

INCOME DISTRIBUTION AND DEVELOPMENT POLICIES IN THE PHILIPPINES

YASUHIRO TERASAKI

I. INTRODUCTION

NUMEROUS attempts have been made to clarify the structure of inequality in Philippine income distribution and the causes for that inequality in the post-World War II period. Some analyses focus on the effects of policy on income distribution and most are based on simulation models (see for instance, Paukert et al. [23] and Rodgers et al. [32]). Models need assumptions and abstractions for simplification and equations for characterizing income distribution. Such abstractions must be based on detailed observations of actual relations between development policies and income equality.

Three points have to be considered in discussing income inequality. The first is whether the equality structure has actually changed. Except for sudden institutional changes, patterns of income distribution usually change slowly as the economy grows and the economic structure changes. To ascertain that change, the length of the period in which change is observed must be known. Kuznets's work [11] [12]¹ has led to wide recognition of this approach. Philippine income inequality changed little at all in the 1960s, despite the economy's fairly fast postwar growth.² The fast pace continued in the 1970s with enormous political and economic changes through the establishment of a new regime, oil crisis, hyper-inflation, the new land reform, large projects for building the infrastructure and so-called industrialization. The enormity of political and economic change during that decade gives a high level of probability that changes in equality structure would also take place. It is, thus, my contention that the equality structure of the 1960s needs to be reexamined in light of the changes that take place in the subsequent decade.

The second point that has to be examined in analyzing inequality is causality.

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¹ See Mizoguchi and Terasaki [19] for a review of theories and evidence for the Kuznets hypothesis.

² This may be why a number of scholars throughout the world have analyzed the Philippine income distribution pattern. Another reason would be that the degree of Philippine income inequality is rather high among developing countries.

The three major reasons usually given for poor income distribution in the early stages of economic development are:

- (a) The nonagricultural sector is becoming a larger part of the economy than the agricultural, and income distribution in the nonagricultural sector is more unequal than the agricultural sector (Kuznets [12], Ahluwalia [1]).
- (b) Modern technology is distributed unevenly through the economic sectors (Oshima [20], Cromwell [5], Mizoguchi and Terasaki [19]).
- (c) Noneconomic barriers, such as race or religion, prevent smooth transitions in the labor force (Kravis [10]).

Oshima and Barros [22] explain changes in income distribution patterns by an argument based on the uneven spread of technology. But their findings do not satisfactorily support their hypothesis.

The third point in inequality analysis is sectoral disaggregation. Classifications of agricultural and nonagricultural, farm household and nonfarm household or urban and rural sector are useful for analyzing the structure of Philippine income distribution in the 1960s when overall inequality did not change significantly.

Three large surveys on family income and expenditure (FIES) are available for the 1960s. They permit overtime comparisons for 1960–71. For the 1970s, there are several surveys including: (1) the 1979 FIES, (2) the 1975, 1978, and 1979 integrated survey of households (ISH), (3) the 1973 national demographic survey (NDS), (4) 1975 survey on the population, resources, and environment of the Philippine future (PREPF), and (5) the 1974 Philippine Social Science Council national survey (PSSC). Each has defects for any comparison with the former period. The different survey methods for the 1979 FIES, the 1975 PREPF, and the 1974 PSSC prevent direct comparisons of these surveys. The PREPF and the 1974 PSSC may be appropriate for analyzing income structure in one year, but cannot be used for cross-decade comparisons. The National Census and Statistical Office (NCSO) prepares both the FIES and the ISH but the size of the samples used differs enormously. The ISH for 1978 and 1979 did not survey annual income. The 1968 and 1973 NDSs can be compared, but the 1973 survey's income tables have yet to be published. This compels an indirect approach to analyses of the 1970s, at least for the time being.³

II. ECONOMIC GROWTH AND INCOME INEQUALITY, 1961–79: AN OVERVIEW

A. *General Trends*

Table I shows summary figures up to 1979. Real net domestic product (NDP) grew 4.7 per cent annually in 1961–65, 4.5 per cent in 1965–71, 6.3 per cent in 1971–75, and 6.6 per cent in 1975–79. Thus, real NDP increased about 270 per cent in twenty years. Not only that, but despite difficult world economic

³ Since the 1957 survey is considered to be tentative, attention is limited to the period after 1961. Terasaki and Romana [38] examine the data problems in detail. Mangahas and Barros [15] and Oshima [21] also discuss the lack of data for the 1970s.

TABLE I
ECONOMIC GROWTH AND INCOME INEQUALITY, 1957-79

	1961-65	1965-71	1971-75	1975-79
Real NDP annual growth rate ^a (%)	4.7	4.5	6.3	6.6
Population annual growth rate (%)	3.0 ^b		2.8	2.6

	1957	1961	1965	1971	1975
Gini coefficient ^c					
Philippines	0.48	0.49	0.49	0.48	0.43-0.55 ^d
Urban	0.44	0.52	0.53	0.45	0.46
Rural	0.38	0.40	0.42	0.46	0.38
Urban-rural average income ratio	2.45	2.47	2.50	2.08	1.75
Theil's entropy measure					
Philippines	—	0.43	0.43	0.40	0.33
Urban	—	0.45	0.46	0.33	0.48
Rural	—	0.26	0.28	0.34	0.31
Between inequality	—	0.10	0.10	0.07	0.04

Sources: [30] [24]. For Gini coefficient in 1975 [26].

^a Real NDP in terms of 1967 prices to 1971 and 1972 prices thereafter.

^b Annual average growth rate for 1960 to 1970.

^c The figures might be slightly different from the ones usually reported since they are calculated from decile distribution.

^d Gini coefficient varies around 0.43 to 0.55 according to publicly released versions of the 1975 ISH. Figures in the table refer to one such version.

circumstances NDP grew more in the 1970s than it did in the 1960s. But population growth was also high, reportedly an annual 3 per cent from 1961-70, 2.8 per cent for 1971-75, and 2.6 per cent for 1976-80. As a result, annual per capita growth in the 1960s was about 1.6 per cent and 3.5-4.0 per cent in the 1970s.

Using Gini coefficients gives the following patterns.

- (a) An overall income distribution that is the same through 1960-71 and probably through the early 1970s.
- (b) A decrease in urban to rural income ratio in the same periods.
- (c) Improved urban income distribution around 1970, whereas rural income distribution worsened in the 1960s.

