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AGRICULTURAL GROWTH, EMPLOYMENT GROWTH AND RURAL POVERTY

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I. Introduction

The thrust and zeal to achieve sustained poverty reduction as well as economic growth have certainly been present throughout the post-World War II period. By and large, only the emphasis and the strategy to achieve them have changed over the years, at least as reckoned from development plans and official policy statements.[1] For an overview of postwar development planning, objectives, and strategies, see Balisacan (1990a). The 1950s and the larger part of the 1960s saw rapid economic growth through import-substituting industrial development as the central focus of efforts aimed at improving living standards. The 1970s and 1980s increasingly emphasized direct poverty alleviation schemes, along with strategies to achieve sustainable economic growth. But it is only the present administration that has heretofore officially put in place a comprehensive plan centered on rural poverty alleviation. Its Medium-Term Philippine Development Plan (1987-92) makes agriculture and rural development the central focus of development efforts aimed at alleviating poverty. Although some earlier development plans (e.g., the Yulo Plan of 1950) and political regimes also emphasized agricultural development, none presented it as the major component of a development strategy *directly* aimed at alleviating poverty, particularly rural poverty, and at enhancing economic recovery. Previous plans tended to emphasize agricultural development mainly to enhance domestic food security and foreign exchange earnings. Development plans are, of course, one matter. The economic record is another.

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1. For an overview of postwar development planning, objectives, and strategies, see Balisacan (1990a).

The present paper provides a critical look at the country's record with respect to agricultural growth and poverty alleviation. It argues that rapid agricultural growth, as demonstrated by the experience in the 1960s and 1970s, is not sufficient to pull the rural poor out of poverty or to sustain rapid overall economic growth. Rather, economic structures and the economic environment outside of agriculture must likewise be conducive to a rapid growth of productive employment opportunities for the fast growing labor force. Section II of the paper discusses the key features of agricultural growth in the Philippines. Section III then examines the historical record with respect to income distribution and poverty. Section IV turns to issues concerning access to land, agricultural productivity, and rural poverty. Section V examines the link between access to employment opportunities and rural poverty. Finally, section VI provides concluding remarks.

II. Postwar Agricultural Growth

The agricultural sector (comprising crops, livestock and poultry, fishery, and forestry) of the Philippine economy performed remarkably well during most of the post-World War II period. The sector posted an annual average growth rate of 3.9 percent between the mid-1950s and late 1980s (Balisacan 1990a). The growth has, however, decelerated in the 1980s. While the average annual growth rate for the period 1965-80, which was the height of the so-called Green Revolution, was substantially higher than the average for the developing monsoon Asian countries and the middle-income developing countries and compared favorably well with those for Thailand and Indonesia, it was way below the averages for these countries in the 1980s (Table 1).

Changes in food production per capita depict the same pattern (Table 2). The increase in food production per capita in the Philippines exceeded the average for the low-income economies (including India and China) and for the middle-income economies in 1975-80. But by the late 1980s, food production per capita in the Philippines was 10 percent lower than the level prevailing at the start of the decade. In contrast, the average food production per capita for low-income economies increased by 12 percent, while that for middle-income economies nearly remained the same. Among ASEAN-member nations, Indonesia had a remarkable performance — food production per capita increased by 17 percent during the period.

Table 1

RELATIVE CONTRIBUTION OF AGRICULTURE TO ECONOMIC GROWTH IN DEVELOPING MONSOON ASIA AND MIDDLE INCOME DEVELOPING COUNTRIES

Country	1988 Per capita GDP ($)	Share of agriculture in GDP (%)		Annual growth rate (%)				Relative contribution of agriculture to GDP growth[a] (%)	
				GDP		Agriculture			
		1965	1988	1965-80	1980-88	1965-80	1980-88	1965-80	1988-88
Developing Monsoon Asia	1,019	39	28.8	5.4	5.5	2.3	2.9	39.0	27.2
Malaysia	2,052	28	21.1	7.3	4.6	--	3.7	28	
Thailand	1,063	32	17.0	7.2	6.0	4.6	3.7	32	17
Indonesia	476	56	24.0	8.0	5.1	4.3	3.1	56	24
Philippines	655	26	23.0	5.9	0.1	4.6	1.8	26	23
Sri Lanka	386	28	26.0	4.0	4.3	2.7	2.7	28	26
Pakistan	320	40	26.0	5.1	6.5	3.3	4.3	40	26
India	292	44	32.0	3.6	5.2	2.5	2.3	44	32
Bangladesh	177	53	46.0	2.4	3.7	1.5	2.1	53	46
Nepal	159	65	56.0	1.9	4.7	1.1	4.4	65	56
China	342	44	33.0[b]	6.4	10.3	2.8	6.8	44	32
Burma	192[b]	35	37.0[b]	2.9[c]	5.3[f]	--	--	34[c]	39[d]
Taiwan	6,113	18[e]	4.8	10.3[f]	9.8[g]	--	--	18[e]	5
Middle income developing countries	174,761 2,061	20	12.0	6.1	2.9	3.6	2.7	20	12

a. Ratio of the growth rate of agriculture multiplied by the share of agriculture in GDP, to the growth rate of GDP.
b. 1985 c. 1965-73 d. 1973-86 e. 1970 f. 1975-79 g. 1986-89

Sources: Asian Development Bank, Key Indicators of Developing Asian Pacific Countries, July 1990.
World Bank, World Development Report, 1990.

Table 2
FOOD PRODUCTION PER CAPITA AND POPULATION GROWTH RATE

	Index of food production per capita (1980=100[a])		Percent change		Average annual growth rate of population (%) population (%).	
	1975[a]	1987[a]	1975-80	1980-87	1965-80	1980-88
Low-income economies	90	112	11	12	2.3	2.0
Middle-income economies	91	99	10	−1	2.4	2.2
East Asia	..	123	..	23	2.3	1.5
South Asia	..	100	..	0	2.4	2.3
ASEAN-3						
Philippines	79	90	27	−10	2.9	2.5
Thailand	81	101	23	1	2.9	1.9
Indonesia	84	117	19	17	2.4	2.1

a. Three-year average, centered on the year shown.
Source: World Bank, World Development Report, various issues.

Partly explaining the decline in food production per capita is the country's continued high population growth. The average population growth rate of 2.5 percent per year for the period 1980-88 was above the average for low-income economies (2.0 percent), middle-income economies (2.2 percent), and those of Thailand and Indonesia (1.9 and 2.1 percent, respectively).

It is interesting to note that developing countries which have relatively high growth rates of agricultural value added also tend to have comparatively high GDP growth rates. This observation augurs well with the view that there is a strong link between agricultural growth and macroeconomic performance in developing countries (Adelman 1984; Bautista 1987).

The expansion of the cultivated area (i.e., the opening up of new lands for cultivation) provided the major source of the production growth of Philippine agriculture (defined in this section to include crops and poultry and livestock only), at least up to the 1950s. Since the closing of the agricultural land frontier in the 1960s resulting from increased population pressure, the contribution of land productivity (output per hectare) growth has increasingly become the more im-

portant source of production growth.[2] Over the last two decades, increases in yield accounted for about 80 percent of total agricultural production growth. Whereas cultivated area per farm worker declined by an annual average of 2.5 percent during the same period, yield grew by an annual average of about 5 percent, enabling agricultural output per farm worker to grow by about 2 percent annually (David et al. 1984). In contrast, the six decades preceding the 1960s were marked by increasing cultivated area per farm worker, decreasing output per cultivated area, and virtually unchanged per capita agricultural output (Hooley 1968).

However, there exist substantial differences among crops. Whereas yield growth contributed nearly two-thirds of the production growth of palay, corn, banana, and pineapple between the mid-1970s and mid-1980s, area expansion largely contributed to output growth of coconut, coffee, sugarcane, abaca, tobacco, and rootcrops (Table 3). In the case of rice, the rapid diffusion of the modern variety fertilizer-irrigation technology beginning in mid-1960s was largely responsible for yield increases. By the mid-1980s, about 85 percent of the total rice area was planted to modern varieties, and nearly 65 percent of this was irrigated. Fertilizer use in rice also rose from 8 kg NPK per hectare in the mid-1960s to 40 kg NPK per hectare in the mid-1980s.

