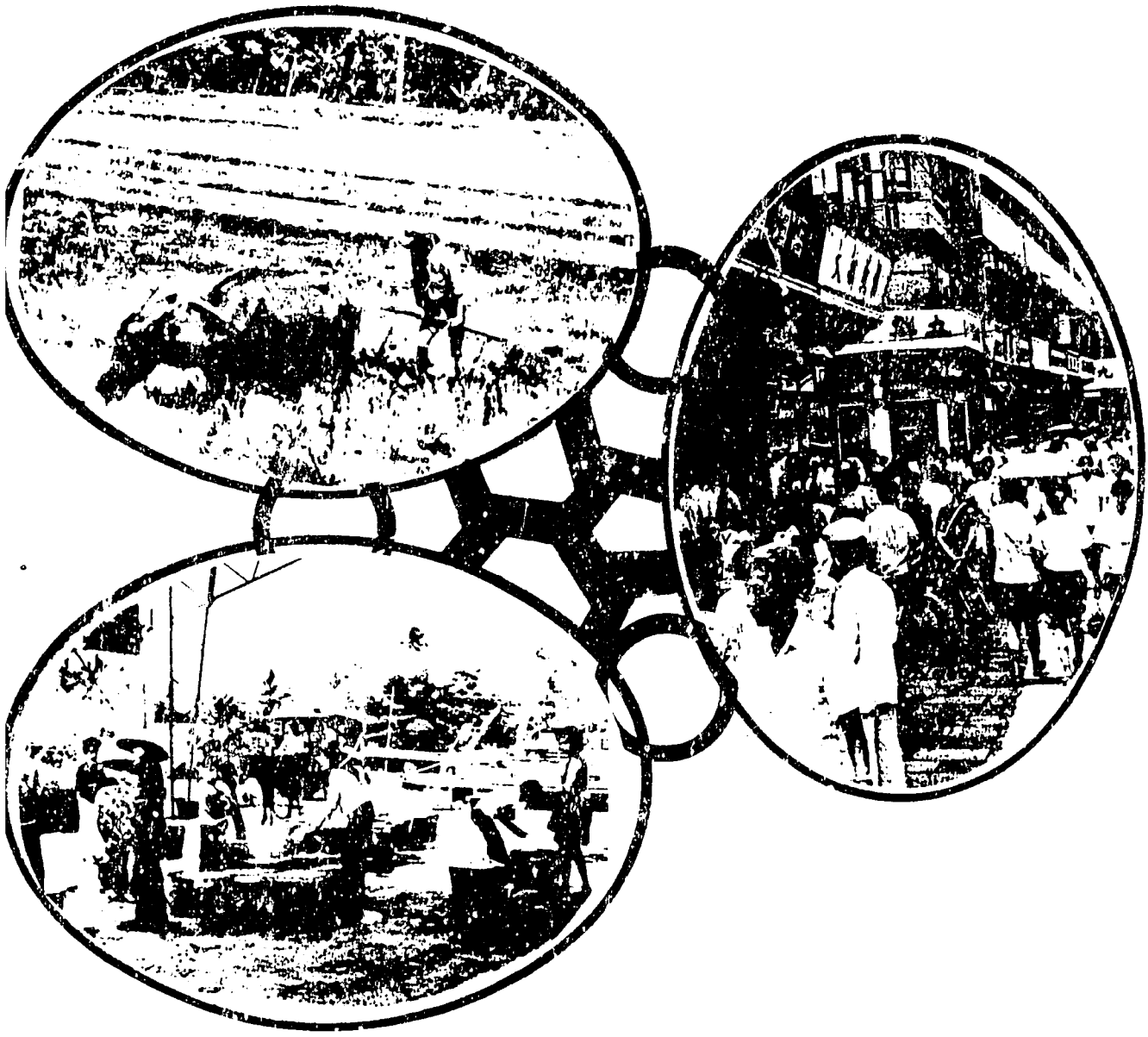
AGRICULTURE, EMPLOYMENT AND ENTERPRISE:

Rural-Urban Dynamics in AID Development Strategy



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for

Regional and Resources Development Division
Bureau for Science and Technology
U. S. Agency for International Development
Washington, D.C.

1987

Contract Number:

DAN-1406-C-00-5106--00

United States Agency for International Development

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PREFACE

This report was prepared through a small research contract from the Bureau of Science and Technology of the U.S. Agency for International Development. I am grateful to Eric Chetwynd, Jr. and Avrom Bendavid-Val who monitored the work, and who provided helpful suggestions for revision at various stages of its progress. Several people read and commented on earlier drafts, and their recommendations were reflected in later revisions of the manuscript. Thomas Carroll, Gerald Karaska, and Gustavo Arcia, especially, provided insightful reactions. The conclusions and interpretations presented in this report, however, are those of the author. They do not necessarily reflect the policies of the U. S. Agency for International Development, or the opinions of those who were kind enough to provide assistance.

This study deals with the complex set of relationships among agricultural, employment and enterprise development in less developed countries, and with the rural-urban interactions that pervade those relationships. It examines those relationships in subsistence and low-surplus agricultural production regions, in regions with economies undergoing the transition from subsistence to commercial agricultural production, and in urban regions with diversified nonagricultural economies. A major thread running throughout the analysis is the pervasive impact of rural-urban marketing systems on agricultural, employment and enterprise development. The conclusions focus on ways in which AID and governments in developing countries can promote agricultural development, generate employment, and expand private enterprise by strengthening rural-urban linkages in the food marketing system.

Those who prefer to read an "executive summary" of this report should concentrate on Chapters Two and Six, which outline the major themes and policy recommendations.

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CHAPTER ONE

AGRICULTURE, EMPLOYMENT, AND ENTERPRISE:

PROBLEMS AND CHALLENGES IN DEVELOPMENT

Developing countries in Africa, Asia, and Latin America face three critical problems that pose serious challenges to them for the rest of this century and into the early years of the next. These problems include those of: first, increasing and sustaining agricultural production to meet the expanding food needs of growing populations and to alleviate hunger and malnutrition; second, generating employment for their growing labor forces; and, third, creating or strengthening viable public and private enterprises through which productive activities can be carried on and employment can be generated. In addition, nearly all developing countries must find ways of coping with the pervasive economic and social changes accompanying rapid urbanization. Their capacity to deal with these problems will largely determine how quickly and how effectively less developed countries achieve their goals of economic growth and social progress.

Although the U.S. Agency for International Development (AID) has provided technical assistance to developing countries in food production and distribution, employment

generation, and enterprise development for many years, its strategies only partially recognize the inextricable relationships among these problems and that foreign aid programs must come to grips with those relationships if they are to help developing countries achieve economic and social progress. Its strategic plan provides little guidance or direction in coping with these relationships, especially the rural-urban dynamics that underlie all three development problems. Much still must be learned about the relationships among these problems before policies can be transformed effectively into action.

Therefore, this study focuses on the nature of the relationships among agricultural, employment and enterprise development, and on their implications for translating AID's strategic objectives into policies and programs that can deal more effectively with them. Special attention is given to the rural-urban dynamics that seem to affect, and are influenced by, all three development problems. And because all of the problems manifest themselves most clearly at subnational levels within developing countries, this study focuses on the regional context in which rural-urban dynamics affect--and are influenced by--agricultural, employment, and enterprise development.

ECONOMIC DEVELOPMENT PROBLEMS AND AID STRATEGY

The U.S. Agency for International Development recognizes in its development assistance policies, the importance of each of these problems and the challenges they offer to developing countries. AID's strategic plan, Blueprint for Development, notes that economic growth in developing countries must "be reflected in increases in employment, income, and agricultural production... and in increased income to low income people" (USAID, 1984: 8). The plan concludes that if economic growth does not produce these results, it will have failed to improve developing countries' capacities to satisfy people's basic needs. In the short run, development activities in poor countries must reduce hunger and malnutrition, which AID considers "a humanitarian concern as well as a constraint on productivity that cannot be endured."

In the long run, the alleviation of hunger and improvements in the quality of life depend on increasing per capita food production and availability, and raising the incomes of poor households. Therefore, AID's strategy defines economic growth not only as increasing gross national product, but also as increasing employment and income. "Neither human dignity, a sense of individual purpose and worth, nor material well being are within the reach of the chronically unemployed and underemployed," AID's strategic plan points

out. "Low productivity of workers is a fundamental cause of low earnings. ... Without increased employment and income, prospects for improved quality of life are dim and the burden of paying for solutions to hunger, health and education problems rests on over-pressed governments" (USAID, 1984: 24-25).

Agricultural Development

AID's plan recognizes that despite the progress made by developing countries in increasing agricultural output over the past two decades, the problems of improving food production and distribution will remain a dominant one for the remainder of this century. The agricultural policies of developing nations seek a number of common objectives, including setting prices that create incentives for farmers to increase output, raising the levels of farm income, providing adequate food at affordable prices to poor households, protecting the economy from short-term international price fluctuations, and developing marketing systems that are responsive to changing consumer demand (Cleaver, 1982). Although increases in food production have more than kept pace with the growth in world population, and many developing countries have achieved higher levels of per capita food consumption since the early 1960s (Bale and Duncan, 1983), further improvements in both are still crucial to the development of poor countries for a variety of

reasons.

First, in many developing countries agriculture still contributes significantly to gross domestic product (GDP) and is likely to continue doing so for the rest of this century, especially in the low income countries where agriculture contributed 36 percent of GDP in 1982 (World Bank, 1985).

Second, in about 60 percent of the developing countries agricultural goods are still the main export. Agricultural exports accounted for about one-third of the total merchandise export earnings of all developing countries during the late 1970s and early 1980s (World Bank, 1982). In 11 of the poorest countries in Latin America and the Caribbean, agricultural goods account for more than half of their total exports, as they do for 15 countries in Africa (FAO, 1983). More than 70 percent of the earnings from exports in African countries are derived from a relatively few agricultural commodities. Moreover, African governments receive the largest amounts of revenues from direct and indirect taxes on agriculture (Lele, 1981).

Third, agriculture provides employment and livelihood for a substantial portion of the population in developing countries, and especially in the poorest ones. The United Nations Food and Agriculture Organization identifies 24 countries in Africa with more than 75 percent, and 15

countries more with over half of their populations engaged in agriculture. In the Near East and Asia, 19 countries have over half of their populations in agriculture as do 5 countries in Central America (FAO, 1983). In countries with a percapita GNP of less than $400 a year, more than 70 percent of the labor force is in farming. And although the relative importance of agriculture as a source of employment generally declines with higher levels of economic development, only a few of the higher income developing countries have seen a significant drop in the absolute numbers of people employed in farming (Gregory, 1980).

Fourth, although world food production has increased impressively since the early 1960s, agricultural growth rates have declined or remained stagnant in many African, some Central and South American, and several Asian countries, while population has grown rapidly. This has contributed to severe food crises and widespread malnutrition in those countries. The index of food production per capita has dropped for many developing countries, despite the increase in world agricultural output. From 1981 to 1983, per capita food production fell below 90 percent of the 1974-1976 level in at least 20 developing countries that have populations of more than 184 million (World Bank, 1985).

Finally, between 340 and 730 million people in developing countries are subject at regular intervals to crises of food

scarcity, famine, and severe malnutrition because they have incomes too low to obtain adequate amounts of food (Reutlinger, 1985). AID's Africa Bureau points out that 35 of the 46 countries that it assists are expected to have food deficits by the end of the 1990s (USAID, 1984).

AID's agricultural development policies have two major goals. The first objective is to increase food availability by raising agricultural production, especially by increasing the productivity and incomes of small farmers and by increasing their capacity to market their goods effectively. The second goal is to improve food consumption in both rural and urban areas by expanding employment so that the poor will have the income to buy food, by increasing awareness of sound nutritional principles, and by directly distributing food to those facing temporary shortages or severe malnutrition (USAID, 1982a).

Employment Generation

Programs to increase agricultural production can only be successful in most developing countries, and especially in low income agricultural regions, if they are tied closely to programs for employment generation. Mellor (1986:79) points out that if agricultural production increases without the expansion of employment, prices will fall significantly, leading to reduced production. "The way to deal with the

problem is through accelerated growth in employment, which under the low-income conditions of developing countries is efficiently translated into increased demand for food."

The green revolution in Asia and Latin America had a strong impact on increasing agricultural output and rural incomes in some countries, but Mellor (1986: 73) emphasizes that "where--as in India and the Philippines--the green revolution was not associated with an employment orientation, it served substantially to displace food imports and build food stocks rather than as the base for a new development strategy."

AID's strategic plan emphasizes that the most direct and lasting means of overcoming the problems of poverty and of generating sustainable economic growth in developing countries is by expanding job opportunities and lowering the rates of unemployment and underemployment. "Self-sustaining answers to the problems of poverty require a productive and self-reliant population," AID's plan points out. "Economically viable jobs appropriate to the levels of education and skills training of the poor enable them to generate the income necessary for meeting basic needs." (USAID, 1984: 25).

Recent statistics on labor force growth in developing countries indicate that millions of new jobs will be needed over the next two decades. The labor force has been growing

by about 2.2 percent a year since the early 1970s, and is projected to continue growing at that same annual average rate until the end of the 1990s (World Bank, 1985). Studies done for the World Bank have found that developing countries are attempting to cope with labor force growth rates that are nearly twice as high as those of economically advanced countries during their periods of industrialization (Squire, 1981). The high rates of overall population growth and the high dependency ratio arising from the large percentage of young people in the population structure of most developing countries means that they will face serious problems of providing employment for the large numbers of youth who will be entering the labor force during the next 15 years.

Developing countries report open unemployment rates averaging 7 to 10 percent during the past decade, but they are known to be substantially higher in many poorer countries, for many lower income and ethnic groups within some developing countries with low overall rates of open unemployment, and in many Third World cities. Underemployment tends to be a far more serious problem, and especially in urban areas. Total underemployment in Latin American countries, for example, was estimated to be about 42 percent in 1980, a level not significantly lower than that in 1950 (Portes and Benson, 1984). Although accurate and reliable data for both unemployment and underemployment are

difficult to obtain, rates of labor underutilization (the combined rates of open unemployment and underemployment) have been reported to be about 20 percent in Latin America, 26 percent in Asia, and 39 percent in Africa (Squire, 1981). AID's Latin America Bureau points out that in South America and the Caribbean, "employment in the modern sector, especially in industry, has grown slowly in the past 20 years, in large part because of economic distortions that favored the substitution of capital for labor. In agriculture, labor productivity remains low and growth rates have been disappointing" (USAID, 1984a: 12).

AID's strategy for employment generation focuses on helping developing countries reduce their overall rates of population growth, expand agricultural output, and strengthen private enterprise. Expansion of private sector investment, and especially in small- and medium-scale enterprises, is considered to be crucial for creating jobs because "in almost all Third World nations, the vast bulk of income and employment is generated by the activities of private producers." AID officials claim that "this is true in the agriculture sector as well as in manufacturing and services. Moreover, most employment and self-employment occur within small productive units, whether farms or machine shops" (USAID, 1984: 20). AID sees the expansion of small- and medium-scale enterprise as an effective way of absorbing some

of the workers who will be added to the labor forces of both rural areas and cities.

Enterprise Development

Underlying AID's analysis of food production and employment problems in developing countries is a recognition that governments alone cannot deal with them effectively. Therefore, AID seeks to help governments build the capacity of the private sector to play a stronger role in meeting the challenges of expanding agricultural production and employment. AID's strategy is based on the belief that "there are many things that government cannot do, or cannot do well. We reject the idea that government is the sole instrument for delivering goods and services vital to the development effort." Therefore the U.S. foreign aid program seeks to promote "fuller participation of the private sector as an engine of growth," assuming that "private institutions can become self-sustaining without requiring continued infusions of public funds" (USAID,1984: 19).

Urbanization

Although many of AID's projects focus on problems of agricultural and rural development, the Agency recognizes the fundamental changes that rapid urbanization will bring to much of the developing world over the next two decades. Low income developing countries--the 34 with the lowest levels of

per capita GNP--had an average urban population growth rate of 4.5 percent a year during the 1970s and early 1980s (World Bank, 1985). "In some countries, particularly those in the Near East and Latin America, the urban population now constitutes a majority. In many other countries this will occur by the turn of the century," AID's strategic plan points out. "We are now seeing urban centers containing five and even ten million people. By the end of the century the largest cities in the world, some with over fifteen million people, will be in Third World countries."

The problems accompanying accelerated urbanization are exacerbated by the fact that the largest cities are growing the fastest in most developing countries. The United Nations estimates that the number of cities of one million or more residents more than doubled from 50 to 118 between 1950 and 1980, and that their populations tripled from 113 million to 339 million (United Nations, 1980). The UN predicts that the number of Third World cities with more than a million population will more than double again, to about 284, between 1980 and the end of the century. The populations of these cities are likely to increase by nearly 600 million.

By the end of the 1990s, many of the largest metropolises in the world will be in developing countries. United Nations (1985) demographers predict that Mexico City is likely to reach 25 or 26 million in population, that Sao Paulo will

grow to 24 million, Bombay and Calcutta will exceed 16 million, Jakarta, Seoul, Rio de Janiero, New Delhi, Tehran and Shanghai will grow to more than 13 million, and Cairo, Manila, Bangkok, Karachi, and Beijing will reach at least 10 million in population.

Over the next twenty years developing countries will also see a dramatic shift in the incidence of poverty. Although about two-thirds of the poorest households now live in rural areas, the World Bank predicts that by the end of the 1990s, more than half of the destitute will be living in urban places (World Bank, 1980). By the year 2000, more than half of those people living in absolute poverty will be urban dwellers. About 245 million poor people will be added to the populations of Third World cities. In Latin America and the Caribbean over 90 percent of the absolute poor will be living in urban places, as will be about 40 percent of the poorest in Africa and about 45 percent of the poorest in Asia.

The strains on urban services, facilities, housing, and infrastructure are already great, and the capacity of national and municipal governments in most developing countries to extend even basic urban services to new migrants is quite limited. Studies by the United Nations indicate that more than 60 percent of the residents of Addis Ababa, Casablanca, Kinshasa, Bogota, and Calcutta now live in slums and squatter settlements where sanitation, potable water,

waste disposal, and health and educational services are scarce or nonexistent. More than 40 percent of the residents of Mexico City, Lima and Bombay live in such slums, as do at least one-third of the people living in Nairobi, Dakar, Rio de Janiero, Delhi, Dacca, and Manila (Donohue, 1982).

Unemployment problems in urban areas are likely to surpass those in rural areas. Large concentrations of poor families in cities will create growing demands for jobs, health, education, housing, and other basic services and physical facilities. Rapid urbanization will also increase the demand for food and place increasing strains on agricultural production capacity.

AID's strategic plan observes that "it is increasingly clear that a major transformation is taking place in Third World countries that necessitates increased attention to urban areas" (USAID, 1984: 55). AID's strategic plan emphasizes that the Agency, in giving increased attention to urban areas, will focus primarily on "employment generation and the strengthening of host country institutional capability"(USAID, 1984: 56).

RELATIONSHIPS AMONG DEVELOPMENT PROBLEMS AND STRATEGIES

The problems of agricultural, employment and enterprise development are inextricably related and must be mutually reinforcing components of strategies for economic growth. If

agriculture and employment are to play an important role in national development, Mellor (1986) insists that three conditions must be created. First, there must be an acceleration in the growth rate of agricultural production. In most developing regions, increases in agricultural output are the result of technological change. Second, the expenditures from increases in income derived from accelerated agricultural production must create demand for a wide range of goods and services produced by enterprises that generate employment in a large number of market towns and small cities in rural regions. Third, an effective marketing system must be created to lower food prices and to encourage employment in nonagricultural sectors by making labor less expensive than the goods and services it produces.

To some extent, AID's strategic plan recognizes that the problems of agricultural production and distribution, employment generation, and urbanization are related. For example, the plan points out that generating employment in rural areas depends in part on increasing agricultural production and raising the incomes of rural households. Thus, AID seeks to help increase agricultural production in Central America by 4 percent a year by 1990 because this "would increase food availability internally and generate exports of nontraditional agricultural and agro-industrial products," thereby creating about 80,000 jobs a year (USAID,

1984b: 16). AID's Africa Bureau also claims that "not only is broad based agricultural development the key to increasing incomes, employment and foreign exchange earnings, it is also essential for improvements in nutrition, health and the general quality of life" (USAID, 1984a: 19).

AID's strategy points out the relationships between rural unemployment and urban growth, and that the "lack of productive jobs in rural areas is expected to increase internal migration to the cities, particularly of younger men, and to a lesser extent younger women."(USAID, 1984: 25). The Agency's plan emphasizes that rapid urbanization will also generate new employment problems in cities, but that "expanded agricultural development will have direct and indirect impacts which should help retard migration to urban areas." Finally, AID's strategic plan recognizes the relationships among all three problems in claiming a strong role for private enterprise in increasing food production in rural areas, improving food distribution in urban areas, and generating new employment opportunities in both rural regions and cities.

Yet, AID's strategic plan fails to describe the nature of these relationships in operational terms or to explore their implications for policies and programs. Nor do existing AID policies deal effectively with the rural-urban dynamics that shape these relationships in regions with different social

and economic characteristics. This study, therefore, focuses on the nature of the relationships among agriculture, employment and enterprise and the dynamics of rural-urban interaction through which these relationships are formed.

METHODOLOGY, SCOPE, AND OUTLINE OF THE STUDY

In the past, AID's research and technical assistance in food production and distribution, employment generation, and enterprise promotion have been pursued independently of each other and with little cognizance of the impacts of urbanization on them. For example, AID's development strategy provides little guidance on how to identify enterprises that are crucial for stimulating sustainable development in regions with different socio-economic characteristics, or on the preconditions that must exist in towns and cities to support those enterprises. It says little about the types of rural-urban relationships that allow cities and towns to support agricultural development and increase off-farm employment opportunities, or about the dynamics through which rural-based agricultural development and town-based enterprise development can help stimulate growth in regional and national economies. It provides AID Missions with virtually no guidance about the most appropriate locations for projects that seek to expand

private enterprise and employment opportunities in rural regions.

More knowledge about these relationships is vital for improving AID's capability to identify and design programs that will be effective and efficient in addressing the relationships among the three development problems described earlier, and that will spark a process of enterprise-driven agricultural expansion, employment generation, and regional economic growth. As a consequence, AID still lacks the means to deal systematically with the rural-urban dynamics that are crucial to addressing these problems effectively.

Methodology

This study reviews the extensive literature on and experience with the relationships among food production and distribution, employment generation, and town and city development. It summarizes the findings of reports and project evaluations of AID, the World Bank, and several specialized agencies of the United Nations, and derives lessons from unpublished reports from developing countries on activities to promote agricultural, employment, and enterprise development. The analysis of these sources of information focuses on four themes:

1. The dynamics by which rural-based agricultural and urban-based enterprise development, in concert, help to

stimulate regional economic development;

2. Private enterprise activities that are crucial for stimulating development in rural regions as their food production and distribution systems change and expand;

3. The preconditions that must exist in towns and cities for private enterprise development to occur effectively and efficiently in regions with different economic characteristics and food production and distribution systems; and,

4. The types of rural-urban relationships that must be strengthened in order for a region's cities and towns to support agricultural development and off-farm employment-generating activities effectively.

Scope of the Study

This study assesses rural-urban dynamics in development by examining food production and distribution, employment, and private enterprise development in their regional economic context. In most regions, even highly urbanized ones, food production and distribution are important components of the economy. Moreover, the dynamic relationships between rural areas and towns and cities within regions, and among regions in a national economy, are most easily analyzed through food production and distribution systems.

An underlying assumption is that there is a close relationship between the characteristics of a regional economy and the types of food production and distribution systems that operate within it. In some cases, a region's economic structure strongly influences the type of agricultural production and distribution system that can emerge. In other cases, the agricultural production system shapes the structure of the regional economy.

Another underlying assumption of this report is that although every rural region is to some degree unique, regions in quite diverse countries also share some common economic, social and physical characteristics. An analysis of those commonly shared characteristics can provide insights into the problems of food production, employment, and enterprise development that can better inform policy making and program design.

This study, therefore, summarizes the lessons of experience from which generalizations can be derived that can be used in policy and program development in the future. Specifically, this study focuses on three major types of regions in developing countries:

1. Regions with subsistence, stagnant, or low-surplus agricultural economies;

2. Regions in transition to surplus agricultural economies,

with expanding commercial food production and distribution systems; and,

3. Regions with urban economies that support food distribution and marketing systems.

Outline of the Study

This study analyzes rural-urban dynamics in a subset of regional economies in developing countries with different types of food production and distribution systems. Chapter Two describes the dynamic relationships between rural and urban areas that affect agricultural production, employment growth, and enterprise development, and identifies the reasons why development policies and programs should be formulated and carried out within a regional context.

Chapter Three analyzes regions with predominantly subsistence or low-surplus agricultural economies. It examines the characteristics of subsistence food production and distribution and of rural-urban relationships in subsistence regions. It focuses on the problems of increasing output and the conditions necessary to generate greater tradeable surpluses in ways that will increase income and employment opportunities for rural households. It identifies investments that can help increase agricultural production and raise rural incomes, and describes a strategy of "micro-urbanization" for low-surplus agricultural

regions.

Chapter Four examines regions with predominantly surplus agricultural economies and with commercialized food production and distribution systems that operate either through the market or through state-enterprises. It assesses the roles of towns and cities in supplying inputs for agricultural development, marketing agricultural commodities, and supporting enterprises that generate off-farm employment. Special attention is given to identifying the enterprises that need to be strengthened or expanded into order to make the food production and distribution system work more effectively. The spatial dimension of development in commercializing and diversifying agricultural regions is crucial, and market towns and regional cities are identified as strategic locations for investments in employment generating enterprises and in agroprocessing, marketing and supply functions.

Chapter Five provides a profile of urban regions with economies heavily influenced by food processing, marketing and distribution activities. It examines the roles of urban regions in providing, through both formal and informal sectors, markets for agricultural products, and the opportunities for investment in urban enterprises that improve food distribution and marketing. Recommendations are made for assisting informal and small commercial sector

enterprises engaged in food marketing and distribution in urban regions.

Finally, in Chapter Six, the findings of the research are summarized. Recommendations are made for strengthening rural-urban relationships in support of agricultural development, employment generation, and private enterprise expansion that can be further tested through more detailed research and pilot projects. Recommendations are also made about appropriate AID policies and programs for improving rural-urban marketing systems in developing countries.

CHAPTER TWO

RURAL-URBAN RELATIONSHIPS IN ECONOMIC DEVELOPMENT

Although much is already known about how to improve food production and distribution, generate employment, and stimulate enterprise development, far less is known about the relationships among these problems and how they influence and are affected by urbanization. Yet, increasing evidence points to the fact that underlying all three de elopment problems is a pervasive set of rural-urban relationships that are crucial to understanding and coping with them effectively. This chapter reviews the major rural-urban relationships in agricultural production and distribution, employment, and enterprise development, and subsequent chapters examine in detail the dynamics of these relationships in different types of regional economies.