A slightly different picture is drawn from Theil's entropy measure.⁴ The entropy measure indicates slight improvement in the late 1960s and exaggerates the trend toward urban inequality.

To fill the blanks due to restricted data for the late 1970s, Oshima [21] estimated the annual 1978 and 1979 income distribution so that a comparison could be made with the 1971 FIES.⁵ He obtained Gini coefficients of 0.52 for 1978

⁴ Atkinson and Toyoda's decomposable measures are also calculated, but generally they show patterns similar to the Theil measure.

⁵ He starts from the idea that the 1978 and 1979 ISH can be compared with FIES because both were conducted by the same organization and the sample sizes in each are not that

TABLE II
INDUSTRIAL ORIGIN OF REAL GROSS DOMESTIC PRODUCT

Industry	Annual Growth Rate (%)				Share (%)				
	1961 -65	1965 -71	1971 -75	1975 -79	1961	1965	1971	1975	1979
Primary	3.9	3.5	4.2	5.5	34.2	33.2	28.9	26.6	25.6
Secondary	5.7	5.7	8.8	9.3	26.3	27.0	30.3	33.2	36.6
Tertiary	4.9	4.3	5.9	5.0	39.6	39.8	40.8	40.2	37.8
Mining	2.7	15.1	3.0	10.2	1.5	1.3	2.4	2.1	2.4
Manufacturing	4.6	7.6	7.0	7.7	17.5	17.5	23.6	24.2	25.2
Construction	10.4	-4.0	21.4	14.8	3.3	4.1	3.5	6.0	8.1
Public utilities	—	—	8.4	8.8	—	—	0.8	0.9	1.0
Transportation & communication	—	—	10.7	8.9	—	—	4.1	4.8	5.2
Commerce	5.4	5.3	4.8	4.7	14.9	15.2	13.4	13.3	12.1
Services	4.7	4.5	6.2	4.1	24.7	24.6	23.3	22.0	20.5

Sources: [30] [31].

Note: Figures for 1961 and 1965 are based NDP in 1967 prices. Others are in 1972 prices.

and 0.53 for 1979 which are a little higher than those for 1971. Oshima gave the following assumptions and supplementary evidence to explain the increasing trend toward inequality.

- (a) Enlarging differentials in per capita production in industrial sectors.
- (b) Increasing numbers of small farmers and farm laborers.
- (c) Doubling in numbers of small fishermen in the 1970s with little increase in productivity.
- (d) Increase in nominal per capita wages for large manufacturing firms to a level twice that of small firms.

In sum, although there was no change on the national level in the 1960s, income distribution gradually changed in both urban and rural areas. These factors seem to have led to the overall national deterioration of the late 1970s.

B. *Structural Change and Policy Effect*

Table II provides indicators for the Philippine industrial structure and Table III provides indicators for the employment structure. At an annual growth rate of 9 per cent in the 1970s, the secondary sector was an increasingly important part of real gross domestic product by industrial origin. Growth in the primary sector was 4 to 5 per cent. Manufacturing expanded at an annual rate of 5 to 8 per cent. Construction growth fluctuated wildly but increased dramatically in the 1970s, and mining jumped up in the late 1970s. This implies an overall shift

different. He then uses the following assumption and estimates annual income distribution using quarterly income distributions. If income classes are roughly aggregated into four groups, the lowest 30 per cent, the next 30 per cent, the next highest 30 per cent, and the highest 10 per cent, a household would remain in the same income class throughout the four quarters. Then the four quarterly income distributions could be aggregated to form an annual income distribution.

TABLE III
EMPLOYED BY MAJOR INDUSTRY GROUP

Industry	Annual Growth Rate (%)				Share (%)				
	1961 -65	1965 -71	1971 -75	1975 -78	1961	1965	1971	1975	1978
Agriculture, fishery & forestry	0.9	1.7	5.3	2.7	60.6	56.7	50.4	53.5	52.3
Mining			-2.2	-3.2			0.5	0.4	0.3
Manufacturing	1.6	4.9	3.5	1.8	11.6	11.1	11.5	11.4	10.8
Construction	6.4	6.1	2.1	4.1	2.5	2.9	3.3	3.1	3.2
Public utilities			-1.6	2.1			0.4	0.3	0.3
Transportation & communication	6.4	8.8	-1.8	12.4	9.2	10.6	12.1	12.8	—
Commerce	6.3	5.8	1.0	0.1	9.6	11.0	12.4	11.2	10.1
Services	7.2	3.9	4.1	—	6.4	7.7	7.7	7.6	—
Total	2.7	3.7	3.7	3.5	100	100	100	100	100

Sources: [30] [31].

from a primary to a secondary sector economy in the period, and shows definite progress in industrialization. Some comment is needed here however. The slight slowdown in growth rate for agricultural products in the late 1960s should not be overemphasized, because, as Ezaki [6] says, if agricultural productivity is measured by a national income deflator in 1967 prices, then that productivity was declining during the period. Moreover, using the Mangahas-Encarnación deflator shows an improvement by 1.4 per cent. The use of this deflator appears more valid in view of the increasing use of high-yielding rice varieties and fertilizer, i.e., the introduction of modern inputs. Another comment that must be made is that the agricultural growth rate is 1 per cent higher than what it was in the late 1950s, while the manufacturing growth rate is lower.⁶ Thus, it would be safe to say that industrialization did not become a distinct phenomenon until the early 1970s.

What policies led to structural change in industry? The Philippines suffered chronic balance-of-payments deficits after the post-World War II recovery period. The government tried to cope by regulating imports and maintaining a fixed exchange rate. These policies protected domestic industry and aided its development. But they also led to an eventual overvalued peso and constrained agricultural export which resulted in lower agricultural and higher manufacturing sector growth before 1960. Devaluing the peso and decontrolling trade in 1960 began to improve export conditions. That favored production of commercial crops such as coconuts and sugarcane.⁷ Increased tariffs on consumer goods still protected domestic industry, however, and tariffs on capital investment were lowered. Imports of relatively cheap capital goods induced capital-intensive in-

⁶ Baldwin [2, p. 3] calculated 12.1 per cent for 1951-55 and 7.7 per cent for 1956-60. Note that real NDP is measured in 1955 prices.

