0	100.0	100.0

Source: National Economic and Development Authority - UP Institute for Small-Scale Industries (1987).

percent per annum (1967-1971) were accompanied by annual increases of 8.2 percent and 9.0 percent, respectively, in non- agricultural employment (Gibb 1974).

The same was observed in Oton and Tigbauan between 1974- 75 and 1979-80. A rise of 6.7 percent per annum in agricultural production induced an 8.4 percent annual increase in non- agricultural output (Wangwacharakul 1984).

2. Rural non-agricultural employment is dominated by consumption- linkage activities. This is also supported by aggregate data presented earlier where most of the rural employment occurred in trade and services.
3. Increases in agricultural output are accompanied by high increases in all types of linked activities.
4. The expansion of employment in absolute terms was invariably the highest in consumption-related activities.
5. Among production-related activities, forward linkages have much greater significance for absolute employment and employment expansion than backward linkages.
6. The ranking of linkages in terms of employment derives partly from the labor-intensity of the different types of activities.

As for the industry-to-agriculture linkage, the studies of Luna (1982) and Pernia and Hermoso (1983) provide evidence of the positive effects of this type of linkage to agricultural productivity. Ranis *et al.* (1990) also found the effects of linkage indicators like roads to be positive on agricultural productivity in Bicol. Further, the distance from the nearest urban center and the presence of modern establishments were found to be inversely and positively related to agricultural productivity.

On the whole, the linkages between agricultural production and non-agricultural activities have opened up work opportunities for an increasing number of people in the rural areas. Further, a growing industrial sector seems to reinforce agricultural growth.

IV. The Role of Non-Farm Activities in the Development of the Rural Economy in Laguna[7]

This section describes the evolution and growth of non-farm activities at the micro level. It also provides evidence to support the macro observations made in the earlier sections. Specifically, it analyzes changes in the structure of labor utilization, earnings and household income over two time periods. Data at the village level are presented to highlight possible changes in income distribution.

Data for this section were taken from the series of intensive household surveys conducted in Laguna. The periods covered were 1975-76, 1980-81 and 1981-82. Interpretation of data, especially for the non-farm activities, was made with extra caution since the period 1980-82 was not a normal year. The National Irrigation Administration (NIA) constructed an irrigation system in the area during this period, resulting in either delay or complete stop in the delivery of water

7. This chapter draws upon the works of Hayami *et al.* (1989) and Ranis and Stewart (1990).

to some areas for the entire duration of the record-keeping period. Earlier analyses of the data on rice production (e.g. Kikuchi *et al.*, 1983) suggested unfavorable consequences of this development. As a result of the delay in water deliveries, crop sequencing from land preparation and transplanting to harvesting - was delayed, drastically lowering rice yields by about 40 to 60 percent relative to normal years.

A. *Village Characteristics*

The area of study is a village in Laguna. Laguna's irrigation systems are relatively well-developed, so that rice production is practiced during wet and dry seasons in most paddy fields. Its infrastructure facilities are also well-developed, The road network makes movement to other provinces and to Metro Manila easier. It also has advanced experience in rice production technology, having adopted the modern rice varieties much ahead of other rice-growing areas in the country. Its rice belt is popularly known as "the heartland of the green revolution" (Hayami *et al.* 1989). It also has been widely subjected to land reform, which drastically changed the tenurial arrangements of farmers and farm workers.

The village is one of 13 barangays in the municipality of Pila. It is located in a coconut grove surrounded by paddy fields. It is about two kilometers from a small town (population of 21,000 in 1980), about 13 kilometers from a larger town (population of around 77,000 in 1989), and about 120 kilometers from Manila. Its population in 1987 was 816, belonging to 156 households. The dominant occupation is rice farming.

The coconut grove covers an area of 19.7 hectares, with 6.1 hectares owned by the villagers and 13.6 hectares owned by absentee landowners. Total rice area cultivated by villagers was 111.5 hectares in 1974. This declined to 91.6 hectares in 1987 due to transfer of cultivation to non-villagers. Absentee landlords are common. More than 80 percent of paddy fields are owned by non-villagers.

The village population grew from 66 households (392 people) in 1966 to 156 households (816 people) in 1987, representing an annual growth rate of 3.5 percent which was above the national average of 2.3 percent. This rose to above four percent from the mid-1960s to the end of the 1970s, due to the high birth rates and to migration to the village. Then it slowed down to 2.2 percent in the 1980s because of a fall in birth rates and the outmigration of more educated villagers as a result of the improvements in the highway system.

Rice farming is the major occupation and the chief source of income. In 1987, 84 percent of adult males and 35 percent of "economically active" adult females were engaged in rice farming. The majority were small farmers whose average farm size being cultivated fell from 2.6 hectares in 1966 to 1.7 hectares in 1987. In 1966, 70 percent of the households were farmers while 30 percent were landless workers. Over the years the number of landless workers increased fivefold to 66 percent.

Farm distribution is unequal. In 1966, 13 percent of the farmers cultivated farms of one hectare or less, accounting for three percent of the land area. About seven percent had farms of five hectares or more, covering 16 percent of the land area. In 1987, farmers cultivating one hectare or less increased to 26 percent, accounting for eight percent of total land area, while those

operating farms of five hectares or more declined to six percent, accounting for 22 percent of the total land area.