RURAL-URBAN DYNAMICS IN AGRICULTURAL DEVELOPMENT

The relationships between rural and urban areas vitally affect food production and distribution in a variety of ways. It is well known, but often overlooked in development policies and international aid strategies, for example, that urbanization fundamentally influences not only the demand for food, but also the composition of agricultural production.

Rapid urbanization places stronger pressures on the agricultural sector to produce increasing amounts of food. In order to avoid importing food to satisfy increasing demand in cities, developing countries must increase agricultural output by an annual rate that is higher than the expansion of the non-agriculturally employed population. Moreover, as per capita income increases in urban areas, the composition of demand shifts significantly: from subsistence staples such as grains, starches, and tubers produced in traditional agriculture to commercially produced meats, vegetables, dairy products, and fruits. The percentage of dietary calories that come from complex carbohydrates and vegetable protein declines with rising incomes in cities, and the percentage from edible fats, animal fats, sugar, and animal protein increases (Scrimshaw and Taylor, 1980).

The strong linkages between rural areas and cities can have both favorable and adverse impacts on agricultural development. Excessively rapid growth of large metropolitan areas in developing countries, for example, not only creates problems for the cities, it can have an adversely affect rural regions as well. The major disadvantage of an highly unbalanced urban structure, Weitz argues (1971: 143) lies in "...the inability of cities to supply distant agricultural and rural districts with the services required to rescue them from stagnation and start them on the way to economic

growth." Studies of the central highlands of Peru have shown that the increasing concentration of population and economic activities in one or two very large metropolitan centers tends to break down regional systems of production in rural areas for a variety of reasons. Long and Roberts (1984: 245) contend that first, such a pattern of urbanization allows the major urban industrial center to establish direct linkages through migration and the flow of goods with small villages and towns without creating connections with secondary or intermediate cities that might retain surpluses in the region. Second, highly concentrated urbanization does not allow the dominant forms of regional production--especially low surplus or plantation agriculture--to expand local income fast enough to retain population and to offer economic opportunities that can counter the attraction of the big cities. Third, such a pattern of urbanization often leads to the creation of new enterprises in rural regions by metropolitan-based entrepreneurs or businesses. These enterprises are more likely to be capital-intensive with little direct labor or product linkages within the rural region.

Urbanization also brings strong political pressures to keep the costs of food low, frequently resulting in government pricing policies that are adverse to farmers. In Peru, for example, many of the benefits for farmers that came from

agrarian reform during the late 1960s were subsequently offset during the 1970s and 1980s by government price controls on indigenous food grains and subsidies for imported food (Mosely, 1985).

The World Bank reports that agricultural development in much of Subsaharan Africa has also been adversely affected because "the perennial pressure for cheap food in urban centers led governments to hold producer prices for foodcrops below their border price equivalents" (Acharya, 1978).

In much of Africa, the political pressures brought to bear on politicians keep cheap food policies a high priority for governments even when leaders recognize that those policies undermine the country's agricultural and rural development potential. "Urban consumers in Africa constitute a vigilant and potent pressure group demanding low-priced food," Bates (1983: 33) points out. "Because they are poor, they spend much of their income on food; most studies suggest that urban consumers in Africa spend between 50 and 60 percent of their incomes on food. In addition, the demand for many food crops rises even faster." Urban consumers pay close attention to food prices and form a powerful political force because they are geographically concentrated, strategically located, and can bring strong pressures on political elites to maintain cheap food policies or to replace officials allowing food prices to increase. "Political regimes that are unable to

supply low-cost food are seen as dangerously incompetent and as failing to protect the interest of key elements of the social order," Bates (1983: 34) notes. "Thus, it was that an emphasis on profits over food shortages and rising prices formed a critical prelude to the coup that unseated Busia in Ghana and led to the period of political manuevers and flux that threatened to overthrow the government of Daniel Arap Moi in Kenya."

The adversities for farmers of pricing policies that subsidize food costs for urban residents are often exacerbated by wage policies that create large income disparities between urban and rural workers.

Backward and Forward Linkages Between Rural and Urban Areas

The positive effects of rural-urban relationships are reflected in the strong backward and forward production, exchange, and consumption linkages that develop between agricultural and industrial activities as the economies of developing countries grow. Historical studies of both Western and more advanced developing countries indicate that "a large and increasing domestically produced agricultural surplus is a necessary condition for successful economic development" (Coleman and Nixon, 1978: 134). Successful developing countries found it essential to increase the supply of both traditional and unconventional factors of

production--land, labor, capital, fertilizers, pesticides, irrigation equipment, and higher yielding seed varieties--in order to increase agricultural output. Kuznets (1961) found that agriculture contributes to economic development in three ways. Its "production contribution" is to make available to the nonagricultural population increased amounts of food, the demand for which rises with continuing urbanization. Its "factor contribution" is supplying the rest of the economy with labor and capital, both of which tend to expand with greater agricultural production. Its "market contribution" is the increasing internal demand for services and manufactured goods that accompanies rising incomes and revenues resulting from higher agricultural output.

These linkages between agriculture and industry take a number of forms. First, as agricultural productivity increases and farming becomes more commercialized, it depends more heavily on manufactured inputs, including fertilizers, pesticides, farm implements, flood control and irrigation equipment, land clearance equipment, tractors, agricultural chemicals, storage and refrigeration facilities, and transportation equipment, much of which is produced in cities. Second, agricultural products provide inputs for expanding agro-processing industries--those that mill grains and rice, process meat and dairy products, and refine sugar, for example--many of which are located in small towns and

cities in rural regions. Third, agro-processing in turn creates demand for other manufactured goods--milling equipment, machine parts, packaging materials, tin-plate and glass containers, and transportation equipment. Finally, agriculture provides inputs--natural fibres, for example, like cotton, jute, and kenaf--to nonfood processing industries (UNIDO, 1972).

More importantly, rising incomes from increased agricultural production create internal demand for a wide range of manufactured goods produced in cities and rural towns. Where agricultural production has increased beyond the subsistence level in Asian and African countries, demand has increased rapidly among rural households initially for clothing, shoes, sandals, combs, brushes, cosmetics, plastic, light fixtures, wooden furniture, bricks and paint for home improvements, bycicles, radios, and electric fans. As incomes continue to rise, greater demand is created for consumer durables such as televisions and motor vehicles (Johnston and Kilby, 1975).

These relationships between rural agricultural development and urban manufacturing and commercial development extend throughout the urban settlement system, from large metropolitan areas to small cities and market towns in rural areas. Urban settlements of all sizes can play important roles in supporting agricultural production and rural

development, and in generating off-farm employment in developing countries. As will be seen in subsequent chapters of this report, research has shown that strong economic, social, and physical linkages between urban settlements and rural areas can stimulate agricultural development by allowing dispersed towns and cities to absorb increasing amounts of surplus agricultural goods (Rondinelli and Ruddle, 1978; Rondinelli, 1983; 1985).

Importance of Urban Settlements for Rural Development

The need for a widely dispersed system of towns and cities to support agriculture has become more widely recognized over the past decade in the literature on rural development. Weitz (1971: 147) contends that a system of urban settlements in rural regions is crucial because it "provides the basis for activating the support system" that is essential to the generation of agricultural surpluses and for the diversification of rural economies. Where they function effectively, small and medium-sized cities create demand for products of cottage industries in surrounding rural areas; provide employment opportunities for both urban and rural residents in a wide range of agricultural processing and market-related trade activities; and function as agricultural supply centers, providing equipment, seeds, fertilizer, machinery, repair services, and information needed for agricultural development (Wanmali, 1983). Some small cities

offer an impressive array of economic, personal, commercial, and public services needed by rural households.

Some towns and cities act as centers of innovation diffusion for new agricultural information, methods and technologies developed in larger urban centers or in other regions (Rondinelli, 1983; 1985). The population growth and economic diversification of these urban places also influence the agricultural cropping patterns and land uses in surrounding rural areas. These towns often provide employment opportunities in nonfarm service, commercial, and small-scale manufacturing activities that allow urban workers to remit income to kin remaining in rural areas.

Moreover, both the formal and informal sectors in many large Third World cities provide important marketing outlets for agricultural goods. In Brazil, most of the basic food products such as beans, corn and cassava that enter large urban markets come from small producers in rural areas. They are the surplus production remaining from farm family consumption and provide an important source of rural household income (Barbosa, 1981). Studies of cities in the Philippines indicate that more than one-fifth of their household's prepared food purchases are from informal sector stalls that are operated by people living in nearby rural areas or by urban residents who purchase their supplies from rural households. Street vendors in Indonesia play a

significant role in urban food marketing, and especially in the preparation and distribution of that country's secondary crops such as corn, cassava, soybeans and peanuts. A large majority of poor urban families in other developing countries also obtain a significant amount of their food from the informal sector, which in most developing countries has become a vital link between rural development and urban income generation (Thurston and Bardach, 1983). Finally, large cities often house the wholesalers and exporters that absorb large amounts of commercially produced agricultural commodities in rural regions.

Towns and Cities as Nodes in the Agricultural Marketing Chain

Perhaps the single most important function of urban centers in rural regions, however, is that they form an essential marketing network through which agricultural commodities are collected, exchanged and redistributed (Bromley, 1984). In many regions, agricultural goods that are not retained for household consumption, feed, seed or in-kind payments, move through a complex network of public and private enterprises based in villages, market towns, and intermediate- sized and large cities. Both food and nonfood agricultural products are marketed by farmers in rural areas through cooperatives, itinerant traders, brokers, hullers, processors, and millers, or directly by farmers themselves in village periodic

markets. Food products are also sold in market towns to brokers and truckers, commission agents, and government marketing agents, or directly to consumers in market places. Often some portion of the agricultural products sold in villages and towns is bulked by traders, brokers and truckers, processors and assemblers, and commission agents for resale in regular markets and to wholesalers and retailers in larger towns and cities. Government marketing boards, wholesalers, and brokers often rebulk goods not sold in town and small city markets for sale in metropolitan areas to exporters, urban wholesalers, retailers, public institutions, supermarkets, informal sector vendors, restaurants and hotels, grocery stores and a wide range of other outlets in big cities. Thus, towns and cities not only facilitate the marketing of farm products, but are essential to the whole chain of exchange on which commercial agriculture depends (Lele, 1971; Okoso-Amaa, 1975; Riley and Weber, 1979).

Without a network of towns and cities, agricultural trade in a region is usually restricted to periodic markets in which small-scale farmers exchange goods among themselves or with intermediaries. The incentives for increasing production that come with the ability of farmers to market their goods competitively is lost. Under such conditions agriculture does not easily expand beyond subsistence or

low-surplus production levels.

Thus, because of the strong potential linkages between rural and urban sectors, weaknesses in agriculture can lead to severe problems that slow down or stagnate national economic growth (Lewis, 1964). They exacerbate or sustain income inequalities within developing countries by maintaining subsistence and low surplus farmers in poverty, thereby widening the gaps in income and wealth between urban and rural populations. Weaknesses in agriculture also encourage --through "push factors"--large numbers of the rural poor to migrate to big cities, where employment opportunities and living standards are perceived to be better. They also prevent many developing countries from earning larger amounts of foreign exchange through agricultural exports, and inhibit the growth of industry because the rural population has insufficient purchasing power to consume manufactured goods.

RURAL-URBAN RELATIONSHIPS IN MIGRATION AND EMPLOYMENT

The inextricable relationships between rural and urban development are seen most clearly in the impact of rural emigration on the growth of urban areas in developing countries. Poor Latin American countries, for example, had urbanization rates of more than 5 percent, and the urban populations of Sub-Saharan African countries have been

growing by more than 6 percent a year from 1970 to 1983 (World Bank, 1984). Countries like Bangladesh, Nepal, Malawi, Tanzania, Kenya, and Mozambique have seen their urban populations increase by more than 7 percent a year (World Bank, 1985).

Although lower middle-income countries have had a slightly lower average annual urban population growth rate of 4.1 percent, countries such as Liberia, Zambia, Zimbabwe, Papua New Guinea, Nigeria, Nicaragua, the Congo, and Angola have had urban population increases of more than 5 percent a year. The urban population grew by more than 8 percent a year in North Yemen, the Ivory Coast, and Cameroon, and by more than 20 percent a year in Lesotho. The continued high rate of migration in developing countries has led demographers to predict that by the end of the 1990s a majority of people in the northern and southern parts of the African continent, in Latin America and the Caribbean, and in large parts of Asia will be living in urban places (United Nations, 1980).

Because of the limited labor-absorbing capacity of agriculture in developing countries, and because of their prominence in the settlement systems of developing countries, large cities have had to play the major role in absorbing larger numbers of rural people freed from agricultural production. The problems of labor absorption are especially

critical in the poorest countries, where agricultural output has grown slower than total population, and where growth in industrial output continues to be outpaced by that of labor force expansion. In many developing countries, nonagricultural sectors will have to expand at very high rates in order to to absorb the rapidly increasing rural labor force. Coleman and Nixon (1978) point out that in countries where the labor force is growing by 2.5 percent a year and where agriculture employs 80 percent of it, non-agricultural employment would have to increase by 12.5 percent a year merely to prevent the agricultural labor force from growing. But neither manufacturing nor service sectors are growing fast enough to absorb the growing labor forces in most developing countries. For example, in the 34 countries classified by the World Bank as the poorest and where average annual population growth rates have exceeded 4.4 percent, growth in manufacturing output was less than 4 percent a year and in agricultural output was less than 2.3 percent a year over the past decade (World Bank, 1985).

This conclusion is confirmed by studies indicating that the economically active population in Latin America grew by about 2.5 percent a year between 1950 and 1980, and the urban labor force grew at an annual rate of 4.1 percent (Portes and Benton, 1984). Although the modern sector in agriculture and industry employed nearly 47 percent of the Latin American

labor force in 1980, the absolute increases in modern sector employment were consistently lower than the absolute annual growth of the nonagricultural labor force. The increasing costs of creating jobs in modern industry during the past 30 years has held employment generation below the 6.3 percent a year that would have been necessary merely to stabilize the level of underemployment (Portes and Benson, 1984).

In the poorest countries the ability of large cities to provide employment is severely strained by the steady inflow of unskilled rural people. Many of those who go to large cities must eke out a living on part-time employment or in the low paying "informal sector." In Latin America, the informal sector plays a significant role in providing subsistence income to migrants, many of whom live in densely populated squatter settlements and slums. Portes and Benson (1984) contend that if unprotected wage labor is added to the usual definition of informal sector occupations, then about half of the labor force in Latin American cities is engaged in informal sector activities.

Although in many of the middle-income developing countries high levels of migration have also placed increasing strains on the capacity of urban economies to employ larger numbers of workers, most cities have in fact absorbed large amounts of rural labor. Gregory's (1980) studies found that in the economically-growing developing countries the transfer of

labor from the low-income agricultural sector to the higher-income urban sector brought improvements in the average employment situation and in the living standards of the employed population. The integration of rural migrants in urban labor markets was relatively rapid, despite the fact that migrants derived their incomes primarily from the informal sector. Although migrants often experience high rates of unemployment, they are often comparable to those of long time urban residents.

Thus, both increasing agricultural production and continuing rural underdevelopment directly affect urbanization by freeing-- or pushing--rural labor to migrate to towns and cities. The ability of towns and cities to absorb the growing labor forces of developing countries will be a critical factor in the pace of their development over the next two decades. Some evidence suggests that the growth of larger numbers of towns and cities can change the rural-urban migration pattern in developing countries from one that is directly to the largest metropolitan centers to one that is step-wise (Findley, 1977).

RURAL-URBAN RELATIONSHIPS IN ENTERPRISE DEVELOPMENT

A growing number of studies confirm AID's conclusion that the expansion of private enterprise in rural regions is essential for developing agriculture and for generating

employment in towns and cities. The World Bank (1978) has found that increasing agricultural production and employment in off-farm enterprises is necessary to raise rural household income, retain population in rural regions, moderate the migration from rural areas to large cities, and diversify rural economies. In many countries small- and medium-scale enterprises in rural regions are at the nexus of a constellation of activities that accelerate economic growth.

If the definition of rural is broadened to include market towns and small cities in agricultural regions, Ho (1986) estimates that nonagricultural enterprises employ from 25 to 45 percent of the rural labor force in developing countries and that an additional 10 to 20 percent of the rural male labor force has a secondary occupation in the nonagricultural sector. Moreover, if medium sized rural towns are also taken into account, about 35 to 65 percent of the labor force in rural areas is involved in nonfarm enterprise.

Liedholm and Mead (1986) found that more than 75 percent of the manufacturing employment in Sierre Leone, Indonesia, and Sri Lanka was located in rural villages and towns, as was more than 60 percent in the Philippines, Zambia, Bangladesh, Ghana and Jamaica. More than half of the manufacturing employment was found in rural villages and towns in India and Pakistan, and more than 40 percent of manufacturing employment in Malaysia and Taiwan was located in rural

settlements.

Small-scale enterprises based in market towns and small urban centers are also crucial because they are the foundation on which indigenous large enterprises usually grow. Anderson (1982:923) found in his studies of established firms in developing countries that they almost always begin "as very small entities, with low amounts of capital drawn from the savings of the owner or borrowings from friends and relatives; initial levels of employment are low, typically less than a dozen, though the figure varies with the nature of the business; the social and occupational backgrounds of the woners vary greatly; and the firms that expand into medium or large scale activities do so continually or in steps." In a sense, then, small towns and cities in rural regions can act as "incubators" for the growth of small enterprises into larger ones.

Many towns and cities in rural regions provide sites for the location of agro-processing and agribusiness enterprises. Small- and medium-scale rural industries played an important role in providing off-farm jobs in Korea, Taiwan, and Japan during their periods of economic transition. In Korea, rural factory employment increased from 109,000 to about 369,000 between 1958 and 1975, even while large-scale manufacturing was expanding. In Taiwan, labor-intensive food, textile, and wood products industries

in rural areas absorbed a large share of the increase in employment between 1956 and 1966 (Ho, 1982). Rural enterprises now provide a primary source of employment and income for between 25 and 33 percent of the rural labor force in developing countries. They provide part-time employment and supplementary income for small-scale farmers, and full-time employment for townspeople in construction, service, transport, processing, commercial, and manufacturing activities (World Bank, 1978). Studies indicate that small-scale enterprises in developing countries use less capital per worker, generate more output or value added per unit of capital, and in many cases generate more employment for a given amount of investment than large manufacturing firms (Steel and Takagi, 1983).

In Kenya, rural nonfarm enterprises include a wide range of activities located in market towns and small cities. Such enterprises include raw material processing, manufacturing, construction, transportation, retailing, wholesale trading, and personal and financial services as well as cottage crafts. Employment in the rural nonfarm sector in Kenya is about 8 times as large as in the urban informal sector (Freeman and Norcliff, 1981). Studies indicate that in Brazil, more than 20 percent of family income in the eastern and southern regions of the country is generated by off-farm employment in small-scale enterprises. Studies of other

regions in the country show that off-farm employment is as important as the sale of farm products, with each generating about 38 percent of family income for small-scale farmers (Barbosa, 1981).

The growth of small enterprises in small towns and cities depends heavily on the expansion of markets from increased agricultural production and rural income as well as on the availability of infrastructure and transport. Anderson (1982: 926) concluded from his review of small-scale enterprise development in rural regions that "the nature of agricultural development strategy is exceedingly important in determining both the size and the regional distributions of industrial development."

The success of efforts to expand rural enterprise and employment opportunities, however, also depends heavily on the existence of, or ability to provide, preconditions for their efficient operation in towns and cities. The World Bank's (1978a) research on small-scale rural enterprises found that although they depend for their markets on the growth of agriculture and on rural development, they tend to locate in towns and small cities that offer the infrastructure and services they need to operate economically. Thus, nonfarm enterprises are both the beneficiaries of and contributors to low-level urbanization. As World Bank (1978a:8) studies note, small enterprises

> become increasingly concentrated in rural towns as infrastructure improves and markets grow. Besides benefiting nonfarm activities themselves, this process of development appears to stimulate a degree of decentralization of urban growth, and provides added employment and earnings opportunities for those who can no longer find work in agriculture as agricultural productivity rises. Rural nonfarm activities are, thus, an essential element in the process of economic development and structural change from rural-agricultural to urban-industrial economies. Their extent and importance can largely be explained in terms of their contribution to the tasks of modernizing and servicing agriculture and of catering to the nonfood needs of rural people.

AID's Bureau for Latin America points out that in Central American countries "provision of basic economic infrastructure--roads, communications, urban services--can be important in facilitating increased production of manufactured and agroindustrial products" and that the use of labor intensive techniques in providing that infrastructure can substantially increase employment (USAID, 1984b: 16). But in most countries the services, facilities, infrastructure that supports enterprise development cannot be scattered widely over a region. For investments in private enterprise to be economical and effective, they must often be located or expanded in settlements that are of sufficient size to provide economies of scale and proximity. At the same time, if rural households are to benefit from small enterprise and employment expansion in towns and cities, the physical linkages between those settlements and surrounding rural areas must be well-developed.

In his extensive studies of small scale enterprise, Ho (1986: 18) has found that "proximity to urban areas is an important determinant of both the extent of rural involvement in nonagricultural activities and the quality of that involvement (as measured, for example, by the average income earned from nonagricultural sources)." The importance of town locations for small- and medium-scale enterprises is not only explained by spatial and economic theory, but is confirmed by the behavior of entrepreneurs in less developed countries who, as recent World Bank studies show, consistently prefer town and city locations for their activities (Page and Steel, 1984). The reasons why private enterprise depends so heavily on town and city locations are numerous. A recent AID program evaluation on the private sector points out that marketing facilities and processes must be in place before many private sector initiatives can be effective. In addition "communication and transportation networks that connect buyers and sellers are one of the important factors that influence the growth of an enterprise, particularly in terms of its size..."(USAID, 1982: I-10). The report also points out that "in addition to transportation systems--with a sufficiency of low cost carrier services--and basic communications infrastructure, private enterprise also requires access to power, water and other types of infrastructure." World Bank studies also show that few

enterprises beyond the smallest in size can operate efficiently in rural areas unless they are located in towns, or have easy access to the supporting services that towns can provide (Page and Steel, 1982).

The advantages of proximity and the economies of scale that towns and cities offer to private enterprise facilitate interaction among businesses and their suppliers, distributors, and consumers. This financial, service and technological complex is especially crucial to the success of smaller enterprises that must maximize the use of their limited financial resources (Townroe, 1983).

Thus, it is not merely the creation of new enterprises that contributes to agricultural development and employment generation, but rather it is the "multiplier effects" that are extended through backward and forward linkages among enterprises in towns and cities that set in motion a series of propulsive economic activities that stimulate rural and regional development.

THE REGIONAL CONTEXT FOR DEVELOPMENT

Although rural-urban relationships are pervasive in economic development and strongly influence agricultural production and distribution, employment, and enterprise development, research done for AID shows the pattern of urbanization emerging in developing countries to be

substantially different than that which emerged in Western countries, and is likely to cause even more serious economic and social problems in the future. Unlike the polarized pattern of urban population distribution in developing countries, the pattern of urbanization in Western countries was relatively diffuse. Integrated networks of market towns, small cities, and medium-sized urban centers provided stimuli for the commercialization of agriculture, off-farm employment, and geographically widespread economic growth in rural regions (Rondinelli and Ruddle, 1978). In many developing countries, however, intermediate-sized urban settlements tend to be few in number, economically weak, and unevenly distributed geographically. The links between market towns and urban centers, and between towns and cities and their rural hinterlands, also tend to be weak in many regions in developing countries (Rondinelli, 1983).

To address more effectively the problems of food production and distribution, employment, and enterprise development, and the relationships among them, development strategies must be based on an analysis of, and offer solutions that are tailored to, specific regional conditions. Although national economic and political factors strongly affect agricultural output, food production problems occur in well-defined ecological zones. Problems of food production in highland regions often differ drastically from those in savanna

regions, and in turn differ from those in forest regions. "This great natural diversity, sometimes reinforced by cultural influences, has also produced great variation in the dominant and secondary food crops produced in different areas within a country," Archaya (1978: 82) observed in his review of agricultural problems in Subsaharan Africa, "and this further complicates the problems of crop improvement."

Food crises and the problems of food instability are also primarily regional in nature. In an extensive study of food insecurity for the World Bank, Clay (1981:89) concluded that "the regional dimension of poverty and malnutrition, which are again country specific, reflect classic problems of location and remoteness from the metropolis; environmental and technological factors limit agricultural productivity growth and market demand for agricultural commodities."

Regional patterns of settlement strongly affect agricultural employment, and enterprise development for all of the reasons noted earlier in this report. Ho (1986: 20) contends that "given that proximity to urban areas appears to be an important determinant of the level and the quality of rural involvement in nonagricultural activities, the pattern of urban industrialization, whether it is concentrated or decentralized, will also affect rural nonagricultural development."

Studies of poverty, food supply, and malnutrition in Zambia, for example, indicate that regional variations are closely associated with the distance of the regions from urban centers, or their accessibility to towns and cities by rail. The line-of-rail regions with good connections to urban centers tend to be more prosperous, more productive, and less subject to food shortages because they have better communications, easier access to urban markets, are more easily supplied with agricultural inputs and credit, and have superior access to public services. Poverty, malnutrition and food insecurity are highly concentrated in the less favored regions--the western, northeastern, Copperbelt, northern, and parts of the eastern provinces--that are remote from cities and that have poor communications and little access to urban markets. The overwhelming majority of the farmers in the less favored regions are subsistence growers. Chambers and Singer (1981: 24) point out that "there is a marked concentration of almost all the commercial farmers and substantial majority--probably at least 90 percent--of the emergent farmers in the more favored areas," near or with easy access to urban centers.

The regional pattern of food insecurity is also apparent in Asia. In Nepal, food production is highest in the terai region, where farmers can easily market their goods in towns, and where communications and transport systems have been

better developed. Food crises have been severest in the hill and mountain regions where production has been declining over the past decade. Poor access and ineffective operation of markets in highland regions make it difficult to transfer surpluses from regions with higher production (Khadka, 1985).

In Bangladesh, as Clay (1981a: 59) found, "the mapping of areas liable to famine shows that the worst affects of drought and flood are highly regionalized." Analyses of food insecurity and malnutrition in India point out that they are concentrated "in districts and states where relatively little progress has been made either in raising output-per-hectare or in increasing double cropping" (Lipton, 1981: 89). In these regions, farmers are victims of drought and flood, and do not benefit from high yielding seed varieties.

Many analysts of food security problems argue that problems of famine and malnutrition can best be solved through policies and programs aimed at overcoming deficiencies in regional economies. As one study concludes, for the majority of the rural poor, "food security can best be acheived by enabling them to grow more, eat more, and sell more at better prices, building up from the resources they already have where they are" (Chambers and Singer, 1981: 22).

A regional context for analysis is also important because

the impacts of many investments in private enterprise are area-wide. The linkages between towns and cities and their rural hinterlands have distinctive geographical boundaries. When enterprises are efficiently located in towns and cities that are closely linked to their rural areas, the propulsive effects can stimulate the economies of both town and countryside (Schmitz, 1980). It is the synergy among economic activities in close physical proximity in towns or cities that creates new stimuli for urban economic growth, greater demand for agricultural products, and the expansion of off-farm employment opportunities. The value of these investments lies, therefore, not only in the direct economic benefits that they create on site, but also (and perhaps more importantly) in multiplier effects and stimuli they can provide within a regional economy (USAID, 1983).