⁷ Another factor animating the sugar market is the Cuba crisis of 1962. The United States increased its import quota from the Philippines from 980,000 tons to 1,050,000 tons. See McHale [18].

dustry from overseas. The balance-of-payments situation remained unchanged. But, in the 1970s when floating rates became the rule of international exchange, the government changed policy substantially. It placed more emphasis on export producing than on import-substitution industry. This policy shift increased the export of nonprimary goods to other Asian countries.⁸

The construction boom of the 1970s was encouraged by several factors. Obviously, one was overall industrialization. Another was the promotion of tourism manifested in increased hotel construction. But another important factor is the building of many large-scale infrastructure projects such as irrigation dams, ports, and highways.

The employment structure differs somewhat from the production structure. Manufacturing absorbed less employment than would be expected in a production expansion. Agricultural employment increased in the early 1970s for four reasons. First, land reform. Second, the improvements in productivity which began in the 1960s and are attributable mainly to labor-saving technology (Ezaki [6]). Labor-saving technology caused serious employment problems. Third, the oil crisis in the way that it affected the labor market unfavorably. Fourth, high population growth in which an increasing labor force has to remain in agriculture.

After several unsuccessful attempts, land reform finally got under way. The original land reform plan was to take place in two stages for rice and corn farmers in several planned areas, and was to be implemented in 1963. The two stages were a transfer of ownership in which shareholders would first become leaseholders and then owners. The plan was revised in 1971 to include all rice and corn farmers. In 1972, the Marcos regime then proposed that the transfer of land be made in five steps and that a system of loans be set up. It was soon found, however, that this ambitious plan for completing land reform in 1976 could not be met. By May 1981, 90 per cent of operation leasehold (OLH) was completed, 71 per cent of the written contracts were registered and 68 per cent of eligible tenants had certificates of land transfer (CLT), but only 31 per cent reached agreement on land value and landowner compensation and the Land Bank approved compensation agreements for only 23 per cent (Hanisch [7, Table 5]). The project was completed fairly quickly in Central Luzon but delayed in other areas. And, to avoid transferring land to tenants some owners have converted their corn or rice farms to coconut or sugarcane or to nonagricultural uses. Nevertheless, the number of tenant farmers who registered for the reform was greater than expected (Hanisch [7]) and the reform did provide some progress.

III. REEXAMINING INCOME INEQUALITY IN THE 1960s

A. *Disaggregation of Households*

Although overall income distribution changed little in the 1960s, the urban and rural patterns of distribution did change: Urban distribution improved, rural

⁸ For the direction of Philippine export the United States has the largest share, around 40 per cent, until the mid-1970s. It decreased by 10 per cent in 1980 and was covered by countries in Asia other than Japan. See Tecson [34].

TABLE IV
COMPARISON OF FARM HOUSEHOLD SHARE AND GINI COEFFICIENT
BY VARIOUS DEFINITIONS

	Household share (%)			Gini Coefficient		
	1961	1965	1971	1961	1965	1971
Farm household based on land (FHL)	58	53	45	0.39	0.44	0.46
Farm household based on income (FHI)	43	40	34	0.34	0.42	0.44
Farm household based on occupation (FHO)	—	56	50	—	0.41	0.43
Farm laborers' household	—	—	11	—	—	—

Source: [24].

distribution deteriorated. The factors in these variations must be clarified. But the urban-rural classification is inappropriate, because the definition of what is urban changes with each of the surveys available.⁹ Alternatively three definitions can be derived from FIES:

- (1) Based on land a farm household is one which cultivates more than 0.1 hectare (FHL).¹⁰
- (2) Based on income a farm household is one which gains its income mainly from agricultural production (FHI).
- (3) Based on occupation a farm household is one in which the head identifies his occupation as a farmer (FHO).

Each definition has its characteristics. FHO is appropriate for analyzing agricultural society. FHL for analyzing ownership. FHI is useful for economic activity. Note that neither FHL nor FHI include farm laborers' household or household whose main source of income is farm wages. FHO does include both entrepreneurs and wage earners. Table IV shows that,

- (a) The use of three different definitions gives any one group a different share of the total at different times.
- (b) FHO occupies 50 per cent even by 1971.
- (c) The share decreases overtime in all definitions.
- (d) The amount of the decrease is larger than the production structure.

Note that farm laborers' household is more than 10 per cent. This is partly due to the production of coconut and sugarcane in a plantation system. There

⁹ It is widely acknowledged that urban-rural income disparities in the 1960s have to be interpreted with caution because the definition of urban area differs with each survey: Urban is Metro Manila, chartered cities, provincial capitals, and *poblaciones* in the 1961 survey, but is defined according to size or population density of cities, *poblaciones*, and barrios in the 1965 survey. In the 1971 survey, besides requirements for size or population density, the socioeconomic factors are taken into account such as street patterns, the existence of a town hall, church, school, hospital, and public plaza. For details, see the explanatory notes in each survey, or the appendix note in Terasaki [36]. Berry [3] estimates the level of bias to be about 5 per cent. Apparently, this equalizes the urban distribution and disequalizes the rural.

¹⁰ Livestock and poultry are converted appropriately. See the agricultural census for details.

TABLE V
HOUSEHOLD DISTRIBUTION IN URBAN AND RURAL AREAS

	1961	1965	1971
Rural	66	70	70
Farm household based on land (FHL)	—	—	—
Farm household based on income (FHI)	56	52	47
Farm household based on occupation (FHO)	—	72	67
Farm laborers' household	—	—	14
Urban	34	30	30
Farm household based on land (FHL)	—	—	—
Farm household based on income (FHI)	16	9	5
Farm household based on occupation (FHO)	—	17	11
Farm laborers' household	—	—	3

Source: [24].

is no straightforward explanation through differences by definition. The gap between the FHO and FHL may be interpreted as a gap due to farm laborers, but in the 1971 survey the difference is 5 per cent while the farm laborers share is 11 per cent. Not only that but 34 per cent and 11 per cent, the rate for FHI and farm laborers does not add up to the FHO of 50 per cent. In terms of household share, FHO is between FHL + farm laborers and FHI + farm laborers. This depends on how the farmers indicate their occupations, some according to land ownership others by size of farm income. Probably they are mixed. The difference between FHL and FHI could be one of respondents engaged in farm activities indicating their main source of income as rent or wages.

No appropriate adjustment could be made for the differences in definition of urban area in each survey. The urban data is valuable in one sense and Table V can be used for reference. Note that:

- (a) The urban household share did not increase in proportion to the progress in industrialization.
- (b) FHO was more than two-thirds in rural areas, and quite low in urban areas.
- (c) The farm household share declined in both the urban and rural areas.

