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# Pathways of Poverty Reduction Rural Development and Transmission Mechanisms in the Philippines

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## I. Introduction

The Philippines has lagged behind its major East Asian neighbors in achieving economic development, particularly in improving the socioeconomic well-being of its people. While real per capita gross domestic product (GDP) was higher in the Philippines than in any of these countries in the mid-1960s, it was the lowest among them at the turn of the new century. The Philippines also had the best human development indicators in the early 1960s – longest life expectancy, lowest infant mortality rate, highest primary school enrollment ratio, and lowest illiteracy rate. During the subsequent decades, however, major countries not only caught up with, but also surpassed, the Philippines in many aspects of human development. Its neighbors had higher income growth, more dynamic structural transformation, and much more impressive poverty reduction by the 1990s.

Development experience of emerging Asian market economies suggests a strong link between agricultural growth and overall economic performance. This is not surprising, given that agriculture and agriculture-dependent manufacturing and service sectors are a relatively large fraction of the economy at the early stages of development. Even more importantly, the experience shows that rapid growth in agriculture induces rural non-farm growth and, hence, substantial poverty reduction in rural areas. This has apparently not been the case for the Philippines. At the height of the “green revolution” (1960s and 1970s), agricultural growth in the Philippines was high by Asian standards. However, rural supply response was weak, resulting in rather poor rural welfare outcomes.

The post-World War II experience of Philippine rural development illustrates how misguided policies and institutional factors could constrain the responses of rural areas to the stimulus provided by agricultural growth, thereby stifling economic development. This paper reviews this experience, specifically examining the influence of government policies and institutional arrangements on rural welfare outcomes. The next section presents a simple organizing framework for understanding the transmission of agricultural growth to rural welfare outcomes. The paper then discusses economic and rural performance, especially focusing on the link between agricultural growth and rural poverty outcomes, as well as the nature of government policies which could have influenced these outcomes. The paper moves on to examine the determinants of poverty reduction in rural areas during the 1980s and 1990s, using comparable provincial data. The last section provides concluding remarks.

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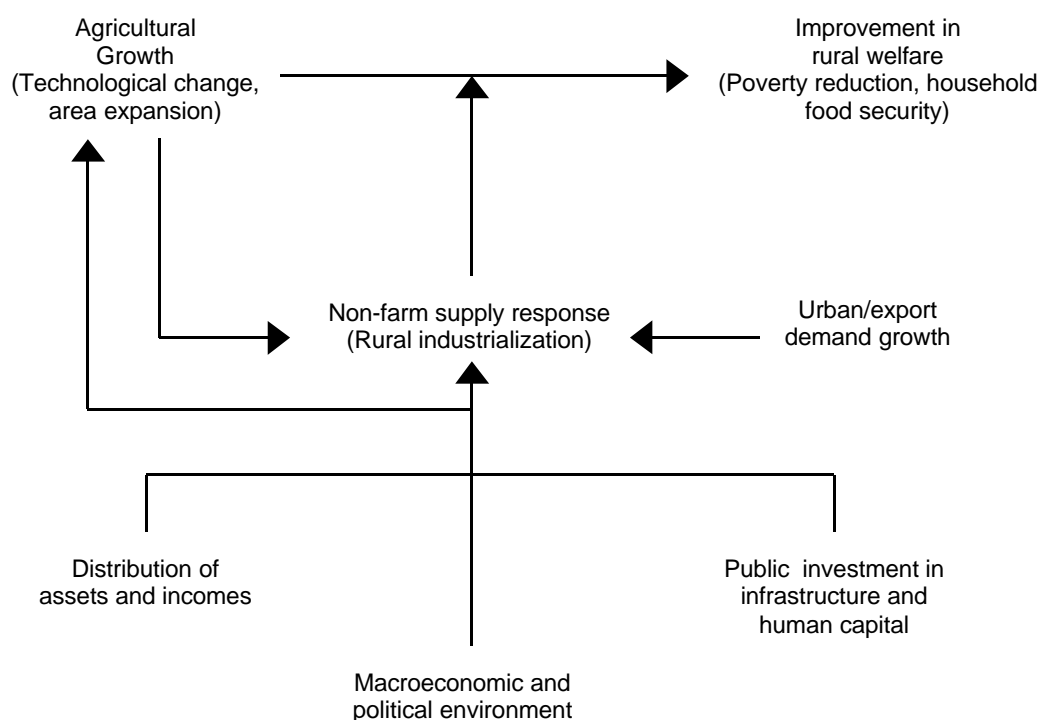
## II. An Organizing Framework

For virtually all the developing Asian economies, the main source of poverty is the rural sector (FAO, 1999; Lipton and Ravallion, 1995; Quibria, 1993). Nearly three-fourths of the poor in these countries have their origin from the rural sector. The large majority depend on agriculture for employment and income. For this reason, agricultural growth and rural development are seen as central to a strategy towards sustained poverty alleviation in these countries.

In developing economies, where there is a high share of population in rural areas and where urban-rural links are nascent, the rural non-farm economy is very much linked to agriculture. Increases in agricultural productivity and farm incomes stimulate the growth of non-farm activities and, hence, employment opportunities. Put differently, while agricultural growth reduces rural poverty and food insecurity directly by increasing agricultural incomes, the indirect effects of this growth on the rural non-farm economy through demand and supply linkages could represent even more important sources of food security and rural poverty reduction in the long-term.

The response of the rural non-farm sector to the stimulus provided by agricultural growth hinges on certain “initial conditions” of rural areas – distribution of assets and incomes, quality of human capital, rural infrastructure, and macroeconomic and political environment (Figure 1). Drawing from the Asian experience, strong response of rural non-farm areas (as well as urban areas) and, hence, of rural poverty to the stimulus provided by agricultural growth, as well as to export and/or urban demand growth, requires investment in rural infrastructure to lower transaction costs, removal of public-spending biases favoring large farmers and agri-business enterprises, adoption of small-scale enterprises, improvement in access to land and technology, and macroeconomic and political stability.

Figure 1. Rural Growth and Rural Welfare



In East Asia, where conditions were generally favorable to the emergence of rural non-farm activities, even agricultural households became increasingly dependent on non-farm incomes in the course of agricultural modernization (Balisacan, 1996a; Reardon *et al.*, 1998). In Asia and elsewhere, improvements in the living standards of the rural population have been commonly associated with robust rural growth linkages (Ranis and Stewart, 1993; Lipton and Ravallion, 1995; Rosegrant and Hazell, 1999).

Not surprisingly, given large differences in initial conditions across countries, the experience in rural Asia is quite varied. Some rural areas, such as those of Indonesia and India's Punjab, have responded strongly to agricultural growth, while others, such as those of the Philippines, apparently

have not. Even within a country, large disparities in rural performance are evident (Datt and Ravallion, 1992; Rosegrant and Hazell, 1999).