Area expansion contributed nearly 60 percent of growth in corn output prior to the mid-1970s With the increased adoption of high-yielding varieties (mainly yellow corn) since the late 1970s, increases in yield subsequently became the dominant source of this growth.

Substantial area expansion explained much of the growth in coconut production between 1950 and the early 1980s. Yields stagnated somewhat during the period, and even declined to about 3 percent between the mid-1970s and mid-1980s Drought in the early 1980s, world price deterioration between 1983 and 1986, peace and order conditions in coconut-growing areas, depressed domestic prices due

2. As Hayami et al. (1976) point out, population pressure pushes the cultivation frontier into marginal lands, thereby causing the marginal cost of production via expansion of cultivated area to rise relative to the marginal cost of production via more intensive land use. The intensification of irrigation and the adoption of land-saving modern rice technology can thus be seen as efforts to augment land in response to the increasing cost of land relative to labor. (David et al. 1984) also note the influence of other factors promoting land intensification in lowland areas of the Philippines. Among the principal ones are the suitability of early modern varieties to irrigated conditions, the worsening peace and order situation in Mindanao and upland areas, and the policy bias against agriculture and labor use.

Table 3
RELATIVE CONTRIBUTION OF YIELD AND AREA TO PRODUCTION GROWTH BY COMMODITY
(In percent)

	1954-56 to 1964-66			1964-66 to 1974-76			1974-76 to 1984-86			1954-56 to 1984-86		
	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area
Food Crops												
Palay	2.39	0.86	1.51	4.01	2.87	1.14	2.90	4.27	--1.37	3.49	2.90	0.59
Corn	5.41	2.16	3.07	5.83	2.40	3.43	3.10	2.32	0.78	5.08	2.28	2.80
Banana	9.46	6.27	3.20	8.06	6.70	1.36	7.42	5.15	2.27	10.05	7.72	2.33
Mango	8.26	10.67	--2.40	6.04	7.56	--1.52	3.62	2.12	1.50	7.91	9.08	--1.17
Pineapple	5.14	6.08	0.90	7.28	5.99	1.29	16.98	10.07	6.91	9.63	6.20	3.43
Rootcrops	2.00	2.46	--0.52	0.35	--1.73	2.08	1.31	0.34	0.97	3.13	1.10	2.03
Coffee	21.65	11.56	10.09	4.88	0.86	4.02	5.47	--2.79	8.26	9.52	3.25	6.27
Others	2.67	5.09	--2.39	5.65	4.19	1.46	0.87	0.47	0.40	4.91	4.20	0.71
Commercial Crops												
Coconut	2.05	--3.03	5.08	4.81	1.08	3.73	--0.37	--3.38	3.01	4.62	0.07	4.56
Sugarcane	5.88	4.10	1.78	6.39	0.61	5.78	--2.01	0.92	--2.93	3.39	0.56	2.83
Abaca	1.30	2.77	--1.47	0.02	1.32	--1.30	--5.39	--2.41	--2.98	--0.02	--0.08	0.06
Tobacco	5.40	1.92	3.48	1.25	1.52	--0.27	--1.41	3.08	--4.49	0.16	1.32	--1.16
Rubber	12.75	--3.58	16.33	18.58	9.05	9.53	11.33	8.01	3.32	15.29	5.75	9.54
Others	6.69	--5.60	1.09	--3.28	1.01	--4.29	--8.84	--5.08	--3.92	0.41	2.06	--1.65

Source of basic data: Philippine Statistical Yearbook, various issues.

to unfavorable pricing policies during most of the 1970s and early 1980s, and the senescence of coconut trees (with about half of the tree population more than 50 years old), all contributed to the dismal growth performance of the industry. In contrast, countries producing coconut oil substitutes (e.g., soybean oil and palm oil) were gaining substantial inroads into productivity improvement.

Yield growth in sugar was likewise niggardly during the last three and a half decades, particularly since the mid-1960s. Area expansion contributed 83 percent of the 3.4 percent growth rate posted during this period. Steep declines in hectarage occurred in the 1980s following the sharp decline in the world prices of sugar beginning in 1984 and the expiration of the country's lucrative long-term export contracts with the United States. These developments were even more painful to the industry when it could not profitably export to the "non-U.S. world market" due to the relatively high costs of domestic production.

III. Agricultural Growth, Income Distribution, and Rural Poverty

The conceptual and empirical difficulties surrounding the measurement of income inequality and poverty are fairly well known. In this paper, purely practical considerations, such as the availability of data and the impossibility of obtaining new data, have dictated definitional and measurement choices. More importantly, the imposition of consistency of definition, and not a mixture of definitions, became the dominant factor in the choice of one concept over another.

The statistical base for the analysis in this section is mainly the various Family Income and Expenditure Surveys (FIES). These surveys were undertaken in 1961, 1965, 1971, 1975, 1979, 1985, and 1988.[3] The 1975 and 1979 surveys, however, were not published due to some technical problems, one of which was the implausibility of the data generated arising from substantial undercoverage. Excluding 1975 and 1979, it appears that the FIES provides a reasonably good series—and the *only* one available for the analysis of trends in income inequality and poverty over the last three decades. Unfortunately, we have been limited to published tabulations for 1961, 1965, and 1971, and have acquired data tapes only for 1985 and 1988. Given the imprecision of the data, particularly for earlier years, the results should be interpreted as indicating trends rather than precise magnitudes.

3. See Balisacan (1990a) for a detailed discussion of the limitations and comparability of the various rounds of FIES.

Has Income Distribution Gotten Worse with Agricultural Growth?

It is often desirable to use more than one summary index of inequality, since some indices are more sensitive than others to changes in the different parts of the size distribution of income. The Gini (G) index, the summary measure commonly employed in the Philippines, is relatively more sensitive to changes in the middle ranges than in the extreme ranges of the size distribution of income. This is so since G depends on the rank order weights of income recipients and on the number of recipients in a given range. The coefficient of variation (CV), on the other hand, is more sensitive to changes in the upper ranges of the distribution, since it attaches equal weights to transfers at all levels of income. The standard deviation of logarithms (SD), derived when incomes are expressed in logarithms, is one measure which is more sensitive to changes in the lower ranges than in the other parts of the distribution. That is, the fact that a logarithmic transformation staggers the income levels tends to soften the blow in reflecting inequality. Looked at differently, each of these measures is most sensitive to a particular type of inequality: G for inequality among the less extreme incomes, the CV for inequality due to extreme wealth, and SDL for inequality due to extreme poverty (SDL).[4]

Table 4 shows the estimates of these measures for the five rounds of FIES.[5] All the above measures exhibited little changes over the years. Considering that per capita GDP grew by an annual average of nearly 2 percent between 1961 and 1971, the relatively small change was rather unusual in relation to the growth and income distribution experience of East Asia's newly industrializing countries (NICs) where economic growth was accompanied by a considerable improvement in income distribution.[6] Even the "growth spell" in the latter half of the 1960s when GDP grew by about 5 percent (which was low in relation to the average for middle-income economies and ASEAN

4. See Champernowne (1974) for a comparison of the various indices in measuring the inequality displayed by given frequency distributions of income. Atkinson (1970) and Sen (1973) characterize the form of the social welfare function implicit in each of the most common measures.

5. It should be noted that since these estimates are obtained from grouped-data, they tend to be less than what would be obtained from individual observations. For 1961, 1965, and 1971, grouped data are a reconstruction of published official tabulations. For 1985 and 1988, grouped data are based on FIES tapes.

6. Based on Bautista's (1990) compilation of Gini estimates obtained from several studies. See also the earlier comparison of Gini ratios in selected Asian countries by Oshima and Barros (1976).

countries) and the "economic recovery" in the latter part of the 1980s barely improved income distribution. One may argue that this is hardly a surprise when viewed in the context of the so-called inverted U-shaped relationship between economic growth and income distribution.[7] Fields (1988: 469), in surveying the available evidence from the experiences of various countries, concludes "that whether inequality increases or decreases with economic growth depends on the type of growth rather than on the level of GNP or the rate of GNP growth *per se*." Many others (e.g., Fei and Ranis 1964; Adelman and Morris 1973) also emphasized that income inequality is determined as much or more by the *type* of economic development, including policies followed, as by the *level* of development *per se*.