Due to changes in definition, areas such as the *poblaciones* (centrally located barrios) of low population density are classified as rural and this exaggerates the decline in farmers in the urban areas. This is confirmed in the 1965 survey but is unclear in the 1971 survey.

Table VI shows the source distribution of household income.¹¹ Three features are evident:

- (a) Income from entrepreneurial agriculture and related productive activities decreased slightly from 30 per cent in 1960 to 28 per cent in 1971.
- (b) Wages and salaries from nonagricultural activity increased from 36 per cent to 39 per cent in the decade.

¹¹ The table does not show income level because FIES income data claims that (1) the level is undervalued compared to consumption and (2) 1971 values are extremely low. Terasaki and Romana [38] examine the data problems in detail.

TABLE VI
PERCENTAGE SHARE OF HOUSEHOLD INCOME BY SOURCE

	(%)		
	1961	1965	1971
Wages & salaries			
Farm	6	7	6
Nonfarm	36	36	39
Entrepreneurial activities			
Farm	24	25	22
Nonfarm	17	14	15
Rent	11	13	11
Others	6	5	8
Total	100	100	100

Source: [24].

- (c) Rent is over 10 per cent and the rather high share shows no tendency to decrease.

Items (a) and (b) correspond to changes in the production structure. Item (c) is a characteristic of Philippine income distribution. This kind of survey generally understates property income, but it is still over 10 per cent which is explained by the existence of a land tenure system.

B. *Income Inequality in Farm Households*

The causes for deteriorating farm household income are in need of reexamination. Oshima and Barros [22] found that the FHL income distribution worsened in the 1960s because of the increase both in the use of modern agricultural technologies and the production of commercial crops. They interpret those changes as modernization and the diversification of agricultural management.

Though Oshima and Barros explain the changes in the Philippine distribution pattern very well, further examination is necessary. The first reason being that the two authors have compared only 1961 and 1971. But if we can combine the 1965 survey with their results, there may be further clarification, because the late 1960s was when major modern agricultural technology began to be used. Second, FHO is more suitable than FHL if farm household inequality is analyzed in relation with agricultural production. FHL may also contain a large amount of nonagricultural income. Third, the non-FHL distribution is not well explained. Oshima and Barros's hypothesis provides for a worsening in non-FHL distribution, although it actually improved in the 1960s.

We will start with 1965 data. Table VII presents Gini coefficients and Theil measures for household groups according to main source of income. The following features are observed:

- (a) Farm household inequality was getting worse. This is noticeable in the early 1960s.
- (b) In contrast, the distribution of wage and salary worker households improved in the late 1960s.

TABLE VII
INEQUALITY CHANGE BY HOUSEHOLD GROUPS CLASSIFIED BY MAIN
SOURCE OF INCOME

	Gini Coefficient			Theil Measure		
	1961	1965	1971	1961	1965	1971
Wages & salaries	0.46	0.46	0.42	0.37	0.39	0.30
Entrepreneurial activities						
Farm	0.34	0.42	0.44	0.20	0.30	0.34
Nonfarm	—	—	—	0.47	0.45	0.45
Others	0.58	0.57	0.57	0.65	0.58	0.57
Between*	—	—	—	0.08	0.05	0.04

Source: [24].

* Between-group inequality is expressed as T_B in the Theil measure decomposition.

- (c) The disparity between household groups was rather large, but showed some narrowing in the period.
- (d) The "others" group shows the highest inequality. After that, in order, are nonfarm self-employed, wage earner, and farm households.

The same trends are observed using the urban-rural classification or the non-FHL-FHL classification. The order of inequality among household groups generally coincides with the conventional wisdom. "Others" is highly unequal because it includes various household types ranging from people living off of rent to those living on pensions. Income of nonfarm entrepreneurial households varies according to size of firm, type of business, and business cycle and causes tendencies toward inequality.

The worsening inequality for households can be explained by the extent of increase in measurements of inequality. Many of the measurements have the common property of ordering distributions according to size. But the size difference depends on the value system inherent in each of the measurements. The Gini coefficient responds more to changes in the modal class, the Theil measure to changes in the lower class. No agreement has been reached as to which of these measures is the more suitable. Some claim that no attention should be given to the extent of increase and decrease in measurements. Keeping this difficulty in mind reference will be made to the extent of change to point out finding related to item (a) above.¹²

What factors seriously affected farm household income distribution in the early 1960s? Table VIII summarizes technological developments in agriculture through-

¹² Table I's Gini coefficient gives a deteriorating rural income distribution in the late 1960s which differs from the behavior indicated by the FHL, FHI, or FHO. Since the degree of FHI inequality in rural areas increased more in the early 1960s (0.17 in 1960, 0.30 in 1965, and 0.32 in 1971), the difference comes from the household income distribution behavior of wage earners, nonfarm self-employed and "others," all of which worsened significantly in the late 1960s. That is, the Gini coefficient for wage earner income distribution is 0.25 in 1960, 0.23 in 1965, and 0.26 in 1971. Furthermore, for nonfarm self-employed, in those years, it is 0.24, 0.18, and 0.38 and for others it is 0.28, 0.37, and 0.56.

TABLE VIII
TRANSITION IN AGRICULTURAL TECHNOLOGY

	1960	1965	1970
Percentage of cultivated area covered by irrigation system (%)	6.8	10.0	12.8
Percentage of irrigated rice crop area (%)	24.0	29.9	41.0
Percentage of HYVs rice crop area (%)	—	—	43.5*
Intensity of land use (area planted/area cultivated)	1.36	1.38	1.41
Harvested area per worker employed (ha)	1.36	1.36	1.41
Fertilizer supply per harvested hectare (kg)	30.3	33.0	60.3
Supply of agricultural chemicals per harvested hectare (peso)	0.59	0.73	0.34

Source: [9, pp. 443, 454-5].

* HYVs were introduced in 1967. The proportion of rice area in HYVs were 0.21 in 1968 and 0.56 in 1972.

TABLE IX
CHANGES IN CULTIVATED AREAS, MAIN PRODUCTS

	Rice	Corn	Coconuts	Sugarcane
1960	100.0	100.0	100.0	100.0
1965	96.3	104.1	151.4	160.4
1970	94.1	131.1	177.8	168.4

Source: [30].

out that decade. With the possible exception of irrigation, the late 1960s was the period in which the use of modern inputs spread. However, irrigation was greatly expanded for rice fields at that time. As mentioned above, devaluing the peso in the early 1960s accelerated the production and export of commercial crops. Thus, increased production of commercial crops probably affected farm household income distribution at that time, while improvements in production technology affected the distribution in the latter half of the 1960s.