Over four-fifths of the paddy fields are owned by absentee landlords, most of whom live in nearby areas.

The introduction of high-yielding rice varieties, increased application of fertilizers and chemicals, and better irrigation facilities increased production significantly. Practically all the farms now use the new varieties. Yields per hectare across all farms rose by 60 percent over a period of 20 years. Data suggest the absence of a significant difference in average yield between large and small farmers. This reinforces the observation that "neither farm size nor tenure has been an important source of differential growth in productivity" (Ruttan 1977, p. 17).

B. *Village Level Employment and Income Structure*

The relative scarcity of land due to population pressure and to land reform regulations on tenancy contracts increased the number of landless laborers and made labor available for non-farm work. This is evident in Tables 28 and 29 which indicate the occupation of the economically active males and females in the village. In 1974, 6.0 percent of the economically active males, mostly landless workers, had engaged in activities outside agriculture as their major occupation. In 1987, their proportion grew to 15.1 percent, an increase of more than 150 percent.

For minor occupation, the share of rural male workers doing non-farm work increased to 15.8 percent in 1980 from 1.3 percent in 1974. Among females, and for major occupation, the figure was 8.0 percent in 1974, rising sharply to 23.1 in 1987. For minor occupation, the share rose from nil to 3.4 percent in 1987. The figures clearly indicate the very sharp increases in the proportion of landless rural workers doing non-farm work. Greater increases in the number of males doing non-farm work as minor occupation were observed.

For females, significant increases were noted among those engaged in non-farm activities as major occupation. This is due to the nature of work arrangements traditionally practiced in rural households. In farm households, males normally do the farm work, and they usually take non-farm employment on a seasonal basis. In the case of females, their participation in farm work is more or less flexible, with possibilities of taking non-farm activities on a more permanent basis.

Looking at specific types of activities among rural workers, it is observed that most males who took non-farm activities as primary occupation were salaried workers. In minor occupation, the dominant activities were carpentry and tricycle driving. Among females, trade and vending were the dominant activities followed by salaried work.

Non-agricultural income rose from 8.1 percent in 1974 to 36 percent in 1987 (Table 30). The bulk of the increase was shared proportionately by small farmers and landless workers. This suggests that non-agricultural income has an equalizing effect on income distribution. Its growth helps offset the growing inequality in agricultural income.

Apparently, there was increasing dependence on non-farm income among farm households especially among landless workers, but there was a sharp contrast in the sources of these

Table 28

Occupations of Economically-Active Male Population
(13-65 years old) in the East Laguna Village, 1974, 1980 and 1987
(in percent)

	1974			1980			1987		
	Total	Farmer	Landless	Total	Farmer	Landless	Total	Farmer	Landless
No. of Persons	151	99	52	197	87	110	272	114	158
Major Occupation									
Rice farming									
Self-employed	47.0	71.7	0.0	26.0	58.6	0.0	20.9	50.0	0.0
Hired	18.6	0.0	53.8	45.7	9.1	74.6	47.8	15.8	70.9
Duck Raising	15.2	6.1	32.7	2.5	1.2	3.6	1.1	1.8	0.6
Fishing	0.0	0.0	0.0	1.0	0.0	1.8	2.2	0.0	3.8
Tricycle	0.0	0.0	0.0	0.5	1.2	0.0	1.5	0.9	1.9
Vendor	0.7	0.0	1.9	0.5	1.2	0.0	0.4	0.0	0.6
Buy & sell	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.3
Quack doctor	0.7	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Carpentry	1.3	0.0	3.9	2.5	1.2	3.6	0.0	0.0	1.9
Salaried worker	3.3	4.0	1.9	6.1	8.0	4.6	6.2	6.1	6.3
Schooling	11.9	16.2	3.9	13.2	19.5	8.2	15.5	21.9	10.8
None	1.3	2.0	0.0	2.5	1.2	3.6	2.6	3.5	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Minor occupation									
Rice farming									
Self-employed	4.0	6.1	0.0	3.6	8.0	0.0	-	-	-
Hired	16.6	14.1	21.2	7.1	10.3	4.5	-	-	-
Duck Raising	15.2	17.2	11.5	10.2	9.2	10.9	-	-	-
Cattle raising	0.0	0.0	0.0	0.5	1.1	0.0	-	-	-
Fishing	0.7	0.0	1.9	15.7	14.9	16.4	-	-	-
Tricycle	1.3	2.0	0.0	4.1	6.9	1.8	-	-	-
Vendor	0.0	0.0	0.0	0.5	0.0	0.9	-	-	-
Quack doctor	0.0	0.0	0.0	0.5	1.1	0.0	-	-	-
Carpentry	0.0	0.0	0.0	10.7	13.8	8.2	-	-	-

Source: Hayami et al., 1989, Table 16.