It bears noting that the inequality of income in rural areas was somewhat less than in urban areas. This difference could be larger than the figures shown in Table 4 when one takes into account the undercoverage of residential enclaves of rich families, particularly in Metro Manila, in FIES rounds. Notice, however, the narrowing of the gap (e.g., the difference in the Gini index for urban and rural areas) from 1961 to 1971, and its widening in 1985. The trend in the first period was mostly associated with decreased income inequality in the urban areas and increased inequality in the rural areas. The widening of the gap in 1985 (relative to 1971) resulted largely from the improvement in income equality in the rural areas.

Table 4
INDICES OF INCOME INEQUALITY, 1961-88

Index	1961	1965	1971	1985	1988
All Families					
Coefficient of variation	1.094	1.076	1.003	0.963	0. 949
Standard deviation of logarithm	0.409	0.445	0.436	0.373	0.374
Gini index	0.486	0.491	0.478	0.446	0.445
Rural Families					
Coefficient of variation	0.797	0.797	0.920	0.772	0.769
Standard deviation of logarithm	0.318	0.366	0.396	0.310	0.310
Gini Index	0.386	0.410	0.448	0.378	0.378
Urban Families					
Coefficient of variation	1.116	1.129	0.893	0.945	0.910
Standard deviation of logarithm	0.462	0.448	0.395	0.373	0.363
Gini Index	0.506	0.503	0.440	0.442	0.431

7. Most often associated with Simon Kuznets, the inverted U-shaped hypothesis depicts a development path whereby income inequality increases in the early stages of development and decreases in the later stages.

The increase in income inequality in rural areas between 1961 and 1971 deserves a closer look. This period was characterized by fairly rapid agricultural growth, especially in the rice sector where the adoption of high-yielding modern varieties was unusually rapid vis-a-vis many other Asian countries. Indeed, the average real family income in rural areas increased by 19 percent between 1961 and 1965 and by another 19 percent between 1965 and 1971 (Table 5). In contrast, while average real family income in urban areas increased by 21 percent in the first period, it stagnated in the second period. Thus, the rural-urban income ratio increased from about 40 percent in 1961 and 1965 to 48 percent in 1971. Then, when the growth of agriculture slowed down, along with the rest of the economy, in the 1980s, income distribution in the rural areas improved somewhat even though the rural-urban income ratio was almost steady between 1971 and 1988. Herdt (1987) and others observed that the adoption of modern technologies in the 1960s and early 1970s tended to be initially concentrated among large farmers, with small farmers catching up in later years. This fact, along with the highly skewed distribution of agricultural landholdings in the Philippine and the slow growth of employment opportunities in off-farm areas in relation to the growth of the labor force, partly explains the pattern of income inequality in rural areas.

Table 5
AVERAGE REAL FAMILY INCOME OF URBAN AND RURAL HOUSEHOLDS, 1961-88

	Average family income[a] (in 1978 pesos)					Percentage change			
	1961	1965	1971	1985	1988	1961-65	1965-71	1971-85	1985-88
Philippines	7,452	8,582	9,386	8,806	9,907	15.2	9.4	-6.2	12.5
Rural	4,971	5,928	7,080	6,204	6,939	19.3	19.4	-12.4	11.9
Urban	12,262	14,873	14,730	13,082	14,700	21.3	-1.0	-11.2	12.4
Rural/Urban Ratio	40.5	39.9	48.1	47.4	47.2				

a. For 1961 and 1965 average family income is deflated using the consumer price index for Metro Manila. For all other years the CPI for the Philippines is used.

Source of basic data: NSO, Family Income and Expendditure Surveys, various issues.

Has Agricultural Growth Trickled Down to the Poor?

The identification of the poor and the attendant aggregation which brings together the data on the poor into an overall measure of poverty almost always involve a construction, albeit imprecise, of a poverty line or threshold.[8] For practical purposes, we define a poverty threshold as the critical minimum amount of income below which a person cannot attain a predetermined consumption bundle of goods and services, as judged necessary for the fulfilment of certain basic consumption needs, most importantly (in the context of this study) adequate nutrition. We have adopted the NEDA-FNRI-NSO technical working group's estimates of poverty lines for 1985 for the country's 13 regions subdivided into rural and urban areas.[9] We have adjusted these estimates for inflation to obtain poverty thresholds (at current prices) for 1961, 1965, 1971, and 1988. Although necessarily still imprecise, these estimates take into account regional price differences and consumption patterns (and thus avoid a major shortcoming of previous studies), as well as the desirability of imposing consistent definitions of poverty thresholds throughout the period of analysis.[10]

The commonly used summary measure of poverty in the Philippines is the head-count index, expressed as the proportionate number of households whose incomes fall below the poverty line. The drawback of this measure is that it is entirely insensitive to changes *below* the poverty line. A poor person may become poorer but measured poverty will remain the same. Furthermore, an income transfer from a person below the poverty line to one above it does not change measured poverty—which is indeed an absurd property of a summary measure of poverty.

In addition to the head-count index, we have employed the following summary measures:

(1) Income gap, measured as the average income shortfall of the poor (expressed in proportion to the poverty line);

8. For a discussion of the many conceptual and empirical issues involved in poverty measurement, see Srinivasan (1990), Atkinson (1987), and Kanbur (1987).

9. For details on the estimation, see Balisacan (1990a).

10. The poverty line can be argued to be positively related with correlates of development (e.g., urbanization). Ravallion et al. (1990), however, have demonstrated that, for a large number of low-income countries, real poverty lines tend to increase with growth, but they will do very slowly for the poorest countries.

(2) Poverty gap, measured as the arithmetic mean of the income shortfall (expressed in proportion to the poverty line) over the whole population. This measure is sensitive to both the number of the poor and to how poor they are, although the various poverty deficits of the poor are weighed equally. Moreover, poverty gap has the added advantage, at least from a policy viewpoint, of measuring the actual amount of income necessary to bring every unit below the poverty line up to the poverty line. One objection to it, however, is that it is insensitive to the redistribution of income *within* the poor units;

(3) The Foster-Greer-Thorbecks (FGT) (a = 2) index, measured in the same way as poverty gap, except that the weights are simply the squared income shortfalls themselves;[11]

(4) The Sen index, a well-known, distributionally sensitive measure that takes into account the poor's income shortfalls as well as the inequality of income among the poor.

All the poverty measures show a decline in poverty incidence from 1961 to 1988 (Table 6). Head-count poverty declined from 75 percent in 1961 to 62 percent in 1971, 58 percent in 1985, and 49 percent in 1988. The average income shortfall of the poor is 53 percent of the poverty line in 1961, 49 percent in 1971, 39 percent in 1985, and 36 percent in 1988. Note that although income inequality hardly changed between 1961 and 1971, the head-count declined by an annual average of 1.3 percentage points.[12] This shows that the benefits of relatively modest growth of GDP per capita—averaging about 2 percent per year—during this period "trickled down" to the poor, although only minimally compared to the experience of other Asian countries. Moreover, the often-asserted argument that the post-World War II economic growth completely bypassed the poor is not supported by the figures in Table 6. Note too, however, that the relatively

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11. The FGT index is a class of additively decomposable poverty measures (Foster, Greer, and Thorbecke, 1984). The head-count and the poverty gap are special cases of this index, i.e., for $\alpha = 0$ and $\alpha = 1$, respectively. These measures are *additively decomposable* in the following sense: the aggregate (population) poverty level is simply a weighted average of the subgroup poverty levels, the weights being their population shares. Moreover, a *distributionally* sensitive FGT measure ($\alpha > 1$) satisfies the main axioms for a desirable summary measure of poverty (Foster 1984).

12. These rates of decline were, however, lower than those for other countries of similar income level, based on data in the World Bank's *World Development Report* 1990 (pp. 45-48).