For further evidence, observe the changes in planted area for the major crops, rice, corn, coconuts, and sugarcane. Table IX indexes changes in area with 1960 as the base 100. Coconut and sugarcane area increased substantially, which is partially attributable to the 1963 land reform that was limited to corn and rice land. Some rice and corn area was probably converted to coconut and sugarcane production (Takigawa [34, pp. 189-92] and Sicat [33]). Not only that but sugarcane productivity increased around 1960 (Mangahas and Rimando [17, Table 4.5]). Since plantations harvest most of the commercial crops, the larger the plantation, the more it earns. Overall, the increase in commercial crops probably affected farm household income distribution much more seriously and

TABLE X
INCOME INEQUALITY CHANGES FOR NONFARM HOUSEHOLD BY OCCUPATION

	Gini Coefficient		Theil Measure	
	1965	1971	1965	1971
Professional workers	0.41	0.36	0.28	0.22
Managers & administrators	0.57	0.39	0.58	0.25
Clerical workers	0.39	0.33	0.25	0.17
Sales workers	0.48	0.46	0.40	0.36
Transport & communication	0.34	0.36	0.19	0.23
Factory workers & craftsmen	0.39	0.37	0.25	0.23
Manual workers	0.31	0.33	0.17	0.18
Services workers	0.34	0.39	0.20	0.25
Between	—	—	0.12	0.06

Source: [24].

the wider use of modern technology affected Philippine income distribution less than Oshima and Barros indicate. As Hayama and Kikuchi [8, pp. 52–8] demonstrate, neither farm size nor tenure seriously constrained high-yielding grain variety (HYV) use. They argue that HYV can be used in small units with equal efficiency and thus differs from technologies such as mechanization, e.g., tractors. Greater HYV use pulls the income level of rice farm households up leading to decreased income differences between households cultivating rice and those cultivating commercial crops. Regional agricultural development will be analyzed to examine this point further.

Another interesting finding on farm household income distribution is the near equality of FHO. FHI and FHL follow in Gini coefficient (Table IV). This shows that including farm laborer households does not make the distribution unequal.

C. *Income Inequality in Nonfarm Households*

Changes in income distribution of nonfarm households can be examined by classifying those households as non-FHI, non-FHO, and non-FHL. The three distributions give almost the same general trend, i.e., no noticeable movement in the early 1960s but a marked trend toward equalization in the latter part of the decade. The Gini coefficients for non-FHL indicate the situation: 0.49 in 1961, 0.49 in 1965, and 0.46 in 1971. The point requiring careful discussion is the equalization trend of the late 1960s. If the hypothesis provided by the Kuznets inverted-U curve holds true, then the given pattern goes against what is expected and the reasons for that would have to be explored.

Beginning with Table VII, the trend for the breakdown of non-FHI is entirely due to improved income distribution by wage earners and reduced between-group inequality. Similarly, the breakdown for non-FHO in Table X shows that:

- (a) Income distribution for professionals, managers and administrators, and clerks definitely improved while that for sales and factory workers and craftsmen improved slightly.
- (b) Inequality for workers in services, transportation and communications, and for manual workers worsened.

TABLE XI
RATIO OF WAGE INDICES: SKILLED/UNSKILLED (1971=100)

1960	122.5	1971	100.0
1961	119.3	1972	98.9
1962	117.2	1973	97.5
1963	114.4	1974	102.7
1964	115.5	1975	98.7
1965	111.0	1976	97.5
1966	108.6	1977	102.4
1967	108.6	1978	110.4
1968	105.4	1979	115.5
1969	105.9	1980	118.0
1970	101.6		

Sources: [30, Table 14.9] [31].

(c) Differences between occupations decreased.

Items (a) and (c) could account for the overall trend in non-FHO income distribution. The income gap between groups classified by various social or geographical variables is generally significant in the early stages of economic development but diminishes during later stages (Kravis [10]). The decrease in between-group income inequality observed here would be of this type.¹³

Changes in income distribution for professionals and clerks coincide with those of wage earners classified by main source of income, since most are wage earners. But the changes for administrators and managers are difficult to interpret. Income distribution for service workers deteriorated, and these are people whose incomes would be affected more by rapid economic development.

In income distribution for wage earner households, the early 1960s peso devaluation was a factor in manufacturing stagnation at the time but this economic sector later moved on to recovery. Table XI shows the wage-index ratio of skilled to unskilled workers. The difference between them declined in the late 1960s. This shows that industrialization benefits unskilled workers more than skilled because it provides more employment opportunity.¹⁴

D. *Decomposition Analysis by Income Source*

Thus far, households have been classified into homogeneous groups by some standard such as industry or occupation. But in the Philippines, a household averages six persons and the percent of households with more than two workers

¹³ But note that the FIES average income for professionals, administrators and managers did not grow nominally from 1965 to 1971. FIES says their income largely dropped in real terms, which is difficult to accept in view of their status. The geographical distribution of professionals shows that a third lived in Metro Manila in 1965, but only a fifth in 1971. Although a nationwide dispersal is undeniable, their numbers are probably under-reported considerably. Various related statistics indicate similar trends. See Berry [3, p. 331].

¹⁴ Ezaki [6, p. 280] says that labor's share declined. He measured that share by using an input/output table. Ratio of wages to GNP is 0.426 in 1961, 0.444 in 1965, and 0.410 in 1969.