### III. Agricultural Growth

The agriculture sector continues to account for a sizeable proportion of total employment and, to a lesser extent, national income. In accord with the well-known stylized fact of development, its share in total employment dropped from 59 percent in the mid-1960s to 40 percent in the late 1990s, while its share in GDP declined from about 32 percent to 18 percent. (Table 1). However, the rather slow drop of agriculture's share in total employment, together with the sluggish absorption of labor in the industrial sector, suggests that the large increments to the labor force over the last three decades were nominally employed in agriculture and in the informal services sector where self-employment is more common and wages more flexible. This process, however, limited the growth of labor productivity and real income in these sectors.

Table 1. **Agriculture in the national economy\***

	1965	1975	1985	1995	1999
Per capita GDP (1965=100)	100	131	128	143	146
Share of agriculture ( percent) in:					
GDP	31.5	26.9	28.6	21.8	17.9
Employment	58.6	56.7	48.9	43.5	39.8
Imports	22.2	13.6	12.4	9.8	9.3
Exports	85.6	66.2	35.8	13.6	7.3
Ratio of agricultural imports to agricultural exports ( percent)	26.8	27.6	38.0	114.0	142.1

\* Three-year averages centered on the year shown

Sources: Philippine Statistical Yearbook (various issues); Foreign Trade Statistics (various issues).

In recent development experiences, especially in the celebrated newly-industrialized economies of East Asia, the development process is also shown to be accompanied by a declining share of agriculture in total exports, an increasing dependence on food imports (at least for countries with relatively low land endowment per worker), and an increasing share of non-farm income in total income (Oshima, 1987). The development process could also bring about absolute declines in the number of farm workers (Chenery and Syrquin, 1975). In the Philippines, the growth of per capita income, albeit small in relation to those of neighboring countries, was accompanied by a sharp fall in

agriculture's share in total foreign trade. For exports, agriculture's share plummeted from 86 percent in the mid-1960s to only 7 percent in the late 1990s. In the case of imports, the fall was from 22 percent to 9 percent.

The agricultural sector performed quite well during the 1960s and the 1970s. The sector's annual growth, averaging at 4.6 percent, was then substantially higher than the norm for most Asian developing countries (Table 2). Increments to land productivity (i. e., in output per unit of land) increasingly became the major source of growth in food production beginning the mid-1960s. At the height of the green revolution, yield increases accounted for much of the growth in agriculture. These gains were brought about mainly by the expansion of irrigation systems, increased application of fertilizers, adoption of high-yielding varieties, and investments in rural infrastructure and education.

Table 2. **Agricultural growth in Asian developing countries**

Economy	Average growth rate (percent per year)				Share of agriculture in GDP (percent)	
	Agriculture		GDP		1960	1997
	1965-80	1980-97	1965-80	1980-97		
Malaysia	–	3.0	7.3	6.6	37	13
Thailand	4.6	3.8	7.2	7.6	40	11
Indonesia	4.3	3.2	8.0	6.7	54	16
Philippines	4.6	1.4	5.9	1.9	26	20
Sri Lanka	2.7	1.9	4.0	4.5	32	22
Pakistan	3.3	4.1	5.1	5.5	46	26
India	2.5	3.1	3.6	5.8	50	27
Bangladesh	1.5	2.3	2.4	4.4	58	30
Nepal	1.1	3.3	1.9	4.8	–	43
People's Republic of China	2.8	5.3	6.4	10.9	–	20
Viet Nam	0.8	4.7	0.8	6.2	–	

– Not available.

Sources: *World Development Report*, World Bank (various issues).

*Asian Development Outlook*, Asian Development Bank (various issues).

Food and Agriculture Organization (FAO) of the UN.

In recent decades, less-developed countries (LDCs) with relatively high growth rates of agricultural output tended to have also comparatively high GDP growth rates (World Bank, 1986: 79-80). The correlation is clear for the Asian developing countries in Table 2. This observation is, of course, not surprising given that agriculture and agriculture-dependent manufacturing in a typical LDC is a large fraction of the economy. In the Philippine case, the remarkably robust agricultural growth for the period 1965-80 was accompanied by a GDP growth that closely matched the averages for the Asian developing countries (2.3 percent a year) and the middle-income developing countries (3.6 percent a year). Similarly, the dismal growth of agriculture in the 1980s and 1990s paralleled the poor performance of the overall economy.

Growth among the major sub-sectors, however, was far from uniform (Table 3). Fishery registered the highest annual growth rate, averaging 5.2 percent a year, during the 1965-80 period. Consequently, the share of fishery in the sector's gross value added (GVA) rose from 12 percent in the mid-1960s to roughly 20 percent in the early 1980s. The growth of crop GVA, averaging 3 percent a year during the period, also emerged as outstanding by historical standards. This sub-sector contributed about four-fifths of the observed growth of agriculture's output. The growth was particularly high in corn, banana, and "other crops".

Table 3. Average growth rates of agriculture by sub-sector

Sector	1965-80		1980-90		1990-99	
Agriculture	3.7	(100.0)*	1.2	(100.0)	1.5	(100.0)
All crops	3.0	(80.7)	0.6	(54.8)	1.5	(53.4)
Rice	4.0	(14.1)	2.6	(14.8)	3.8	(15.8)
Corn	5.7	(8.0)	3.5	(6.2)	0.3	(6.2)
Coconut	3.8	(8.8)	-4.6	(6.9)	-2.0	(4.0)
Sugarcane	4.2	(4.6)	-1.6	(2.9)	4.7	(2.7)
Banana	11.8	(4.9)	-3.5	(2.3)	2.6	(1.7)
Other crops	7.5	(40.3)	1.5	(21.7)	1.0	(23.1)
Poultry and livestock	2.3	(7.6)	6.0	(14.2)	4.6	(20.8)
Agricultural activities	**		4.1	(4.0)	0.0	(4.7)
Fishery	5.2	(20.6)	3.9	(18.8)	1.5	(19.4)
Forestry	-5.2	(8.9)	-7.8	(8.2)	-18.5	(1.8)

\* Growth rates pertain to gross value added (GVA). Figures in parentheses are contributions to total GVA in agriculture. The agricultural sector comprises crops, poultry, livestock, fishery and agricultural services.

\*\* Included in "other crops" category

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Production growth rates for virtually all crops decelerated, however, in the 1980s and 1990s. One reason for this is the slowdown in new lands brought into cultivation. While agricultural land increased at a rate of 3.6 percent a year in the 1970s (brought about primarily by deforestation), the rate decelerated to only 0.8 percent a year in the 1980s and early 1990s.