Table 6
INDICES OF POVERTY INCIDENCE, 1961-1985
(In percent unless otherwise indicated)

Year and area	Total number of families (1,000)	Share of area in total families	Head-count	Income gap	Poverty gap	FGT ($\alpha = 2$)	Sen Index	Contribution to total poverty		
								Head count	Poverty gap	FGT ($\alpha = 2$)
A. Total										
1961	4,426	100.00	75.02	52.78	39.60	25.62		100.00	100.00	100.00
1965	5,127	100.00	67.08	50.29	33.74	21.33		100.00	100.00	100.00
1971	6,348	100.00	61.63	48.81	30.08	18.29		100.00	100.00	100.00
1985	9,847	100.00	59.65	40.23	24.00	12.00	24.00	100.00	100.00	100.00
1988	10,533	100.00	49.52	36.35	18.00	8.00	19.00	100.00	100.00	100.00
B. Rural										
1961	2,920	65.97	80.19	53.62	43.00	28.00		70.52	71.64	72.10
1965	3,606	70.33	71.15	52.00	37.00	24.00		74.60	77.13	79.13
1971	4,434	69.85	66.08	51.45	34.00	21.00		74.89	78.95	80.21
1985	6,121	62.16	63.30	39.49	25.00	13.00	25.00	65.97	64.75	67.34
1988	6,548	62.17	54.08	35.13	19.00	9.00	20.00	67.89	65.62	69.94
C. Urban										
1961	1,506	34.03	65.00	50.77	33.00	21.00		29.48	28.36	27.90
1965	1,521	29.67	57.43	45.27	26.00	15.00		25.40	22.86	20.87
1971	1,914	30.15	51.32	40.92	21.00	12.00		25.11	21.05	19.79
1985	3,726	37.84	51.98	38.48	20.00	10.00	20.00	31.52	30.14	30.14
1988	3,985	37.83	39.95	35.04	14.00	6.00	14.00	30.52	29.42	28.37

Source: Balisacan (1990a).

fast growth of the population—averaging 2.9 percent per year between 1961 and 1971 and 2.6 percent per year between 1971 and 1985 meant a 57 percent increase in the total number of poor families from 3.3 million in 1961 to 5.2 million in 1988.

The incidence of poverty was higher in rural areas than in urban areas, although the difference tended to narrow down since 1961. This tendency paralleled the increase in the ratio of average rural family income to average urban family income. Based on the head-count index, rural poverty accounted for the bulk of overall poverty (nearly three-fourths in 1965 and 1971 and about two-thirds 1985 and 1988), mainly because of the greater number of families residing in rural areas. This contribution appeared to be even larger with the use of poverty gaps as weights (i.e., consideration is given to poverty aversion), simply because poverty gaps were larger in rural areas than in urban areas.

It bears noting that despite the noticeable increase in income inequality in the rural areas between 1961 and 1971 (see Table 4), all the indices of rural poverty showed a decline during this period, further supporting the argument that rural (mainly agricultural) growth itself, even while initially increasing income inequality, is a powerful stimulus to poverty reduction.

The vast majority (62-68%) of the rural poor are engaged in farming (Table 7). About two-thirds of all farming families were considered poor in 1988; this group had an average income shortfall of about 40 percent of the poverty line. The incidence of poverty was equally high among families whose incomes depended mainly on fishing. Their contribution to total rural poverty, however, was much lower (11%) than that for farming families, simply because this group accounted for only 9 percent of all rural families. Families dependent mainly on incomes earned outside farming, fishing, and forestry comprised another single block (37%) of families in the rural areas.[13] The incidence of poverty among this group was much lower—about 40 percent of the families were poor and the average income shortfall for the group was 31 percent.

The traditional characterization of the rural poor is that the poorest of them are the landless and those who are dependent mainly on wage incomes. Surprisingly, Table 7 shows that the intensity of pov-

13. There is some overrepresentation here, considering that some families whose occupations were not declared were lumped into the "other occupation" category.

Table 7
POVERTY INCIDENCE BY INDUSTRY, RURAL FAMILIES, 1988
(In percent unless otherwise indicated)

Industry	Total number of families (1,000)	Share of area in total families	Head-count	Income gap	Poverty gap	FGT ($\alpha = 2$)	Sen Index	Contribution to total poverty		
								Head count	Poverty gap	FGT ($\alpha = 2$)
All Rural Families	6,548.1	100.00	55.03	36.84	20.27	9.41	20.00	100.00	100.00	100.00
Farming										
Wages	614.6	9.39	69.40	38.90	27.00	13.00	27.00	11.84	12.50	12.96
Self-employed	2,853.3	43.57	63.17	39.58	25.00	12.00	25.00	50.02	53.74	55.56
Forestry	72.2	1.10	50.46	39.64	20.00	10.00	20.00	1.01	1.09	1.17
Fishing	592.5	9.05	66.77	35.94	24.00	11.00	24.00	10.98	10.71	10.58
Agricultural Services	25.6	0.39	52.69	37.96	20.00	10.00	20.00	0.37	0.39	0.42
Other Occupation										
Wages	1,217.5	18.59	38.19	28.80	11.00	4.00	11.00	12.90	10.09	7.90
Self-employed	1,172.4	17.90	39.58	32.84	13.00	6.00	13.00	12.88	11.48	11.41

Source: Balisacan (1990a).

erty among the self-employed, as indicated by their income shortfalls is as severe as, if not more severe than, that of "wage" households (although there are differences across occupations, as shown below). In agriculture, the poor self-employed heads of households include primarily lessees, tenants, and small owner-cultivators.

In agriculture (farming, fishing, and forestry), among the poorest were (a) farm workers in sugarcane, rice, corn, coconut, and forestry; and (b) corn and "other crop" farmers, coconut farmers, and fishermen (Table 8).[14] Rice producers had a lower average income shortfall, and a smaller proportion of their group below the poverty threshold, but they contributed almost one-fourth of overall poverty in agriculture owing to the large proportion (28%) of rice farmers in agriculture.

The poor families in agriculture are characterized by a high level of underemployment, inadequate access to or use of modern technology (partly because of lack of access to credit), high dependence on incomes in agriculture, and little access to social services, including health care and family planning services. The high level of underemployment in agriculture arises partly from the monsoon-dependent nature of agricultural production. The access of the poor to land is limited by the high concentration of landholdings (especially in sugarcane, coconut, and "export crops" such as banana and pineapple) and, ironically, by land reform programs covering only *tenanted* rice and corn farms. For the large number of poor owner-cultivator farmers, farm size is small and the farm is often located in unfavorable areas (e.g., outside of irrigated areas). Their ability to improve their lot is substantially limited by their low incomes and very limited access to credit. With the sluggish growth of productive employment opportunities outside the farm, the main bulk of the incomes of the poor in agriculture comes mainly from the sector. Their limited access to social services, on the other hand, is due to (a) the concentration of these services in urban areas, (b) the lack of information, (c) the ill-designed composition of publicly provided services, or (d) intimidation by officials.

Rural poverty is also common in areas where agricultural productivity is low and where droughts and typhoons occur frequently (e.g., in the Bicol Region). In these areas, rural nonfarm employment forms

14. Unlike the 1985 FIES, the 1988 FIES does not allow for a disaggregation of agricultural families by main occupation (i.e., self-employed rice farmers, sugarcane workers, etc.).