TABLE XII
V. M. RAO'S GINI COEFFICIENT DECOMPOSITION BY SOURCE OF INCOME, 1961-71

Source	1961			1965			1971		
	A	B	(C)	A	B	(C)	A	B	(C)
Philippines									
Wages & salaries	0.60	42	(52)	0.59	43	(52)	0.56	44	(51)
Entrepreneurial activities									
Farm	0.15	24	(7)	0.23	25	(12)	0.19	22	(9)
Nonfarm	0.66	17	(22)	0.55	14	(16)	0.58	15	(18)
Rent	0.55	11	(12)	0.57	13	(15)	0.52	11	(10)
Others	0.49	6	(6)	0.57	5	(6)	0.64	8	(10)
Urban									
Wages & salaries	—	—	(—)	0.50	55	(54)	0.41	55	(51)
Entrepreneurial activities									
Farm	—	—	(—)	0.09	5	(1)	0.17	4	(2)
Nonfarm	—	—	(—)	0.52	18	(19)	0.48	20	(21)
Rent	—	—	(—)	0.62	15	(19)	0.50	12	(14)
Others	—	—	(—)	0.57	7	(8)	0.56	10	(12)
Rural									
Wages & salaries	—	—	(—)	0.52	31	(39)	0.56	35	(43)
Entrepreneurial activities									
Farm	—	—	(—)	0.32	45	(35)	0.31	37	(25)
Nonfarm	—	—	(—)	0.50	11	(14)	0.56	12	(15)
Rent	—	—	(—)	0.39	10	(9)	0.40	10	(8)
Others	—	—	(—)	0.39	4	(4)	0.62	6	(8)
Manila and suburbs									
Wages & salaries	—	—	(—)	0.43	58	(51)	0.32	56	(40)
Entrepreneurial activities									
Farm	—	—	(—)	—	—	(—)	—	—	(—)
Nonfarm	—	—	(—)	0.56	16	(18)	0.58	19	(24)
Rent	—	—	(—)	0.66	19	(26)	0.68	15	(23)
Others	—	—	(—)	0.38	7	(5)	0.55	10	(12)

Source: [24].

Notes: A. Pseudo-Gini coefficient.

B. Share of income (%).

C. Percentage of contribution defined by

$$\frac{\text{Pseudo-Gini coefficient} \times \text{Income share}}{\text{Total Gini coefficient}}$$

went from 58 per cent in 1965 to 49 per cent in 1971. Thus, almost half the households have multiple income sources. Wages, entrepreneurial income, rent, interest, and inheritance would all be added into the household income total. The next problem is to find out how the income source relates to inequality. Urban-rural groupings and V. M. Rao's decomposition method will be used for this analysis.¹⁵

Table XII shows the results of the decomposition.

¹⁵ V. M. Rao's decomposition method is, generally, as follows. Total income is expressed as the sum of n sources. That is,

$$X = X_1 + X_2 + \dots + X_n,$$

- (a) Farm incomes tend to be equally distributed and favorably affect income distribution.
- (b) In contrast, wage incomes are tend to high inequality levels and deleteriously affect income distribution.
- (c) Entrepreneurial income, rent, and other sources are distributed unequally, but do not accelerate inequality.
- (d) Overtime changes are not conspicuous.

Since farm households with low average income earn most of the farm income, (a) implies that income tends to be distributed in the lower income class, (b) becomes unclear with households classified by main source of income. The table depicts wages earned by a variety of household types: farm laborers, manual workers, professionals. Income size of these household types distributes over a wide range, and thus high inequality emerges. The extent to which other sources contribute seems to directly correspond with the share of those sources.

This decomposition is not very attractive because changes in the pseudo-Gini coefficient for each source are similar to changes in the household income inequality viewed from the main source of income. It is, therefore, necessary to break households down into more homogeneous groups to clarify the effect of income sources. Urban-rural separation shows that:

- (a) Widened rural disparity is due mainly to increased wage-income disparity even though farm income tended toward equality.
- (b) Except for rent, the values of urban area contribution are generally comparable to income share.
- (c) Wages began to distribute equally particularly in Manila and suburbs.
- (d) Rent and entrepreneurial income inequality in Manila is striking. Rent has a rather high share and accounts for a quarter of all inequality.

Urban wage income equalization reflects the trend in household income distribution for wage earners. Wage income works to the contrary in rural areas, it worsens income distribution by affecting it in two ways. One is to increase wage share, the rural distribution of which was highly unequal. The other is to deteriorate the wage distribution itself. Both could result from a change in definition which enlarges the rural area, on one hand, and by agricultural development on the other. The former brings higher wage income into rural areas, the latter increases the numbers of wage earners.¹⁶ It is also interesting that farm

where X is total household income and X_i is the i th source. Rao's decomposition is used to obtain

$$G = W_1 G^*_1 + W_2 G^*_2 + \dots + W_n G^*_n,$$

where G is the Gini coefficient of X , W_i for the share of the i th source in total income, G^*_i for the pseudo-Gini which is calculated by ordering X_i according to the size of X . If we calculate the Gini coefficient for X_i only, that is G_i then

$$-G_i \leq G^*_i \leq G_i$$

follows. If X and X_i are in reverse order, $G^*_i = -G_i$. Sources like social assistance have this property. Furthermore, X_i accelerates inequality when the ratio of G_i to G is greater than one and vice-versa. The contribution of $W_i G^*_i / G$ is the contribution of source i to total inequality.

¹⁶ Oshima and Barros [22, pp. 498-501] give such examples for each region.

income distribution improved slightly in 1965–71. Since about 90 per cent of farm income is in rural areas, this implies that the cause of overall deterioration in farm household income distribution is in the different income level between urban and rural farmers, the changes in income distribution for urban farmers, and the extent of farmers' nonfarm income. FIES shows that the ratio of FHI's average urban to rural income increased from 1.5 in 1965 to 2.0 in 1970. If, as the 1970 census¹⁷ suggests, more urban area farmers are in favor of producing commercial crops, the first two factors could be explained by increased amounts of commercial crops.

A larger rent share is characteristic of Philippine income distribution. Most rent concentrates in metropolitan Manila and greatly contributes to higher inequality. It is interesting that the data clearly depict the effects of these rents.

E. *Income Inequality and Regional Characteristics*

Closely examining regional characteristics may lead to further evidence on widening inequalities in income distribution. This section looks at changes in income distribution in ten regions classified by economic activity, crops, dialect, and ethnic origin.

Table XIII shows the regional distribution of major crop production. Manila and suburbs are excluded due to the almost total lack of crop production there. Regional features are:

- (a) Every region harvests rice and Central Luzon has the lion's share.
- (b) Southern and Western Mindanao grows about half the corn.
- (c) Mindanao Island, Eastern Visayas, and Southern Tagalog (Luzon) are the main coconut producing areas.
- (d) Western Visayas grows more than 70 per cent of the sugarcane.