Table 29

Occupations of Economically-Active Female Population (13-65 years old) in the East Laguna Village, 1974, 1980 and 1987 (in percent)

	1974			1980			1987		
	Total	Farmer	Landless	Total	Farmer	Landless	Total	Farmer	Landless
No. of Persons	161	106	55	176	80	96	251	107	144
Major Occupation									
Rice farming									
Self-employed	11.8	18.0	0.0	3.4	7.5	0.0	1.2	2.8	0.0
Hired	7.5	0.0	21.8	15.9	5.0	25.0	13.2	2.8	20.8
Duck Raising	1.2	0.9	1.8	10.8	13.8	8.3	3.2	6.6	7.0
Sari-sari store	3.7	4.7	1.8	5.7	8.7	3.1	5.6	7.5	4.2
Vendor	0.6	0.0	1.8	0.0	0.0	0.0	3.8	3.7	3.5
Dress-making	0.6	0.9	0.0	3.4	5.0	2.1	3.2	3.7	2.8
Handicraft	0.0	0.0	0.0	0.6	0.0	1.0	0.0	0.0	0.0
Rice milling	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.7
Quack doctor	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.7
Maid	0.0	0.0	0.0	2.3	0.0	4.2	3.5	2.8	4.2
Salaried worker	3.1	4.7	0.0	2.8	3.7	2.1	4.8	8.4	2.0
Overseas worker	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.9	1.4
Schooling	11.2	13.2	7.3	17.6	23.8	12.5	11.9	16.8	8.3
None (household)	60.3	57.6	65.5	37.5	32.5	41.7	47.4	43.0	50.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Minor occupation									
Rice farming									
Self-employed	13.7	20.8	0.0	1.7	3.8	0.0	-	-	-
Hired	18.6	15.1	25.4	9.1	3.8	13.5	-	-	-
Duck Raising	8.1	10.4	3.6	9.1	10.0	8.3	-	-	-
Sari-sari store	0.0	0.0	0.0	1.7	2.5	1.0	-	-	-
Vendor	0.0	0.0	0.0	1.7	1.2	2.1	-	-	-

Source: Hayami et al., 1989, Table 16.

Table 30
Percentage Composition of Household Income by Source,
1974 and 1987

	Average		Large Farmer		Small Farmer		Landless Worker	
	1974	1987	1974	1987	1974	1987	1974	1987
Total	100	100	100	100	100	100	100	100
Self-Employed								
Rice	63.4	25.3	84.5	44.3	66.5	38.7	0	0
Others	13.6	7.8	6.9	8.8	18.0	10.2	25.8	4.8
Non-Farm Enterprise	5.1	16.0	3.1	5.0	5.9	27.0	8.2	16.0
Hired Wage Earning								
Farm Work	14.4	24.8	1.8	8.8	8.0	12.8	58.8	45.9
Non-farm work	3.0	20.0	3.7	19.0	1.6	8.0	4.5	29.0
Grant	0.5	6.1	0	14.1	0	3.3	2.7	4.3

Source: Hayami et al., 1989, Table 21.

increases. Among farmers, increase in non-farm income was mostly due to remittances from family members abroad and from local jobs which paid regular salaries. Landless workers, however, depended mostly on self-employed activities such as operating a sari-sari store or a tricycle.

A similar observation was made in an area in Bicol, but this may not necessarily reflect the conditions in Laguna. Bicol is a poor region, less accessible to Metro Manila since it is located far down south of Luzon. However, the infrastructure investments infused in the region through the Bicol River Basin Program were more or less comparable to those in Laguna. These investments emphasized on facilities that would increase agricultural productivity.

For two-time periods more or less similar to Laguna, the farm households in the said Bicol area indicated a shift from heavy dependence on farm income to a higher share of non-farm income. Although the share of farm income to total household income remained 50 percent over a period of five years, there were notable increases in income from non-farm activities and from other sources, such as remittances from Metro Manila, and from abroad (Table 31). These increases in non-farm income may have cushioned the big drop in farm income so that average net household income did not decline so much.

C. *Household Labor Utilization, Earnings and Income Structure*

Labor Utilization. Using data for a smaller sample of households, changes in the time allocation behavior of family labor can be looked at more closely to gauge changes in the structure of labor utilization.

From 1975-1976 to 1980-81 the time, or number of days, spent by rural workers on non-farm activities increased significantly (Figure 1). This increase was more apparent among large farmers' households and landless workers (Figures 2 to 4). More detailed data presented in Kikuchi *et al.* (1983) also indicate that for all types of households, there were considerable increases in either non-rice self-employment or non- farm hired employment, mostly in carpentry and construction, or both.

The increase in the amount of time devoted by larger farmers to non-farm work may be due to their ability to hire workers to do the farm work for them. This enabled them to allow household members who have better education to take non-farm jobs in provincial towns or in Metro Manila.

The landless workers, however, did not seem to have much choice. Mounting population pressure and the disappearance of the land- rental market due to land reform regulations made it difficult for them to ascend the "agricultural ladder" and become tenant farmers. Thus, they turned to non-farm work. This is apparently a case where greater participation in non-farm activities indicates a situation of distress rather than progress.

Improved roads and better transportation facilitated the movement of people to nearby towns where non-farm work is available.

Some degree of seasonality is still evident in the allocation of time for non-farm work. However, the overall picture suggests increasing commitment to non-farm work, as shown by the

Table 31
Composition of Net Rural Household Income in Bicol,
1978 and 1983 (in percent)

	1978	1983
Net Rural Household Income	100.0	100.0
Net Farm Income	59.37	56.73
Net Labor Income	0.21	6.71
Net Business Income	22.21	18.94
Net Income from other Services	5.23	17.62
Replacement Cost	12.98	-

Source: Angeles-Reyes 1987, Table 2.