Table 8
POVERTY INCIDENCE IN AGRICULTURE BY MAIN OCCUPATION OF HOUSEHOLD HEAD, 1985
(In percent unless otherwise indicated)

Main occupation of household head	Total number of families (1,000)	Share of area in total families	Head-count	Income gap	Poverty gap	FGT ($\alpha = 2$)	Sen Index	Contribution to total poverty		
								Head count	Poverty gap	FGT ($\alpha = 2$)
All Agricultural Families	3,962.3	100.00	72.86	41.36	30.13	15.82	30.58	100.00	100.00	100.00
Rice Farmers	1,103.9	27.86	66.21	39.27	26.00	13.00	26.48	25.32	24.04	22.90
Corn Farmers	596.4	15.05	83.49	49.11	41.00	24.00	41.04	17.25	20.48	22.84
Sugarcane Farmers	19.4	0.49	60.73	29.64	18.00	7.00	18.12	0.41	0.29	0.22
Other Crop Farmers	203.4	5.13	84.40	42.65	36.00	22.00	39.80	5.95	6.13	7.14
Coconut Farmers	360.9	9.11	75.46	41.08	31.00	16.00	31.38	9.43	9.37	9.21
Fruit Tree Farmers	17.6	0.44	56.29	26.65	15.00	7.00	15.30	0.34	0.22	0.20
Livestocks & Poultry	23.4	0.59	61.38	34.21	21.00	9.00	20.98	0.50	0.41	0.34
Other Farmers	9.2	0.23	73.04	38.34	28.00	13.00	28.36	0.23	0.22	0.19
Rice & Corn Workers	215.2	5.43	81.07	44.41	36.00	20.00	36.18	6.04	6.49	6.87
Sugarcane Farm Workers	88.5	2.23	93.81	43.71	41.00	20.00	40.83	2.88	3.04	2.82
Other Crop Farm Workers	16.4	0.41	84.69	42.51	36.00	20.00	36.17	0.48	0.49	0.52
Coconut Farm Workers	61.6	1.55	83.70	41.82	35.00	17.00	34.69	1.79	1.81	1.67
Livestock & Poultry Workers	13.8	0.35	62.69	33.50	21.00	8.00	20.63	0.30	0.24	0.18
Other Crop & Animal Husbandry	80.1	2.02	51.42	35.01	18.00	9.00	18.25	1.43	1.21	1.15
Forestry Workers	46.6	1.18	82.60	39.95	33.00	16.00	33.03	1.33	1.29	1.19
Fishermen	515.4	13.01	76.70	40.42	31.00	16.00	31.06	13.69	13.38	13.16
Other Occupation	590.5	14.90	61.74	35.63	22.00	10.00	22.43	12.63	10.88	9.42

Source: Balisacan (1990a).

an important source of supplementary household income. However, the poor are concentrated in traditional industries with low skill and capital requirements and very low labor productivity. Moreover, the pressure of the very rapid growth of the labor force in rural areas has led to the decline in real wages, especially for the unskilled workers (see section V). But in areas (e.g., Central Luzon) where agricultural productivity growth is high, the substantial growth of nonfarm employment slows down the fall in real wages.

IV. Agricultural Productivity, Land Resources, Land Tenure, and Poverty

In the Philippines, as elsewhere, rural poverty and rural insurgency problems have often been tied to access to land and to tenurial relations. As shown in section III, poverty incidence is relatively high among landless agricultural workers and farmers cultivating small plots of land. Moreover, in regions where the concentration of land ownership is relatively high, the incidence of poverty is correspondingly high. Rural insurgency in these regions has tended also to be more pronounced than in other regions. These associations do not, of course, imply that limited land access is, by itself, the only factor that has contributed to existing rural poverty, nor do they suggest that it is the sole factor that has spawned rural insurgency. The limited growth of employment opportunities outside of agriculture and the country's relatively high population growth have been equally important determinants of rural poverty. Nonetheless, it remains true that institutional and policy changes concerning access to land resources have an important bearing on poverty alleviation. Moreover, these demonstrate the government's resolve to address the issue of income inequality.

The various indicators of agricultural productivity, particularly for the disaggregated level such as crop-farming, appear to be negatively correlated with poverty incidence in agriculture. Based on the 1985 FIES, both average poverty gaps and the proportion of poor families in total farm families were lowest in Central Luzon, Southern Tagalog, and the Ilocos Region where agricultural productivity levels were higher than the national average. In contrast, poverty incidence was highest in the Bicol Region and Western Visayas where productivity levels were also lowest. In some regions, however, agricultural productivity is a poor indicator of rural poverty incidence: productivity levels were relatively high in Northern Mindanao due to its high-value forestry and pineapple activities, and in Western Visayas prima-

rily arising from large sugar plantations. But in these regions, the incidence of poverty was also high.

Farm size and land/labor ratio have also often been associated with rural poverty, but, as Table 9 shows, the correlation is rather weak. The Ilocos Region, Central Luzon, Cagayan Valley, and Central Visayas had the lowest average farm sizes in 1980, but average poverty gap in these regions was among the lowest. Similarly, in the Bicol Region and in Northern and Southern Mindanao where average farm sizes were relatively large, poverty gaps were above the national average. This only shows that while farm size is an important factor determining household earnings from land, other factors are likewise crucial, among which are farm tenure, cropping intensity, land quality, rural infrastructure, and the availability of nonfarm employment. The low poverty incidence in Central Luzon, for example, was a combined effect of high cropping intensities facilitated by the availability of irrigation and short-maturing varieties, and of nonfarm employment primarily due to its proximity to Metro Manila. These more than compensated for a relatively high tenancy rate (at least in the 1970s) and small farm size. The Ilocos Region exhibited about the same characteristics as those of Central Luzon, but farm sizes were smaller and tenancy rates higher. Southern Tagalog and Central Mindanao had slightly lower yields and cropping intensities than those in the Ilocos Region and Central Luzon, but their agriculture was more diversified and their farm sizes larger. Western Visayas, on the other hand, had high tenancy rates owing to the plantation mode of production in the region, although the average farm size was close to the national average.

The incidence of poverty in agriculture appears to have a sharper association with the size-distribution of operational landholdings than that with average farm size. This is, of course, not surprising now considering that landlessness is highly correlated with landholding concentration and that landless agricultural workers, who are among the poorest groups, have low employment opportunities outside of agriculture. Southern Tagalog and Cagayan Valley do not seem to fit this generalization, but note that agriculture has been more diversified in the latter than in most of the other regions and that, for the former, employment opportunities outside of agriculture are available partly due to its proximity to Metro Manila.

After World War II, land reform programs focused on improving tenurial relations, including the setting up of limits on output and input sharing arrangements and the conversion of share tenants to

Table 9
INCIDENCE OF POVERTY IN AGRICULTURE (1985), AGRICULTURAL PRODUCTIVITY MEASURES (1980), AND LAND RESOURCES BY REGION

	Poverty incidence (1985)		Valued agriculture, fisheries & forestry			Gross value of crops			Land/ labor ratio[a]	Ave. farm size (ha.)	Percent of physical area above 10 ha.
	Head-count (%)	Poverty gap (%)	Per labor	Per hectare	% in regional GDP	Per farm	Per person	Per hectare			
Philippines			2,705	2,697	29.18	4,805	301	1,690	0.62	2.84	2.6
National Capital Region	43.9	24.0	--	--	--	--	--	--	0.28	0.73	--
Ilocos Region	53.9	18.0	2,767	4,361	46.90	4,577	349	3,158	0.46	1.45	11.9
Cagayan Valley	56.2	19.0	2,233	2,117	57.04	3,724	373	1,470	0.80	2.53	23.3
Central Luzon	47.0	15.0	3,160	4,439	29.07	5,855	253	2,746	0.79	2.13	8.8
Southern Tagalog	55.8	22.0	3,936	3,100	30.29	4,969	280	1,572	0.51	3.16	27.6
Bicol Region	72.4	31.0	1,975	1,751	58.55	3,396	269	1,014	0.43	3.35	35.4
Western Visayas	73.8	33.0	2,462	3,620	42.17	5,722	314	2,084	0.55	2.75	37.6
Central Visayas	68.0	30.0	1,599	2,496	23.22	1,637	133	958	0.48	1.71	21.7
Eastern Visayas	70.8	31.0	1,510	1,800	59.18	3,036	268	1,103	0.37	2.75	22.7
Western Mindanao	63.5	26.0	3,428	2,626	64.68	4,001	300	1,071	0.77	3.73	24.6
Northern Mindanao	66.7	29.0	3,062	2,213	44.35	6,395	531	1,747	0.93	3.66	28.4
Southern Mindanao	62.1	24.0	3,272	2,812	49.70	9,287	694	2,348	0.63	3.96	31.9
Central Mindanao	64.3	25.0	3,714	2,412	57.65	5,993	587	1,816	1.05	3.30	15.7

a. Including arable land only. Labor includes only employed labor in agriculture.
Sources: NSO, Census of Agriculture, 1980; NEDA, Philippine Statistical Yearbook, 1989 and 1986; DOLE, Yearbook of Labor Statistics, 1984; Balisacan (1990a).

amortizing owners.[15] For an overview of postwar land reform programs, see Hayami, Quisumbing, and Adriano (1990) and Balisacan (1990b). The argument has been that farmers are poor because of the high incidence of tenancy (the proportion of farms under tenancy to total farms) considered to be one of the highest in Asia which has changed only minimally since 1960. The census of agriculture in 1960 indicates that only about 45 percent of the total crop and livestock farms (and 53 percent of the total physical area) were fully owned by the operators themselves. In the 1980 census, this was about 59 percent. The proportion of rented or leased farms, on the other hand, hardly changed, from 37 percent in 1960 to 38 percent in 1980. Tenancy has persisted and become even more prevalent, partly because of the strong population pressure on land and of the slow growth of employment opportunities outside of agriculture.