Additional exogenous factors also contributed to the deceleration in the 1980s including the drops in world commodity prices affecting the country's traditional export crops (e.g., sugar and coconut), a series of natural calamities and droughts, and the virtual completion of the green revolution by the early 1980s. In addition, however, there were policy related factors such as the policy uncertainty regarding the Comprehensive Agrarian Reform Program (CARP) and the sharp decline in public investments in agriculture, which contributed to the slow growth of the sub-sectors.

The poultry and livestock sub-sector has emerged as the only consistent performer through the years, growing at an average of 6 percent annually in the 1980s and about 5 percent for the most part of the succeeding decade. Its strong showing contrasts with the declining performance of the fishery sub-sector and the diminished role of the forestry sub-sector. The share of poultry and livestock output in agricultural GVA has steadily climbed from 14 percent in the mid-1960s to 21 percent by the late 1990s. The robust performance of the industry may explain the similarly robust performance of corn (also used as animal feed) – growth of corn production normally exceeded that of rice up until the 1980s. The macroeconomic difficulties of the 1980s and early 1990s apparently failed to prevent the poultry and livestock sub-sector from achieving respectable growth rates. It managed to record the highest rate of expansion among all the sub-sectors of agriculture, contributing about 70 percent of the observed growth of agriculture's GVA in the 1980s and over 50 percent in the 1990s. Growth in poultry production (mainly chicken) accounted for much of the progress, which could be partially explained by the relatively high nominal protection rate induced by domestic policy.

#### **A. Rural Welfare Outcomes**

The rural sector, which comprises half of the total population (52 percent), continues to account for over 70 percent of all the poor nationwide (Table 4). The overwhelming majority of the rural poor are in agriculture. Moreover, poverty incidence in agriculture (60 percent in 1997) is substantially higher than in either industry or services sector (Balisacan, 1999b).

Table 4. Rural poverty estimates – official methodology

	1985	1988	1991	1994	1997
<i>Rural</i>					
Population share	61.3	62.0	49.9	50.2	52.4
Poverty incidence	56.4	52.3	55.0	53.1	51.4
Share in total poverty	70.2	71.4	60.8	65.7	72.2
No. of poor persons (in '000)	18,744	18,118	17,346	17,988	19,591
<i>Agriculture (urban and rural)</i>					
Population share	47.4	45.5	44.5	43.3	40.1
Poverty incidence	63.7	61.7	63.7	62.0	60.3
Share in total poverty	61.3	61.7	62.7	66.2	64.7
No. of poor persons (in '000)	16,344	15,552	17,910	18,103	17,561

Note: The official approach to poverty measurement uses region-specific poverty lines (i.e., food and nonfood menus), differentiated by urban and rural areas, and current income as a broad measure of household standard of living. A person in a given region is deemed poor if his income is below the poverty line for that region. Poverty incidence is defined as the proportion of the population deemed poor.

Source: Author's estimates based on the Family Income and Expenditures Survey (various issues).

Based on estimates using official approach to poverty estimation, the level of rural poverty remained relatively stable during the 1960s through the mid-1980s (Table 5). The *Family Income and Expenditures Surveys* (FIES) data show that, although there were some notable fluctuations, poverty incidence in rural areas stayed at the level between 55 percent and 60 percent up to 1985.<sup>1</sup> While the poverty estimates show somewhat larger fluctuations with a sharp increase in poverty incidence during the period of economic crisis in the 1980s, estimates of poverty incidence remained largely between 46 percent and 53 percent. This means that there was relatively little reduction in rural poverty incidence in the 1960s and 1970s despite a respectable performance in national income growth. Furthermore, poverty reduction in rural areas was also quite insensitive to the aggregate growth in agriculture during most of the 1960s (with a possible exception of the early 1960s when a significant reduction in poverty is observed) through the mid-1980s (Ranis and Stewart, 1993; Balisacan, 1993).

1. Conducted every three years since 1985, the FIES provides the only nationally representative surveys for poverty comparison in the Philippines. Unit record data are available for these surveys. Earlier surveys covering 1961, 1965, and 1971 are available only in published forms. While surveys covering 1975 and 1979 are also available, these are beset by serious technical problems (see Balisacan 1995).

Table 5. Rural poverty estimates, 1961-1997

	1961	1965	1971	1985	1988	1991	1994	1997
Official Approach								
Incidence	64.1	55.2	57.3	59.4	50.2	52.4	53.1	51.4
Depth	30.4	26.2	27.1	23.5	18.6	19.0	18.2	18.0
Severity	18.0	16.1	16.4	12.2	9.0	9.0	8.3	8.0
Author's Approach								
Incidence	–	–	–	53.1	45.7	48.6	45.4	36.9
Depth	–	–	–	17.8	14.0	15.6	13.0	9.8
Severity	–	–	–	8.0	5.9	6.8	5.2	3.6

– not available

*Note:* Official approach uses region-specific poverty lines (i.e., food and nonfood menus), differentiated by urban and rural areas, and current income as a broad measure of household standard of living. This author's approach uses spatially fixed poverty norm and per capita consumption expenditures, adjusted for provincial cost-of-living differences, as a broad measure of standard of living. See Balisacan (1999b) for details.

Source: Author's estimates based on the *Family Income and Expenditures Surveys* (various issues).

In contrast with the relatively stable rural poverty incidence during the 1960s through the early 1980s, poverty incidence during the latter half of the 1980s and through the 1990s appears to follow a declining trend. Based on the FIES data, poverty incidence declined from 53 percent in 1985 to 37 percent in 1997 (Table 5).<sup>2</sup> The decline is quite impressive given the fact that, in contrast with the steady aggregate growth during the 1960s and the 1970s (when the poverty incidence remained stable at a high level), there were large fluctuations in aggregate economic growth during the mid-1980s through the mid-1990s. Hayami and Kikuchi (2000) argue that the increase in the income of the landless poor during the 1990s came mainly from increased employment opportunities in non-farm economic activities. The increase in non-farm income earning opportunities for the rural poor, in turn, resulted from both the greater integration of the rural into the urban labor markets and the increase in non-farm income opportunities within rural areas (such as petty trading and local transportation services).

2. The official approach to poverty measurement does not capture well the changes in standard of living of the poor. This is so since the official poverty lines applied for various regions, areas, and years imply different levels of living standards, tending to systematically underestimate (overestimate) the reduction (increase) in absolute poverty in economically more progressive (backward) regions or sectors, or during periods when the overall economy is expanding (contracting). The problem arises because of the use of region-specific (and, within region, area-specific) poverty line based on the prevailing consumption pattern of that region (area). See Balisacan (1999b).