The fact that these synergies and their multiplier effects can extend the benefits of development activities to a larger geographical area is one of the strongest arguments for planning within a regional context. To ignore the potential regional impacts of properly located development projects is to risk investing in enterprises that are not effectively supported, to shortchange the people of the areas in which they are implemented of the full potential benefits, and to incur opportunity costs for both AID and host country governments. AID's strategic plan says virtually nothing,

however, about how national policies for dealing with development problems should reflect, and be tailored to, regional conditions.

Thus, the next three chapters of this study examine problems of agricultural production and food distribution, employment expansion, and enterprise development within three types of regions: subsistence and low-surplus agricultural regions, commercializing and diversifying agricultural regions, and urban and metropolitan regions with nonagricultural economies.

CHAPTER THREE

RURAL-URBAN DYNAMICS IN LOW-SURPLUS AND SUBSISTENCE AGRICULTURAL ECONOMIES

A substantial portion of the population in the poorest developing countries lives in low- surplus or subsistence agricultural regions in which food production is sufficient only to supply basic dietary needs, or to provide small surpluses that can be sold or traded for basic consumption goods. In the poorest countries, the large majority of population makes its living from low-productivity agriculture. More than 85 percent of the labor force in very poor countries such as Nepal, Niger, Rwanda, Malawi, the Central African Republic, Madagascar, Bhutan and Chad, is in the agricultural sector.

Low-productivity agricultural employment also remains crucial to the economies of many middle-income developing countries. About 65 percent of those employed in the primary sector in Latin American and Caribbean countries, for example, remain in traditional agriculture (Portes and Benson, 1980). More than 40 percent of agricultural employment is traditional in Uruguay, Mexico, Guatemala, El Salvador, Costa Rica, and Colombia, and reaches more than 70

percent in Peru, Panama, Ecuador, Brazil, and Bolivia. An average of 54 percent of the labor force in middle-income developing countries is in the agricultural sector, and the average reaches more than 65 percent in Senegal, Mauritania, North Yemen, Zambia, the Ivory Coast, Cameroon, and Thailand, although in these countries a smaller but still significant proportion of the agricultural population earns its living in low-surplus traditional farming.

Moreover, subsistence agricultural areas in poor countries often have high rates of population and labor force growth. According to World Bank (1985) estimates, the labor force in the lowest income countries (excluding China) grew by more than 4 percent a year between 1973 and 1983. Countries like Bangladesh, Malawi, Niger, Tanzania, Rwanda, Kenya, Pakistan, the Sudan, and Mozambique have seen their labor forces grow by over 2.5 percent a year since the early 1970s. The rate of labor force expansion decreased only slightly in lower middle-income countries, but still averaging 2.5 percent a year. It reached rates of 3 percent or more in Liberia, Honduras, the Ivory Coast, the Philippines, and Thailand. Higher than average labor force growth rates have also been seen in Nicaragua, Costa Rica, Guatamala, the Dominican Republic, and Paraguay.

CHARACTERISTICS OF LOW-SURPLUS AND SUBSISTENCE AGRICULTURAL ECONOMIES

Subsistence or low-surplus agricultural economies differ widely throughout the world. Subsistence conditions can exist in areas where large numbers of people engage in "slash and burn" or shifting agriculture, in adverse or low resource areas with settled farming populations, and in areas in which the population may engage partially in surplus trade, but produces primarily for family consumption. Often, subsistence farming takes place together with commercial cropping in the same region. For purposes of this analysis, however, low surplus and subsistence agricultural regions are defined as those in which a majority of the population produce less than half of their agricultural goods for commercial sale. This can include areas with plantation economies in which agricultural laborers produce a large amount of agricultural goods for export, but in which a large majority of the households live at or near subsistence conditions because wages, and production for local consumption, are low.

Although conditions differ in these areas, many low surplus agricultural regions also share common characteristics that are important to understand before development policies and programs are formulated. Among the most common

characteristics are the large percentage of the region's population in agriculture; the low productivity of the rural labor force; and the low returns to agricultural activities for rural households. Although average consumption levels may be well above the subsistence point, low-production agricultural economies provide diets that are made up largely of starchy staples of low nutritional quality (Johnston and Kilby, 1975). Farm sizes are often extremely small and a significant portion of the population is composed of landless laborers, tenents, or sharecroppers.

In many such regions ecological conditions are adverse and environmental conditions may be deteriorating. Most farmers use low levels of technology, are slow to adapt new farming methods and techniques, and expand production primarily through larger labor and land inputs. Agricultural decisions are made on the basis of risk avoidance and survival strategies. Most poor families in subsistence or low-production regions have little access to social and physical support services. They depend strongly on informal reciprocal exchange and community-based support systems for survival. In many such regions there is a high rate of temporary, seasonal, or permanent population out-migration, especially among the most productive age groups.

These characteristics of subsistence agricultural regions form the parameters within which rural-urban dynamics occur,

and in which interventions to promote development must be understood and formulated.

Low Levels of Production, Productivity, and Income

In many of the poorest countries in the developing world with large regions of subsistence or low-surplus agricultural production, food output has remained stagnant or decreased over the past decade. In the low-income countries (excluding China), with populations in 1980 of more than 1.3 billion, the average annual growth rates of agricultural production dropped from 2.8 percent during the 1965-1973 period to about 2.2 percent during the period from 1973 to 1983 (World Bank, 1985). Moreover, in many of the poorest countries agriculture grew at a much slower rate than their populations. Agriculture grew on average by less than 2 percent a year in Ethiopia, Nepal, Zaire, Burkina Faso, Niger, Togo, Bolivia, Zambia, the Cameroons, Panama, Ecuador, Costa Rica, and Nicaragua, and by less than one percent a year in Haiti, El Salvador, Peru, the Congo, Morocco and Senegal. Countries such as Jamaica, Madagascar, Uganda, and Nigeria have had negative growth rates in agricultural output over the past decade.

But these statistics about the low productivity of farming in low-surplus and subsistence regions mask the crucial fact that in most of the poorest countries, agriculture is the

major source of national production. In countries with an average annual per capita gross national product (GNP) below $400 a year, agriculture contributes more than 37 percent of GDP. In Bangladesh, Burma, Mali, Madagascar, and Ethiopia more than 40 percent of GDP is derived from agriculture. More than half of GDP in countries like Nepal, Somalia, Ghana, Burundi and Burkina Faso comes from farming. More than one-quarter of gross domestic output also comes from the agricultural sector in lower middle-income countries such as Liberia, Mauritania, Indonesia, Honduras, the Ivory Coast, Nigeria, and Paraguay.

In subsistence agriculture, production and consumption are closely related and less than half of the agricultural goods produced are sold or traded. Most of the cutputs are consumed by the farm family, used for seed or animal feed, or are reserved for in-kind payments. In humid regions of Africa, for example, subsistence farmers produce mostly starchy roots, tubers or banana-plantains. In drier grassland regions the dominant crops are millets, sorghums, or maize, and sometimes cassava or manioc. Studies of the Shaba region of Zaire indicate, for instance, that the typical farm family consumes 80 percent of its production in an average year. In addition, some of the harvested crop is lost to waste, storage, and seed, resulting in only 12 to 13 percent usually being available for sale (Nsaku and Ames,

1984-85). Not surprisingly, the diets of most of the population in towns and urban areas of subsistence regions also consist of staples. It is estimated that in low-surplus agricultural regions in Africa, 60 to 85 percent of the calorie intake of town and city residents is from cereals, roots or tubers and banana-plantain (Anthony et al. 1979).

In low-surplus regions, production often reaches a level beyond the basic needs of the population, although the surpluses may be produced by only a minority of the area's farmers. Most families remain at or below the subsistence level of living. Even the poorest families, however, may grow more than is needed for household and farm use. They also may have suplementary sources of income from part-time off-farm employment, or from the production of nonagricultural or cottage industry goods, or from having a household member engaged entirely in wage employment in a nearby town or city.

Although not all of the households living in subsistence or low- surplus regions are poor, typically the majority of the population consists of landless laborers who work as tenants, sharecroppers, or for very low wages on estates or plantations, and of households owning and cultivating very small plots of land. For example, in the Eastern Visayas region, one of the poorest in the Philippines, about 73 percent of the households have income equivalents below the

poverty threshold, about 80 percent of the population lives in rural areas, and about 80 percent of the rural population lives at or near the subsistence level. The highest incidences of poverty are among farmers who are part-owners of land (84 percent), small-scale farmers growing staple vegetables and tubers (83 percent), tenant-farmers (79 percent), farmers who own small plots of land in the hills and marginal zones (60 percent), and farm laborers (66 percent) (Hobgood, 1982).

Quite typical of subsistence areas in Asia is the Tumkar District of Karnataka in India. The nearly 11,000 square kilometer area of dry crop cultivation has a population of more than 1.6 million. About 88 percent of the households are found in rural areas cultivating primarily millet and other course grains, although rice is grown on some of the irrigated land (Ramachandran, 1982). Most farm households have some livestock, mainly cattle, sheep or goats. Cash crops such as coconuts and groundnuts are grown in a few villages. About 80 percent of income in the Tumkar is derived from agriculture. Small-scale industrial activities--based primarily on raw-materials processing and handicrafts--absorb only about 5 percent of the labor force. The sample of nearly 30,000 households included in Ramachandran's study showed that about 65 percent are agricultural laborers, rural artisans, and small and marginal

farmers with less than 5 acres of land; a little more than 22 percent are medium-sized farmers with land holdings of less than 25 acres, and about 1 percent are considered to be large-scale farmers with more than 25 acres. More than 67 percent of the land is owned by farmers with less than 2 hectares. Only about 10 percent of the households are in business, trade, professional, salaried, and other nonagricultural occupations.

Although a large percentage of tenant farmers in low surplus regions are poor, when land ownership is not possible or likely, sharecropping is often a preferred arrangement by peasant households for a variety of reasons: it allows for risk-sharing between tenant and land-owner, it can reduce employment risk and labor recruitment costs for property holders, and allows peasants to take advantage of the meager benefits of patron-client relationships (Feeny, 1983).

Subsistence conditions may also prevail in regions in which modern commercial agriculture is practiced widely on plantations or estates. Under these conditions much of the population works as landless laborers for very low wages, and subsists on staples that they grow in household gardens or buy with meager salaries. Thus, a region may have a high level of export crop production, but the majority of the population may still be living in subsistence conditions.

Environmental Adversity

Among the regions with the lowest agricultural production are those with adverse or deteriorating physical environments. Steep slope areas with soil erosion, areas of deforestation, humid lowlands and dry areas often generate the lowest yields of commercial crops. Physical adversities and environmental deterioration may be exacerbated by cultivation and harvesting techniques used by subsistence farmers, and can be accelerated by poorly planned development interventions. The World Bank (1979) has found that environmental problems in many regions of developing countries can be attributed to both the effects of poverty and to those of development activities aimed at overcoming poverty.

There is a strong tendency for people living in subsistence regions to misuse or mismanage their resources by overgrazing grass lands, eroding the soil, deforesting woodlands, and polluting surface water. In the African highland regions, for example, rapid population growth, overuse of forests for cultivation, pastures, and fuelwood sources, careless expansion of agriculture, over-grazing of lands in and around new settlements, and poaching have resulted in destruction of watersheds, soil erosion, drought, famine, the depletion of irrigation water, and serious threats to animal and plant species on which local communities depend for food and

livelihood.

In the Andes region of Latin America, the cultivation of steep slopes, overexploitation of soil, over-grazing and excessive hunting and poaching have also destroyed watersheds, caused landslides, diminished water supplies, caused serious sedimentation of rivers and reservoirs, and reduced the supplies of wildlife. In some regions of the Andes, agricultural production has become stagnant or begun to decline because of unplanned and careless human settlement in ecologically fragile zones. This has led to seasonal or permanent outmigration and eventually the abandonment of land and settlements (Ruddle and Manshard, 1981).

Low Level of Technology and Expansion of Agricultural Production Primarily Through Increases in Land and Labor Inputs

In traditional agriculture, most of the output is produced by the cultivator and his extended family, using simple tools and implements or draft animals, perhaps with intermittent use of small amounts of hired labor. Capital investment is usually small, and "vertically" supplied commercial inputs--those that come from towns and cities--are rarely used, or are only used in small amounts. Studies of low-surplus regions in Botswana, for example, indicate that the great majority of farmers use only a single row plough.

About one-third of the rural households engaged in agriculture own no farming equipment at all (Kerven, 1982). In most of the subsistence tropical regions of Africa and Asia, expansion of food production has come through "horizontal" increases in output based on increased inputs of labor and land (Anthony et al. 1979).

In the Eastern Visayas region of the Philippines, both the adverse characteristics of land resources and the use of primitive farming technologies explain the low productivity of agriculture. "The limited use of agricultural inputs, modern crop varieties and agricultural practices, and the lack of agricultural technologies appropriate to the conditions in the region further constrain production and incomes," one observer points out (Hopgood, 1982).

In subsistence regions of Botswana, agricultural labor consists primarily of unpaid family workers. Few farming units hire labor. Work is available in most subsistence areas and, indeed, one of the farmers' most frequent complaints is the inability to hire workers during peaks in the agricultural season. But because small amounts of goods are marketed and because the incomes of the farmers are so low, they cannot afford to pay even casual workers a high enough wage to make the work worth doing (Kerven, 1982).

High Degree of Risk and Uncertainty and Focus on Survival

Most of the decisions made by poor households in

subsistence agricultural regions are based on the need to hedge against risk and uncertainty and to assure survival. The low levels of production and resulting low levels of income, often put the food supplies of poor rural households at risk when natural conditions or economic policies change. The poorest households in subsistence or low-surplus regions of developing countries are the most common victims of hunger and famine. Small farmers, tenants, landless agricultural workers, and pastoralists in South Asia and Sub-Saharan Africa are the most adversely affected by food crises. Although it is widely recognized that problems of food insecurity are not caused directly by low levels of food production, they are caused in part by problems related to agriculture. Rural poverty, low agricultural yields, ineffective and costly food distribution arrangements, and fluctuating agricultural prices make large numbers of people vulnerable to famine and malnutrition (Clay, 1981; Chambers and Singer, 1981).

In rural South Asia, landless laborers and marginal agricultural producers are most vulnerable to food crises and severe malnutrition when fluctuations in output due to adverse weather affect the supplies of agricultural goods. Plantation workers who are paid in cash and depend largely on marketed food supplies are also directly affected by

scarcities in food supply or increased prices (Clay, 1981). Those people living in remote and backward regions where population pressures on land are severe usually have the highest levels of malnutrition. In much of Africa, poor households living in disaster prone regions also have insufficient income to obtain adequate food when their subsistence production is temporarily interrupted.

Because farming in low-surplus regions is adversely affected by both natural and economic forces, and because of the survival behavior of those engaged in it, subsistence agriculture, as Todaro (1981: 271) points out, "is a highly risky and uncertain venture. In regions where farms are extremely small and cultivation is dependent on the uncertainties of a highly variable rainfall, average output will be low and in poor years the peasant and his family will be exposed to the very real danger of starvation. In such circumstances, the main motivating force in a peasant's life may be the maximizaton, not of income, but rather of his family's chances of survival." Ironically, many of the decisions that are made to hedge against risk and uncertainty in order to assure survival also exacerbate already adverse conditions that keep poor families at the subsistence level.

One means of hedging against risk and uncertainty in traditional farming systems is for cultivators to plant multiple staple crops or to interplant small amounts of cash

crops with staples, rather than to specialize only in the production of cash crops. In the Shaba region of Zaire, for example, nearly all farmers produce peanuts and beans in addition to the staple, maize, and some also raise cotton or manioc (Nsaku and Ames, 1984-85). Often they cannot afford to allow land to lie fallow. The combination of constant use and intercropping further aggravate adverse soil conditions or lead to soil deterioration, both of which further reduce yields and increase the risk of hunger in bad years.

Where ecological conditions permit, subsistence farmers may also interplant crops with different growth habits that are used in the same dishes to insure that the crops mature at the same time. Or they may plant small amounts of key staples at different times of the year so that physical conditions will not risk the total supply of any key staple (Collinson, 1972). This may reduce overall productivity, but also reduces the risks to staple food supplies.

In many parts of the developing world, having large families is another means of coping with uncertainty. Having larger numbers of children adds to the household labor force and hedges against high infant mortality rates. In his studies of the Oaxaca Valley, in Mexico, for example, Cook (1984) found that in a labor-intensive regional economy both unpaid family labor, and members who can get part-time wage employment or participate in small-scale enterprise

activities in towns, can make a significant contribution to household income. However, the high levels of population growth further strain the capacity of agriculture to meet food needs and for nonagricultural activities to provide higher returns to labor because of the increased numbers of people who must find employment in the rural economy.

Slow Acceptance of Innovations

Much of the research on innovation and change in subsistence or agricultural regions suggests that farmers are not ignorant of or hostile to all new ways of planting, cultivating, and harvesting. But they do adopt innovations slowly and carefully. Usually, they maximize security unless food prices, or the nature of the innovation, allow them to change without risking their food supplies for the coming season. Studies of subsistence farm families in Botwana show that only 11 percent of the households have adopted proven higher yield-generating technologies, and these were mostly higher income farmers, those with remittances from household members working in towns and cities, those with higher levels of education, and those who raised both crops and cattle (Kerven, 1982).

The slowness to accept agricultural innovations in subsistence regions results in part from the fact that existing systems of cultivation and harvesting have evolved

over a long period of time. During that time, farmers have found the most effective means available for dealing with the local environmental and physical conditions to assure at least a subsistence yield. In many cases, as Schultz (1964) has long argued, there are few significant inefficiencies in the allocation of factors of production in traditional agriculture. Farmers may be poor, but they often allocate the production factors at their disposal quite efficiently to meet their primary goal of survival.

In many poor regions, such as in subsistence areas of West Africa, the tradition of communal decision-making can also make it quite difficult to elicit community support for innovations even among progressive elements of the community (Saadat and van Gigch, 1981). Guy Hunter (1973: 236) has concisely summarized three essential conditions for agricultural innovations to be adopted by low-surplus farmers in developing countries: "the new practice must be feasible for the small farmer, it must pay him better than his present practice, and its product must be marketable." If these conditions of perceived feasibility, profitability, and marketability are not met, Hunter contends, "the development of small farm marketing systems has not failed, it has not been effectively tested."

Innovations may only be accepted, even when they have been demonstrated to work effectively in the region, when

arrangements have been made to provide small-scale farmers with adequate insurance in the form of credit or food reserves so that failures will not endanger the welfare of the farmers' families. Having a supplemental form of income from wages or remittances has often given farm families the extra margin of security to try new agricultural methods. In low-surplus areas of Botswana, for example, the adoption of technological innovations for farming tended to be higher among those subsistence or near subsistence farm households receiving remittances from wage employment. Nearly 79 percent of the second stage adopters of innovations had a wage earning member in their households, and rates of innovation adoption tended to increase with the size of wage remittances (Kerven, 1982).

Weak Access to Formal Support Services; High Degree of Dependence Informal Social Support Systems

One of the most common characteristics of subsistence and low-surplus production economies in developing countries is the low level of access that poor households have to basic social services and to public facilities that are needed to increase their productivity and income. "In most of West Africa, for instance, farm inputs--including fertilizers, insecticides, and seeds--are rarely supplied by the commercial sector, and the state monopolies that handle such inputs are seldom efficient," Saadat and van Gigch (1981: 38)

point out. "More important, the difficulties in procuring and distributing a variety of inputs to a large number of widely dispersed farmers place an unreasonable burden on the already overstretched agricultural public administration."

In most subsistence or low-surplus regions poor households survive through a combination of means that depend heavily on community social support systems. Often household members--most frequently, older people, women and children--will engage in weaving, basket-making, sewing and home-based crafts; or hawking, vending, or domestic service activities at low pay to diversify household income. Many poor families depend on wealthier relatives to provide loans, access to small plots of land on which to grow vegetables, or assistance with food during particularly adverse periods. Sharing of meagre surpluses among kin, and arrangements for village social support are common in subsistence areas (Carner, 1982).

In highland Peru, much of the work that is done in subsistence agricultural areas depends on well established practices of goods and services exchange (Orlove, 1977). Individual households call on members of other households to help with planting, cultivating, building, processing, and sheep shearing in return for obligations of future assistance, food, a share of the output, or cash. This exchange process often substitutes for market activities or

supplements the formal hiring of labor and marketing of goods in return for cash that could be used to purchase goods and services. It is an ingrained part of the social system in the region that operates independently of economic considerations. Although both poor and rich families usually participate in the exchange process, poorer households often do not benefit as much as richer families.

Even those not engaged directly in agriculture, but who are involved in marketing, trading, or brokering, must rely on informal networks of social support. In poor regions of Liberia, for example, market sellers can only survive by developing reliable networks of informal social interaction. "To help control long-run risks, market sellers bind themselves into a matrix of obligations with kinsmen, close friends, and good customers. Both entrepreneurs and their kinsmen and friends call on one another for loans," Handwerker (1981: 9) points out. "Friendship is generally important in learning the skills of trading and in providing market intelligence. Kinship, close friendship, and good customer relations are used to obtain free transport, some concessions on exchange, and a variety of other small aids for their businesses."

Much of the market interaction in the Sefrou region of Morocco is also organized by social relationships, which are long-term interactions that foster both interdependence and

competition. For both the buyers and the sellers, informal relationships offer some degree of stability and a means of offsetting high risks. They provide a socially stable framework in which intensely competitive bargaining can still take place between buyer and seller. The market-place itself is a mechanism through which buyers and sellers can gather important information about relative prices and quality of goods through a combination of bargaining and client relationships. As Geertz (1978: 32) found "Sefrou bazarris make a terminological distinction between bargaining to test the waters and bargaining to conclude an exchange, and tend to conduct the two in different places: the first with people with whom they have weak clientship ties, and second with people with whom they have firm ones."

High Levels of Population Out-migration

Subsistence and low-production agricultural areas usually have high rates of population outmigration, either permanent moves by people who cannot make an adequate living in the region and see better opportunities in the cities, or temporary or seasonal moves by one member of the household who takes a job in the city for part of the year in order to supplement income through wage labor. In much of Western Africa, for example, there is a pronounced pattern of migration out of the poorer interior regions toward the largest cities along the coast (Zacharia and Conde, 1981.)

Studies of low-surplus agricultural regions in Algeria, Morocco, and Tunisia also indicate that "low incomes available in agriculture, the higher incomes and the generally higher level of living in urban areas, and the better educational facilities in urban areas are stimulating rapid rural-urban migration, and migration abroad" (Cleaver, 1982: 11).

In many southern African countries, the temporary migration of farmers and livestock raisers to jobs in towns and to the mines in South Africa has created critical shortages of agricultural labor in subsistence farming areas. In low-surplus regions of Botswana, for example, the migration of household members is often essential because crop production simply cannot supply sufficient amounts of food to meet minimum caloric requirements. Migration, however, has different effects for families in different income groups. Kerven (1982) found that for the poorest families migration brings a decline in agricultural production, especially when the migrant is the male household head, because of the loss of labor and experience. Female-headed groups with no adult males usually ended up worse-off as a result of migration. The absence of the male migrant forces households to hire labor, the cost of which is often offset by or greater than wage remittances. This can result in the family dropping out of agriculture or accepting a lower return from crop

farming. For families who have attained above-subsistence living conditions, migration can generate remittences that can counter the loss of labor, decision-making, and management skills of the migrant and allow the farm family to purchase capital goods or intermittent labor. For higher income families in poor regions, migration provides a wage supplement to agricultural activity that increases overall income and allows the family to diversify into livestock raising as well as crop farming.

The adverse impact of migration on lower income and female-headed families was worse for those with adult males working in mines in South Africa, for whom crop levels decreased on average by 41 units, than for those with adult males working in towns in Botswana, for whom crop levels decreased an average of 18 units. In any case, the studies of Botswana indicate that wage employment in towns and cities was a necessity for rural households living in subsistence agricultural regions because even in years with good weather and favorable conditions, farming would not return a sufficient income to allow them to survive.

RURAL-URBAN LINKAGES IN SUBSISTENCE OR LOW SURPLUS REGIONS

These characteristics of subsistence regions shape their spatial systems and the degree of interaction between their rural and urban economies. The very nature of subsistence and low-surplus agricultural economies, for example, constrains the trade relationships between rural and urban areas. The low volumes of agricultural surpluses obviate the need for strong market linkages; and the lack of accessible market centers in many regions weakens the incentives for increasing agricultural output. Moreover, low levels of income restrict the demand for manufactured goods and for services that are usually located in towns and cities. The nature of the subsistence agricultural economy creates few demands for purchases of inputs from other economic sectors (Johnston and Kilby, 1975; Rondinelli and Ruddle, 1978).

Weak Rural-Urban Linkages in Marketing

In low- surplus and subsistence regions, where less than half of the agricultural production is traded, rural households do not participate heavily in market activities. Much of the traded surplus is exchanged in small lots in small periodic market places, or is collected at the farm

gate by itinerant brokers or traders who resell it in larger lots at markets in towns and cities (Eighmy, 1972; R.T.H. Smith, 1979). In India, as in many other developing countries, small-scale farmers living in subsistence or low-surplus agricultural regions depend heavily on intermediaries to market whatever amount of goods that is not consumed at home. Gupta (1975: 37) points out that:

> The various types of middlemen render very valuable services in the field of agricultural marketing. Itinerant vendors and village "banias" purchase smaller quantities of produce at the very door of the cultivators and thus relieve them from bothering about the sale of their produce and arranging for other marketing facilities, vis., transport and finance. They take upon themselves all trade risks and do business on a small margin of profit. They take the benefit of certain economies which they have learnt by experience and which the cultivators, dealing in small quantities, cannot secure. Thus, they are an integral part of agricultural marketing.

In low-surplus regions in Latin America commercial intermediaries from cities and rural towns also play an important role in collecting and transporting to market small amounts of goods from large numbers of farmers, and in trading or selling to rural families small amounts of commercial household goods, clothing, seeds, or farm implements. They may also provide small amounts of credit, and usually have information about prices of inputs and commodities in markets. Commercial traders usually have well-defined territories, operate in two or more different market areas, and build their network through long personal

relationships with peasant households (Bromley and Symanski, 1974).

Although intermediaries, brokers, and traders play a crucial role in the exchange process in low-surplus areas, they can also be a source of exploitation that keeps farmers in poverty.

The marketing characteristics of low-surplus agricultural regions can differ drastically in different parts of the world and, indeed, in different parts of the same country. Yet the spatial aspects of marketing also have some common characteristics in nearly all low-surplus regions. Among these common features are the following:

1. Low levels of marketing interaction among low-income households, and weak trade linkages between rural areas and towns and cities.