As shown in section III, the incidence of poverty is high for households whose major sources of income (whether from wages or entrepreneurial concerns) are from palay, corn, coconut, and sugar farming. In rice and corn farms, the incidence of tenancy is higher than in other major crop farms (except tobacco and sugarcane) as well as in livestock farms. Moreover, in rice and corn farming, the average farm size cultivated by operators under share tenancy is not only lower than that under full ownership but also lower than the national average for all farm operators. On the other hand, the incidence of share tenancy is also high in pineapple and other permanent crops where farm sizes tend to be larger for these farms.

What the above observations, as well as other recent empirical and theoretical studies, suggest is that tenancy by itself is not as important and compelling a correlate of poverty as expected: the variation in incomes *within* tenure classes (reflecting the effect of farm size, yield, cropping intensity, land quality, etc.) has been found to be much greater than the variation *between* classes.[16]

V. Labor Supply and Employment Growth

New entrants to the labor force totaled about 600,000 in the late 1980s, of which about 40 percent was accounted for by rural areas. The growth of the labor force, particularly among the female popula-

15. For an overview of postwar land reform programs, see Hayami, Quisumbing, and Adriano (1990) and Balisacan (1990b).

16. For an excellent discussion of this literature, see Otsuka and Hayami (1988) and Otsuka, Honma and Hayami (1989.)

tion, was particularly high (averaging 3.8% annually) in the latter part of the 1970s and early part of the 1980s, although it decelerated in the latter part of the 1980s. The level of this growth closely matched the expansion of employment in the 1970s, but was slightly higher than employment growth in the 1980s, particularly during the 1983-85 economic crisis. Interestingly, while employment growth was persistently lower than output growth in the 1970s (the implicit employment elasticity with respect to output for this period was close to 0.65), such was not the case in the early part of the 1980s. Employment continued to expand at an extraordinarily high rate of 3.5 percent per year in 1981-85 even though GDP contracted by an annual average of 1.9 percent. However, the number of underemployed workers was high, averaging 25.8 percent of the total number of employed workers during the period, in contrast to the average of 19.7 percent for the period 1976-80 (Table 10).

The economic recovery in 1986-89 which pulled GDP growth to an annual average of 5.5 percent also brought with it an expansion of employment, although at a rate hardly sufficient to absorb the new entrants to the labor force. Thus, the open unemployment rate continued to increase from about 4.6 percent in the 1970s and 6.6 percent in 1983-85 to 8.6 percent in 1986-89. By 1989, there were 2 million unemployed individuals, more than half of them in the rural areas. Of the employed, a large number were underemployed in the urban informal sector (mostly services) and in subsistence agriculture. Their number picked up in the 1980s, relative to the observed averages in the 1970s. This can be primarily attributed to the rapid growth of the labor force and the sluggish expansion of employment in industry, particularly in manufacturing.

The rate of unemployment in the rural areas was only about one-half of that in the urban areas. However, the ratio of the *visibly* underemployed (defined as those working less than 65 days in a quarter and reporting their willingness to work additional hours) to the total labor force was nearly two-times greater in the rural areas than in the urban areas, although the difference tended to diminish in the latter part of the 1980s. The seasonality and irregularity of monsoon agriculture largely explain the high underemployment in rural areas. Moreover, as shown below, average labor productivity in agriculture has been much lower than that in manufacturing or urban industries.

While agriculture accounted for nearly one-half of the total employment in the late 1980s, it contributed only about one-fourth of the total national output (Table 11). Services, on the other hand, accounted for 40 percent of output and also about 40 percent of total

Table 10
UNEMPLOYMENT AND ENDEREMPLOYMENT RATES, 1971-89 [a]

	1971	1972	1973	1974	1975	1976	1977	1978	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Unemployment Rate (%)	5.3	5.3	4.8	3.2	4.2	5.2	4.5	4.1	5.0	5.3	6.0	5.4	7.3	7.1	8.0	9.5	8.3	8.4
Urban	8.7	9.8	8.0	5.7	7.8	8.5	7.2	6.0	8.2	8.3	9.8	9.3	12.2	11.8	11.5	13.8	12.3	11.7
Rural	3.7	3.3	3.3	2.0	2.6	3.5	3.1	3.2	3.7	4.0	4.2	3.7	4.4	4.4	3.9	6.8	5.9	6.4
Underemployment Rate (%)																		
A: [b]						25.5	17.4	19.2	20.9	23.9	25.5	29.8	36.4	22.2	28.4	23.9	23.6	22.7
Urban	--	--	--	--	--	21.6	15.2	18.9	19.9	19.5	24.0	29.9	34.0	16.9	27.7	18.1	24.1	17.3
Rural	--	--	--	--	--	27.3	18.5	19.3	21.4	25.8	26.2	29.8	37.7	25.1	28.8	27.2	23.3	25.9
B: [c]						13.8	8.1	9.0	12.0	14.5	13.9	17.2	22.5	15.3	17.8	11.1	11.4	10.9
Urban	--	--	--	--	--	7.8	5.4	5.5	7.4	7.0	8.9	8.1	8.7	16.9	13.7	6.9	6.8	6.0
Rural	--	--	--	--	--	16.6	9.5	10.6	13.9	13.1	16.9	14.4	21.3	25.2	19.9	13.5	13.9	13.7

a. No data available for 1979.
b. Those who worked for the reference quarter, but still wanted additional work, expressed as a proportion of the employed.
c. Those who worked less than 65 days in the quarter, but still wanted additional work, expressed as a proportion of the employed.
Sources: Philippine Statistical Yearbook, various issues; National Statistics Office, Integrated Survey of Household Bulletin, various issues.

Table 11
SECTORAL COMPOSITION OF GROSS DOMESTIC PRODUCT AND EMPLOYMENT, 1955-89[a]

	1955	1965	1975	1985	1989
Gross Domestic Product					
Agriculture	33.22	30.22	26.92	28.64	27.11
Industry	25.66	28.09	33.79	32.61	32.9
(Manufacturing)[b]	18.63	21.21	24.98	24.21	25.00
Services	41.12	41.69	39.29	38.75	39.99
Employment					
Agriculture	60.03	57.59	54.28	49.52	45.61
Industry	15.67	14.76	14.74	14.11	15.67
(Manufacturing)[b]	12.37	11.31	10.97	9.59	10.46
Services	24.29	27.67	30.99	36.38	38.71

a. Three-year averages centered on the year shown, except for 1989 wherein the figures refer to averages for 1988 and 1989.

b. Subsector of industry.

Sources: NEDA, Philippine Statistical Yearbook, various issues; NSO, Philippine Yearbook, 1987.

employment. Although the shares of agriculture in output and employment were comparable to those of other countries of similar income levels, the same cannot be said for services. In other countries, the average share of services in national output was about 45 percent while its share in total employment was about 25 percent, thereby implying a much higher relative labor productivity.[17] It is apparent that a large part of the "employment" in services (as well as in agriculture) reflects a forced adoption by the sector of redundant workers and a high degree of underemployment in the sector.

Equally disturbing is the fact that the expansion in the share of industry to GDP was not matched by an increase in its share of employment. Industrial output growth, albeit low in relation to the country's Asian neighbors, rose from about 26 percent in the mid-1950s to 33 percent in the late 1980s. The rise is, of course, expected, as this is a well-known stylized pattern in development (Chenery and Syrquin 1975). But between the mid-1950s and the late 1980s, the industry's share in total employment remained relatively low at about 15 percent. Employment in this sector grew at an average of only 2.9 percent during the 1956-89 period. The growth of its major subsector, manufacturing, was even poorer—only 2.3 percent during the period.