Thus, despite some fluctuations in the poverty level over relatively short horizons, there has clearly been a consistent trend in poverty reduction in rural areas after the mid-1980s. Overall, however, the pace of the poverty reduction during the past four decades in the Philippines is nothing but a disappointment compared to the poverty reduction performance in the neighboring Asian countries. Using the internationally comparable “\$1 a day” poverty line used by the World Bank, for example, poverty incidence at the national aggregate fell by ten percentage points from 36 percent to 26 percent between 1975 and 1995 in the Philippines. During the same period, poverty reduction was far more impressive, e.g., in Indonesia where poverty incidence dropped from 64 percent to 11 percent and in Thailand where poverty incidence fell from 8 percent to near zero.

Changes in the welfare level of the rural population cannot be captured solely by the changes in income and consumption expenditure profiles. Equally important are access to resources needed for the opportunity to lead a long and healthy life and the ability to acquire and use knowledge. Considerable improvement in life expectancy, literacy and child health occurred between the early 1960s and the 1980s, but as with income growth, these achievements paled in comparison with those of neighboring countries (Table 6). The average annual changes in these indicators for the latter group of countries outpaced those for the Philippines although some improvement occurred in the 1990s.

A little over half of the entire rural population in the Philippines had access to safe water and sanitation services in the 1980s, but this situation substantially improved by the next decade (Balisacan et al., 2000). The same is true with regard to access to sanitation services although the progress has not been as distinct. Rural-urban disparities in access to services have also somewhat narrowed over time. Access to safe water used to be available to a greater proportion of the rural population than it was for the urban population, while the opposite was true for sanitation services. Despite such developments, however, rural households still have much weaker access to sanitation service. Viewed from an international perspective, a relatively large percentage of the rural population in the Philippines has access to basic services. On average, only about 60 percent of

rural populations in developing Asia have access to safe water. For sanitation services, the corresponding figure is even lower at slightly less than 40 percent.<sup>3</sup>

#### IV. Government Policies Affecting Rural Development<sup>4</sup>

##### A. Development Strategies and Economy-wide Policies

There has emerged a consensus among economic researchers that the failure of the Philippines to grow robustly on a sustainable basis and to induce substantial poverty reduction during the last half century stems mainly from the absence of an “effective allocation mechanism” that allows the true comparative advantage of various industries to emerge (Bautista, Power and Associates, 1979; de Dios and Associates, 1993; Bautista and Tecson, 2000). Instead, past governments introduced distortions in economic policies, which, in not a few cases, made socially undesirable investments attractive to private investors and desirable ones (i.e., promising and efficient activities) relatively unprofitable (Power and Sicat, 1971; Medalla *et al.*, 1995; Fabella, 2000). Such policies not only hampered economic growth at the national level but also produced side effects deleterious to rural development.

Table 6. Standard of living and human development in the Philippines, Indonesia, and Thailand

	Real GDP per capita (1995 PPP dollar)		Human Development Index	Poverty incidence		
	1965	1995	1995	1975	1985	1995
Thailand	1,570	6,723	0.838	8.1	10.0	<1.0
Indonesia	817	3,346	0.679	64.3	32.2	11.4
Philippines	1,736	2,475	0.677	35.7	32.4	25.5

Sources: Real GDP per capita and poverty incidence, Ahuja *et al.* (1997); human development index, UNDP (199\_).

3. These figures must be taken with extreme caution, however, given the low quality of available data in many developing countries, including the Philippines.

4. This section has drawn largely from Balisacan, Debuque and Fuwa (2000).

Table 7. Indicators of human development in the Philippines, Indonesia and Thailand

	Life expectancy at birth (years)				Infant mortality rate (per 1000 live births)				Gross primary school enrolment ( percent)				Adult illiteracy rate ( percent)			
	1962	1970	1980	1998	1960	1970	1980	1998	1960	1970	1980	1997	1960	1970	1980	1996
Thailand	54	58	64	72	95	73	49	29	83	83	99	89	32.3	21.4	12.0	6.2
Indonesia	43	48	55	65	133	118	90	43	71	80	107	113	61.0	43.4	32.7	16.2
Philippines	55	57	61	69	76	66	52	32	95	108	112	117	28.1	17.4	16.7	5.4

Source: World Development Indicators, World Bank.

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From the 1950s to the 1980s, an array of policies meant to push the country towards an import-substituting industrialization track inadvertently stunted the development of the rural sector by creating a bias towards large-scale, capital-intensive manufacturing industries located in urban areas (especially Metro Manila) to the detriment of rural enterprises which are inherently smaller in size, hire more labor and make greater use of local materials (Medalla *et al.*, 1995; Ranis and Stewart, 1993). These policies also created an incentive structure that was significantly biased against agriculture, the economic backbone of the rural sector. Trade and exchange rate policies then distorted the relative prices of agricultural inputs and outputs, preventing an efficient allocation of resources, and tended to heavily favor the manufacturing sector over agriculture, non-tradable over tradable goods, and import-competing over export products. In the long run, resources move away from agriculture and export sectors; new investments into these sectors are discouraged. Since agricultural production is more labor-intensive, less import-dependent, and more efficient in earning (or saving) foreign exchange than industrial production (especially of import-competing industrial consumer goods), the premature shift of resources away from agriculture dampens the growth of employment opportunities and output in rural areas.

Many authors point out that the bias did not come largely from measures aimed directly at agricultural commodities, although government interventions in the form of taxes, custom duties, subsidies, quantitative trade restrictions, import prohibitions, price controls and monopoly control in international trade had, up until the late 1980s and mid-1990s, affected agricultural incentives. It was rather the *indirect* effect of the overall development strategy that accounted for a substantial part of the policy bias in the past (e.g., Intal and Power, 1990; Bautista, 1987; Bautista and Tecson, 2000). The primary channel had been the overvaluation of the domestic currency, which in turn had its roots in the industrial protection system and in fiscal, monetary, and exchange rate policies, specifically those adopted to promote import substitution and accommodate current account imbalances.

Estimates of the overvaluation of the domestic currency in the 1970s and 1980s are in the order of 20-30 percent. Making use of the same methodology, Bautista (1990) showed that these rates are much higher than those derived for Thailand (16-24 percent) and Malaysia (less than 3 percent).

## **B. Sectoral Policies**

In the early 1970s, government interventions in Philippine agriculture started to rise in unprecedented proportions. The government intervened intensively in agricultural production, marketing and international trade. The intervention in the rice sector was precipitated by a rice crisis in 1971-72 resulting from both local (poor weather, pest infestation and the great flood in Central Luzon) and international (a sharp price hike in the world market) shocks. The government responded to the crisis by imposing price controls on rice and embarking on a massive program aimed at achieving rice self-sufficiency. Dubbed *Masagana 99* and launched in 1974, the program called for government assistance in the form of credit, irrigation, extension services and fertilizer subsidy.