2. Strong dependence of poor farmers on intermediaries and brokers to collect and market small amounts of surplus goods.

3. Short distances of market interaction for most rural families who trade primarily in periodic market-places.

4. Long travel distances for most rural households for specialized purchases and services.

5. Relatively small numbers of towns and villages attain high levels of market interaction.

6. Market towns and small cities serve primarily as service centers.

Much of the trade that takes place in subsistence or low-surplus regions is through periodic markets in villages and small towns. Periodic markets exist primarily to serve large numbers of people with very low incomes, low levels of production, and no contractual sales arrangements for the surpluses that are traded. Moreover, the surpluses that are sold to brokers, traders or truckers are usually sold in daily markets of larger towns, which persist in urban centers because of the low levels of discretionary income available to most town and city dwellers in poor regions (Handwerker, 1981).

The low level of production in subsistence regions in most African countries is due to the fact that the marketing system--the primary link between rural areas and urban centers--is not efficient in transmitting demand from urban centers to rural areas. Studies of the Shaba region of Zaire, for example, point out that the low levels of maize production is due in large part to ineffective marketing linkages between rural areas and towns and cities. "Due to poorly organized marketing systems and badly maintained

roads, only a small number of merchants are able to transport food crops from the countryside to the major cities. This small group of merchants, therefore, controls the farm gate price in the rural areas," observers point out (Nsaku and Ames, 1984-85). Because of the lack of or delay in receiving information about market prices, and their inability to participate directly in marketing activities, most poor farmers are at the mercy of intermediaries. Often, the itinerant traders pay a lower price for agricultural goods than the going market rate in order to cover their transport costs, but many also convince farmers to sell their goods below market prices by claiming that the floor prices of goods are the fixed legal prices. After continuing to receive low prices for their goods year after year, farmers in the Shaba region were discouraged from increasing their output, and consumers in the towns and cities were forced to pay higher prices for maize in the market. This forced the government to import maize to feed the growing urban population.

The low levels of marketing interaction in many subsistence areas are due to deficiencies in transport and communication linkages between rural areas and the towns and cities where marketing facilities are located. Soemardjan (1969) points out that peasant farmers in Java, Indonesia, have not participated actively in market transactions because, first,

they do not produce enough to establish continuous communications links between the farm and the market; second, because of physical isolation from market centers where agricultural goods can be sold or disposed of at a reasonable transportation cost; and third, because of a lack of price incentives to increase and market agricultural goods, or because of the lack of consumption goods and services in the area on which poor households could spend additional income from increased output.

This is not to say that the activities in rural areas, towns and cities in subsistence regions do not affect each other. Ramachandran's (1982) studies of the Tumkur area of India provide a profile of urban-rural relationships and marketing interactions that is common in other low-surplus agricultural regions throughout the world. In Tumkur District, for example, a mostly rural area on the farthest fringe of the Bangalore metropolitan area, the population is scattered widely in 2,452 villages and 12 towns. About half of the villages have less than 500 people, which is a little less than the average size (586 people) of all villages in Tumkur. The 12 towns range in size from 1,500 residents in Ammasandra to about 22,500 in Tiptur. Most of the services, marketing facilities, small-scale industries, and transport and communication facilities in the region are located in the 12 towns. The villages have little infrastructure and few

services. The road network through Tumkur was constructed to link several larger urban centers outside of the district's boundaries and was located with virtually no concern with Tumkur's economy. About one-third of the villages in Tumkur are connected by all-weather metalled roads, the other two-thirds have varying degrees of accessibility by unpaved roads.

Larger villages and towns primarily function as small markets, providing rural villagers with outlets for the sale of farm and non-farm products and the purchase of farm, non-farm and consumption goods. About 83 percent of the population in Tumkur participates in market activities in the towns and larger villages to purchase consumption goods, but only about 20 percent participate to purchase non-farm supplies and less than half to purchase farm inputs. Only 43 percent of the households in the region sell farm produce in the the markets and only 8 percent sell nonfarm products. A little more than 85 percent of all trips outside of the villages are made to purchase consumption goods and less than 7 percent are to sell farm produce.

The distance that villagers travel to participate in market activities is also rather short. The weighted average distance to purchase all types of goods is about 12 kilometers, and to sell farm produce is about 16 kilometers. Those households living in villages unconnected by roads or

with poor transport access travel considerably longer distances to participate less frequently in town-based market activities. Villages located closer to urban places tend to have higher market participation rates than those located farther away from the towns.

There is a strong positive relationship between the per capita household trips to towns for marketing purposes and the population size of villages. This is partially because the larger villages have larger numbers of households employed in non-farm activities. While households in the villages connected to or near the towns primarily interact through markets in the towns, the marketing interactions of households in rural villages not connected to or remote from the urban centers are sporadic, diffuse and unorganized. High levels of market interaction are found in the larger towns and regulated market centers in the irrigated areas of the district and in those places where some cash crops are grown.

Because of the low level of participation in marketing by rural households, no one market town in the region tends to dominate or organize market interactions. A highly decentralized set of very small, periodic markets tends to draw participants from short distances surrounding them. Medium-scale farmers tend to have the highest participation rates in market interactions, perhaps because they are better

able to sell agricultural products and to buy consumption goods. All of the lower income households in the region reveal uniformly low rates of market interaction.

The spatial variations in the levels of interaction in general, are reflect primarily in variations in the agricultural economy, especially in cash cropping, and in the development of off-farm economic activities. Ramachandran (1982) found that the lack of marketing facilities at large numbers of towns and the inability of the rural population to travel long distances combine to define the field of rural marketing interactions. The upper limit of travel for marketing is about 21 kilometers in Tumkur, the range within which 70 to 90 percent of all marketing interactions take place. Generally larger farmers by-pass local markets completely and travel longer distances to cities outside of the district to market their agricultural goods and to purchase consumption goods. Agricultural laborers and artisans tend to travel only very short distances to participate in marketing activities.

Of the approximately 452 villages or towns that have some type of marketing activity, only about 30 centers account for the bulk of market visits in the region. About half of the households in Tumkur visit a few government regulated market centers in the largest towns for their transactions, but only 16 percent of the households surveyed visit any of the 58

regular weekly markets.

In a low-surplus agricultural region such as Tumkur the availability of transportation strongly influences the patterns of market interaction. Roads usually channel people toward larger, better connected market centers. Thus, larger market towns tend have a larger service area or hinterland than do smaller market centers. Most smaller towns and villages in Tumkur do not effectively organize the marketing interactions of the households living in and around them.

Marketplace trade is constrained in low-production regions not only by the low levels of agricultural exchange, but also because their meager incomes inhibit rural households from consuming large amounts of manufactured goods. Studies of regions in Sierra Leone with large numbers of low-income rural households indicate that their consumption patterns are quite constrained. More than 70 percent of household consumption expenditures go for food. Rice, the major staple, comprises over half of all food expenditures. Other major expenditures tend to be for root crops, palm oil, fish, cloth, fuel, household and ceremonial items, and basic services. Rural household consumption patterns are highly localized. The rural poor seek low-cost goods that are produced by labor-intensive methods in small rural enterprises rather than those with capital and foreign exchange requirements produced in urban centers (King and

Byerlee, 1978).

Despite the fact that marketing interactions are highly constrained in poor regions by the small volume of surplus agricultural goods produced, the meagre income of the rural households, and the fragmentation of the marketing system, market towns still play crucial economic, social, and physical roles in linking rural areas to sources of employment, consumption goods, basic services, and farm inputs, as well as providing outlets for the small amounts of agricultural surpluses that are generated. The suqs or bazaars in North African and Middle Eastern countries offer all of these functions even in poor regions. Market towns may contain both small regular markets and sizable periodic ones. In the Sefrou region of Morocco, for example, Geertz (1978) found two bazaars operating simultaneously. A permanent one consisted of stalls and shops in the town's old walled quarters that primarily served the town's permanent residents, who numbered less than 30,000. A periodic one met at various spots for different goods and commodities outside the walls on Thursdays to serve a weekly regional market double the size of the town's population.

RURAL-URBAN RELATIONSHIPS IN EMPLOYMENT AND ENTERPRISE DEVELOPMENT

In low-surplus or subsistence regional economies off-farm

employment in rural enterprises located in villages, market towns, and small cities play a crucial role in providing sufficient income to assure survival for poor households. Between 35 and 60 percent of the rural population in developing countries is engaged in supplementary off-farm employment. In the Eastern Visayas region of the Philippines, for example, nearly all low-income farming groups survive by diversifying their household income with secondary occupations. About 70 percent of upland and rice and corn growers and an equal percentage of coconut farmers have secondary occupations, as do 50 percent of shifting cultivators and nearly all landless agricultural workers (Hobgood, 1982). In subsistence areas of Swaziland, rural families can derive only about 20 percent of cash income from the sale of agricultural produce. They must rely heavily on wage employment for most of their cash needs (Funnel, 1982).

In subsistence economies most of the needs of rural households are met by the work of their own members. But in regions with low-surplus agricultural economies, rural nonfarm enterprises come into being to meet basic household consumption needs and to respond to incipient market demands. In low-surplus regions, nearly all enterprises in rural towns perform functions that are directly related to local agriculture (Binswanger, 1983). In some subsistence economies the amount of employment in nonagricultural

enterprises is primarily determined by supply factors and depends on the amount of labor available after the needs of agriculture are met (Ho, 1986). As surpluses begin to be produced, even at marginal levels, enterprises catering to market needs begin to appear in villages and market towns. Small- scale agroprocessing enterprises such as rice and grain mills, and those providing basic agricultural inputs, transportation, and some manufactured goods also find at least a limited market. Some personal and commercial services related to agriculture may also emerge as the volume of traded surpluses grows. Such enterprises remain very small, however, and the number that actually appear is constrained by local demand and by the supply of factors of production (Binswanger, 1983).

Some market towns in low-surplus agricultural regions can accommodate a relatively large number of small enterprises dealing in a wide variety of basic agricultural and consumption goods. In subsistence regions of many African developing countries, rural service centers and market towns support small enterprises engaged in furniture-making, wood crafts, baking, beer-brewing, agricultural processing, tailoring and dress making, car and bicycle repair, blacksmithing, electrical repairs and light engineering (Liedholm and Mead, 1986).

Geertz (1978) reports that in the Sefrou region of Morocco,

the main market town, with a population of less than 30,000, contains more than 600 shops that carry on 40 distinct trades and 300 workshops engaged in 30 different crafts. More than 60 percent of the town's labor force is employed in bazaar-related activities.

In the Oaxaca Valley, a rural low-surplus agricultural region in Mexico, rural enterprises are located in small towns and villages and produce goods that cater largely to low income farm households. They include loom weaving, pottery making, embroidery, palm-weaving, basketry, rope and brick making, mezcal distilling, thread spinning, wood carving and metate making. Some cottage industries produce handicrafts for tourists. Most of the enterprises are family operated by both men and women. Some hire a few nonfamily workers. The larger units in the towns may have a small workshop with satellite outworker households. About 76 percent of the labor force in the villages and towns participate at least part-time in these enterprises, and a large majority also engage in farming. In surveys of the region, Cook (1984) found that less than half of the families participating in craft enterprises could survive on agricultural employment alone.

In other low-surplus regional economies, the need for wages to diversify household incomes is so great that family members will migrate to cities and towns outside of the

region to find employment, even if migration has adverse effects on agricultural production. Increased employment of farm household members in nonagricultural enterprises can diversify their incomes, but can also have serious adverse effects by diverting the more skilled and able farmers from agricultural activities. It can reduce the supply of household labor available during peak planting and harvesting periods, and over time drain the supply of agricultural labor from a region (Ho, 1986).

POLICY IMPLICATIONS

Increasing the incomes of small-scale farmers and of the rural population in subsistence or low-surplus agricultural economies depends primarily on increasing agricultural output and the prices that farmers recieve for their goods. It also depends on increasing part-time wage employment during off-season periods, or the employment of a household member in nonagricultural activities. And in many low-surplus agricultural regions it requires remittences from household members who have migrated out of the rural area to take employment in towns and cities.

For the largest numbers of poor households in most subsistence regions expanded income and better living conditions depend primarily on increasing agricultural output. This usually requires the adoption of technological

innovations and changes in cultivation, harvesting, and marketing practices, access to support from appropriate social institutions, and government economic policies that encourage increased productivity (Todaro, 1981).

But the conditions that result from and reinforce poverty in subsistence agricultural areas are not entirely economic in nature. Chambers (1983: 109) argues persuasively that most poor rural households are caught in "the deprivation trap." This trap is the result of five interacting conditions of poor households--poverty, physical weakness, vulnerability, isolation, and powerlessness. Not only do poor households have few physical assets, but their "stocks and flows of food and cash are low, unreliable, seasonal and inadequate. The household is either locked into dependence on one patron, for whom most work is done, or contrives a livelihood with a range of activities which reflect tenacious ingenuity in the face of narrow margins for survival." The poverty of rural households is exacerbated by the fact that often there is a high ratio of dependents to working adults in poor households, and that many live in peripheral rural areas far from towns and cities that are the centers of trading, services, and information. Moreover, poor rural households are vulnerable to a wide range of contingencies--illness, accidents, crop failure, famine, natural disasters and social obligations--that must be met

from slender reserves. The continuous exhaustion of these reserves keep them in poverty. Finally, their poverty is reinforced by their powerlessness. "Ignorant of the law, without legal advice, competing for employment and services with others in a similar condition, the household is an easy victim of predation by the powerful," Chambers (1983:110) emphasizes. "It has inherited or descended to low social status. Its position is weak in negotiating terms for the use of its labor or the sale of its produce or assets. It is easily exploited by moneylenders, merchants, landlords, petty officials and police."

These mutually reinforcing conditions that keep poor households in poverty have been clearly described in the Bicol, Visayas, and Cagayan Valley regions of the Philippines. These regions are characterized by excessive population in relation to the resource base, inappropriate farming practices in uplands, which exacerbates soil erosion and run-off, severe damage to crops from a variety of pests, and inadequate food consumption affecting productivity and the quality of the labor force. The high levels of poverty in these regions and subsistence conditions for many households accounts for the low level of demand for rural commercial services and the goods of industrial enterprises. As a result there is a heavy concentration of industry around a few major cities, smaller towns and rural areas lack

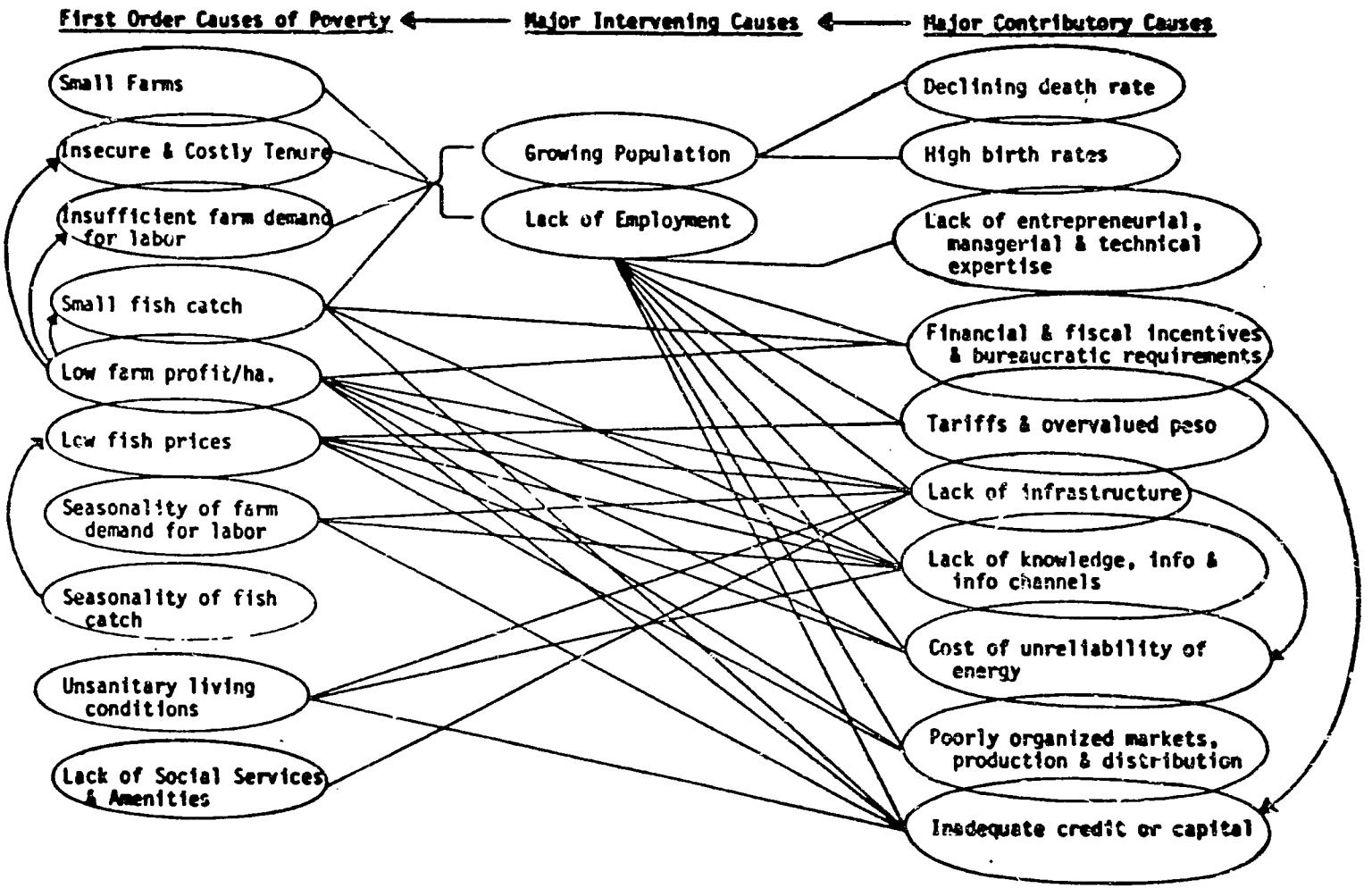
adequate industrial infrastructure such as roads, electricity, communications, and water. Poverty and subsistence production can also be traced to the unorganized and unproductive use of village resources, to the poor health and nutritional status of workers, and to excessive demand for a limited number of jobs (USAID, 1980).

Recent analyses of subsistence agricultural regions indicate that these manifestations of household poverty are due as well to a wider range of "first order" causes. They include small farm sizes, lack of or insecure land tenure for many rural households, and low prices for fish and agricultural goods. Declining death rates and high birth rates have resulted in high rates of population growth that have far outpaced the growth in employment opportunities. Lack of employment is due to lack of entrepreneurial, managerial and technical skills, lack of infrastructure, the high cost and unreliability of energy, the lack of adequate savings and credit for investment in job-generating activities, and poorly organized markets and production and distribution systems in the region. All of these characteristics reinforce each other to create the "deprivation trap" described by Chambers. (See Figure 3-1.)

Many of these same reinforcing and interlocking problems that keep poor families in poverty in subsistence and low surplus agricultural regions in the Philippines are also

FIGURE 3-1

Factors Contributing to Regional Poverty in Bicol Region of the Philippines



Source: USAID, 1982.

found in Thailand, where a survey by the agricultural bank found that poor farm families are plagued by common characteristics: heavy underemployment and seasonal unemployment, land distributed among a large number of people in very small holdings, low intensity of agricultural production, lack of access to farm machinery and equipment, and dependence on off-farm employment for about one-third of family income (Crowe, 1982).

Components of a Policy for the Development of Low-Surplus Agricultural Regions

The complex and interrelated problems that promote, result from, and reinforce subsistence production and poverty in these regions cannot usually be solved through single policy or program interventions. Experience indicates that at least four critical sets of interventions are usually necessary in these regions. Assuming a favorable national pricing policy for agricultural goods, these interventions include the provision of:

1. A minimum package of agricultural inputs that will allow the production of surplus, commercially tradeable, agricultural goods as well as more efficient and effective production of foods for household consumption.

As Norman Borlaug (1982: 63), a pioneer in developing the green revolution technology, has pointed out, "the continued

unavailability to farmers of production inputs is still a nagging problem in many developing countries. It is still necessary to establish more effective networks to distribute seeds of improved crop varieties, fertilizer, herbicides, insecticides and fungicides down to the village level if crop production is to be improved."

The particular inputs needed in any region will, of course, depend on local conditions; no standard package is likely to be universally applicable. Indeed, the inputs provided in a region should be carefully chosen to be compatible with local social, cultural, and economic conditions, and in the short term not overly disruptive of the social support system by which many rural people survive. Much can be done in subsistence and low-surplus agricultural regions to introduce and adapt appropriate technologies to increase productivity. Cleaver (1982) found that low-surplus regions of the Magreb countries, for example, the following appropriate technologies would contribute to increased agricultural output:

-- Better animal-drawn implements (slowing down the rate of increase in tractor use);

-- Improved animal-powered pumps, or eventually solar energy powered pumps;

-- Structures to channel and collect rain water run off, combined with inexpensive gravity irrigation systems;

-- Use of animal manure and cultivation of nitrogen fixing legumes, as partial substitutes for

chemical fertilizer;

-- Reduction of the tendency to use blanket applications of herbicides and pesticides in favor of combinations of manual weeding, cultivation practices which minimize pest and weed problems, other biological pest control measures and more limited chemical applications;

-- Techniques to conserve forage and maintain its nutritive value (silage); and,

-- Community maintenance of permanent pastures in areas subject to soil erosion, for livestock production.

An important need in many low-surplus agricultural regions is for research on improving the effective use of draft animals in cultivation and harvesting. In such regions it is unlikely that large numbers of farmers will have the money to purchase, or access to the use of, mechanical equipment. In much of the developing world draft animals remain the primary source of power for farming. In most of the developing world more than 75 percent of farm traction power is provided by draft animals such as oxen, buffalo, horses, mules and other animals. In the Far East, animals provide about 99 percent of farm traction power. In Africa 82 percent, and in the Near East 88 percent, of farm traction power comes from animals (Wheeler, 1982).

2. Basic infrastructure investment, especially in farm to market roads that can increase physical access for farmers to market towns and small cities where they can trade their surpluses, obtain basic services and consumption goods, and

seek off-farm employment on a full or part time basis.

Mellor (1986: 81) points out that in low-surplus regions infrastructure is essential to the growth of rural industry and services must be in place to promote agricultural production: "highly developed infrastructure is essential to agricultural production growth, favorable consumption incentives, and to the complex, interactive system of regional based urban centers that are so essential to a high employment content in an agriculture-based growth strategy." Farm-to-market and access roads, cheap forms of energy and power, basic communications facilities, and irrigation and potable water supplies must be made available before growth is likely to occur.

3. A minimum package of basic health, education and social services that can improve the productive resources of farm household members as well as their living conditions generally.

Although the expansion of basic social services is often considered by governments to be a "welfare" program, a good deal of research on rural areas indicates that social services are critical investments for increasing productivity. Arnon (1981: 441) concisely summarizes studies indicating that "the provision of services is an essential concomitant of the modernization process. Apart from the

humanitarian aspect, improvements in health, water supply, and education are also economically justified because they contribute to increases in agricultural productivity as a result of the increased availability and improved quality of labor."

4. Policy reforms that reinforce investments in services, infrastructure and inputs and that encourage and promote small scale farm production.

Borlaug (1982: 63) has emphasized that the introduction of new technology in subsistence agricultural areas must be reinforced by government policies that are favorable to increasing production:

> Whenever an attempt is made to provoke change in a primitive agriculture, more effective technological recommendations which include improved crop varieties and agronomic practices must be developed to overcome the inherent defects and weaknesses in the traditional agricultural system. The improved technology must be checked for validity and demonstrated widely on thousands of farms. Once effective technologies have been developed and widely demonstrated with positive results, then they must be married to sound government economic policy that will encourage adoption and thus result in increased production. Without such a marriage, the benefits from agricultural research can never be fully realized.

In many subsistence or low-surplus regions, substantial improvements in agricultural production are not likely to come about without land reforms that give cultivators title to property. Although land reform does not ensure

agricultural development, it is often a necessary condition for farmers to take risks, adopt new technologies, invest their savings in new inputs and seek new markets for their goods. Experience suggests, moreover, that land reform alone is unlikely to increase agricultural output without extending technical assistance, credit, new inputs, and marketing opportunities into the areas where land redistribution takes place.

Clearly, if these interventions are to have much impact they must be "packaged" carefully to meet the specific needs of farmers in particular areas of a region, and located at places where large numbers of rural households have easy access to them. In most low surplus and subsistence regions, farmers will not increase their production--even when they have access to agricultural inputs--unless they can cheaply and conveniently market their surplus goods. Commercialization of agriculture depends primarily on developing the marketing chain through a series of settlement-based market centers, from the farmgate to intermediate and final consumers in cities. These market centers can also serve as locations for small-scale agricultural processing, small-scale manufacturing, and a wide variety of commercial and personal services demanded by rural households as their incomes begin to increase.

A "Micro-Urbanization" Strategy for Development in

Low-Surplus Agricultural Regions

The effective and efficient location of services, facilities, infrastructure, and productive activities in subsistence and low surplus agricultural regions is critically important. Farm families are usually scattered widely throughout a rural region on individual farmsteads or in villages and hamlets of very small size. Attempts to distribute investments as widely over the landscape would be extremely expensive and inefficient in most rural regions. A more efficient and effective locational strategy is to invest in new services, facilities, infrastructure and productive activities in selected rural service centers--that is, in villages and towns with sufficient population size and accessibility for families in surrounding rural areas to be able to support those investments profitably.

Two major approaches can be use: first, the strengthening of rural service centers in subsistence or low-surplus agricultural regions, and second, the creation of new settlements in frontier agricultural regions.

1. Strengthening Rural Service Centers. The location of a minimum "critical mass" of services and facilities within rural service centers not only can make these settlements more attractive to private sector entrepreneurs, but can also reduce the overall costs of providing the services because of

the low-level economies of scale that these places offer. As new activities are located within rural service centers, they can offer greater opportunities for off-farm employment, provide a wider range of social and economic services to farm families, distribute agricultural supplies and inputs more effectively, and provide market outlets for agricultural surpluses. Villages and towns that already have some basic services and facilities often attract larger populations and begin to provide social and economic functions for other hamlets, villages, and towns surrounding them.

Hamer (1985: 40) contends that at early stages of urbanization, rural service and marketing centers can support economic activities that are "closely linked to servicing agriculture, processing natural resources for regional or international markets, and producing simple manufactures that are competitive with potential imports." He notes that selected rural service centers can support agroprocessing activities, production of construction materials, beverages, textiles and handicrafts, and the repair and production of simple structures and machines.

Rural service centers, Rondinelli and Ruddle (1978) contend, should, at a minimum:

-- function as "central places," providing isolated farms, small hamlets, and villages with basic services and

facilities as well as household and agricultural goods;

-- offer facilities that provide services needed to stimulate nonagricultural small scale industries and increase agricultural productivity;

-- provide basic social services and facilities and amenities that raise the quality of life within surrounding rural areas;

-- offer cooperative organizations required to expand popular participation in development programs;

-- serve as a node of transportation and communications between the rural area and larger urban centers within the country;

-- offer periodic marketing facilities and low level bulking and assembling functions.