FIGURE 1

F O R A L L H O U S E H O L D S

PROPORTION OF TOTAL MONTHLY WORKDAYS

SPENT ON FARM AND NON-FARM ACTIVITIES

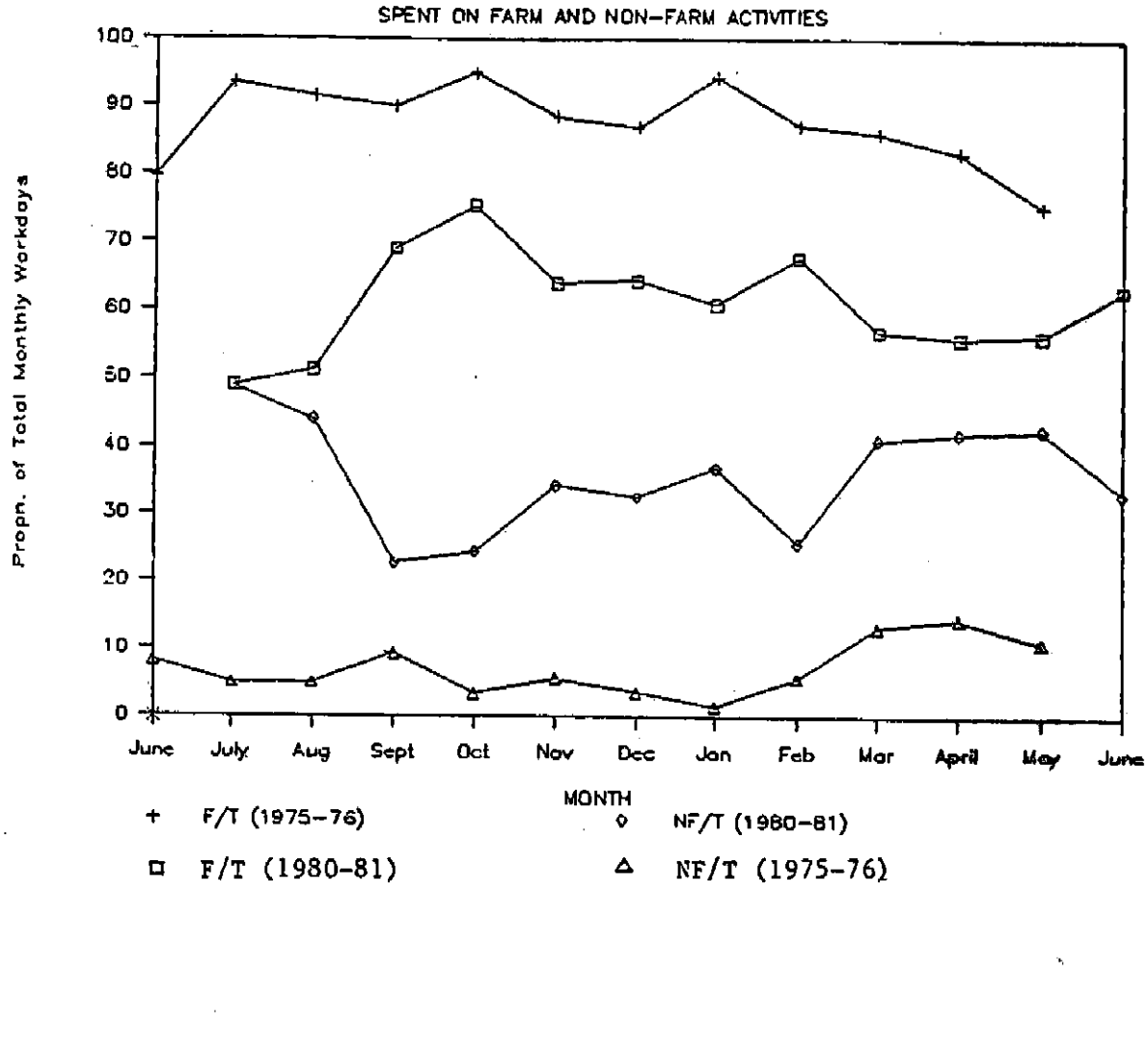


FIGURE 2

F O R L A R G E H O U S E H O L D S

PROPORTION OF TOTAL MONTHLY WORKDAYS SPENT ON FARM AND NON-FARM ACTIVITIES