In regional composition of planted area by crop it should be pointed out that considerable change took place during 1960–71, namely, increased corn area in Cagayan Valley and Southern Tagalog, increased sugarcane area in Western Visayas, and increased coconut area in Western Visayas and all of Mindanao Island. Rice area in Ilocos increased by 10 per cent.¹⁸

How did income distribution change in these regions? Table XIV summarizes the answer. The table shows a markedly worsening distribution in Ilocos–Mountain Province, Southern and Northern Mindanao, and Eastern Visayas. Oshima and Barros explain these trends as,

¹⁷ Though there are no data for household income classified by crop type, crop type can be inferred from the 8 per cent larger share of plantation workers in the urban area (see 1970 population census).

¹⁸ In 1,000 hectare areas, the changes in harvested area from 1960 to 1970 are: Western Visayas, –172 for rice, –12 for corn, 171 for coconuts, and 13 for sugarcane; Eastern Visayas, –171 for rice, –34 for corn, 24 for coconuts, and 96 for sugarcane; in Northern Mindanao, –58 for rice, –68 for corn, and –156 for coconuts; and in Southern Mindanao, 166 for rice, 371 for corn, and 287 for coconuts. Agricultural land development in Southern Mindanao was remarkable in the 1960s but the rice area decreased by 104 from 1965 to 1970. But areas in corn and sugarcane increased by 125 and 134 respectively.

TABLE
REGIONAL

A. Regional Share of Production by Kind of Crop (1969-71 Average)

	Rice	Corn	Sugarcane	Coconut	Tobacco	
					Virginia	Native
Ilocos	5	1	—	—	83	7
Cagayan Valley	10	9	—	—	—	55
Central Luzon	27	2	13	1	14	11
Southern Tagalog	12	7	9	10	3	—
Bicol	9	4	—	5	—	—
Western Visayas	12	10	72	9	—	6
Eastern Visayas	6	9	6	25	—	7
Northern & Eastern Mindanao	6	9	—	17	—	3
Southern & Western Mindanao	13	49	—	33	—	5
Philippines	100	100	100	100	100	100

B. Crop Share of Cultivated Area by Region (%)

	Rice		Corn		Sugarcane	
	1960	1970	1960	1970	1960	1970
Ilocos	49	58	10	8	—	—
Cagayan Valley	61	52	23	33	—	—
Central Luzon	73	71	8	9	5	7
Southern Tagalog	44	35	9	16	3	4
Bicol	37	41	12	11	—	—
Western Visayas	45	33	24	25	10	19
Eastern Visayas	35	22	27	29	1	2
Northern & Eastern Mindanao	31	21	33	29	—	—
Southern & Western Mindanao	29	24	43	48	—	—

Source: [29].

In the Ilocos Region the expansion of diversified commercial crops, especially tobacco, garlic, vegetables, etc., enabled the better farmers to increase their incomes as compared with the various tribal groups cultivating rice and root crops on a subsistence basis. The new rice technology reached only 14 per cent of the rice farmers in the Ilocos Region by 1971. Similarly, in Mindanao, the income disparity increased as sharply as in Ilocos, with the migration of farmers from other parts of the Philippines to take up commercial farming. In contrast, the position of most of the Muslim peasants probably did not improve much and some who lost their land became worse off...in the case of Eastern Visayas, the Gini had risen sharply. This may be due to the increase in the concentration of farm holdings...also, the spread of the new rice technology had been limited to 16 per cent of rice farmers....[22, pp. 498-500]

The Ilocos Region specialty crop is tobacco. The price of tobacco has been protected, but its cultivated area is decreasing. Tobacco had dropped from the list of ten major export goods in the Philippines as early as the 1950s. In view of the increased inequality in the late 1960s and expanded rice area, the spread

XIII
CHARACTERISTICS

Abaca	Banana	Pineapple
—	2	—
—	7	—
—	4	—
—	8	8
34	3	—
2	26	—
28	21	—
15	15	58
21	15	17
100	100	100

Coconuts		Tobacco				Abaca		Others		Total
1960	1970	Virginia		Native		1960	1970	1960	1970	
		1960	1970	1960	1970					
1	1	20	12	1	2	—	—	19	19	100
1	2	—	—	4	4	—	—	11	9	100
1	1	—	—	1	1	—	—	12	11	100
30	33	—	—	—	—	—	—	14	12	100
28	28	—	—	—	—	11	9	12	11	100
8	11	—	—	—	—	—	—	13	12	100
15	33	—	—	—	—	—	—	22	14	100
21	37	—	—	—	—	3	2	12	11	100
13	21	—	—	—	—	6	2	9	5	100

TABLE XIV
INEQUALITY BY REGIONS

	Gini Coefficient of FHL			Household Share of FHL (%)		
	1961	1965	1971	1961	1965	1971
Manila and suburbs	—	—	—	1	1	2
Ilocos-Mountain Province	0.36	0.38	0.51	69	65	64
Cagayan Valley-Batanes	0.36	0.38	0.35	77	86	68
Central Luzon	0.38	0.43	0.45	49	42	39
Southern Luzon & Islands	0.39	0.39	0.42	55	46	34
Bicol	0.37	0.38	0.37	64	65	56
Western Visayas	0.43	0.37	0.40	53	51	40
Eastern Visayas	0.35	0.44	0.50	67	58	50
Northern Mindanao	0.35	0.44	0.43	40	68	46
Southern Mindanao	0.34	0.44	0.43	63	65	51

Source: [24].

of high-yielding varieties would greatly influence this region. Though the ratio of HYV adoption is not so high (14 per cent), there is a marked difference in productivity between traditional varieties and HYV (Mangahas and Rimando [17, Figures 4.9 and 4.10]). Furthermore, there was considerable regional development such as in irrigation (43 per cent). In fact, average income grew at a fairly high rate, whereas the inequality of nonfarm household income worsened. According to Oshima and Barros's [22, Table II], non-FHL household income distribution worsened from 1961 to 1971 in Ilocos, Cagayan Valley, and Southern Luzon. The changes in Gini coefficient were -0.06 , -0.01 , and -0.04 , respectively. As a result, inequality in this region was due to regional development.

Increasing trends toward inequality in the early 1960s were noticeable for Mindanao Island, which harvests various commercial crops such as coconuts, abacas, bananas, and pineapples. The transfer of production from rice and corn to other crops also unfavorably influences inequality, because large-scale farmers can easily make such transfers.¹⁹ This holds true for Eastern Visayas where the land concentration was conspicuous.