Locating investments in a pattern of "decentralized concentration"--that is, in selected towns with growth potential or in villages that are already performing service functions, and that are located widely throughout a region--is especially important in resource frontier areas where agricultural production is beginning to increase or in low-surplus agricultural regions into which "green revolution" technology has begun to generate greater output. Hackenberg (1984) points out that a strategy of promoting

micro-urbanization is essential to assure that the income and wealth generating benefits of accelerated agricultural growth accrue to the population and economy of the region and to minimize the "leakage" of resources from the region. Micro-urbanization, which requires some degree of modernization and increased productivity in agriculture; allows capital originating in farm operations to be invested in local firms, provides the educational and health services needed to improve the quality of the local labor force; facilitates the movement of labor out of farming and into commerce, manufacturing and services; allows the expansion of professional and technical services; and offers a base for extension of government services and facilities.

The minimum "microurban complex" that Hackenberg found to be essential to promote development in resource frontier areas consists of a transport terminal, a livestock and agricultural goods market, and a small-scale financial and technical center. The transportation terminal would be a dedicated site for the arrival and departure of buses, trucks, minibuses, or other vehicles that bring goods into and out of the rural service center. The livestock and agricultural goods market would be an organized facility operating on a periodic or regular basis at which farmers, intermediaries and buyers can exchange their goods. The financial and technical center would be comprised of a group

of small enterprises engaged in agroprocessing; feed, fertilizer, and farm implement production and supply; small-scale manufacturing, appliance, machine and vehicle repair; and agricultural extension, credit, and farm technical services.

2. New Settlement Schemes

Many low-surplus production and frontier agricultural regions with large amounts of potentially arable farmland have either a few widely scattered settlements or are largely unsettled. Increasing productivity in these areas may call for a strategy of micro-urbanization based on colonization or new settlement development. Transmigration and land development schemes have been tried in Indonesia and Malaysia, cooperative settlement schemes have been tried in many African countries, and planned frontier settlements have been tried in several Latin American countries, with mixed success.

Perhaps the most successful micro-urbanization experiments have been those based on the Isreali Moshav concept. These are cooperative agricultural production communities consisting of 60 to 120 family farms, that provide common social, cultural and municipal services. The farm units have equal allocations of land and resources, and farm families have equal access to credit. Land in the community is held

in freehold under long-term leases, with inheritable tenancy rights (Maos, 1984). This cooperative farm community concept is based on careful selection of participants according to criteria appropriate to the settlement situation; development of economically viable farm units that will yield a living comparable to that of an urban worker; planned production processes that are suited to the capabilities of farm families with only peak season requirements for labor; and prevention of the fragmentation of land holding and physical resources by participating families. Moreover, care is taken to provide supplemental sources of income through public works and infrastructure development until the farms become fully productive. Agreements or statutes are drawn up to provide detailed descriptions of the rights and duties, and of the investment requirements, of participants. Some schemes require probationary periods for settlers before final lease contracts are granted (Arnon, 1981).

Such an approach to micro-urbanization in advance of agricultural growth is a means of providing economies of scale for both farming and nonagricultural activitives in settlements, and of encouraging cooperation among settlers to overcome physical and economic problems associated with frontier development. Moreover, the cooperative approach faciltiates the access of all participants to essential inputs for agricultural production and access to markets for

the surplus goods that are produced.

Transformational Development and Local Institution-Building in Subsistence Regions

Some social scientists argue that the commercialization of agriculture can leave the poor in subsistence or low-surplus agricultural regions worse off economically and socially by placing them at the mercy of market forces, while at the same time weakening their traditional survival arrangements. Marxists contend that the introduction of capitalist modes of production in rural regions leaves peasants dependent on market forces over which they have little or no control. There is little doubt that changes in production and marketing processes that facilitate and accompany the commercialization of agriculture bring substantial changes in the structure of a regional economy and in traditional economic and social relationships.

In the short run, some groups of farmers--usually those who were already better off--benefit more from commercialization of agriculture than the poorest groups. Some groups who either cannot or will not participate in commercial production may end up becoming poorer. Substantial evidence also indicates that the introduction of modern farming techniques too quickly can seriously disrupt traditional social and economic relationships. The introduction of green

revolution techniques in the Bali region of Indonesia, for example, brought pervasive changes in the social system and economy of people with a strong traditional village-based culture. Poffenberger and Zurbuchen (1980: 132) found in their studies of Bali villages that as households became more intimately involved in commercial activities, traditional village economies were progressively weakened:

> Desire to acquire consumer goods, which is central to the modern economy, works to counteract the stabilizing effect of intervillage goods and labor-sharing relationships which are demonstrated and activated through ritual and traditional agricultural activities. Community wealth, which once ciruclated within the village, now increasingly flows outwards as villagers acquire motorbikes, radios, electricity, and other goods and services. However, only those few village members who through luck, or more frequently, connections acquire full-time jobs in the modern economy, are able to channel money back into the village.

They note that the survival of many traditional village and family welfare systems in the face of modernization sustained the poor and prevented them from slipping further behind.

But whether or not such changes are undesirable for the majority of people in low-surplus regions is a matter of legitimate and ongoing debate. Many studies of regions undergoing the transition from subsistence to commercial agriculture point out that while such a change increases people's dependence on market forces, it frees them from other equally constraining dependencies of subsistence

production. Modernization of the agricultural economy leaves many rural households economically better off and creates new opportunities for improving their living conditions. Although illustrations of the changes in economic structure that come with modernization of agriculture production will be given in Chapter Four, it should be noted here that many analysts looking historically at the transformation of peasant agricultural communities in Asia, contend that "the evidence does not clearly indicate that the development of markets increased the risks faced by peasants. In fact, it indicates that markets gave peasants another effective tool to use in their self-insurance plans. This, in part, explains their responsiveness to the opportunities afforded by the introduction of regular markets" (Feeny, 1983: 783).

Studies of the Digos-Padada Valley in the Mindanao region of the Philippines, once a subsistence frontier region into which green revolution technology had been introduced during the 1970s, show that many of the economic and social changes that came in the wake of modernization were beneficial for large numbers of rural households. Hackenberg (1984: 45) notes that as the result of the introduction of high-yield rice varieties, and extensive public investment in roads, highways, power and utilities, and irrigation facilities--which attracted investment by agribusinesses--the structure of the regional economy changed fundamentally. By

the early 1980s, the rice yields increased substantially and rice cultivation had expanded throughout the region; many farmers diversified into other cash crops as well; and a majority of those engaged in farming also acquired second jobs in nonagricultural activities. Labor force participation expanded, allowing the wives and children of farmers to supplement family income. Hackenberg (1984: 33) points out that "in 1970 less than one-fourth of the households reported a woman employed. By 1980, more than nine-tenths of the households were being partially supported by women. The increased income being shared among households throughout the Valley in 1980 represented a much higher rate of labor force participation." Higher participation rates of women in the local labor force reduced fertility and birth rates, keeping the population growth rate below the rate of regional economic growth, a crucial factor in allowing widespread distribution of the benefits of development. Commercialization of agriculture generated a thriving informal sector trade in livestock, poultry and garden produce, and led to the creation of a large number of formal sector commercial enterprises. After a decade, there was a reduction in the tenant and leaseholder class of farm operators and an increase in small-scale land owning farmers.

As a result of these changes, "land, labor and capital have

all acquired a freedom of movement within a fluid and flexible market structure which is no longer characterized by fragmentation," Hackenberg (1984: 45) concluded. Within the restructured regional economy, "the economic position of the lower class, or poverty stratum, in this population is protected by 1) expansion of economic opportunities as productivity grows faster than population, and 2) their own freedom to exploit these opportunities by mobility and multiple occupation and combined income source strategies."

The theory that the introduction of small-scale enterprise and manufacturing into rural economies exploits low-wage rural labor and fails to promote capital accumulation in rural areas is highly questionable in many low-surplus rural regions. Cook (1984: 27) found in his studies of peasant participation in small-scale industries in the Oaxaca Valley in Mexico, for example, that rural households do in fact accumulate small amounts of capital over long periods of time. He concludes that "an accurate understanding of the dynamics of the Oaxaca Valley rural economy cannot be achieved by focusing exclusively on agriculture, nor by assuming that industry is simply an adjunct to agriculture whose only significance lies in providing the peasant household with an alternative means for acquiring complementary commodities and services." Many of the small-scale enterprises--weaving and embroidering, for

example--provide the only convenient way that women can convert their labor into desperately needed cash. Even though outworkers make very marginal amounts, some can become sufficiently proficient and save enough to become independent producers and, later, commission agents. In some regions, Cook concludes, this process of "protoindustrialization" can provide the base upon which small enterprises can grow into larger rural industries or provide the experience needed for rural workers to participate more effectively in urban manufacturing.

The impacts of changes brought about by surplus production and commercialization of agriculture depend on how the changes are introduced and how they are structured institutionally. They also depend on the political motivations of government and on the economic objectives of private organizations. Changes introduced with the intent of creating a commercial agricultural system in which widespread participation is possible, in which the benefits accrue to a majority of the population, and in which there are equitable opportunities for economic and social mobility must be designed carefully and implemented with a great deal of sensitivity to local social and cultural conditions. Poffenberger and Zurbuchen (1980: 133) concluded from their studies of the Bali region in Indonesia that development programs must "integrate preexisting strategies for survival

with attempts to achieve growth appropriate to village conditions. Such growth plans must consider the need to increase productivity without destroying badly needed jobs or positive aspects of traditional socioeconomic and cultural ecological systems."

Rondinelli and Ruddle (1978: 180) argue that the most effective means of introducing such changes in subsistence and low-surplus regions is through a process of transformational development, which "seeks to increase incrementally the productivity of indigenous institutions and practices, reinforcing and building upon those appropriate to local conditions and needs and adaptive to changing circumstances, gradually replacing those that are not." Their concept of transformational development involves eight basic principles:

1. Building on existing culturally embedded resources, institutions and practices;

2. Involving local people, who will be affected by transformation and change, in the processes of development planning and implementation;

3. Adapting modern technologies, services, and facilities to local conditions and needs;

4. Promoting specialization in production and exchange

activities based on existing spatial comparative advantages;

5. Using appropriate, low-cost, culturally acceptable methods of change to generate "demonstration effects" that lead to widespread adoption of those methods that prove successful;

6. Planning for displacement of unproductive and unadaptable traditonal insitutions and practices as change occurs;

7. Establishing, through planning based on "strategic intervention," the preconditions for transformation and change in social, technical, economic, and administrativbe structures and processes and in elements of the spatial structure; and,

8. Creating a planning process that is flexible, incremental, and adaptive and that provides for experimentation and adjustment as transformation takes place.

Local institutional development must be a fundamental component of development programs for subsistence and low-surplus agricultural regions. Uphoff (1986) points out that local institutions--ranging in form from local administration, local government, membership organizations, coooperatives, to service organizations and private

businesses--can play important roles in natural resource management, construction and maintenance of rural infrastructure, delivery of primary health care, agricultural development, and nonagricultural enterprise development.

Esman and Uphoff (1984) show that local institutions perform a wide range of functions that are essential to transformational development, including planning and goal-setting for local development, managing conflicts among local organizations, mobilizing resources for development, providing local services, acting as a control on bureaucracies, and making claims for local interests on the national government.

Both national governments and international assistance organizations can promote, facilitate, and assist local institutions through training and leadership development programs, by strengthening institutional capacity, by helping to develop alternative institutions where existing ones are ineffective, by strengthening institutional networks and support bases in rural regions, by decentralizing appropriate activities from national to local organizations, and by reorienting national bureaucracies to support, work through, and cooperate with local institutions (Uphoff, 1984).

Although changes aimed at improving agricultural production and marketing in low-surplus rural regions is likely to be

socially and economically disruptive of traditional organizations and practices, much can be done to smooth the transition. If they are carefully planned and sensitively implemented such changes can bring widespread benefits to the poor in subsistence regions. Many analyses of the food insecurity crisis in developing countries, for example, conclude that increased agricultural output, accompanied by appropriate price policies and improved marketing and distribution, would at least alleviate, if not solve, much of the food insecurity problem by making more food available and by increasing the incomes of agricultural households to obtain it (World Bank, 1986).

CHAPTER FOUR

RURAL-URBAN DYNAMICS IN COMMERCIALIZING AGRICULTURAL REGIONS

As a region develops from a subsistence or low-surplus agricultural economy to one that is more commercialized or diversified, the requirements for increasing agricultural output become more numerous and complex. In the early stages of transformation, food surpluses are generated mainly through the intensification of crop production. This is done by raising yields per hectare without lengthening the growing period, or by increasing yields per hectare through shortening the growth cycles of major crops. Higher production can also be attained by shifting from less valuable to more valuable crops, or by devising diversified farming schemes to include crop and animal production and the full use of by-products. Intensification of crop production relies heavily on development of new seed varieties and the introduction of new farming methods to get higher yields on the same land. Effective agricultural research and efficient extension activities must, therefore, be created to initiate and sustain more intensive crop production (Wortman and Cummings, 1978).

Later, when the demand for and the supply of agricultural goods begin to grow larger, increased production depends on modern farming techniques that raise both yields from existing land and the output per unit of human time. Raising production to higher levels usually requires using farm machinery, high yielding seed varieties, commercial fertilizers and pesticides, and a wide range of other inputs. Modern agriculture depends not only on research and extension, but also the production of industrial inputs and on government policies and programs that support agricultural development.

As a region begins producing a traded surplus rather than simply providing for the consumption needs of rural households, new production inputs, supporting services, infrastructure, marketing outlets, and commercial organizations must be available to maintain higher levels of production and ensure a steady return on investment. In addition, new and more dynamic physical and economic linkages must be forged between rural areas and towns and cities. Urban centers ranging from small market towns with perhaps 15,000 to 20,000 or more in population, small cities of 30,000 to 100,000 people, and secondary cities of 250,000 or more residents come to play a vital role in regional development. They are especially important as marketing centers for agricultural goods, as sources of agricultural

and commercial inputs, and as centers of off-farm employment.

Physical and economic linkages between rural areas and urban centers--and among towns and cities--in a region begin to play a crucial role in facilitating the dynamic relationships that allow a regional economy to continue to grow and diversify, and in influencing the distribution of income from agricultural development. Towns and cities become critical not only as markets for agricultural goods, but also as centers for supplying agricultural inputs and providing consumption goods. They take on increasing importance as locations for enterprises that produce and distribute goods and services needed for agricultural development and that generate the employment opportunities needed to retain population in the region.

This chapter examines the changes that occur in regions that are undergoing a transition from a subsistence or low-surplus to a commercial and more diversified agricultural economy. Special attention is given to the factors essential to increasing agricultural productivity and the roles of cities and towns in providing them.

CHARACTERISTICS OF TRANSITIONAL AND DIVERSIFYING REGIONAL ECONOMIES

As agriculture is transformed from low-surplus to commercial production and a regional economy begins to

diversify, agriculture becomes more dependent on a wide range of manufactured inputs, and the economy undergoes a pervasive structural transformation in which rural-urban relationships become crucially important. The continued development of agriculture and related activities comes to depend heavily on efficient operation of local and regional marketing systems centered in towns and cities. The economies of urban centers begin to diversify into nonagricultural activities. Often, this structural transformation in the regional economy creates new opportunities for employment and small-scale enterprise, which together with higher agricultural production raises the income of a larger number of rural households. Increasing income, in turn, creates demand for new manufactured goods, household consumption items, and commercial and personal services for enterprises located in towns and cities within the region. As towns and cities diversify and grow in size, they create larger markets for agricultural and rural nonfarm goods.

Increased Need for Modern Agricultural Inputs

As farmers in a regional economy begin to produce a tradeable surplus, continued growth in the agricultural sector depends, as Schultz (1964: 148) points out, "predominantly upon the availability and price of modern

(nontraditional) agricultural factors." Both price and availability generally depend on efficient suppliers. Either the government or private enterprise must be able to produce and deliver new agricultural inputs effectively. "When they succeed in producing and distributing these factors cheaply, investment in agriculture becomes profitable, and this then sets the stage for farmers to accept modern factors and learn how best to make use of them. It is also an inducement to increase savings and to develop institutions to provide credit for financing investment in such factors."

As demand for food increases and production expands beyond the subsistence level, agricultural output depends on a larger constellation of inputs and supporting services that, together, form a region's farming system. Studies of developing countries have shown that the major elements of that system usually include the following (Hopgood and Millikan, 1965; Mellor, 1967; Wharton, 1969):

1) Physical input factors--such as seeds, water, natural or commercial fertilizers and pesticides, work animals or farm machinery, manufactured tools, and human labor.

2) Economic factors--including transport, storage, processing and marketing facilities for farm products; facilities for the supply and distribution of inputs, including credit; affordable input prices; favorable product

prices; and appropriate agricultural tax and subsidy policies.

3) Organizational factors--such as favorable land tenure arrangements; public policies supporting agricultural development; farmers' organizations that can coordinate physical inputs; and economic, social and public services needed by rural households.

4) Knowledge factors--including effective organization of basic and applied agricultural research and diffusion of knowledge relating to technology, economic factors, farming methods and agricultural policy.

In nearly every developing country, the most critical factors that affect the pace of agricultural development are markets for farm products, changing technology, local availability of supplies and equipment, production incentives for farmers, and transportation (Mosher, 1966). Some of these factors can be provided by farmers themselves. Others must be provided by private entrepreneurs in response to growing demand, by local or national governments concerned with accelerating agricultural production and rural development, or by some combination of public and private investment. Weaknesses in rural market mechanisms and organizational structures of many poor regions, however, often require governments to play an important role, at least

initially, in creating these factors and in extending access to them.

Structural and Spatial Changes in the Regional Economy

The entire structure of the agricultural economy in a region changes as production increases and farming becomes more commercialized (Johnston and Kilby, 1975). Technical and managerial efficiency must be increased through the adoption of technological innovations, and inputs must be combined more effectively. Larger amounts of land and labor are usually needed. Pressures increase for bringing new land into cultivation or extending the growing period on existing land. At the same time, the need for capital also increases. Production is expanded initially through the use of family labor, later through the application of biological and chemical inputs, and finally through the use of labor-saving technology. New demands and opportunities arise for agricultural research, for extension and education programs, and for modifications in local and national political, institutional and economic structures that affect farmers' attitudes, perceptions, and values.

The process of transformation accelerates when farmers in a region begin to specialize in crop and household production. The increasing division of labor that comes with specialization enables farmers to take advantage of economies

that allow the use of technology, which further raises the productivity of land, capital, and labor. "As these processes get under way, individual productive units shift from self-sufficiency to dependence upon markets, both for disposal of their production and for purchase of their raw materials and factor services," Johnston and Kilby (1975:34-35) point out. With rising agricultural productivity comes greater demand for nonagricultural goods and the "transfer of function from generalist producers in the countryside to specialist firms in the towns."

Towns and cities in many developing countries have grown rapidly where agricultural production has increased, either as the result of favorable natural and climatic conditions or from the deliberate efforts of government to induce greater agricultural output. As agricultural production increases it often creates new economic opportunities and reshapes the employment structures of towns and cities in the region.

The impact of agricultural development on urban growth is particularly strong at the lower end of the settlement hierarchy. Gibb's (1984) studies of market towns and small cities in the Philippines, Thailand, Malaysia, and Sierre Leone conclude that these places have grown mainly as a consequence of the commercialization of agriculture in their regions. He notes that in the urban centers that he examined more than three-quarters of the employment was accounted for

by consumer activities and public services that were dependent primarily on the level and distribution of agricultural income. Market town and city growth was linked directly to increased agricultural production in the region and to the level of disposable income of rural households. Following Mosher's (1969) classifications, Gibb found that market towns and small cities grow primarily because they provide services that farmers need, consumer industries that produce household goods, agro-industries that provide inputs for and use the outputs of agricultural production, public services such as education and health, and community infrastructure.

The economic activities most frequently found in market towns in the countries Gibb examined consisted of formal and informal sector retail trade, such as hardware stores; personal and recreational services, such as restaurants and barber shops; light transport; trades and crafts, such as bakaries, tailor shops, shoe repair shops, and mill works; construction, cottage and small-scale manufacturing using local materials; basic education and health services; and agro-business, agricultural services, and agricultural trade activities. The economic base of market towns and small cities--and thus their growth and diversification--depend strongly on agricultural production and increases in farm household income.

Studies of other countries provide further evidence of the impact of commercialization of agriculture on structural and spatial changes in the regional economy, especially on town and city growth. Increased agricultural production that resulted from the introduction of green revolution technology in Pakistan during the 1960s stimulated the demand for manufactured goods, farm equipment, supplies, and fertilizers that were primarily produced in larger towns and cities. Increased agricultural output spawned investment in diesel engines and irrigation equipment in Lahore and Daska, and in tubewell components, cane crushers, fodder choppers, pipe and farm implements in Multan, Sahiwal, Gujranwala, Gujrat and Lyallpur. The vast majority of the firms manufacturing agricultural equipment in these cities were small in scale, but many were linked to larger firms that produced components assembled by artisanal and craft shops in smaller cities (Child and Kaneda, 1975).

Similarly, the Sri Lankan government's policies of colonizing and extending irrigation services and transportation in Dry Zones increased agricultural productivity in sparsely populated and economically depressed areas, and in so doing accelerated the growth of small towns and cities. Colonization was promoted through the provision of credit, guaranteed prices for paddy and produce, subsidies for farm inputs, crop insurance and the creation of tractor

and equipment pools for new settlers. All of these incentives attracted farm families to the dry zones and as colonization proceeded, "the sparsely populated regions began to develop and expand and new administrative and commercial centers grew up" (Wanigasekera, 1979: 71) Indeed, some of the new towns and cities grew fast enough to overtake the towns in the densely populated districts and in the coastal cities that existed prior to agricultural development in the Dry Zone.

In Ecuador, the intermediate city of Ambato has grown largely as the result of its strategic location in the heart of an agricultural area in the central highlands and because of its role as a marketing and distribution center for the region's agricultural goods. The city, with a population of a little more than 100,000 in 1982, grew by 31 percent from 1974, to become Ecuador's fifth largest city. Ambato's development was intimately related to the agricultural development in Cotopaxi-Tungurahua region. Ambato's central location in the major transportation corridor between Quito and Guayaquil, Ecuador's two largest cities, gave the regional center a major role as a distribution point for agricultural goods grown in the surrounding areas and as a major link in the food marketing systems of smaller villages and towns (Carroll et al, 1984).

More detailed and extensive evidence of the agricultural

stimulus to urban growth can be found in deAlcantara's studies of the state of Sonora in Mexico, where the growth and diversification of the state's two metropolitan centers--Obregon and Hermosillo-- were a direct response to agricultural development. DeAlcantara (1976: 289) points out that "the manufactured inputs, banking facilities, professional counsel, transport and storage services required by modern agriculture in Sonora are the exclusive domain of the city, as is the provision of many of the goods and services required for the maintainance of farm and nonfarm families." She notes that state government offices and the offices of farming and business pressure groups of various kinds also located in Ciudad Obregon and Hermosillo, and thus, the two cities emerged "as the decision-making and commercial outposts of a national, industrial society, channelling grains and fibres out of the countryside and offering in exchange consumer goods manufactured in other parts of the Republic."

Although these cities played important roles in providing essential services and facilities for landowners and farm workers in surrounding areas, their development depended ultimately on increased agricultural production. The cities' growth depended almost entirely on the commercial and service functions they provided for agriculture. Manufacturing's role in their development was insignificant. DeAlcantara

(1976: 294) emphasizes that the "profits from cotton, irrigation and the first effects of the green revolution in wheat encouraged the appearance of hundreds of new businesses, and the influx of city dwellers of all kinds." Most of the businesses that grew in Obregon and Hermasillo were small-scale. They were founded by local residents or recent immigrants to the cities with borrowed capital "who responded to the opportunities of sudden wealth in agriculture."

Agricultural development in Sonora not only brought people and new economic activity to Obregon and Hermasillo, but also created opportunities for new small-scale enterprises in areas around the cities, and especially along major access roads. During the period of agricultural growth, "the access roads to Ciudad Obregon were crowded with makeshift shops set up by immigrant mechanics and their assistants," deAlcantara (1976: 295) recounts. "Money was easy and the need for repairs constant, since the sudden increase in purchases from farm machinery had not been accompanied by any immediate increase in knowledge of how to handle it on the part of the buyers."

Historically, Algerian secondary cities like Tlemcen also grew primarily as agricultural markets. They diversified into commercial centers as farmers turned more of their fields to the production of cash crops. During the French

colonial period, when both domestic and foreign demand for agricultural goods was high, larger market towns became regional centers for banking, transport, storage, and wholesale and retail trade and, depending on the number of foreign residents, for luxury goods shops and import trade. After a short period of settlement by colonists, agriculture was transformed almost entirely to cash-crop production, and the economies of the market towns came to be dominated by trade and service activities (Lawless and Blake, 1976).

Thus, structural changes in the agricultural economy of a region are usually bound up with economic changes in other sectors. Rising per capita income not only stimulates demand for food, but also shifts the types of foods demanded from staple grains and starches to vegetables, meats, dairy products, and fruits. Meeting the demands for these commercial crops requires inputs from transport, service, manufacturing, and commercial sectors, and increased investment by government in infrastructure and utilities.

Increased Importance of Agricultural Marketing

Once the demand for food increases, the capacity of farm households to expand production and raise their incomes depends largely on their access to an efficient marketing system. Farmers must be able to get their goods to market quickly and cheaply after harvest, and to store goods that

cannot be sold at a favorable price. An effective system of processing contributes to marketing improvements, initially by reducing waste and lowering transport costs. But an efficient processing industry also makes goods available in more convenient forms to consumers, thereby expanding the markets for agricultural products (Abbott, 1967; Mittendorf, 1981).

Indeed, Wortman and Cummings (1978:365) emphasize that "production of a surplus makes sense for a farmer only if a market for the surplus exists, if he has ready access to that market and if, with his income, he can purchase items that he desires." Farmers must be able to sell their goods not only in local village and town markets to meet local demand, but also in more distant larger urban markets. Market centers of various sizes must be accessible in order for the farmer to get the best prices for his goods and to use the income derived from production to purchase inputs and consumer goods. The market centers "should be close enough to the farmer that he can reach it, do his marketing and purchasing and return home within the day, using whatever means of transport is normal" (Wortman and Cummings, 1978: 365).

Usually, as a region is transformed from a subsistence to surplus production economy, the periodic markets that serve rural households begin to consolidate, and some grow into larger, more diversified, daily market centers. The

marketing system becomes more complex and sophisticated in its components and more hierarchical in its structure. The marketing chain--the sequence of transactions and commodity movements between the producer and the consumer--initially becomes longer. Intermediaries, brokers, bulkers, and other traders take advantage of the need for many farmers with small amounts of capital to get their goods to market. Later, the marketing chain becomes shorter again as farmers obtain the resources to get their goods to market themselves or begin to sell directly to urban wholesalers (Bromley, 1971).