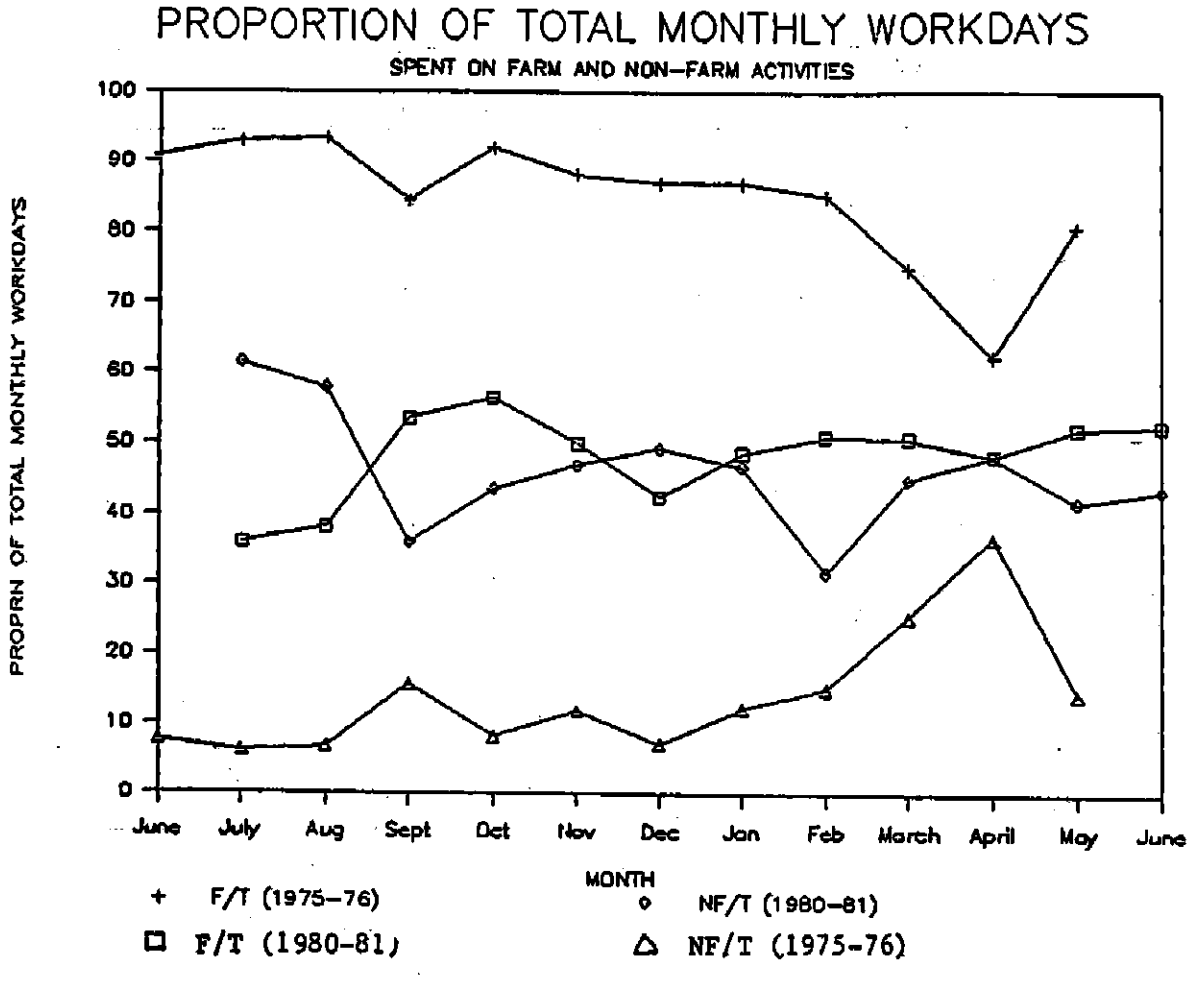


FIGURE 3

FOR SMALL HOUSEHOLS

PROPORTION OF TOTAL MONTHLY WORKDAYS

SPENT ON FARM AND NON-FARM ACTIVITIES

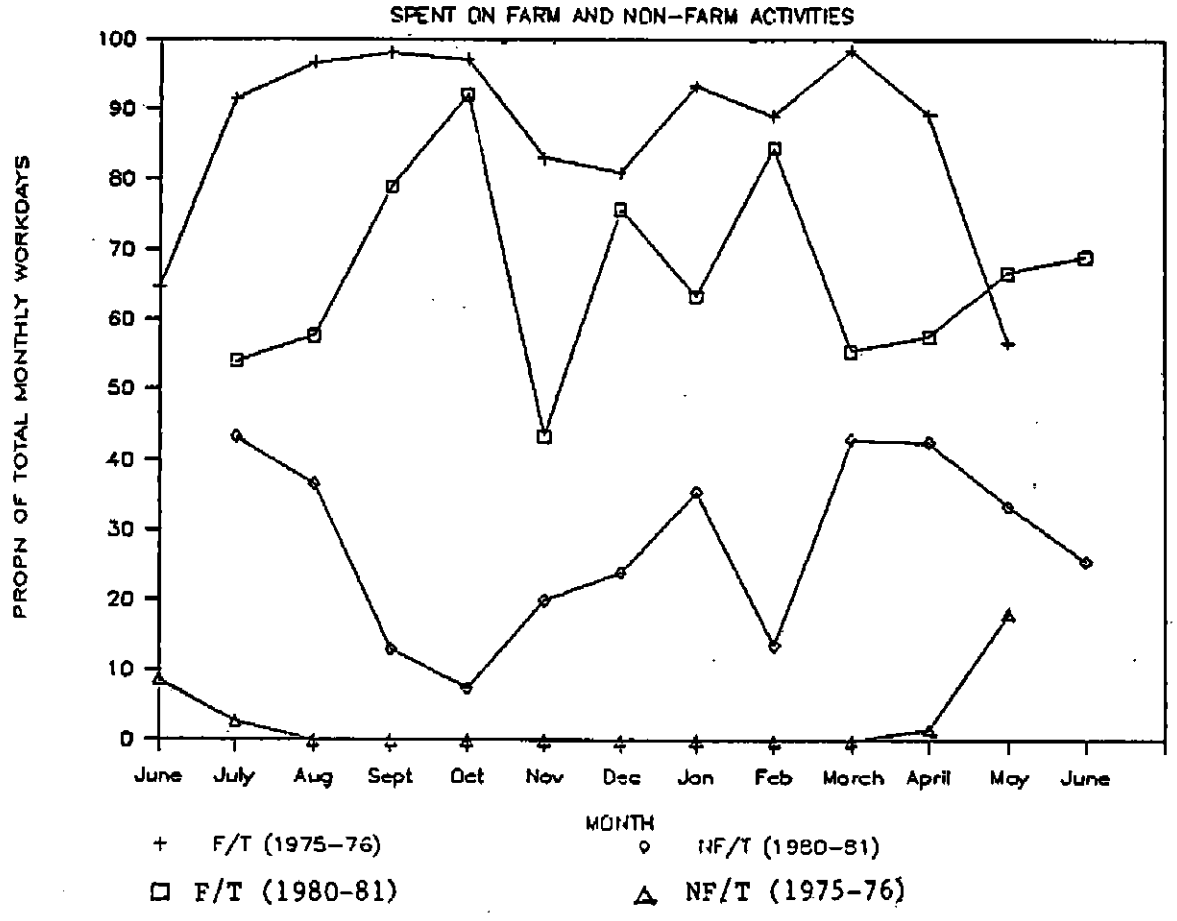
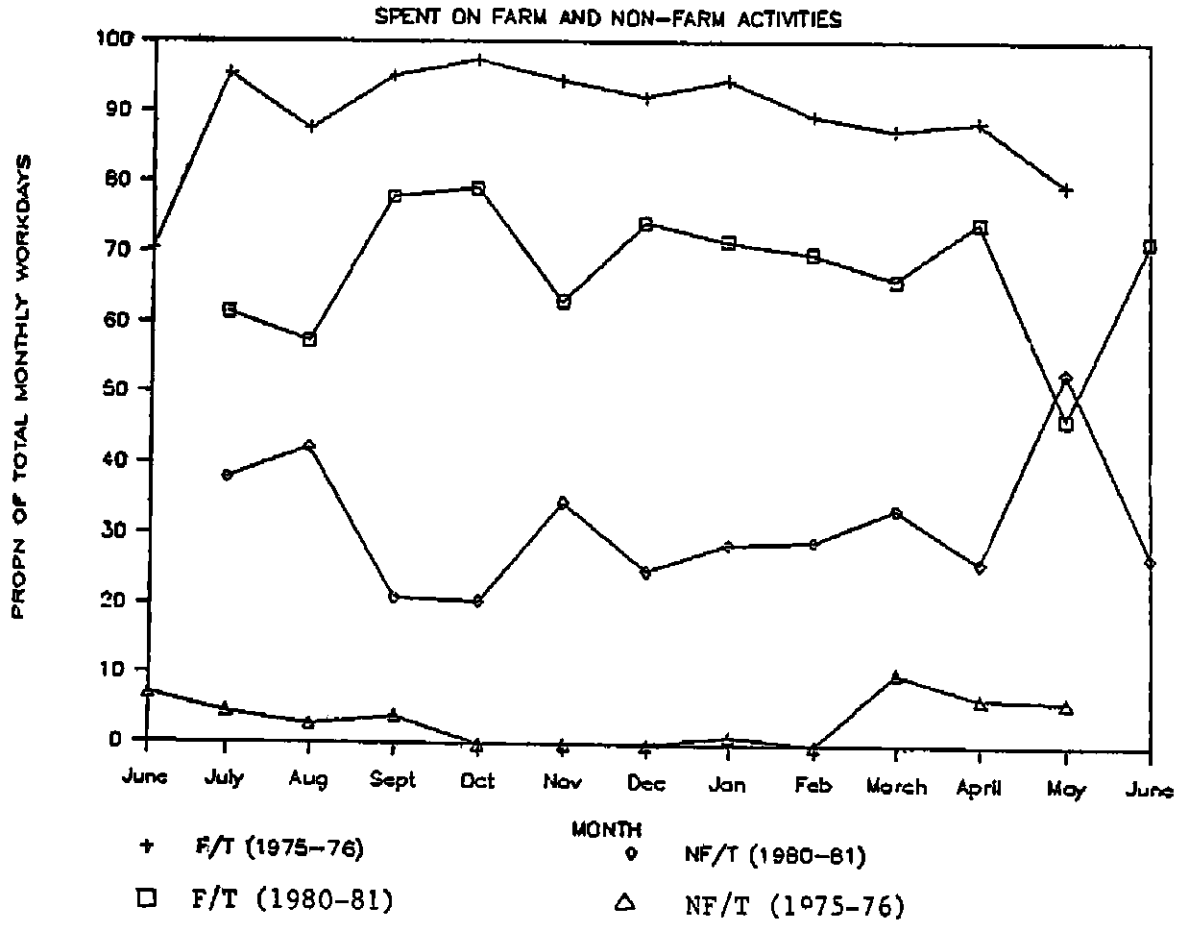


FIGURE 4

F O R L A N D L E S S W O R K E R S

PROPORTION OF TOTAL MONTHLY WORKDAYS

SPENT ON FARM AND NON-FARM ACTIVITIES



significant reduction in the gap between the proportions of time allocated for farm and non-farm work.