17. Based on figures from the World Bank's *World Development Report* and ILO's *International Labour Statistics*.

The residual labor force and the new entrants to the labor force were thus absorbed largely in agriculture and the services sectors where self-employment was more common and wages more flexible. This process, however, limited the growth of labor productivity and real income in these sectors.

The patterns of labor productivity growth and real wages are reflective of the structural bottlenecks in the economy, particularly its persistent inability to absorb the growing number of underemployed members of the labor force. Figure 1 shows the trends in average labor productivity in the three major sectors of the economy—agriculture, industry, and services—since the mid-1950s At least three major observations can be noted. First, average labor productivity in agriculture has consistently been lower than that in industry and, not until the latter part of the 1980s, services. Second, labor productivity in the services sector was comparable to that in manufacturing in the latter part of the 1950s, remained virtually stagnant in the 1960s and early 1970s, and then dropped steadily in the latter part of the 1970s and in the 1980s. This occurred in tandem with the substantial increase in the share of the services sector in total employment—from 25 percent in the mid-1950s to 39 percent in the late 1980s. Third, although labor productivity in industry managed to rise in the 1960s and 1970s, the growth soon petered out and labor productivity fell for the most part of the 1980s. Average labor productivity in industry in 1986-89 was even lower than during the economic crisis of 1983-85. It is apparent that not only has industry failed to absorb an increasing proportion of the labor force, as was the case in other countries of similar income levels and in newly industrializing countries, but it has likewise been unable in recent years to reverse the decline in labor productivity.

The rapid growth of the labor force, the slow pace of employment generation, and the sluggish growth of labor productivity, all combined to create a large pool of unemployed and underemployed. Because the rural sector failed to absorb the additional labor force members and to provide full employment to its workers, pressure built up for laborers to move out of the farms to rural nonfarm and urban areas. This tended to depress real wages outside the farm, especially those of unskilled occupations (mainly in the services sector). Figures 2a and 2b which show the trends in real wages for skilled, unskilled, and agricultural workers, and for various crops, over the last two-and-a-half decades lend support to this claim. The persistent fall in labor productivity in the services sector was matched by a persistent fall in real wages for both skilled and unskilled work-

FIGURE 1
REAL VALUE ADDED PER WORKER
(By industry of origin, 1956-1989)