Furthermore, the National Grains Authority (NGA), the government's rice and corn agency, expanded its control of the food sector to include the effective monopolization of wheat (beginning 1975) and soybean (beginning 1978) imports. Marketing controls included all food commodities by the early 1980s when the NGA was transformed into the National Food Authority (NFA) as the government's food price stabilization arm. The NFA financed its expanded operations partly from price margins on its duty-free imports. In the case of the export crop sector, the government's intervention shifted from its traditional role of allocating domestic sugar quotas, collecting minor export taxes and undertaking research and extension in tandem with the private sector, to one of monopolizing domestic and export marketing.

The economic consequences and cost of government interventions in the 1970s and 1980s have been well documented in the literature. In most cases, the interventions were either ineffective or yielded results contrary to avowed intentions. In the case of rice, for example, while increased government intervention during the 1970s reduced seasonal fluctuations in *palay* (paddy) prices, the intervention was inadequate to maintain producer prices at the official floor price. This meant that the opportunities to sell at the official price had to be rationed, often to the disadvantage of small farmers. In addition, because the difference between official ceiling and floor prices was insufficient to cover normal marketing margins, the intervention prevented the development of private trading and storage. Arguably, the government's objective of reducing marketing margins could have been achieved with non-price policy interventions such as investment in transport and communication infrastructure.

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One other major piece of policy measure that was high on agenda during the early 1970s was agrarian reform (land reform). Presidential Decree No. 27 (PD 27) was issued stipulating that all rice and corn fields of over 7 hectares be transferred to the tenants who tilled them at a price 2.5 times the value of average annual production and that all the rice and corn lands of 7 hectares or less under share tenancy be converted to fixed-rent leasehold with the official rental ceiling of 25 percent of average output for the three 'normal' years prior to land reform. Compared to the earlier land reform legislations, PD27 expanded the potential coverage of the lands under the reform program by lowering the retention limit, among other things.

While the 1970s saw an unprecedented rise of government interventions in agriculture in the form of price and quantitative controls, levies and taxes as well as entry into activities for which the public good argument was unjustified, the late 1980s saw an undoing of these policies towards a market-oriented agricultural economy, relieved of the burden of explicit as well as implicit taxation of agriculture. The deregulation that commenced starting 1986 took the following forms:

- Lifting of the export ban on copra and export taxes on copra (10 percent) and coconut oil (5 percent);
- Abolition of monopsonistic agencies and arrangements in sugar and coconut trading and the dismantling of government monopoly control over international trade in coconut oil, corn, soybeans, soybean meal and the marketing of sugar;
- Liberalization of fertilizer distribution and importation;
- Removal of price controls on rice, poultry products and pork;
- Opening up of import trade in wheat, flour and animal feeds to the private sector;
- Divestment of the National Food Authority (NFA) from non-grain activities and the reorientation of its primary function to price stabilization of rice and corn; and
- Consolidation of commodity-specific funds into the Comprehensive Agricultural Loan Fund (CALF) to unify various agricultural lending programs and minimize government participation in these programs.

Despite these reform measures, however, the deregulation of agriculture was left substantially incomplete. Reforms undertaken did not include the abolition of the remaining restrictions such as:

- NFA monopoly of international trade and domestic market operations in rice and corn;

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- Import controls on sugar;
  - Import prohibitions on onions, potatoes, garlic, cabbage, coffee and seeds;
  - Hectarage controls on banana production;
  - Centralized importation of ruminants (for breeding and/or slaughter) and beef;
  - Bans on buntal and ramie planting materials;
  - Export restrictions on animal and animal products; and
  - Licensing and/or registration of production and domestic trade for some agricultural goods.

Rather than expanding the scope of deregulation, which could have had a positive impact on the welfare of rural population (see Balisacan, 1991), the government moved instead to strengthen the regulation of agriculture, especially over the international trade of agricultural products. In 1992, Congress, with the endorsement of the executive branch, passed the Magna Carta of Small Farmers (Republic Act 7607), which barred importation of agricultural products produced locally in sufficient quantity.

Another major government program initiated in the late 1980s with a profound effect on the agriculture sector was the Comprehensive Agrarian Reform Program (CARP). Launched in 1988 under Republic Act 6675, the program covered, unlike its predecessor PD27, all agricultural lands, regardless of commodity produced and type of tenurial arrangement and included the provision of support services for farmers. CARP intends to redistribute about 580,000 hectares of rice and corn lands (which was also covered under PD27) and over 2 million hectares of privately-owned non-rice/corn lands (which was newly covered under CARP) over a period of ten years. The huge budgetary requirement of the program, together with the limited capacity of the agencies tasked to implement it, stood in the way of swift implementation.

The uncertainty surrounding the program implementation served to discourage the flow of private investments into agriculture as well as encouraged non-planting and premature conversion of agricultural lands into nonagricultural uses, a trend exacerbated by weak monitoring of the government and absence of a comprehensive land use policy (e. g., Medalla and Centeno, 1995). Aside from dampening the flow of agricultural investments, the CARP also diminished the collateral value of agricultural lands by constraining private land sales. This feature of the program has caused the demise of private markets for agricultural lands. Indeed, the amount of loans (at constant prices)

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granted by private and government banks in the early 1990s was only half of that in the early 1980s. Loans by private institutions, including private commercial banks, dropped by much more than loans by public institutions. Loans per peso of agricultural value added fell from about 0.42 in 1980-82 to 0.20 in 1985-87 and 0.16 in 1991-92 (Balisacan, 1998).

As we saw in the previous section, production growth rates decelerated during the 1980s and the early 1990s for most crops. The deceleration can be attributed to the combination of some exogenous factors (such as price changes in world market, natural calamities and droughts) and government policies. The negative policy impact includes the unintended negative side effects of CARP as mentioned above as well as the sharp fall in public investment in agriculture – especially rural roads, irrigation and research – in the 1980s and early 1990s. In particular, investments in agricultural research and development (R&D), the single most important source of long-term output growth, stagnated in the 1970s and then dropped in absolute value in the 1980s; the total spent on R&D in the early 1990s comprised merely 60 percent of that in the early 1970s.

A change in the policy environment had been anticipated with the country's accession to the World Trade Organization (WTO) in 1995 since this required opening up local agricultural markets to competition as well as enacting laws prescribed by the trade treaty.<sup>5</sup> Political negotiations to win public support for this policy direction, in turn, severely weakened the drive towards greater openness in the farm sector. Rice, for instance, has been exempted from the trade commitments for a period of ten years. In 1996, Congress passed a law (Republic Act 8178) lifting all quantitative restrictions on agricultural imports (save for rice) but replacing non-tariff barriers with the highest possible tariff protection of 100 percent (i.e., the ceiling or binding tariff rates).<sup>6</sup> Clarete (1999) pointed out that the manner of "tariffication" resulted in tariff levels that exceeded the corresponding equivalent rates of most products. The tariff rate equivalent of quantitative restrictions on corn, for example, was estimated to be only 60 percent, but government "tariffied" the commodity at the

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5. Commitments of the Philippines with regard to agriculture include a prohibition on the use of (additional) non-tariff measures, conversion of all existing quantitative restrictions to tariff measures (except for rice, the tariffication of which has been deferred for 10 years), binding tariffs at ceiling rates, tariff reductions (average cut of 30%) and harmonization of sanitary and phytosanitary measures.