Non-farm Earnings.The significant contribution of non-farm activities to farm household income became more evident in the 1980s. This may be due to the decline in rice income during the early part of the period because of crop failures. However, the emergence of more non- farm work opportunities which offered higher cash incomes seemed to provide more permanent alternatives to farm work.

Table 32 gives monthly wage earnings per working member for the periods 1975-76 and 1980-81. On the average, total wage earnings in 1980-81 were about three times as much as those in 1975-76. This was due mainly to wage earnings from non-farm employment which increased by more than 14 times. Translated into percentage changes over the 6-year period, total wage earnings for all households increased by about 190 percent (Table 33). Non-farm earnings increased dramatically, compensating for the relatively insignificant increase (and even decline, in the case of large farmers) in farm earnings. The increase was most pronounced among small farmers and landless workers.

Relative to total farm household income, the share of non-farm earnings increased from about 14 percent in 1975-76 to 55 percent in 1980-81 (Table 34). The increase was particularly evident among large and small farmers.

In 1975-76, farmers' wage earnings were only about 30 percent of that of landless workers, but in 1980- 81, a member of a small farmer's household was receiving as much as that of a landless worker's household.

The same was observed in terms of average daily wage. The increase in daily non-farm wage was substantially large especially among large farmers (Table 35).

Kikuchi *et al.* (1983), analyzing data on monthly earnings, found that in 1975-76 total wage earnings almost followed the usual peaks and troughs of the normal rice planting and harvesting seasons. But, this seasonality became less visible in 1980-81, especially among landless workers. There were other pronounced peaks in months not normally considered peak seasons because of non-farm earnings.

Household Production and Income. The figures in Table 36 reveal observations similar to those of earnings. Village households experienced a sharp decline in rice income, from 43 percent in 1975-76 to 25 percent in 1981-82. On the other hand, non-rice agricultural production increased from 14.5 percent to 18 percent, and non-agricultural income from 43 percent to 57 percent, over the same periods.

Changes in shares of output, value added, and employment followed similar movements: falling share of rice, a rising share of other agriculture, and a sharply rising share of non-agriculture.

D. *Income Distribution*

The village under study experienced a decline in real income among all households in general. But for each type of household, real income registered positive changes over the 13-year

Table 32

Monthly Wage Earnings Per Working Member by Type of Household

	1975-76			1980-81		
	Total	Farm	Non-farm	Total	Farm	Non-farm
All Households	756.7	651.9	104.8	2191.2	685.6	1505.6
Large Farmers	423.9	289.9	134.0	1803.5	96.1	1707.4
Small Farmers	408.0	377.0	31.0	2412.3	843.7	1568.6
Landless Workers	1269.7	1206.1	63.6	2457.0	1252.1	1204.9

Source: Hayami et al., 1988, Table 17-20

Table 33

Percentage Change in Monthly Wage Earnings Per Working Member by Type of Household, 1975/76 - 1980/81 (in percent)

	% Change Total	Farm	Non-farm
All Households	189.6	5.2	1336.6
Large Farmers	325.4	(66.8)	1174.2
Small Farmers	491.2	123.8	4960.0
Landless Workers	93.5	3.8	1794.5

Source: Hayami et al., 1988, Table 17-20

Table 34

Percentage Share of Farm and Non-Farm Earnings to Total Monthly Earnings (in percent)

	1975-76		1980-81	
	Farm	Non-farm	Farm	Non-farm
All Households	86.2	13.8	31.3	68.7
Large Farmers	68.4	31.6	5.3	94.7
Small Farmers	92.4	7.6	35.0	65.0
Landless Workers	95.0	5.0	51.0	49.0

Source: Hayami et al., 1988, Table 17-20

Table 35

Average Daily Wage Per Working Member, Farm and Non-Farm, 1975/76 and 1980/81

	1975-76		1980-81	
	Farm	Non-farm	Farm	Non-farm
1 Households	9.9	10.8	16.2	30.0
Large Farmers	8.0	8.4	12.0	39.3
Small Farmers	16.7	8.9	17.6	26.0
Landless Workers	9.5	11.8	15.1	24.7

)urce: Hayami et al., 1988, Table 17-20

Table 36
Shares in Income, Output and Employment

	1975/76					
	Rice	Other Ag.	Non Ag.	Rice	Other Ag.	Non Ag.
Income	42.6	14.5	42.9	24.9	18.0	57.1
Output	81.1	18.3	0.7	62.5	28.7	8.8
Value-Added	87.3	12.2	0.6	74.3	25.7	4.1
Labor Days	76.6	15.8	7.6	43.2	24.4	32.4

Source: Ranis and Stewart, 1990, Table V.7

Table 37
Household Incomes, 1974 and 1987

	Income per household 1974	Income per household 1987	Income per household 1974	Income per household 1987
Nominal Income				
All Households	5,300	22,240	917	4,277
Large Farmer	10,973	65,425	1,463	11,478
Small Farmer	5,082	27,365	924	4,486
Landless Worker	2,401	14,059	490	2,929
Real Income[a]				
All Households	5,300	4,421	917	850
Large Farmer	10,973	13,007	1,463	2,282
Small Farmer	5,082	5,440	924	892
Landless Worker	2,401	2,795	490	582

[a]deflated by CPI (outside Manila 1974 = 100)
Source: Hayami et al. 1989.

period from 1974-1987, especially among large farmer households and landless workers (Table 37).