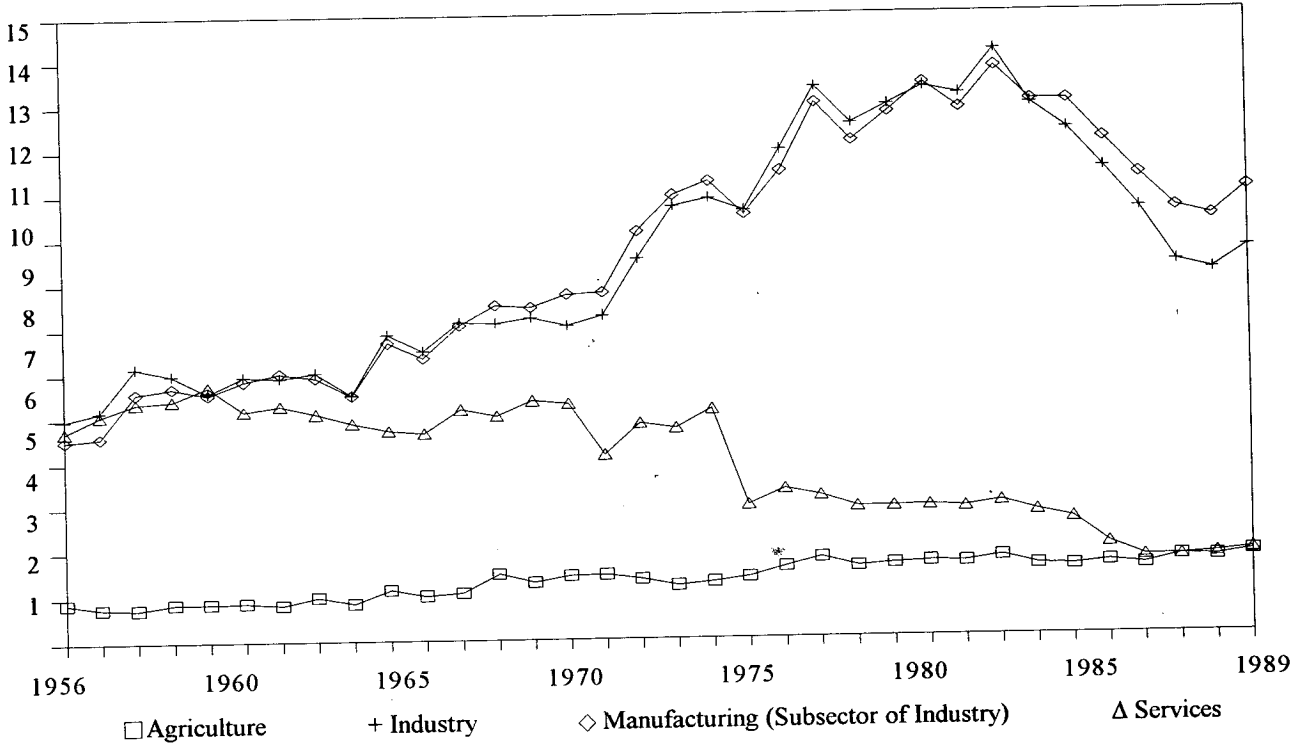


FIGURE 2a
REAL WAGE INDEXES, 1966-88

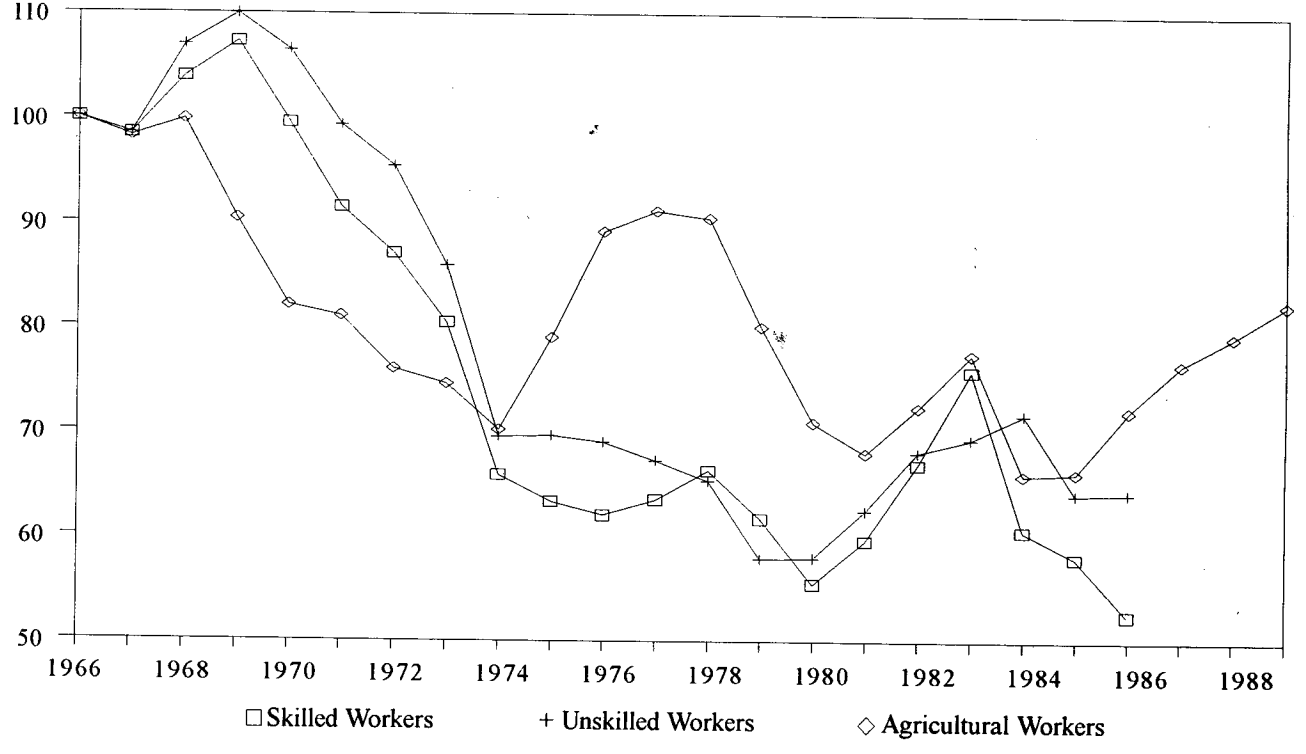
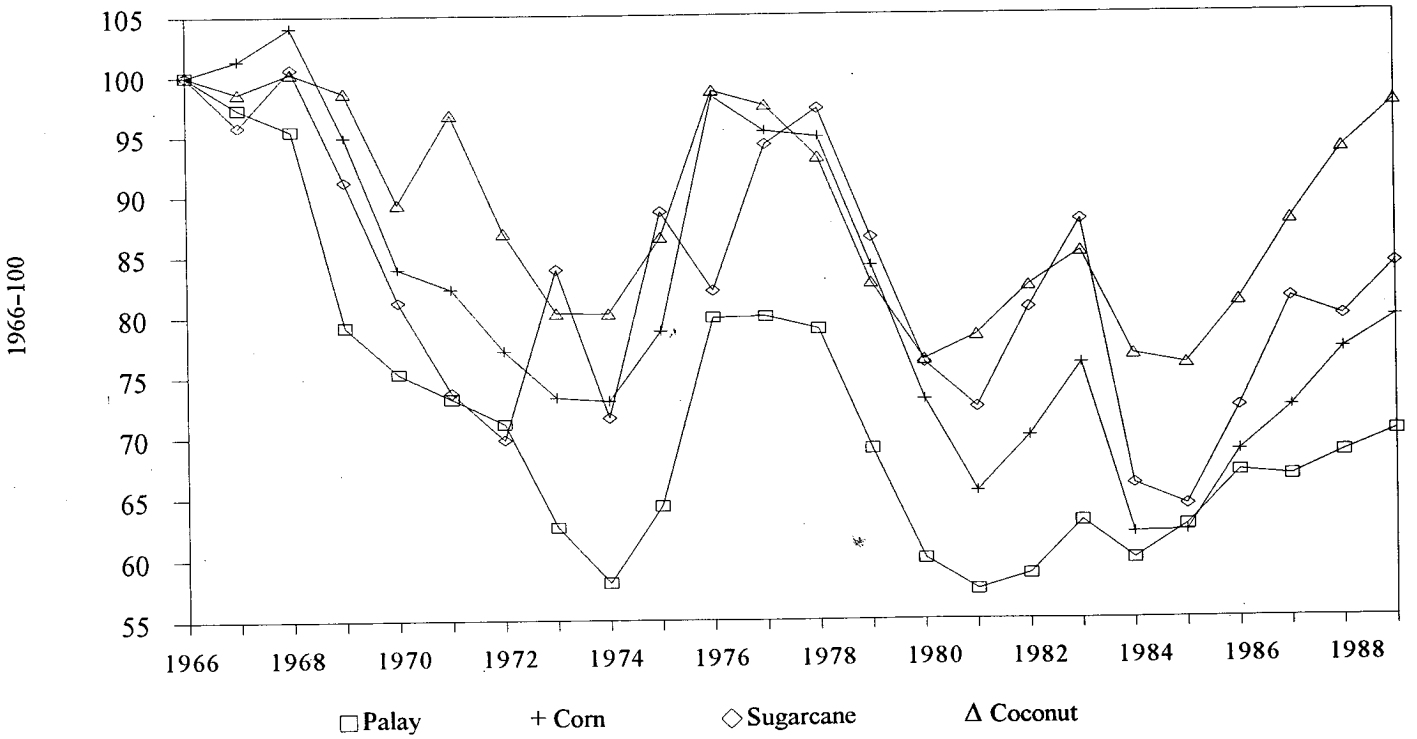


FIGURE 2b
REAL WAGE BY CROPS



ers. Moreover, although real wages in agriculture were lower in the 1980s than in the 1960s, the drop was not as sharp as those for skilled and unskilled workers. This implies that the unskilled and skilled occupations outside the farm were the ones which bore the larger proportion of the adjustment in real wages.

It is worth noting that persistent declines in real wages and the rise in per capita income were rather unique in the Philippines. In the postwar experience of Asia, particularly Taiwan and South Korea, growth was accompanied by rising real wages in agriculture and industry, even when there was considerable unemployment (Oshima 1986: 151). Not that these countries had effective laws on minimum wages; labor productivity growth and expansion of employment accompanied the growth of GDP per capita in these countries. Government policies in the Philippines, on the other hand, tended to undermine both productivity growth and the generation of employment opportunities for its expanding labor force.

Postwar government policies tended to run against the dictum of comparative advantage (although public pronouncements often called for the efficient use of scarce capital resources) by unduly promoting import-substitution industries and, in the process, severely penalizing labor-intensive exports and backward integration. While these policies led to an initial spurt in overall economic growth (such as during the "easy import substitution" period in the early part of the 1950s), they subsequently constrained the country's capacity to earn foreign exchange required for the importation of capital goods for continued growth. Macro pricing policies tended to severely overvalue the domestic currency vis-à-vis the currencies of the country's trading partners, particularly in the 1950s when import and exchange controls were the primary means of trade and payments adjustments and in the 1960s when a cascading tariff structure replaced import and exchange controls. The overvalued exchange rate depressed the relative prices of labor-intensive tradable goods, encouraged the movement of scarce resources towards less labor-intensive nontradable or home-goods production, and thus put a downward pressure on real wages.

Moreover, generous fiscal incentives provided a window for the development of export-oriented manufacturing establishments, but for the most part, "the new export sector functioned almost as [an] export processing zone and [a] bonded warehouse 'enclave'. . . which had little interaction with, and provided little benefit to, the domestic economy except primarily through the (limited) employment of labor" (Intal and Power 1990: 42). Government interventions, especially in the 1970s, also tended to diminish the role of market mechanism in favor of regulations by parastatals as well as promoted a

monopolistic structure in important sectors of the economy. The use of governmental functions to dispense economic privileges to some select groups close to the ruling elite was rampant. Fiscal and monetary policies thus tended to be expansionary in the 1970s and early 1980s. All told, the intermittent balance-of-payments crises during the postwar period (in late 1949, at the turn of the 1960s, in 1983-85, and at present) and the persistence of widespread poverty and unemployment (and underemployment) have been a reflection of the weaknesses of the economic structure engendered by policy regimes.

VI. Conclusion

The root causes of the "farm problem"—low productivity, landlessness, high underemployment, and high incidence of rural poverty —go beyond agriculture. The economic welfare of the rural population can be secured only by a comprehensive economywide policy reform, and not by a piecemeal one as has been the case for a long time. This reform has to allow a rapid, sustained growth of agriculture, combined with equally rapid employment growth outside of agriculture. The importance of the latter is clearly demonstrated by the experience in the second half of the 1960s and in the 1970s: rapid agricultural growth did occur but productive employment in the rest of the economy, particularly in industry, failed to grow substantially faster than the growth of the labor force. The failure of industry's share to grow despite the rapid expansion of its share in GDP meant that services and agricultural sectors were the major sources of employment generation for the rapidly expanding labor force. Unfortunately, in large parts of these sectors, labor productivity is low and underemployment is high.

The policy reform must also address the country's high population growth. Together with the failure of economic structures and policies to generate productive employment opportunities, the unabated population pressure against forestry and marine resources contributes to heavy erosion and other related environmental problems, thereby depressing the productivity of lowland farms which produce the bulk of the country's food requirements.

It appears that there is also an urgent need for wide-ranging institutional reforms aimed at increasing the efficiency of providing basic support services to farmers. For one thing, the research and extension functions of the Department of Agriculture and its various attached agencies have to be strengthened. The reform may have to include an overhaul of the organizational structure and leadership, putting in place only people with adequate professional background the tasks involved and, more importantly, small-scale agriculture.