6. These binding (tariff) rates are slated to go down to a range of about 40 to 50% for the various crops in 2004 in accordance with the WTO agreement.

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maximum rate of 100 percent.<sup>7</sup> David (2000) similarly expounded that binding tariffs were higher than either the nominal protection rates from quantitative trade restrictions or the book tariff rates under EO 470.

As noted in the previous section, after a decade of stagnation in the 1980s, production growth in the agricultural sector recovered in the 1990s. The combination of the sweeping reforms in non-agricultural sectors and the increasing government protection on agriculture apparently led to a rise in relative prices of agricultural products in domestic market, and thus may partially explain the upturn in agricultural growth in the 1990s.

The Agriculture and Fisheries Modernization Act (AFMA) was enacted in 1997 partly in response to the farm lobbies' opposition to the country's entry to the WTO. The AFMA prescribes a coordinated set of measures aimed at enhancing the competitiveness of domestic agriculture in the global marketplace. These include infrastructure development, devolution of communal irrigation systems to local government units, budgetary allocation for R&D in agriculture, phase-out of directed credit programs, and provision of post-harvest facilities.

While there have been efforts to liberalize the agriculture sector, crucial restrictions remained, such as the continued monopoly of the NFA over rice trade and hectareage controls on banana production. In addition, profitability levels of the sugar and corn sectors were becoming artificially high due to increased protection afforded by the new tariff regime as well as regulatory barriers, reducing the competitiveness of allied industries. Corn is the main input of the livestock sector, while sugar is an essential ingredient in the food processing industry.

The land reform program, meanwhile, could not be completed as scheduled (i.e., by 1997) although relevant local agencies performed relatively well compared to their predecessors in terms of land distribution. Only a little over half the total coverage was achieved. Implementation had been particularly slow for public alienable and disposable (A & D) lands and private agricultural lands (other than rice and corn lands), representing about 45 percent and 25 percent, respectively, of the total coverage of the program. For public A&D lands, the poor performance could be traced mainly to

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7. Binding rates on corn are scheduled to go down to 50% after a 10-year period. High tariff protection of corn, which is used as feed in the livestock industry, in turn spurred high tariff protection of hogs, poultry, and meat products as a compensatory measure.

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delays in undertaking land surveys, slow reconstitution of land records and sluggish resolution of land conflicts among competing claimants. For private agricultural lands, the main problems included the time-consuming process involved in land acquisition and distribution, insufficient technical capacity of implementing agencies, legal disputes relating to coverage and land valuation, landowners' resistance, harassment, an unstable peace and order condition and budget constraints (Balisacan, 1996c). As noted earlier, the negative indirect effects of the slow and incomplete implementation and the uncertainty created as a result (i. e., disincentives for private investment, incentives for non-planting or premature land conversion and negative effects on land market transactions) continue to be a serious problem for stimulating agricultural development.

A convenient summary measure of the direct impact of trade and industrial policies is the effective rate of protection (ERP), defined as the percentage excess of protected value-added over non-protected value-added of a particular economic activity. This measure takes into account the changes in the domestic prices of both inputs and outputs arising from tariffs and import controls. A positive ERP implies that the sector is accorded protection by the system of tariffs and import controls while a negative ERP indicates that the system penalizes (i.e., taxes) the activity of the sector.

The primary and agricultural sectors typically had lower ERPs than manufacturing during the period between 1965 and the early 1990s—most of the period under our review. The agricultural sector as a whole was thus penalized vis-à-vis the manufacturing sector in terms of relative prices up to the early 1990s (Table 8). Through the 1990s, however, such bias against agriculture (at least on aggregate) appears to have finally disappeared; the ERPs for agriculture became roughly equivalent to the ERPs for manufacturing. Such result can largely be attributed to the substantial changes in the country's tariff structure over the last ten years. Clarete's (1991) and Medalla's (1992) assessment of EO 470 indicates that the tariff reform program moved the country towards a lower, sector-neutral and trade-neutral effective protection policy.

With the steady progression of the tariff reform program during the period, the 1990s saw both declining protection rates of manufactured inputs (including agricultural inputs) and increased (tariff) protection of major agricultural commodities for which quantitative restrictions have been removed. Falling input prices (with the obvious exception of yellow corn for the livestock industry) imply that

the *effective* protection level of agriculture afforded by domestic policy has outstripped the *nominal* protection level of the sector.

### V. Toward an Empirical Examination of the Determinants of Poverty Reduction in Rural Areas

As noted above, rural welfare outcomes vary substantially not only across regions but also across sectors of the economy. The wide variation also exists across provinces (Figure 2). This section assesses the influence of certain time-varying factors, such as policy regime, and *initial* conditions – related to infrastructure, distribution of physical and human assets, income, and institutions – in accounting for the performance of the various provinces of the Philippines in poverty reduction. The analysis focuses on the period covering the late 1980s and late 1990s, during which comparable nationwide household survey data disaggregated by province are available.<sup>8</sup>

Table 8. **Effective rates of protection by major sector**

	1965	74	85 <sup>ai</sup>	88 <sup>ai</sup>	91	93	95	96	97	98	99	2000
Effective rate of protection												
Overall average		36	49	37	28	29	22	25	23	20	19	18
Agriculture and Primary sectors		9	9	5	23	24	22	22	21	19	18	18
Agriculture	17	15	21	15	27	26	26	29	26	26	24	24
Fishery		116	8	5	18	21	16	11	11	6	6	6
Forestry	-26	-10	-22	-22	12	12	11	5	5	3	3	3
Mining	-17	-2	0	-2	1	1	1	0	0	0	0	0
Manufacturing	51	44	73	56	31	33	23	28	26	22	20	19
Relative protection <sup>bj</sup> (Agriculture=100)												
Agriculture and Primary sectors		95	90	91	97	98	97	95	96	94	95	95
Agriculture	100	100	100	100	100	100	100	100	100	100	100	100
Fishery		188	89	91	93	96	92	86	88	84	85	85
Forestry	63	78	64	68	88	89	88	81	83	82	83	83
Mining	71	85	83	85	80	80	80	78	79	79	81	81
Manufacturing	129	125	143	136	103	106	98	99	100	97	97	96

<sup>ai</sup> Estimates were based on price comparisons.

<sup>bj</sup>  $(1+ERP_j)/(1+ERP_a)$ , where  $ERP_j$  is the effective rate of protection of sector  $j$  and  $ERP_a$  is the effective rate of protection of agriculture.