The increased dependency of these two groups of households on non-farm income accounted for the said increases in real income. The large farmer households increasingly depended on salaried work and remittances from urban areas especially during the 1980s.

On a per capita level, the increase was most pronounced among large farmer households. On both income counts, the gap between large farmer households and the two other types of households increased. This is attributed mainly to the decline in the size of large farmer households as well as to the higher average income earning capacity of their household members. This was evidenced by the higher share of income from salaried work and the higher land rents paid to landlords, which were fixed by land reform programs despite major gains in rice yields.

Despite the above factors, income distribution in the village did not cause significant deterioration. Size distribution of household incomes in Table 38 suggests that from 1974 to 1987, no appreciable change in the distribution occurred, except for slight declines in income shares of the top 20 percent and the lowest 20 percent, and the increase in the middle 60 percent. The gini ratio increased, though unremarkably, from 0.467 to 0.478. The major factor which may have prevented income inequality from getting worse was the emergence of more non-farm employment opportunities in the village and in nearby urban towns as these areas modernize in the process of development.

V. Conclusion

The study traced the evolution of the rural non-farm sector in the Philippines and examined its changing structure over time. The analysis focused on both macro and micro settings. The latter was a case study of a village and its data allowed for an analysis of the growing importance of non-farm activities in the improvement of rural incomes and of income distribution.

The Philippine rural sector has remained relatively large. More than 50 percent of the total population still live in the rural areas. It has also maintained a subsistence character. Farm sizes experienced further declines, landlessness increased, average incomes were still way below the overall poverty line, and the underemployment rate remained fairly high.

Most macroeconomic and sector-specific policies in the past were generally biased against the rural sector, agriculture in particular. Even the highly publicized land reform program barely touched the Filipino peasants.[8] If there were any increases in their incomes and productivity, particularly in some areas in Central Luzon and Southern Tagalog, these were due more to the farmers' increased access to credit, irrigation, transportation, and HYVs,[9] than to a change in land tenure *per se*.

Apparently, in response to these unfavorable conditions, the farmers shifted to employment to non-agricultural activities. The share of non-agriculture to total employment was close to 36

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8. Castillo (1979).

9. NEDA. (1989).

Table 38

Size Distribution of Household Incomes, 1974 and 1987

Income Quintile	Share of Income (%) 1974	1987
1	53.6	51.5
2	18.8	22.5
3	14.9	13.7
4	8.1	8.6
5	4.6	3.7
Total	100.0	100.0
Gini coefficient	0.467	0.478

Source: Hayami et al. 1989, Table 22.

percent in 1988, with the majority of rural non-farm workers engaged in trade, services, and manufacturing. Likewise, while the majority of rural workers have remained own-account workers in agriculture, there were indications of an expanding group of wage and salary workers in non-agriculture. Noticeable also was the increasing participation of females in non-agricultural activities particularly in services, trade, and utilities.

In terms of income, the share of non-agricultural sources was high at 57 percent in 1988 from 49 percent in 1977. The bulk of this income came from wages and salaries, about half of which came from entrepreneurial sources.

The limited information on the demand side suggests the still relatively limited capacity of rural non-farm activities to absorb more labor because most of these activities are basically cottage and micro enterprises, employing 1-3 workers.

The analysis of the micro case revealed characteristics consistent with the general observations on the rural sector. For example, the village had been experiencing increasing landlessness due to increased population pressure and land reform regulations, decreasing farm size, and more unequal size distribution of farms.

This situation, however, has released more labor for non- agricultural activities which were available both in the village and in nearby towns. Extensive road network and modern transportation facilitated the employment of these people in the nearby urban areas and even in Metro Manila.

On the whole, non-farm income in the village rose from 8.1 percent to 36 percent of total income in a span of 13 years. While the average income of large farmers increased significantly because of larger share of land rent that accrued to them, the relative income position of the landless workers did not deteriorate because of the marked increases in non-farm employment.

Of significance was the increased participation of females in non-farm work such as retail trade (sari-sari store), vending, dressmaking, domestic services, and office work usually in government. This increased commitment to non-farm work was also facilitated by the development of modern highway systems and transportation facilities.

Income distribution in the village did not show any remarkable change despite the mounting population pressure in the village. The gini coefficient in 1987 remained close to what it was in 1974, i.e., 0.467 to 0.478. The main reason for this was the significant contribution of non-farm sources of income.

In effect, the mobilization of the rural economy can be achieved even against relatively deteriorating agricultural conditions if the appropriate macro and sector-specific policies are put in place, especially those that would encourage the growth of a dynamic rural non-farm sector. The latter can help eliminate underemployment and, consequently, improve incomes and provide a more equitable income distribution in the rural sector.

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