It was noted earlier that the forces of demand and supply are inextricably related in transforming a regional economy from subsistence to surplus production. Initially, subsistence farmers increase output through additions of land and labor in response to demand for food and other agricultural products. But the transformation from subsistence to commercial production does not accelerate until sufficient demand exists to allow farmers to specialize in the production of cash crops. And specialization and division of labor usually proceed apace the expansion of markets. Increased accessibility to markets is a crucial variable in the transformation and diversification of regional economies. The market is the "linch-pin" in the network of relationships and linkages that allow or promote

economic growth in agricultural regions. "To the extent farmers are held back in the amount of food and fiber they sell, they are prevented from purchasing the externally supplied, high technology inputs--seed, fertilizers, tools, transport equipment, and so forth--that will raise productivity," Johnston and Kilby (1975: 64) emphasize.

The crucial role of markets in the transformation of agricultural regions from subsistence to surplus production gives towns and cities an equally crucial role as locations for markets and as supply points for the inputs necessary to increase farm output.

As regions are transformed from subsistence to surplus production economies, periodic marketing systems are also transformed and consolidated into commercial marketing systems. Market towns, small cities, and large urban centers come to play a crucial role in providing farm inputs and absorbing agricultural products. Under these conditions, as Weitz and his associates (1976:6) have pointed out, the location of public and private investments in strategically located towns and cities becomes an essential instrument for accelerating agricultural development. They argue that "agriculture does not develop by itself. It requires a complete institutional system to support it, market its products and provide inputs, credit and professional advice. The rural community, which is the agent of agricultural

development, needs services for its population, such as education, health, public facilities and commercial outlets. The efficiency and location of both producer and consumer services exert a strong influence on the success of agricultural development."

Perhaps the single most important relationship between rural areas and cities and towns in agricultural development, then, is that towns form the physical structure through which agricultural goods flow from the farm to final markets (Lele, 1971).

Widening Base of Economic Participation

Although there is a strong debate between advocates of commercial agriculture and socialist or Marxist theorists over the impact of market-based economic development on the poor in developing countries, there is substantial evidence that the commercialization of agriculture does allow small land-holders and, in some regions, even landless families, to raise their incomes, accumulate capital, and improve their living conditions. As it was noted in Chapter Three, some critics of policies aimed at commercializing agriculture argue that dependence on market trade makes poor rural households more vulnerable to market forces that are beyond their control, and to food insecurity because of their weak position in the market.

The rapid commercialization of agriculture or the dominance of large export-oriented organizations in the commercialization process can produce adverse effects on some groups, especially if traditional survival systems are weakened or destroyed before the poor can adjust to new economic and social relationships. But a number of studies indicate that the commercialization of agriculture can, in fact, increase the possibilities for providing a secure food supply, higher incomes for the rural poor, and accumulation of capital among small land-holders. Based on historical studies of West African agricultural regions that went through the transformation from subsistence to surplus production, Hart (1982: 131) concludes that "extension of the market reduces the insecurity of farmers by making the supply of foodstuffs less hazardous than when it depended on extremely localized climatic conditions," which is the case in most subsistence economies.

Similarly, extensive studies of the economic transition in the Mantaro Valley of Peru led Long and Roberts (1978: 22) to conclude that although its greater dependence on markets in the Lima metropolitan areas created some adverse consequences for the region's internal development, the "increasing integration into the national economy had not led to the social fragmentation of the community" that critics predicted would occur as the result of commercialization. They note

that in much of the region, "communal organization seemed to be revitalized as the village became more closely connected to Huancayo and other urban centers through increasing trade and better road communications."

Of course, the specific economic and social consequences of the transformation from subsistence to surplus production depend on land tenure patterns, political and class relationships, and the social structure within a region. The transformation from subsistence to surplus production can create wider differences between the richest and poorest groups, but it can also bring a larger number of previously poor households into the "middle income" category.

For example, studies of regions in Western Kenya undergoing the transformation from subsistence to surplus production indicate that although capital formation on smallholdings is low, the commercialization of farming has allowed small land owners to accumulate considerable amounts of capital in permanent crops, farm structures, livestock, cattle dips, and land (Carlsen, 1980). Small farms in Western Kenya have been more productive in raising many crops than larger farms, and the share of smallholdings in total cultivated land has increased since the early 1970s. Much of the capital increase among small-scale farmers has been invested in improved housing and education for their children. As income has increased and capital has been accumulated, demand for

consumption goods has risen, and employment opportunities in the nonagriculatural sector has expanded, providing farm families with new sources of income from off-farm jobs. Although inequality in income and wealth in the region has tended to increase--partially because prosperity does not easily trickle down to landless laborers or to inefficient prodcers--what is often overlooked is that while the number of poor households remains large, the number of relatively well-off households in the region has increased significantly.

Surveys of changes in three districts in Western Kenya found that as the regional agricultural economy commercialized there emerged a strong positive correlation between the level of agricultural production and the development of full-time non-farming activities in both the rural areas and the towns. A positive relationship also emerged between the level of income-based nonfarming activities and the level of disposable income, and between the ratio of manufacturing to trading activities and equality in the distribution of incomes.

Carlesen's (1980: 220) studies found "no evidence that the growth in smallholder production has led to the formation of a non-accumulating class of 'middle peasants.'" Smallholders were able to save and invest a portion of their incomes, although much of the saving was done by the higher income

peasant families.

These findings are confirmed in a similar study of the effects of commercialization on Andean communities in Colombia that underwent a transition from subsistence to surplus production during the 1970s. Reinhardt (1983) found that in El Palmar, Colombia, for example, the increased demand for export crops, and for cash crops for the Cali market, transformed agricultural production and crop mixes in the community. Cash crop production allowed the use of new technology and required greater labor inputs and thus was land-saving, allowing a larger number of families to subsist on a smaller amount of land. Some land was sold to families who were previously landless, allowing them to engage at least partially in commercial agriculture and to remain in the region rather than migrate. The remaining land was allocated to cash crop production by its owners or sold to other landowners who engaged in farming on a larger scale. "While the increasing intensity of land use enabled some peasants to remain in El Palmar and subsist, commercialization also opened up several other income-earning opportunities for households with little or no land", Reinhardt (1983: 255) found. One opportunity was marketing nontraditional crops. "Whereas the traditional crops were bought in the regional markets by the producer, where they were either sold directly by the producer or by a merchant

with whom the producer had a well-established relationship, marketing the nontraditional crops in Cali was more complex and impersonal. Several members of the community became middlemen, negotiating sales of local produce in Cali."

The increased income that came from the sale of agricultural surpluses also spurred new businesses and employment in El Palmar. Some residents opened dry goods stores, others brought in produce from Cali to sell locally. Some families set up roadside stalls to sell local goods, home cooked snacks, or convenience items. Reinhardt also observed that "employment opportunities expanded enormously due to the far greater labor requirements of the new technology and some families became well-paid managers of 'high-tech' absentee-owned farms. Finally, some landless men successfully sharecropped small plots in tomatoes and green peppers."

Household surveys of families in El Palmar attempted to discern how they fared during and after the transition to commercial agriculture. The surveys concluded that about 46 percent of the families reported an improved economic situation; about 28 percent reported no change; and about 26 percent felt their economic conditions had deteriorated. The studies found that among those reporting deteriorating conditions, however, the situation was due not to commercialization of agriculture, but to life-cycle

conditions: either old age or increasing numbers of young children. Of those reporting improved economic conditions, 70 percent attributed the improvements to increased farm profitability, 20 percent to increased profitability of nonfarm businesses, and others to better job opportunities.

During the 10 year period of transition, economic differentiation in El Palmar was reduced. The declining economic situation in the area was stablized, and for many households it was reversed. However, with greater national integration of El Palmar into the national market, its economy and that of its region were subjected to more uncertain market forces and greater risks.

Goodman and Redclift (1982: 109) have also found that in the Mantaro Valley of Peru and in other parts of the Andes, the "emergence of small scale entrepreneurs in areas of smallholder agriculture (minifundia), where proximity to urban markets and freedom from coercion of large landlords, have enabled families of middle peasants to accumulate capital." They were able to identify many families of peasant origin in the Mantaro Valley, and in areas similar to it, who both accumulated capital and employed wage labor. They concluded that "the small-scale entrepreneurs of the Mantaro Valley are able to develop their enterprises through the use they make of family labor and regional networks. In so doing, they come to occupy an important structural

position within the regional economy."

Although there are risks for poor households in the commercialization of agriculture, subsistence production is also a highly risky business. The difference lies in the fact that commercialization creates not only risks, but new opportunities for increased income, capital accumulation, access to social services and facilities, the potential for education and social advancement, and new sources of livelihood.

RURAL-URBAN DYNAMICS IN COMMERCIALIZING AGRICULTURAL ECONOMIES

Because agricultural development depends so strongly on farmers' access to a large number of inputs and to markets, the relationships--backward, forward and lateral linkages--between rural areas and towns and cities intensify as a region undergoes a transition from subsistence to commercial agriculture. This seems to be true whether the market operates freely or is strongly controlled by government, in mixed as well as in socialist economies. The growth of cities in developing countries has a pervasive impact on agricultural production, and agricultural development in turn accelerates the growth and shapes the economies of towns and cities. Moreover, even large metropolitan areas provide important markets for agricultural

goods and much of their secondary and tertiary employment is in market-related activities or in those that depend indirectly on agricultural production.

Case histories of secondary and intermediate cities in developing countries show that their growth and development are both influenced by and in turn contribute to rural and agricultural development (Rondinelli, 1983). By examining the functions of secondary cities, the specific ways in which urban-rural linkages operate in developing countries become clearer. The mutual effects of urban and rural development are manifested in at least ten specific ways (Rondinelli, 1984):

1. Cities provide markets and act as centers of trade for agricultural goods.

2. Urban population growth and agglomeration create increased demand for agricultural products from nearby rural areas.

3. Agricultural markets in cities provide employment opportunities for urban workers in a large number of commercial and service activities related to market trade.

4. Cities function as agricultural supply centers and as locations for agro-processing and agri-business activities.

5. Agricultural development provides a stimulus for

urbanization and the economic diversification of towns and cities in rural regions.

6. The growth of cities strongly influences agricultural cropping patterns, intensity of land use, and returns to agricultural investment in surrounding areas.

7. Urban growth and diversification provide opportunities for off-farm employment and markets for "cottage industry" goods produced by farm households in nearby rural areas.

8. Both stagnation in the agricultural sector and rapidly increasing agricultural productivity push people from rural areas into cities in search of new employment and economic opportunities.

9. Rural-to-urban migration and the employment of migrants in cities is a source of income remittances to farm households in rural areas.

10. Urban services, facilities, and infrastructure increase agricultural productivity in surrounding rural areas and lower the costs of agricultural production and distribution.

These relationships between urbanization and agricultural development are seen most clearly in the marketing system.

Rural-Urban Marketing Linkages

In early stages of surplus production, marketing

chains--the sequence of transactions and commodity movements from producer to consumer--becomes longer and involves larger numbers of small-scale intermediaries. As agricultural production in rural areas expands to meet urban food needs, the number of market centers usually increases. Periodic markets in some areas begin to expand and meet more frequently, and new markets evolve in the areas between existing ones. As the number of goods and services offered in market places increases, stronger and more numerous trading linkages evolve. The larger markets attract more traders and intermediaries from a greater distance. Markets in the region begin to form a hierarchy in size, diversity and volume of goods traded (Bromley, 1971).

Most market systems develop into a hierarchy of market centers as the economy becomes more commercialized and specialized, as Carol Smith (1977: 120) points out, "simply because different kinds of goods are needed more or less often, require more or fewer supplies, and thus will be found either in a few high level centers, widely spaced, or in many low level centers, closely spaced." She observes that if no hierarchies appear, "it is reasonable to assume that the economy is undifferentiated--that market exchange involves only a few items of roughly equivalent demand value or that specialized items flow through the system infrequently."

However, the hierarchy of market centers may evolve slowly through several stages over a long period of time. They may evolve from a variety of forms: a) from a relatively undifferentiated periodic market system usually found in subsistence agricultural economies; b) from a primate market system focused on a single very large market that is typical of many plantation and estate agricultural economies; c) from a dendritic marketing system in which many small market centers send commodities to a single large market; or d) from a two-tiered marketing system in which elments of both periodic and dendritic patterns operate simultaneously (Smith, 1977).

1. Primate Marketing Systems

A primate marketing system, in which nearly all surplus agricultural goods flow exclusively to one large market located either within the region or in a national center, is quite typical of areas with plantation or large estate systems of agricultural production. Outside of the major market center there are usually no significant intermediate-sized markets and only a few small towns in which there is little or no bulking of local products. Small towns are usually retail or commercial service centers rather than agricultural marketing centers. Land ownership is often highly concentrated, with a small number of plantations and estates controlling from 75 to 95 percent of the arable

land. Often the owners of the plantations or estates live in the national capital or in large cities. Most of the residents of the region are landless laborers or seasonal workers on the plantations and estates. Crops other than the primary export goods, such as vegetables, starches, and roots are grown on a subsistence basis in gardens or small plots, and only small amounts are traded in small periodic markets. Often, however, subsistence items are imported from the primate market center and paid for with meager wages earned on the plantations and estates.

Carol Smith's (1977) studies of western Guatemala--the coffee, cotton, sugar and cattle plantation areas of the coastal lowland--identify the characteristics of rural-urban relationships that are also typical of many other regions with primate marketing systems. The major flow of agricultural goods is between the plantations and the estates and the primate marketing center. Goods are shipped by road or railroad by large enterprises owned by urban interests, with little or no opportunity for participation by local residents or peasants. Road and rail connections are good between the capital city, a few port cities, and the plantations, but the small towns within the region are not well linked to each other. Small-scale food producers are dispaced by large-scale commercial agricultural enterprises because of their advantages of size and scale, and the

population of the plantation region often depends for its food supplies on urban traders and merchants from the primate market center.

Smith (1977:135) observes that "economic opportunity for people who are neither plantation owners nor middlemen in import-export trade is poor. Few have nonagricultural occupations outside the large towns, no craft goods of any importance are produced, and trade occupations are filled by outsiders." Although she found that wages for laborers may be higher than in other regions, "since this income cannot be coupled with any self-provisioning activity and must be used to buy relatively expensive food stables, it provides a low real income."

Peasant agricultural production remains at the subsistence level because rural households do not produce the market goods for which there is high demand, and because they cannot get access to the capital needed to engage in wholesale trade. Smith (p. 138) concludes that "because the production system is highly concentrated, the distribution system is highly concentrated. And because the market for the region's surplus is external, there is no need for a well articulated rural marketing system."

Thus, although aggregate statistics may indicate that the region has a highly commercialized and productive

agricultural economy, its indigenous population really lives in a subsistence agricultural system. Rural-urban linkages are constrained; the primate market center dominates the regional economy in the absorption of the market surplus and in the provision of much of the subsistence foods consumed by plantation workers and other rural households.

2. Two-Tiered Marketing Systems

In the early stages of transformation from subsistence to commercial farming, the regional economy may be characterized by a mixed or two-tiered marketing system. One channel facilitates the marketing of commercial goods that are exported outside of the region and is based in a few large cities and towns in the area. The other channel facilitates the trade of internally consumed goods and is based in a large number of small periodic markets. Such a two-tiered system may also be found in regions where the economy is bifurcated into commercial and subsistence production systems that have little relationship to each other, as is sometimes the case in regions with plantation or estate agricultural economies.

One example of a two-tiered marketing system is found in the highland region of Ecuador. There, the export marketing channel takes the form of a geographically concentrated, hierarchical network of 8 towns in which 80 percent of all

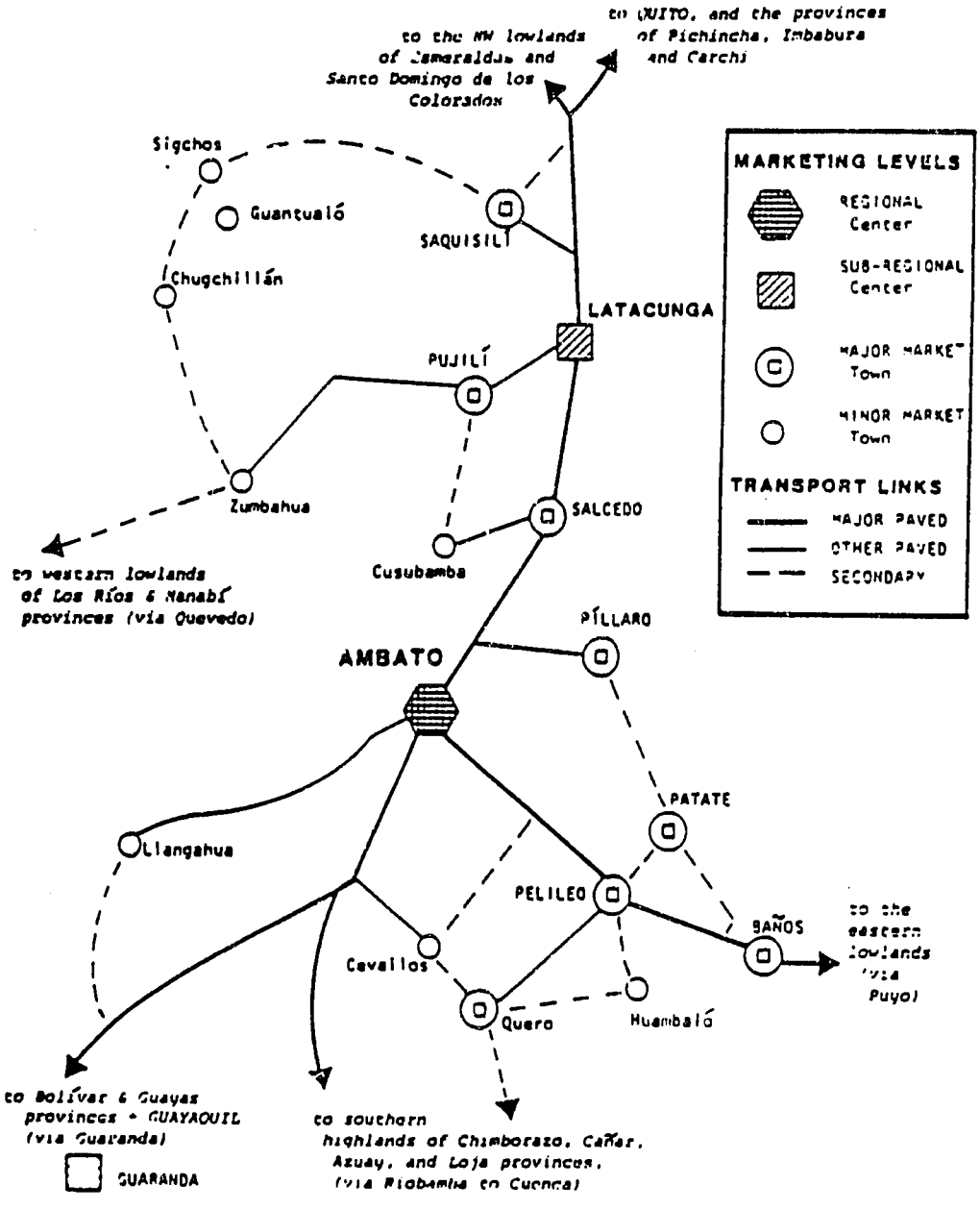
commercial activity takes place. (See Figure 4-1.) The commerical marketing network is centered on the largest city in the region--Ambato--a town of about 100,000 population that has highway links to both Guayaquil and Quito. The rural areas surrounding Ambato are densely populated by farmers intensively cultivating potatoes, onions, vegetables, and fruits, primarily for sale to wholesalers who export the crops to larger cities. The city also serves as the regional center for bulking and processing commercial crops grown in peripheral areas and shipped through several smaller towns to Ambato, where they are sent through wholesalers to larger urban centers. Ambato acts as a marketing and distribution center for goods produced in other regions of the country for resale in the central highland region (Karaska, et al., 1985). On Mondays--the peak marketing day in the city--trading takes place in 18 plazas, each specializing in one or more activities.

For all commercial crops, the pattern of commodity flows in the network of market centers is clear. Karaska and his associates (1985: 48) observe that "the major entrepot is Ambato. The major destinations of regional exports are Guayaquil and Quito, which in some cases also are important orgination points. The local centers which dominate trade in locally produced crops are Latacunga and Saquisili in the province of Cotopaxi, and Pelileo and Pillaro in the province

FIGURE 4-1

AMBATO MARKETING REGION

STYLIZED TRANSPORT LINKAGES & MARKETING CENTERS, 1964



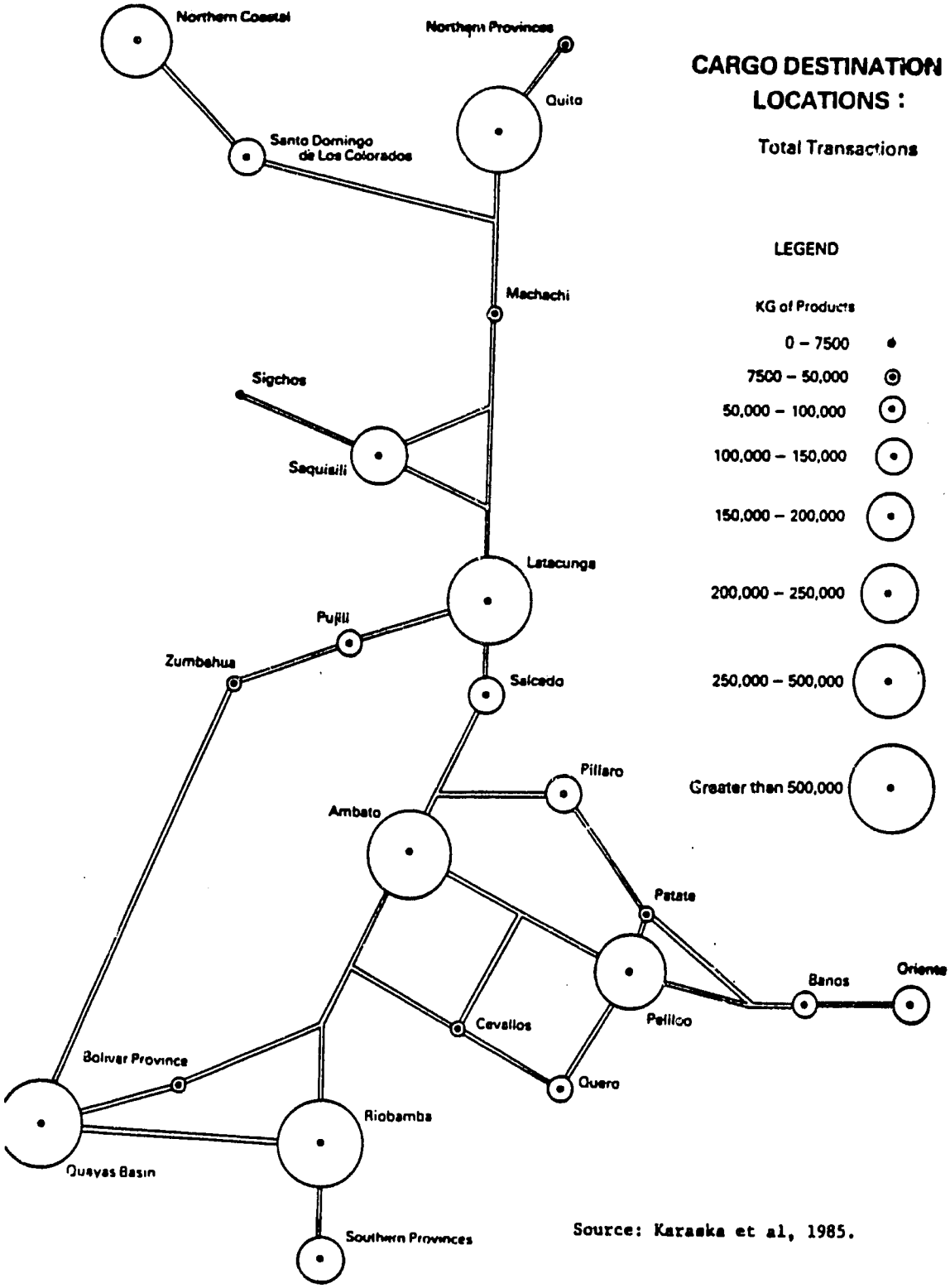
Source: Karaska et al, 1965.

of Tungarhua. Salcedo appears as a significant destination for fresh vegetables, herbs, and spices." Figures 4-2 and 4-3 show the directional flows of commercial commodities within the central highland region.

At the same time, however, a periodic marketing system facilitates trade in subsistence goods and is centered in a larger number of small towns, each serving a very small local production area. In larger towns with daily markets, such as Ambato, the regular and periodic markets operate at the same sites. Although the daily market provides consumer goods for Ambato's residents, and offers a regular supply of agricultural goods for export out of the region, the city is also a regional periodic market on Monday, when the number of people trading in the city is more than double that of its resident population.

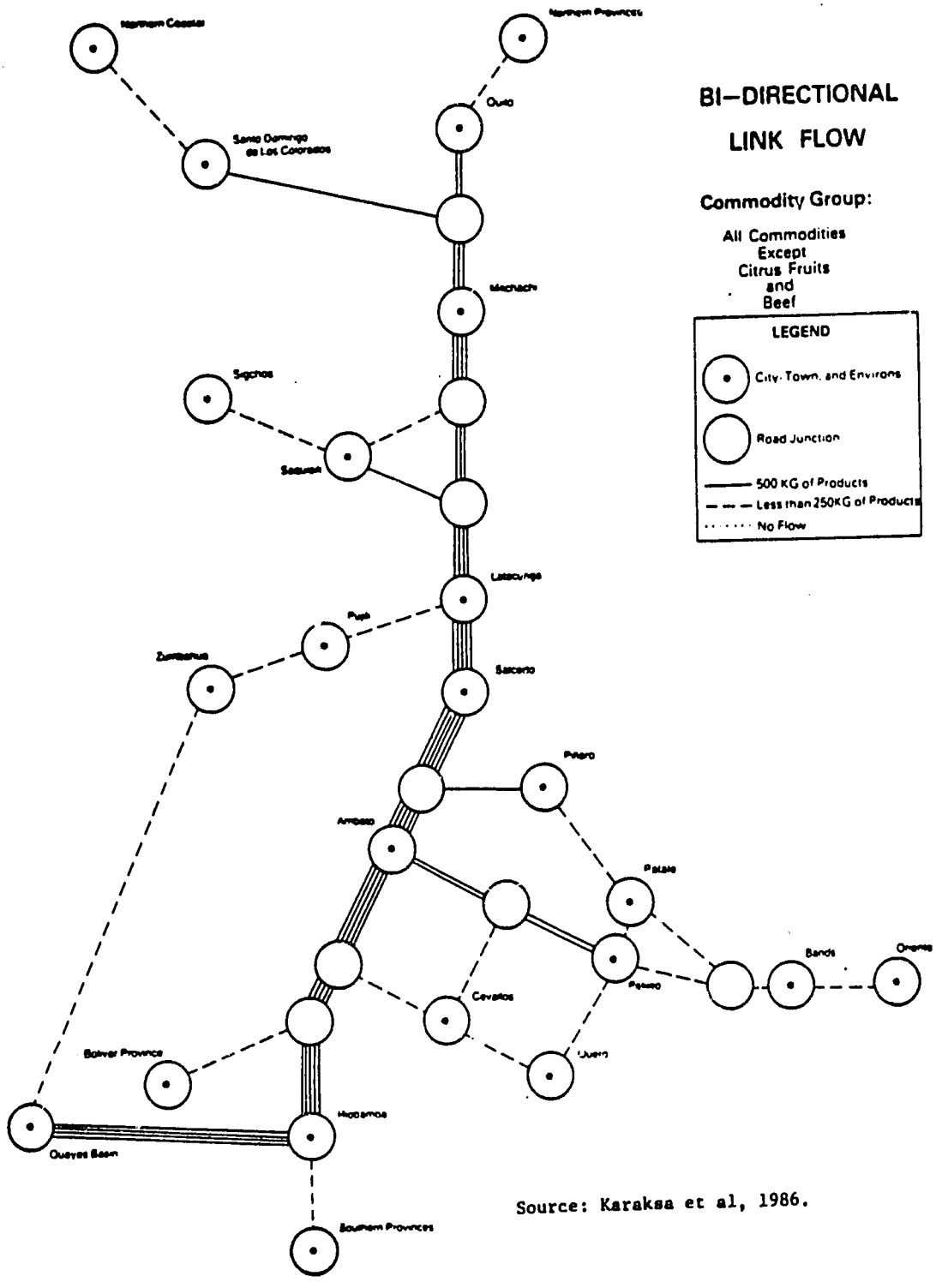
The characteristics of periodic marketing in rural areas of the central highland region in Ecuador are not unlike those found in low-surplus agricultural areas in other parts of the world. The periodic markets or "ferias" meet once or twice a week and have a large number of traders and intermediaries who operate at low volumes. These traders are usually members of low-income peasant households. Exchange takes place among well established networks of trading partners who set prices by bargaining and negotiations.