Sources:

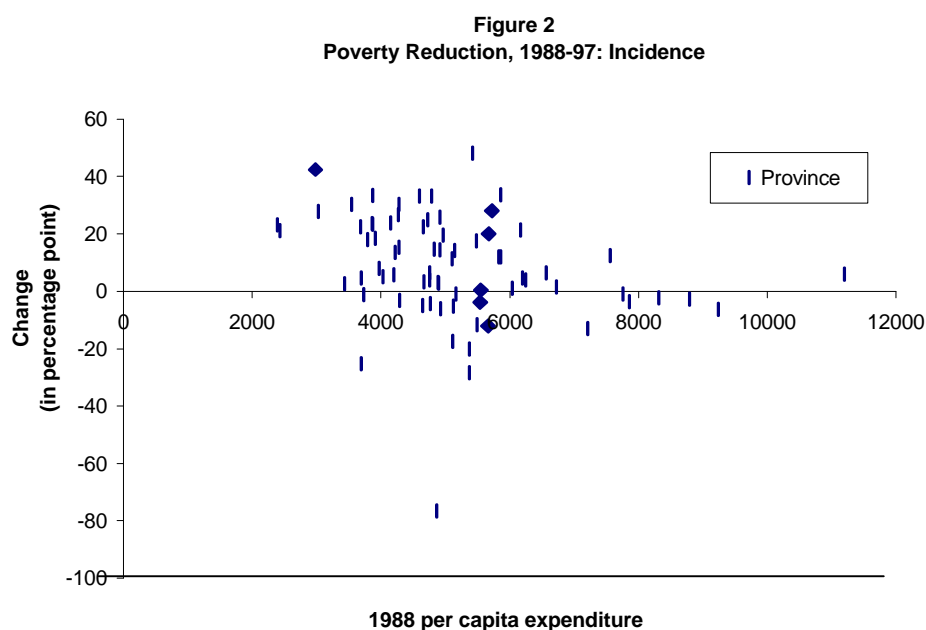
1965, Power and Sicat (1971)

1974, Tan (1979)

1985 and 1988, Medalla (1990)

1991, 1993, 1995-2000, Manasan and Querubin (1997)

8. The choice of province instead of region as unit of analysis permits the use of a much larger number of observations (73 as opposed to 13) for econometric work. In this section, "rural areas" pertain to all provinces outside of major cities (Metro Manila, Cebu, and Davao).



How important are these factors in explaining provincial differences in poverty reduction? In systematically addressing this issue, we have estimated reduced-form functions relating to *changes* in the proportion of the rural population deemed poor.<sup>9</sup> The poverty data are estimates based on the comparable provincial poverty lines reported in Balisacan (1999b). The household data employed are the 1988 and 1997 FIES rounds. These data are supplemented by provincial indicators obtained from various sources.

In each function, we have included the following initial-condition variables: *poverty level* at the start of the period; *land inequality*, given by the landholding Gini ratio which has extreme values of one (perfect inequality) and zero (perfect equality); *average farm size*; *irrigation*, expressed as the ratio of irrigated to total farm area; *road wealth*, defined as quality-adjusted road length per square kilometer of land; and *Pinatubo*, dummy variable indicating provinces devastated by the Mount Pinatubo eruption in the early 1990s. In addition, we have included variables representing the political environment, namely: *dynasty*, defined as the proportion of local officials related to each

9. Results for two other regressions involving the depth and severity of poverty (not reported, for brevity, in this paper) are qualitatively similar to those reported in Table 9.

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other by blood or affinity, with respect to the total number of elective positions; *political party*, dummy variable indicating whether the provincial governor belonged to the political party of the president; and *MILF*, dummy variable indicating whether the province had problems with Muslim insurgency. To capture the effects of time-varying factors on the evolution of poverty, we have added the change in the values of the following regressors: agricultural *terms of trade*, defined as the ratio of the price of agriculture to non-agriculture; *electricity*, defined as the proportion of households with access to electricity; *functional literacy*, defined as the proportion of adult population who can read, write, and execute simple messages; and *CARP*, proportion of cumulative Comprehensive Agrarian Reform Program accomplishment to total potential land reform area; and *RGDP*, defined as regional per capita Gross Domestic Product.

The land-inequality variable reflects access to land and, given imperfections in credit market, serves to proxy for household ability to smooth consumption during shocks. This variable is expected to be negatively related with performance in poverty reduction. The irrigation variable is a proxy for land quality. It is expected to positively influence poverty reduction. Road wealth is proxy for access to markets and off-farm employment. The functional-literacy variable reflects the quality of human capital. Investment in human capital is expected to improve returns to labor (among other channels) and hence reduce poverty. The terms-of-trade variable reflects the relative price incentives for agriculture. RGDP is proxy for overall economic climate in the region. The political-dummy variables reflect the quality of local governance and access to fiscal resources. The dynasty variable captures the extent of participation (competition) in local politics. One may expect that political dynasty inhibits economic growth through its negative effect on efficient operation of markets (e.g., restricting competition in local markets to create rents for the political clan) and, hence, on performance in poverty reduction.<sup>10</sup> The political-party-affiliation variable reflects access to the national coffer for local economic development.

The regression results are given in Table 9. The models explain roughly three-fourths of the observed differences in poverty reduction across 73 provinces between 1988 and 1997.

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10. differently, local governance by political dynasty may make feasible the concentration of economic controls to a few hands, thereby leading to (perpetuating) high income inequality. High income inequality, in turn, may inhibit subsequent growth in the local economy, as suggested by recent development literature.

As expected, the initial level of poverty influences the speed of poverty reduction. That is, provinces with initially high level of poverty tend to be also the ones with relatively rapid rate of poverty reduction, all other factors remaining constant. This has to do partly with the fact that the distribution of living standards is invariably skewed to the left. Thus, for a given growth rate and income distribution, poverty reduction would be higher for provinces with initially lower mean income (and hence higher poverty). Put differently, the marginal return (in terms of poverty reduction) to an investment raising mean income is higher the higher is the initial poverty.

Initial landholding inequality is not significant in all three equations, but the CARP variable is, suggesting that in provinces where the implementation of the agrarian reform program was relatively rapid, poverty reduction tended to be likewise relatively fast, all other things remaining the same. This result supports the finding of Deininger et al. (2000), demonstrating that CARP beneficiaries achieved higher household incomes than comparable households not covered by the program, all else remaining the same.

Farm size and irrigation are also important determinants of poverty reduction, as expected. The positive and significant coefficient of the irrigation variable suggests that improvements in land quality offer an important avenue for speeding up poverty reduction, especially in areas where poverty continues to be a rural phenomenon.