In contrast, Western Visayas, a sugarcane producing region that also harvests commercial crops, did not disequalize as much. This may be due to (1) a high rate of rice HYV harvest area (about 60 per cent in 1971), which would raise the income of rice farmers and not seriously affect income distribution in rice farming households; and (2) only slight worsening of inequality between farm households harvesting sugarcane, perhaps because the large farm share markedly dropped²⁰ and the average area per farm decreased by about 5.5 hectares from 1960 to 1970. In addition, farm land is not as concentrated.

No change in inequality is observed in Bicol, either, a region like Western Visayas that grows large amounts of commercial crops. This is partly because abaca, the region's specialty, lost its importance as an export crop in the late 1960s. Although the coconut crop area has a large share of the total and planted area increased, the average yield per hectare dropped one-third or one-quarter in the late 1960s (Calculated from NEDA [29, Appendix]). Meanwhile, the HYV diffusion rate is one of the highest (the rate to planted rice area is the highest in 1970, about 70 per cent; see Mangahas and Rimando [17]), and planted area increased. Thus, these factors probably moderate the worsening effects on the coconut crop.

Thus an increase in commercial crops worsened income distribution for farm

¹⁹ In view of the changes in harvested area, such transfers would occur throughout the 1960s in Northern Mindanao. In Southern Mindanao, where, from 1960 to 1965, area in rice and coconuts about doubled and area in corn increased 1.5 times the transfer would have occurred after 1965. Though land in Southern Mindanao would have to be developed by migrants (for the numbers of migrants in the region, see NCSO [27]), it is not clear that such land development was directed only toward commercial crops as Oshima and Barros have said.

²⁰ Farms of 50 and more hectares were 71 per cent of total sugarcane area in 1960 but only 66 per cent in 1971. The average farm size was 14.0 hectares in 1960 and 13.6 hectares in 1971 (NEDA [30, p. 157]).

households. These are not modern inputs as the HYVs, although HYVs may worsen income distribution in the initial stage of diffusion.

IV. TRENDS IN THE 1970s

Whether the general trend of Philippine income inequality improves or deteriorates depends on trends in the 1970s. If it deteriorates, Kuznets hypothesis holds for the two decades in the Philippines in view of changes in industrial structure and income inequality in the 1960s. As in Section IIA, Oshima's estimate shows some deterioration. This section examines the trends of the late 1970s by using occupational classifications to explain income differences that are closely related to the employment structure.²¹

Attention is drawn first to occupations in which, according to census figures, the number of workers remarkably increased and/or decreased during 1970-75. Of the 644,000 increase in gainfully employed workers, 440,000 are in the primary sector, 117,000 are in wholesale and retail sales, 110,000 are clerical, 76,000 in domestic service, 57,000 are bricklayers and masons, and 43,000 are tool makers. Carpenters decreased by 112,000 and tailors by 190,000. These figures are to be expected in the development of manufacturing and construction. Among those engaged in agriculture and fishing, farmers and farm managers increased by 470,000, fishermen by 212,000, and farm workers decreased by 217,000. The latter contradicts Oshima's observation of labor force surveys in which he states that farm laborers increased.

Now, how would the income distribution change? Since no income distribution data on each occupation group in 1975 are at hand, 1971 figures for inequality and changes in share are used to infer the trend. Tables IV and X show higher inequality for farmers, sales, and managers and administrators; lower inequality for clerical and manual workers. Increases in clerical workers and decreases in professional workers and managers would work to improve the overall income distribution for nonfarm workers, while an increase of sales workers would deteriorate the distribution. In the same way, greater activity in the primary sector would worsen inequality, but an increase in farmers and farm managers and a decrease in farm workers would moderate that effect. It would be safe to say, therefore, that no definite direction for change emerged in 1971-75. This is supported by the minimal change in wage index ratio for skilled to unskilled workers in the early 1970s (Table XI).

Table XV summarizes figures for the late 1970s. The increase in professionals and decrease in farmers and farm workers makes a difference compared to changes in the early 1970s. It is noteworthy that declining trend in number of managers stopped and clerical workers continued to increase. Movements of professionals and managers, which are high inequality groups, would worsen the overall income

²¹ Data on occupational structure are available in the 1970 and 1975 censuses and labor force surveys (1978). For changes in the early 1970s, the census is a suitable source. The detailed tables for the 1980 census have yet to be published. Labor force surveys have been used instead.

TABLE XV
EMPLOYED BY MAJOR OCCUPATION GROUP

Major Occupation Group	Annual Growth Rate ^a (%)		Share (%)		
	1971-75	1975-78	1971	1975	1978
Professional & technical workers	3.6	7.0	5.6	5.5	6.1
Proprietors, managers & administrators	-3.5	1.3	1.4	1.0	1.0
Clerical workers	5.5	8.6	3.6	3.8	4.4
Sales workers	-0.1	4.7	11.3	9.7	10.1
Farmers, farm laborers & related workers	5.2	2.7	50.1	53.1	51.9
Workers in mines & quarries	-0.0	— ^b	0.3	0.2	
Transportation & communication workers	-1.2	— ^b	4.1	3.4	18.7
Craftsmen & production process workers	2.7	— ^b	12.6	12.1	
Manual workers & laborers, n.e.s.	8.8	— ^b	1.8	2.2	
Service & related workers	2.5	-0.6	9.1	8.6	7.6
Not reported			0.2	0.2	0.2

Source: [31].

^a Calculated by geometric mean.

^b Details are not shown.

distribution, whereas movements of farmers and farm workers would have the opposite effect. But if Oshima's observation on the increase of farm workers is correct, the latter effect would be reduced to some extent. Moreover, the wage index ratio for skilled to unskilled workers rose significantly from 1975 to 1978 (Table X). From these observations and assumptions, income distribution in the late 1970s probably deteriorated.

V. CONCLUDING REMARKS

This concludes my detailed discussion of the structure of inequality and changes in the Philippine income distribution in relation to the policy influences on that structure. The observations and inferences indicate that overall inequality did not change before the early 1970s, but rose thereafter. Combined with structural and demographic changes, this pattern can be interpreted as the initial stage of Kuznets's inverted-U curve. The trend toward inequality is found in various household groups. Income distribution for farm households grew especially bad partly due to the expansion of commercial crops, the results of trade policy revision and the land reform. The extent that modern technology affects rice farming varies according to the kind of technology introduced. The spread in the use of HYV, however, has been rather rapid and does not seem to have seriously affected the income distribution for rice farmers. It appears that the income gap between rice farmers and those who harvest commercial crops decreased. Agricultural reforms would eventually hike up the average income of

farm households and bring about better overall income distribution in the long run.

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