FIGURE 4-2



Source: Karaska et al, 1985.

FIGURE 4-3



Source: Karaksa et al, 1986.

Figures 4-4 and 4-5 indicate the variety of goods traded in one of the larger periodic markets--Saquisili, a town with a resident population of about 3,000--and the marketing area from which people in the region participate. The periodic market at Saquisili operates at seven sites within the town accomodating up to 30,000 participants during peak agricultural periods. The markets are operated by middlemen, housewives, male rural farmers and salaried and part-time workers The flows of commodities are indicated by Figures 4-6 and 4-7.

The periodic marketing system continues to operate in a region with strong commercial farming because it serves a large number of low-income rural households and provides benefits for the large rural population generally. Karaska and his associates (1985: 11) point out that even in a commercializing agricultural region, dispersed periodic markets continue to serve important functions for peasant households. They constitute a decentralized system that brings employment and income-generating opportunities closer to a large number of producers, traders, and consumers. The periodic markets maximize the accessibility of rural producers to markets, minimize weight loss and spoilage during shipping, and minimize the amount of time that producers must devote to marketing. They also allow a large number of traders and intermediaries to bulk efficiently

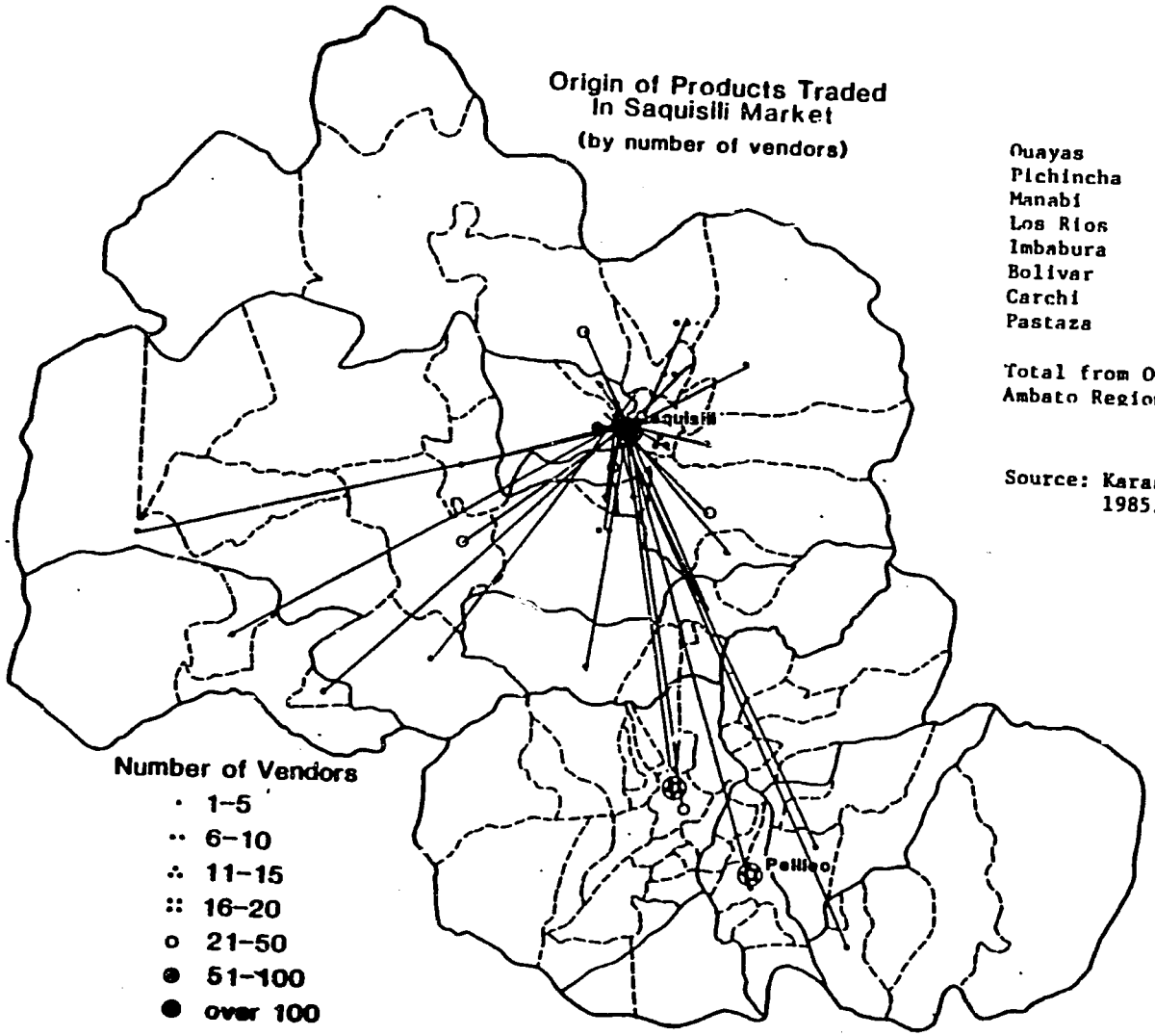
FIGURE 4-4

NUMBER AND PERCENT OF VENDORS BY PRODUCT SOLD
SAQUISILI MARKET

Type of Product Sold	No. of Vendors	%	Farmer/ Producers	%	Middlemen Vendors	%	Day Laborers	%	Salaried Workers	%	House wives	%	Other	%
Vegetables	101	10.1	44	32.1	32	5.73	3	4.47	1	4.76	21	12.2	0	0
Grains	44	4.43	7	5.10	21	3.76	3.	4.47	0	0	13	7.55	0	0
Root Crops	93	9.38	28	20.4	56	10.0	8	11.9	0	0	1	0.58	0	0
Fruits	55	5.54	1	0.72	36	6.45	1	1.49	0	0	17	9.88	0	0
Livestock	163	16.4	11	8.02	91	16.3	26	38.8	10	47.6	24	13.9	1	16
Dry Goods	87	8.77	5	3.64	56	10.0	4	5.97	1	4.76	21	12.29	0	0
Handicrafts	85	8.57	20	14.5	40	7.16	13	19.4	4	19.0	8	4.65	0	0
Cake/Candle	71	7.16	6	4.37	54	9.67	0	0	2	9.52	4	2.32	5	83
Animal feed	6	0.60	0	0	6	1.07	0	0	0	0	0	0	0	0
Other	286	28.8	15	10.9	196	35.1	9	13.4	3	14.2	63	36.6	0	0
	991	100.0	137	13.8	558	56.3	67	6.76	21	2.11	172	17.3	6	0.60

Source: Karaska et al. 1985.

FIGURE 4-7

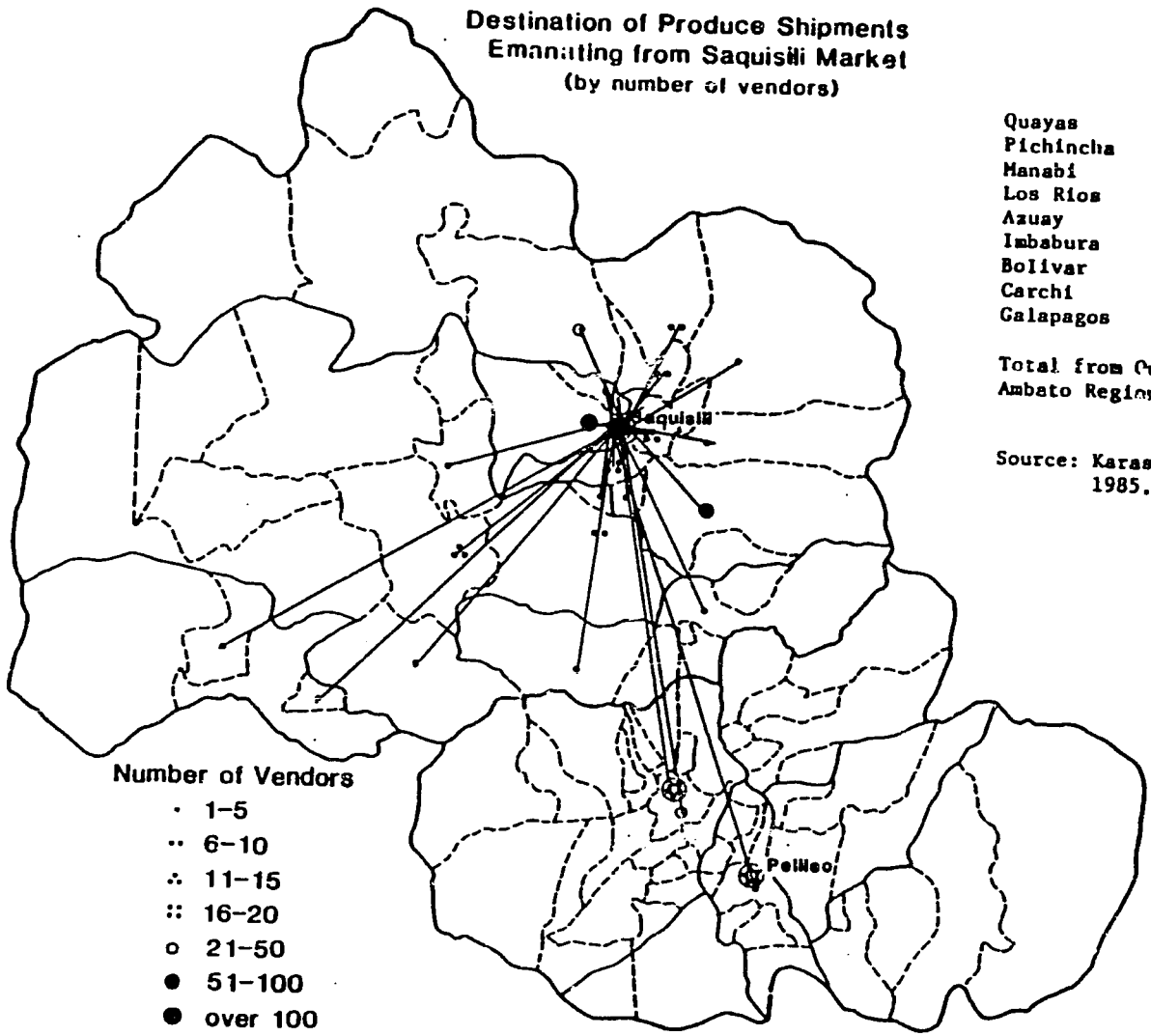


Guayas	5
Pichincha	40
Manabi	4
Los Rios	24
Imbabura	5
Bolivar	1
Carchi	19
Pastaza	1
Total from Outside Ambato Region	99

Source: Karaska et al, 1985.

9051

FIGURE 4-6



Quayas	1
Pichincha	27
Manabi	2
Los Rios	4
Azuay	1
Imbabura	8
Bolivar	1
Carchi	8
Galapagos	1
Total from Outside Ambato Region	55

Source: Karaska et al, 1985.

1500

small lots of peasants' commodities that could not be traded economically by large retailers or wholesalers. Moreover, the numerous periodic markets allow many rural households to derive incomes from salaried work in the ferias and from petty trading as a supplement to their income from farming, and facilitate the formation of networks of personal relationships among farmers and traders on which they base informal credit systems.

Thus, for a substantial period of time during the transition of a regional economy from subsistence to commercial production--and perhaps permanently in some areas where the subsistence and commercial farming systems are not well integrated--periodic markets continue to play an important role in the regional system of exchange.

3. Integrated Marketing Systems

In many regions undergoing a transition from subsistence to commercial production, marketing systems eventually become integrated. As commercialization, specialization, and division of labor proceed the marketing system becomes more hierarchical. Smaller market centers continue meeting demand for frequently used items for which people are not willing to travel long distances, and larger centers emerge to provide a wide variety of specialized items for which people are willing to travel long distances.

In an integrated, hierarchical system of marketing centers goods flow from the farmgate to the destination of final consumption through a series of intermediate markets. The number of levels is determined by the length of the marketing chain. Typically, those goods not retained by rural households for consumption, feed, seed, or in-kind payments are sold by farmers through cooperatives or town-based itinerant traders, directly to consumers in village marketplaces, to local traders, brokers, truckers or commission agents, or to government marketing agents in nearby towns. Studies of the rice marketing system in Ghana, for example, indicate that market towns and secondary cities play a crucial role in organizing and providing access to the marketing system for rice farmers (Okoso-Amaa, 1975). Paddy

farmers sell whatever surpluses remain after retaining crops for family use to traditional rice traders in nearby villages, illegal trader-smugglers, and itinerant traders, who resell the rice in market towns, or to state sales agents located in larger cities. The surpluses gathered in village markets are assembled by traders in "feeder markets" located in district towns and resold to millers and wholesalers in larger cities. Some of the rice is sold in feeder markets to state sales agents and then is resold in private stores in the cities. Private wholesalers in cities also distribute the rice through urban markets to retailers and institutions.

Local traders, in turn, sell the goods in town markets, to other traders and brokers, or to millers, hullers or processors in small cities. Some of the goods are consumed locally in the villages and towns. Some are processed and sold to wholesalers from larger cities. Some are resold to government marketing boards and retailers in regional urban centers. And some products are bulked for sale to exporters in port cities. Other goods find their way through middlemen and brokers to metropolitan areas where they are sold by wholesalers to grocery stores, supermarkets, restaurants, and institutions, and by retailers, hawkers and vendors to individual consumers. People working in the "informal sector" usually dominate an important part of the food

distribution network from producer, to seller, to consumer in Third World cities (Lam, 1982).

As the economy of a region commercializes and becomes for diversified, markets in larger towns and cities enable farmers to trade their agricultural goods and products with people coming from a wider area and longer distances. These towns usually also serve as distribution centers through which small amounts of agricultural goods can be bulked for distribution and sale in other parts of the region or country, and through which mobile traders can bring manufactured goods from larger cities to sell locally. Trager (1976) observed in Ilesha, Nigeria, for example, the important role that middlemen in urban markets play in bulking agricultural products, which they resell to other intermediaries for redistribution to more distant cities and towns. They buy manufactured goods from larger cities such as Ibadan and Lagos and sell them to traders in Ilesha and to farmers in smaller towns and villages in the city's trading area, as well as in the Ilesha market (Traeger 1976-77). These marketing activities also create new economic opportunties for women that may not be available or acceptable in smaller towns or rural villages. In many African secondary cities, women participate heavily in market trade and associated activities. In Ilesha, for example, women participate actively not only as market traders, but

also as brokers, intermediaries, wholesalers, and lenders. They dominate the operation of food distribution activities within the city's internal marketing system.

As a regional marketing system becomes more integrated and as new transport and communications linkages make travel for traders and consumers to larger market centers less expensive and more convenient, many periodic and small daily markets either disappear or are absorbed by larger ones. Larger and smaller markets become organized into a more definitive hierarchy, and become more integrated spatially. Trade interactions tend to increase and the meeting times of periodic markets become more synchronized (Bromley, 1971). The marketing chain then tends to shorten again as small-scale mobile traders are increasingly displaced by larger urban-based wholesalers, and farmers have more direct access to market centers.

As towns and cities in Africa have grown larger, their marketing areas have expanded and their marketing linkages with other cities and towns have become more extensive. Jones (1976: 313) notes that as Ibadan, Nigeria, grew into an intermediate city, its "staple supply hinterland wound round and leaped over the supply hinterland of neighboring cities," encompassing them in much the same way that larger markets encompassed smaller ones in many Western countries. The growth of Ibadan created demands for food and other

agricultural goods that were beyond the capacity of its rural hinterlands to meet, and urban merchants reached out to other cities and towns to obtain supplies.

As the agricultural economy in a region grows and diversifies, larger cities within the region and metropolitan agglomerations in other regions also provide markets and act as centers of trade for agricultural goods. Urban population growth and agglomeration create increased demand for agricultural products from nearby rural areas. Agricultural markets in cities provide employment opportunities for urban workers in a large number of commercial and service activities related to market trade. And the cities come to function as agricultural supply centers and as locations for agricultural processing and agri-business activities (Mortimore, 1970; Simmons, 1975; Elahi, 1976; Rondinelli, 1984).

As a regional economy begins to diversify, and the marketing system becomes more integrated, the distinction between "urban" and "rural" begins to fade. The settlement systems in such regions may be more accurately seen as a continuum rather than as dichotomous. The commercialization of agriculture is the result of the emergence of marketing linkages between rural areas and towns and cities, and at the same time creates the possibilities for stronger and more numerous linkages. In their studies of Central Province, a

commercializing agricultural region in Kenya, for example, Freeman and Norcliff (1984) found a complex set of relationships emerging between rural and nonfarm (town and city) economies that made the two areas mutually interdependent. In Kenya, these linkages have become more complex and interrelated as agricultural production and urbanization increase. They include:

1. Relations between farms and urban production units--centered around the supply by enterprises in towns of farm products for processing, and transport and marketing services, and the supply of tools, seed, fertilizer, and various types of repair services to farms.

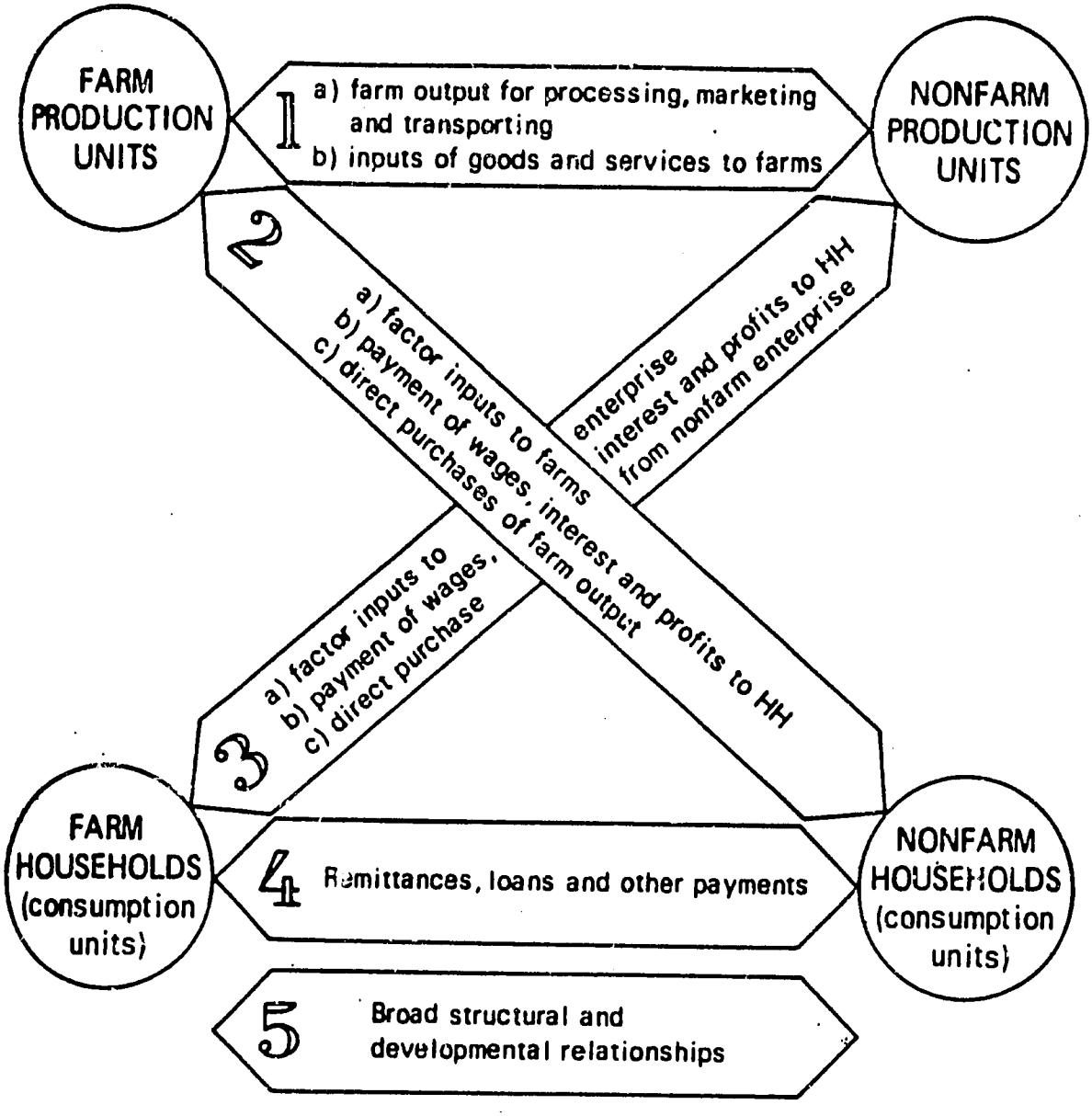
2. Relations between farms and urban households--in particular the provision to farms of labor and capital; payments by urban households of wages, interest, and profits to rural nonfarm households; and direct purchases of food and other agricultural products by urban households from farms.

3. Relations between town or city commercial enterprises and farm households--including the provision of rural labor and capital to urban enterprises; and the purchase of goods and services by farm households from rural nonfarm enterprises located in towns.

4. Relations between farms and urban consumption units--especially through the provision of remittances, loans and

FIGURE 4-8

Linkages Between Rural Nonfarm and Small Farm Sectors in Kenya



Source: Freeman and Norcliffe, 1984.

other payments.

5. Developmental and intangible structural relationships--including the structures of social dominance and economic interdependence between the two sectors.

The structure of the relationships between rural areas and urban centers found by Freeman and Norcliff (1984: 65) in Kenya--depicted in Figure 4-8--is also typical of many other developing countries.

RURAL-URBAN RELATIONSHIPS IN EMPLOYMENT AND ENTERPRISE DEVELOPMENT

It was noted earlier that as the production of tradeable agricultural surpluses leads to greater specialization and division of labor in the regional economy, cities and towns begin to take on a wide range of nonagricultural commercial activities that generate employment and opportunities for investment by small- and medium- scale enterprises. In regions with commercializing agricultural or diversifying economies, cities and towns provide outlets in both the market place and in shops and stalls surrounding the market for a wide range of basic consumer goods such as clothing, crafts, household items, cooking utensils, processed food, and furniture, as well as farm supplies, implements, fertilizers, and other inputs needed to increase agricultural

production. They offer in a convenient location a wide range of personal and commercial services such as credit, storage, mills and processing facilities, transportation, brokerage, blacksmithing and repair services, most of which are provided by informal sector or small-scale entrepreneurs.

As a regional economy diversifies from subsistence agricultural production, towns and cities begin to offer a wider variety of basic household and consumer goods, commercial and personal services, and opportunities for off-farm employment in "formal" and "informal" commercial activities than are found in rural villages.

In some countries, rapidly increasing agricultural productivity frees labor from agricultural activities and pushes people from rural areas into cities in search of new employment and economic opportunities The employment of migrants in cities becomes an important source of income remittances to farm households in rural areas (Rondinelli, 1984). Most towns and cities in Africa are sources of off-farm employment and supplementary income for people living in nearby rural areas. Remittances earned by migrants provide additional income for household members remaining in rural areas. Studies in Kenya indicate that about 13 percent of the income earned by men in a sample of recent migrants to urban centers was remitted home (Rempel and Lobdell, 1978). In Ghana, 40 percent of the rural households with members in

cities have received cash or in-kind remittances (Connel, 1974).

Employment in Commercial and Service Enterprises

Although small- and medium-scale manufacturing play an important role in many towns and cities, the economies of the smaller ones are dominated by commercial and service enterprises. Most intermediate cities and market towns in regions with commercial agricultural economies in Africa, for example, came into being as trade centers and quickly took on personnal and business service functions. Social, business, and public services provided by most intermediate cities are no less important than commerce and trade in stimulating their growth and economic diversification. In Fayoum City, Egypt, for example, about 65 percent of the labor force is engaged in small-scale trade, service, financing, and transport activities (Hoffmann, 1986).

Describing the function of medium-sized towns in South-Eastern Nigeria, Okafor (1985: 155) points out that they "provide the first attraction to school leavers and migrants where they engage in several off-farm activities. Such towns facilitate the adaption of migrants from rural to urban life. The majority of the traders, taxi drivers, and carpenters, are usually people from within a radius of about ten kilometers from the urban base of their operations." He

observes that many of these migrants work in the towns part-time and continue to farm nearby lands to supplement their income. The secondary towns also provide employment for residents from surrounding villages who take jobs as traders, or as casual or daily-paid laborers.

Many towns and cities in transitional regions support agro-processing and agricultural supply enterprises that provide inputs, such as fertilizers, seeds, cultivation and harvesting implements, irrigation components, and pesticides for farmers in their regions. In Senegal, for example, nearly half of the economic activity in secondary towns is related to agro-processing. Agroprocessing provides about 46 percent of the commerce and 44 percent of the nonfarm jobs. In Kaolack, Ziguinchor, and Droubel, oil mills offer employment for rural nonfarm workers, as do sugar and rice processing activities in Richard Toll, tomatoe processing in Dagana, fish processing in Saint Louis and Mbour, and shrimp processing in Zinguinchor (Republic of Senegal, 1984).

Obudho and Waller (1976) note that the town of Kisumu serves as a processing center for one of the most productive agricultural regions of Kenya. It benefits by its proximity to the tea plantations in Kericho, coffee farms in Abagusii, South Nyanza, Kakemega, Busia and Bungoma districts, and the sugar cane processing industries in Muhoroni and Mwani. The industrial base of the city--composed of grain mills,

groundnut crushing factories, hide and skin curing plants, timber yards, fishpacking plants and agricultural equipment assembly plants, is closely related to the agricultural economy of the surrounding areas. During the 1960s and 1970s, food processing dominated Kisumu's manufacturing sector and the city served as a center for agricultural processing in its region.