Table 9. **Determinants of poverty reduction**

Explanatory variable	Full Model		Final Model	
	Regression coefficient	t-ratio	Regression coefficient	t-ratio
Initial Conditions: Late 1980s				
Incidence	0.790	8.48	0.820	10.55
Land inequality	0.521	1.01		
Farm size	-0.375	-0.21		
Irrigation	9.301	0.97	15.348	1.85
Road wealth	12.700	2.72	12.250	2.90
Dynasty	-7.186	-1.09		
Political party	1.206	0.41		
Pinatubo	6.265	0.87		
MILF	1.922	0.33		
Change between 1988 & 1997				
Terms of trade (Pa/Pna)	41.945	1.74	45.59	2.32
RGDP	0.001	3.15	0.002	4.77
Electricity	0.308	2.46	0.277	2.31
Functional literacy	-0.174	-1.02		
CARP	4.444	2.31	3.057	2.19
Constant	-85.843	-2.55	-61.160	-5.148
Adjusted R squared	0.713		0.721	
F-ratio	11.26		22.01	

Note: Dependent variable is change in poverty incidence between 1988 and 1997. Data pertain to 73 provinces.

Road wealth is highly significant and positive in all equations. This result suggests that provinces with initially favorable access to markets and off-farm employment tend to have faster poverty reduction, all else remaining the same. The result confirms the common assertion that public investment in rural infrastructure, especially rural transport, generates economic linkages and externalities critical to sustained growth and development of the local economy (ILO 1974; World Bank 2000a).

The overall climate for local growth, as indicated by the regional-GDP-growth variable, likewise proves to be a significant factor influencing the speed of local poverty reduction. This is consistent with the observation made in Balisacan (2000) that overall growth represents the main source of national poverty reduction in recent years.

Surprisingly, functional literacy is insignificant in all regressions. This result appears to contradict the popular story emanating from East Asia's development experience which suggests that substantial improvements in human capital formed part of the building blocks for sustained

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economic growth and poverty reduction (Ranis, 1996; World Bank 2000b). Note, however, that the result may have been unduly biased by the rather short interval (five years) chosen for this variable owing to the limitation of available data.

The dynasty variable, as well as the variable representing political party affiliation of local government executives, is not significant in all regressions. This is interesting considering the usual claim that dynasty in local politics inhibits economic performance – through its effects on economic efficiency – and hence poverty reduction. It is possible, however, that these variables do not adequately reflect the quality of – and constraints to – local governance. For instance, the dynasty variable falls short of capturing all the possible networks of blood/marriage relationships running from the provincial governor to municipal officials.

## VI. Conclusion

This paper has examined the character of rural development and the policy environment influencing the performance of the rural economy during the postwar period. It has attempted to explain why the pace of poverty reduction in the Philippines has been quite disappointing compared to its neighbors.

Growth of agricultural production in the Philippines during the 1960s and 1970s was quite substantial. Much of this growth resulted from increases in productivity, specifically from the adoption of high-yielding varieties, increased use of fertilizers, and expansion of public investment (especially irrigation). However, despite this rather impressive growth, the response of rural poverty was quite weak. While the incidence of rural poverty declined, with some short term fluctuations, the pace of poverty reduction paled in comparison to that in, say, Thailand or Indonesia.

One of the main reasons for such weak response could be the historical processes leading to the social structure of rural Philippines and the growing incidence of landlessness during the period. Additional reason could be found in policy measures that were “anti-small farmer” and thus “anti-poor.” It has been well documented that economy-wide policies comprising the import-substituting industrialization strategy (e.g. overvalued domestic currency, industrial protection) during the 1960s and 1970s depressed the relative price of agricultural products and encouraged capital intensive patterns of industrialization, thereby hampering the labor absorptive capacity of economic growth and industrialization. Furthermore, policy interventions targeted to the agricultural sector appear to have had anti-small farmer biases. For example, small farmers were rationed out of credit access

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due to the subsidized credit program that reached few small farmers, fertilizer subsidies were ineffective, and public investment in research and infrastructure tended to disproportionately benefit larger farmers.

The poor performance of agriculture in the 1980s and early 1990s resulted from a combination of factors, including the decline of world commodity prices, stagnation in public investments (especially in rural roads, irrigation and research), exhaustion of the potentials of high-yielding varieties, and uncertainty created by the unduly slow implementation of the land reform program. At the policy front, the overvaluation of the domestic currency persisted throughout the 1980s, and, as a result, the magnitude of the negative (indirect) protection on the agricultural sector remained relatively high.

While incomplete, policy measures with anti-small farmer biases introduced in the 1970s were reformed in the 1980s. Meanwhile, despite the substantial slowdown of agricultural growth in the 1980s and 1990s, rural poverty continued to decline, albeit very slowly. A main factor that contributed to the increased responsiveness of poverty reduction to economic growth during this period appears to be the expansion in the non-farm income earning opportunities in rural areas (e. g., Hayami and Kikuchi, 2000). In addition, the policy reforms of the 1980s and the 1990s may have made the impact of aggregate growth more “pro-poor” compared to the earlier period (Balisacan, 2000). In the 1990s, however, there have been both accelerated policy reforms (e. g., liberalization of foreign exchange markets, trade liberalization, privatization in the service sector) and increased protection on the agricultural sector (e. g., high tariffs overcompensating the import quotas being removed). Consequently, the effective rate of protection of the agricultural sector became roughly equal to that of the manufacturing sector in the 1990s, a major policy shift from the previous several decades when the effective protection of agriculture was substantially less than that of manufacturing.

Overall, economic reforms in recent years, albeit largely incomplete, have favorably changed the economic environment of the poor. These have made recent episodes of economic growth to be beneficial to the poor, even more so than to the nonpoor. The details of the transmission actually involved from policy reforms to improvement in economic well-being of the poor is an interesting area for future research.

Land reform aimed at reducing inequality in the distribution of landholding is a crucial aspect of rural development and poverty reduction. Throughout the postwar period, efforts aimed at reforming agrarian relations have not been lacking. Yet, results so far have not been encouraging. Indeed, the unduly long period of land reform implementation has bred unintended effects harmful to agriculture and rural areas. (Successful land reform programs elsewhere, especially in East Asia, were implemented invariably swiftly.) As noted earlier, the uncertainty surrounding the program has discouraged the flow of investments into agriculture as well as encouraged premature conversion of agricultural lands into non-agricultural uses. Moreover, the program has effectively caused the private market for agricultural lands to cease, thereby diminishing the collateral value of agricultural lands and hence discouraging lending to agriculture, especially by private financial institutions.

Priority should also be given to rural infrastructure development, agricultural research and technology transfer, and small- and medium-scale industrial development in rural areas. As the East Asian experience demonstrates, investment in land quality and in access to infrastructure, together with sound "fundamentals" (i.e., fiscal and monetary restraint), are critical to the building of initial conditions for broad-based growth and development.

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