Towns and cities in regions with increasing agricultural production also provide employment in basic public and social services such as post offices, licensing and registration offices, branch offices of national government agencies, elementary and high schools, vocational schools, maternity and child care services, dispensaries and health clinics, and agricultural extension and technical services.

In his study of Kenya Obudho (1976: 103) notes that "the provision of public utilities like water supplies, electricity, and rail and road traffic was an index of the importance of towns. From the inception of the colonial domination the hierarchical importance of any central place could be calculated on the presence or absence of these utilities." The concentration of primary and secondary schools in Tlemcen made that Algerian intermediate city an educational center for its region and complemented its commercial activities (Lawless and Blake, 1976). In Nigeria, as states acquired greater political and administrative

authority, their capitals grew into regional cities and became increasingly important public service centers, supporting universities, technical colleges, other institutions of higher education, hospitals and other social services that generated off-farm employment (Salau, 1979).

Employment in Small- and Medium-Scale Manufacturing

Most towns and cities in regions with commercializing agricultural or diversifying economies provide conditions that are conducive for small- and medium- scale manufacturing and for artisan and cottage industries that serve local markets and satisfy internal demand for low-cost consumer goods. Some of intermediate cities can also support large industries. (Lubeck, 1977; Mabogunje 1977).

Although most secondary cities in Africa grew without the benefit of large-scale industrialization, they exhibit a good deal of economic vitality stemming from numerous small-scale enterprises, ranging from traditional operations that provide their owners with only small amounts of income to more modern establishments. For example, in Fayoum City, a secondary urban center in Egypt with a population of nearly 200,000, employment in informal manufacturing is extensive. Hoffmann's (1986) studies show that the city has developed into a regional center for furniture manufacturing, a sector that absorbs almost one quarter of all workers in local

informal enterprises. Cabinetmakers, shoemakers, and producers of clothing also account for much of the city's employment.

Lubeck's (1977) studies of Kano, Nigeria, show that most of the migrants to that city initially find work in the tertiary sector, but that many of the informal sector activities are partially integrated with larger manufacturing establishments and that this provides a channel of upward mobility, and allows migrants to obtain industrial jobs.

Multiple Roles of Farm Supply Enterprises

Private enterprises in towns and cities not only provide employment, but also generate demand for new agricultural inputs and provide a channel through which new ideas, technology, or ways of doing things can be introduced into a rural region. Farm supply enterprises in towns and cities offer a place where farmers can see new inputs demonstrated or see the effects of their application. Studies of villages in the Central Plain region of Thailand indicate that more than two-thirds of the farmers obtain information about innovations from informal sources, farm supply dealers, extension agents and sugar quotamen in urban centers (Pontius, 1983).

Often, the farmers receive information about agricultural innovations in urban centers where they market their goods,

buy inputs or consumer goods, or participate in other activities. This function in turn often generates new enterprises or more business for existing enterprises in providing agricultural inputs or technology. The merchants in Thai towns, for example, are the primary sources for the propagation of information about agricultural innovations. "Their ability to function in this capacity came about because of the information they received from farmers in the surrounding area and their ability to identify to potential adopters those farmers who were successfully using the inputs," Pontius (1983: 113) discovered. "The merchants revealed that farmers who had already adopted an input would approach them and ask them to stock it. ... When the local demand was sufficient, the merchants would purchase the inputs."

POLICY IMPLICATIONS

This review of the economic characteristics and rural-urban dynamics in agriculture, employment and enterprise development indicates that AID and governments in developing countries can facilitate and perhaps even accelerate the transition from subsistence to surplus agricultural production and regional economic diversification by providing--and strategically locating--appropriate combinations of "production-support" investments. The combination of investments that is needed will differ from

country to country and from region to region within countries, depending on their social, economic, and physical characteristics.

Components of a Development Strategy for Commercializing Agricultural Regions

Among the components of a development program for regions with commercializing and diversifying agricultural economies are the following:

1. Agricultural infrastructure or inputs that cannot easily be provided by farmers themselves or by the private sector.

Governments can play an important role in regions with commercializing agricultural economies by providing those inputs such as irrigation, agricultural extension, technical training, and agricultural credit that are not, or cannot be, provided by the private sector, but with which the region is likely to attract private enterprises to supply commercially feasible farm goods and services. After commercial farming becomes widespread, increases in rural income generate demand not only for household consumption goods but also for farm implements, irrigation pumps and motors, and power tillers that can be produced by light engineering workshops in rural towns. Moreover, increases in agricultural output generate demand for processing, transport, and marketing services.

Liedholm and Mead (1986) report that the value added generated by these activities is larger than the value added generated by the provision of agricultural inputs in some developing countries. But private investments in enterprises producing agricultural inputs usually do not come until governments provide basic infrastructure and inputs that are not commercially feasible in the initial stages of commercialization.

2. Public market facilities and services that are conducive to private investment in related services facilitating the sale and exchange of surplus agricultural products.

Deficiencies in marketing facilities and services within a commercializing agricultural region can be a serious bottleneck to increased agricultural production. At least in the initial stages of the transition to commercial agriculture, governments can assist in providing adequate marketing facilities, grain and cold storage facilities, transportation terminals or stations for vehicles engaged in food distribution activities, and sanitary facilities in market centers. Perhaps even more important to the efficient operation of the marketing system is the provision of extension assistance in marketing functions and timely and accurate price information for market traders.

Bromley (1984) argues that development policies seeking to

strengthen the role of markets in promoting agricultural development should also include regulations and procedures that make the marketing system more efficient. They include: a) establishing new markets; b) synchronizing market days; c) increasing the effectiveness of market regulation; d) installing complementary services at market sites; e) providing mobile government services in market centers; and, f) ensuring that public services located in market towns are kept open on weekend market days.

3. Transport and communications facilities--such as farm-to-market and inter-urban roads--that increase farmers' access to market centers and create conditions conducive to small enterprise development.

Employment expansion in market towns and intermediate-sized cities requires investment in agroprocessing, agribusiness, retail service, agricultural market, and small-scale manufacturing enterprises. Such enterprises will locate in market towns and cities, however, only if they have adequate physical infrastructure, good transport access to rural areas and larger cities, and adequate housing and social services. With proper investment in transport and communications facilities, governments in developing countries can help small cities and market towns to attract the small enterprises that generate off-farm employment and facilitate the growth of market trade.

Transportation and communication play a critical role in ensuring widespread participation in a commercial agricultural economy. Transportation networks, for example, have played a vital role in the transformation of regional economies in Africa, and have restructured the functions and relationships between rural and urban areas and among cities and towns. Mabogunje (1977) observes that in Nigeria the extension of railway and road networks not only created new cities, but also transformed the economies of existing ones from administrative and marketing to commercial, service, and manufacturing centers. Roads and railways built at the turn of the century to exploit the resources of the interior by-passed some traditional centers such as Ile-Ife, Ilesha, Benin City, Sokoto, Katsina and Yauri, and turned small villages into important regional cities. Kaduna, Jos, Enugu, and Port Harcourt, all located along the new rail lines, grew in population and became more economically diversified.

In other regions, the construction and extension of farm-to- market roads and inter-market highways promoted the diffusion and adoption of new seed varieties and agricultural technologies. Construction of new roads or the extension of existing ones in many regions of developing countries have lowered the costs for farmers to market their goods and allowed them to market their products directly rather than through middlemen. It allowed urban wholesalers and

retailers to travel to smaller market towns and periodic markets to buy goods from larger numbers of small producers, facilitated the distribution of farm supplies and inputs, and allowed wider distribution of basic health and social services (Devres Inc., 1980).

In commercializing agricultural regions it is essential to create and maintain an effective network of roads that include a) major arterials connecting regional market centers to large cities; b) secondary roads that connect market towns in rural areas with regional market centers; c) rural collector and feeder roads that link periodic markets and villages with market towns; and, d) local roads that link farmsteads with villages, periodic markets and market towns.

4. A network of social and health services in towns and cities that serve a large rural hinterland.

In regions with commercial agricultural economies it is often necessary for government to take an active role in strengthening the network of social and health services to assure greater access to them for people living in rural areas, towns, and regional cities.

The creation of a hierarchy of social services and facilities is essential to maintain the productivity of the labor force, and to attract skilled professionals, managers, and administrators to the region. The hierarchy of

educational facilities should include elementary, middle, and secondary schools, junior and vocational colleges, technical schools, agricultural schools, and colleges offering diversified curricula. The hierarchy of health services should include paraprofessional health workers, basic health stations, rural health clinics, small general hospitals, and more specialized hospitals and clinics.

5. Credit and technical assistance for small-scale entrepreneurs and business people engaged in providing agricultural services, marketing, manufacturing and commercial services.

Programs to improve and expand small-scale enterprise are crucial in regions undergoing the transition from subsistence to commercial agriculture. As a regional economy diversifies, manufacturing and commercial enterprises play a more important role in satisfying consumer demand and in supply the agricultural sector. Liedholm and Meade (1986) note that in Jamaica, Honduras and Egypt, well over 80 percent of the goods produced by small manufacturing enterprises in rural regions were sold to final consumers and nearly all of the rest to intermediaries. They concluded from empirical studies in Nigeria, Sierra Leone, Bangladesh, and Malaysia that there is a strong positive relationship between increases in rural household income and rising demand for goods and services produced by rural small-scale

enterprises.The elasticities for small-scale rural nonfarm products and services ranged from +1.34 to +2.05 in those countries. In Nigeria and Malaysia, the expenditure elasticities for locally produced goods was higher than or comparable to those purchased from enterprises outside the region. Moreover, the income elasticity of demand for rural industrial goods tends to be higher among lower income, small-scale farm households than among higher-income families.

But most small-scale entrepreneurs in rural areas lack access to the credit needed to operate effectively and expand their businesses. In Nigeria, more than 90 percent of the owners of small rural industries finance their activities from their own savings or from resources borrowed from relatives. In Bangladesh, Tanzania, and Haiti, more than 70 percent of rural industry owners finance their initial investment from their own savings; less than 3 percent receive funds from banks, government, or private money lenders (Liedholm and Meade, 1986).

In brief, national governments, with AID's assistance, can act as catalysts for regional economic development by providing the basic public investments that will create conditions conducive to private investment or cooperative activity. These catalytic investments can help to accelerate the transition of regional economies from subsistence to

commercial production.

Strengthening Spatial Integration of the Marketing System--Market Town and Regional City Development

The spatial strategy for locating investments in social services, infrastructure, and productive activities in regions undergoing the transition to commercialized agricultural economies should focus on strengthening the economies of market towns, and of cities that serve large areas within a region.

1. A Services-Led Investment Approach to Market Town Development

Earlier it was noted that market towns play a crucial role in promoting the transformation of a regional economy from subsistence or low-surplus to commercial agricultural production. Once the transition begins, the continued commercialization of agriculture, and the spread of benefits widely among the population require, as Johnson (1970: 228) has argued, that farm families throughout a region have "access to markets where farm produce can be sold for cash without danger of monopsonistic exploitation and where there are enough sellers of farm supplies to prevent monopoly." What is needed, he concluded, is a well developed and integrated system of market towns where appropriate services and facilities can be concentrated to serve the rural

population efficiently.

To function effectively as exchange, bulking, and distribution centers for agricultural goods, as centers of off-farm employment and as centers of administrative, commercial and social services, market towns need a critical mass of appropriate services, facilities, and enterprises (Rondinelli and Ruddle, 1978). Among the services and facilities that form an effective "market town complex" are permanent market facilities, a rural financial institution, a primary and secondary school, a small hospital or health clinic, an agricultural extension service office and demonstration farm, reliable energy and utilities, a small transport depot, storage and warehousing facilities, a telephone or telegraph station, small milling or agroprocessing facilities, farm supply and implement shops, and appropriate rural industries.

Although government must take an active role initially in locating social services and public infrastructure in market towns, private investment in commercial and personal services, agroprocessing, and small-scale industry often follow. Indeed, in some countries such as India, government has used a social services investment strategy to develop market towns in areas where it has extended irrigation facilities and to create conditions conducive to private investment.

One of the most effective development strategies for AID and national governments in transitional or diversifying regions is to provide those critical services and physical infrastructure that cannot be supplied by the private sector. One example of how a social services led investment strategy was successfully applied is in the Andhra Pradesh region of India, where government extended irrigation into drought prone areas and provided basic social services in selected market towns and cities. In one of the few longitudinal studies done of the transformation of a region from subsistence to surplus production and of the impact of government investments in agricultural inputs and public services, Wanmali (1985) shows the emergence of stronger economic linkages between rural areas and towns and cities in the region as well as the important role that market towns assumed in providing better public and commercial services to a large portion of the regional population. His study of Miryalguda Taluka (subdistrict) in Andhra Pradesh covers the period from 1968 when the previously drought prone subsistence production area received irrigation, until 1982, when the government had completed its investment program in basic social services in 18 selected market towns and cities throughout the district.

In 1968, the district with a population of a little more than 200,000 exhibited many of the spatial and economic

characteristics of an underdeveloped subsistence economy:

-- The size distribution of settlements in the region was quite skewed--there were only about 47 small villages with an average population of 1,400; 12 "middle sized" settlements with about 2,500 residents; and four larger towns with an average popuation of about 54,000.

-- Social and commercial services were highly concentrated in the larger towns. Indeed, only the four largest towns provided any variety of services for people living outside their boundaries. None of the towns provided more than 7 rural services.

-- People living in the subdistrict had to travel between 8 and 21 miles to obtain basic educational, health, financial, and transportation services, and to participate in regular marketing activities. For "higher order" services such as banking, secondary education, and hospital care people living in the district had to travel an average distance of 25 miles. The long and costly journey eliminated most poorer rural households from obtaining the services located in the few towns that provided them.

-- Relatively little economic interaction took place between rural areas and market towns and cities in the subdistrict. Most farm households traded in small periodic markets in or near their villages, which had relatively few

services or facilities. The backward and forward linkages between rural and urban economic activities were weak and aporadic.

The introduction of irrigation into much of the subdistrict--some areas were not included and remained drought prone--rapidly stimulated agricultural production. Between 1967 and 1978 irrigation was provided to more than 80,000 acres in the district, changing and diversifying the cropping pattern to one producing paddy, jowar, groundnuts, castor, pulses, sugarcane and seasonal vegetables. The cropped area increased from 102,000 acres to more than 185,000 acres, and irrigation allowed double cropping on much of that land (Wanmali, 1983) "The extension, intensification and diversification of the cropping pattern was facilitated by the simultaneous provision of rural services such as education, health, credit, banking, transportation, marketing, storage, commmunication and input distribution," Wanmali's (1985:40) surveys found. "The employment generated and the higher incomes earned through the transformation of agriculture were responsible for the increased demand for various retail services, including stores for general provisions, cioth, hardware, fertilizer and pesticides, restaurants, weekly markets and pharmacies."

Initial investments in public and social services were made by the government because private investors were unsure of

the size of the market for commercial goods and services. However, once social and public services were in place and incomes began rising from increased agricultural productivity, private investors and small-scale entrepreneurs began providing retail goods and services in the larger settlements.

Between 1968 and 1978, the characteristics of the area's settlement system and economy changed noticeably:

-- New services and enterprises were established in towns and rural service centers throughout the subdistrict, but especially in the irrigated areas. The number of settlements with no services at all was reduced from 23 to 12; the number of settlements with no retail services decreased from 104 to 34.

-- The number of towns providing public and commercial services for a significant portion of the rural population in surrounding areas increased from 4 to 20.

-- The service areas (the average distance from which people had to travel to the nearest town) of settlements in the subdistrict decreased over the 10-year period, indicating that the population could obtain a wider range of services closer to their homes.

-- The index of service provision--the weighted value of

each service by the number of people served--increased dramatically from 4.6 in 1968 to 9.9 for the subdistrict as a whole, and from 4.5 to 13.9 in the irrigated tract.

-- The population of the "middle level" settlements in which government provided rural services increased substantially, indicating that these places were absorbing migrants.

-- Retail and commercial services provided by the private sector increased in those settlements where government had provided rural services in anticipation of increased agricultural production and income.

Although in 1968, only the towns of Miryalguda and Vijayapuri had retail services, by 1978 most of the middle-level towns in the subdistrict also had cloth stores, chemists, fertilizer and pesticide, general provision, and hardware stores, which were easily reached by a much larger number of rural households.

A follow-up study conducted in 1982 and 1983, focused on the impact of the Miryalguda area's economic transformation at the household level. A sample survey of households in 10 settlements in the dry and irrigated tracts found that agricultural development had continued in the irrigated tracts, where there was increased diversification in cropping as well as in other rural economic activities. As a result

Wanmali (1985: 71) found that "the rich households alone were not continuing to get rich; the marginal, small and medium farmers had also become more economically viable." The surveys also indicated changes in rural household economic relationships with towns and rural service centers. They showed an increasing use of the towns that provided goods and services by a growing number of rural households. By 1983, rural households obtained more than 70 percent of their goods and services from towns and urban centers. The surveys indicated more frequent use of public and commercial services in the irrigated tract, where they were available at a shorter distance from rural peoples' homes. There was also a significant reduction in the level of physical inaccessibility by the rural population to services throughout the district because services were located in a larger number of towns.

The improvements in retail service provision and use in Miryalguda, Taluka, as Wanmali (1985:73) found, was a "direct consequence of the demand linkages emanating from the overall development in agriculture." His evidence suggested that "all segments of the society benefitted from it, which indicates their active participation in the rural economy." Observation of the changes in the district's economy over nearly a decade and a half led the researchers to conclude that "planning for an appropriate regional distribution

system of goods and services is likely to strengthen the service and demand linkages at the household level."

2. An Infrastructure-Led Investment Strategy for Secondary or Regional City Development

As a regional economy becomes more diversified and agricultural production becomes more commercialized, secondary cities serving a large area within the region also become more important. It was noted earlier that secondary cities can play a number of crucial roles in the regional economy as marketing centers for agricultural goods grown in the region, as sources of demand for a wide variety of nonagricultural goods produced in rural areas, as centers of off-farm employment in occupations related to market trade, commerce, and small-scale industry, and as agricultural supply and agroprocessing centers. Moreover, many secondary cities serve as centers commercial and personal service enterprises, and as centers for social and public services that require large populations from the city and surrounding area to support their efficient operation (Rondinelli, 1983.)

Moreover, Hamer (1985) points out that as a regional economy diversifies, secondary cities can begin to support a wide range of private enterprises that do not depend entirely on the economies of very large scale. These include

enterprises that use perishable inputs or inputs that undergo weight losses in processing; enterprises that process resources that are exported directly to other countries; enterprises that market products at prices competitive with those of products shipped long distances; and agribusinesses and administrative services.

In an extensive study of secondary cities in developing countries, Rondinelli (1983) found that governments can assist in strengthening the economies of secondary cities in regions with growing economies by:

-- Increasing the quality and coverage of basic social and municipal services and facilities that may be missing or deficient;

-- Improving physical infrastructure such as roads and utilities that are crucial for attracting and supporting more diversified economic activities;

-- Strengthening the economic base and employment structure--especially through financial and technical assistance to small- and medium-sized enterprises--to raise their productivity and income and to increase the capacity of secondary cities to continue to grow and diversify; and,

-- Building the administrative, planning, and financial capacity of secondary city governments to manage their

development more effectively in the future.

Hamer (1985:40) points out that "as more infrastructure is installed, and experience with industrial processes increases, the encouragement of secondary centers becomes consistent with maximizing national economic growth." He contends that to encourage the expansion "of tradeable goods and services in secondary cities--and local activities that respond to that growth--public services must be improved and regional and interregional access enhanced."

Special attention needs to be given to providing the physical conditions conducive to the location and expansion of agroprocessing and marketing functions, and enterprises related to the bulking, storage, and distribution of agricultural goods. Regional cities in agricultural areas are critical locations for the whole complex of agricultural processing and distribution activities requiring larger economies of scale and stronger physical linkages than are usually found in market towns and smaller cities. Regional cities can be crucial linkage points in the marketing system between rural market towns and large urban centers for both domestic distribution and the export of agricultural products (Rondinelli, 1983).

Hamer (1983:40) points out that "as development proceeds, a variety of industrial firms find that they can be most

efficient if they locate themselves with firms producing similar products, in smaller urban centers, where land is inexpensive and labor available at relatively low wages." Adequate and efficient infrastructure that allows enterprises to operate profitably and that provides access to raw materials and markets is crucial to promoting the growth of regional cities and their agroprocessing and industrial activities. Infrastructure such as "improved roads and communications allow these 'peripheral' producers to reach ever-wider domestic and international markets," Hamer contends. "The stage is thus set for secondary centers to specialize in particular types of relatively routine activity, reap the benefits of lower costs associated with the concentrtion of production within an industry and trade extensively."

The social services and physical infrastructure necessary to make regional cities attractive for managers and entrepreneurs and to allow private enterprise and public corporations to operate efficiently in them are public goods. Governments, through investments in public services and infrastructure, can strengthen the capacity of secondary cities to play increasingly important roles in regions with commercializing agricultural and diversifying economies.

In sum, governments must take a catalytic role in commercializing agricultural regions by providing public

services and facilities necessary to sustain increased agricultural production, by creating the pre-conditions that allow private investment in the regional economy, and by promoting access to markets and productive inputs for both small-scale and large-scale farmers.

CHAPTER FIVE

RURAL-URBAN DYNAMICS IN URBAN REGIONS

No discussion of rural-urban dynamics in economic development can be complete without examining the relationships between agriculture and cities, and their implications for employment and private enterprise. The role of large cities and metropolitan areas as markets for agricultural goods has largely been ignored in the development literature and taken for granted, when it has been recognized at all, by international assistance organizations and governments in developing countries. Yet, large cities are important market centers for agricultural goods produced in peripheral areas of the cities and in rural regions. The distribution, preparation, and sale of food in cities involve a large number of workers in both large and small enterprises and in informal sector activities. Much of the investment and employment in the informal sector in Third World cities are related to food distribution, preparation and sale. And the linkages between the formal and informal sectors involved in urban food distribution and sale are usually quite strong. For many regions with commercial agricultural economies, large cities and metropolitan areas are the final markets for their products

and the sources of many of their manufactured inputs and consumer goods.

This chapter, therefore, examines the findings of the relatively few studies that have been done of rural-urban dynamics in urban regions, focusing primarily on the food sector, and outlines policies and programs that AID and governments in developing countries can pursue to improve the urban food marketing system and strengthen linkages between cities and rural areas.

URBAN REGIONS AS AGRICULTURAL MARKETS

The most important role of large cities in rural development is that they serve as significant markets for agricultural goods. Historically, as cities have grown larger in size they have become more dependent on the importation of food from other regions within the country and, sometimes, from more efficient food-producing regions abroad. Although only about 24 percent of India's population, for example, lives in urban areas, more than half of all of the food grains distributed by India's national food procurement system, go to five states that contain about half of the country's urban population and 60 percent of its city population (Ahmad and Singh, 1982).

In many countries, large metropolitan areas are the dominant

markets for agricultural goods from throughout the country. The cities organize the marketing system for both domestically consumed and exported commodities, as well as the distribution system for imported foods. Studies of rice marketing in Thailand, for example, point out that for the large Central Plain regions around Bangkok, the city serves as the direct linkage point for all aspects of pricing, bulking, distributing and exporting. "For the most part, commodities that are collected by the provincial trade centers are transported to the Bangkok market which is the main distribution center, supplying the goods to the needy areas for processing and export," Savit Bhotiwihok (1978: 124) found. "Certain import commodities such as rice, cassava, and sugar cane are processed at provincial centers before being sent into the Bangkok market." He also found that "the Bangkok market plays a major role in collecting goods [and sending them] to provincial trade centers for distribution to other smaller markets in the rural localities or for direct distribution to consumers."

Large cities are important markets for agricultural goods not only because of the size of their populations, but also because urban households in developing countries tend to spend a large proportion of their incomes for food. Although the percentage of total household expenditures for food tends to decrease with rising levels of income, low- and middle-income groups in most developing countries spend on average about half of their incomes

for food. The range of expenditures in any particular urban region, of course, depends on income distribution and the level of economic development. Studies of expenditures of urban households in Bangladesh, for example, indicate that on average the highest income groups allocate about 56 percent, and the poorest households about 68 percent, of their expenditures for food. Among the poorest groups nearly 90 percent of urban households spend more than 80 percent of their total income on food, and at least 12 percent of the poor spend more than 90 percent on food (Islam, 1982). In Malaysia, lower and middle income urban households spend between 42 and 54 percent of their incomes on food (Lam, 1982).

Studies of the intermediate city of Iloilo in the Philippines indicate that about 77 percent of the income of poorest households is spent on food, as is 66 percent of the income of middle-income groups. About 30 percent of all household food expenditures are made for prepared food purchased outside of the home. Two-thirds of these food expenditures are made at street food establishments or at vendors' stalls (Barth, 1983).

Large cities in the developing world are likely to remain the most important markets for rural agricultural products for many years to come, especially as urban areas continue to grow rapidly over the next two decades.

FOOD MARKETING CHAINS IN URBAN REGIONS

The food marketing chains in urban regions are quite similar in their composition throughout the developing world, although the percentage of food distributed and sold by each of the components differs drastically among developing countries and among cities within them, depending on their economic, physical and social characteristics.

In most cities, food is procured from producers directly by consumers in urban markets, indirectly through government operated procurement agencies that distribute food to government stores, or through retailers who obtain their products from processors, wholesalers, brokers, or other intermediaries. Wholesalers distribute food to institutions such as schools, hospitals, hotels, workplace canteens, and public agencies, and to supermarkets, grocery stores, food shops, bakeries, restaurants, market vendors, hawkers, and street-cart operators. Those commodities that cannot be procured locally, such as exotic food items, are usually imported from abroad and distributed through supermarkets and special food shops.

In large Third World cities, most of the food is sold through urban marketplaces, small shops, and street vendors. The small enterprise and informal sector components of the food marketing system are crucial because of the large numbers of people with low incomes in Third World cities. The low incomes of most urban households shape consumer behavior and make them dependent on small-scale food preparers and distributors. Studies of urban food consumption patterns in Latin American countries, for instance, show that:

1. Urban consumers tend to fragment their purchases among a large number of shops or vendors, buying groceries in food shops, fresh meats in butcher stores, vegetables and fruits from market stalls, dairy products, eggs, and cheese from shops specialized in those goods, and bread and pasteries from bakeries;

2. Consumers shop for food products quite frequently, usually daily and often several times a day, because they lack adequate storage to keep perishable foods;

3. Consumers tend to purchase small amounts of food during each shopping trip, because of their low incomes, their preference for fresh foods, and the lack of storage space; and,

4. Consumers tend to buy primarily from vendors, stalls, and shops in their immediate neighborhoods, and usually from the same sellers on a regular basis (Goldman, 1974).

For all of these reasons, the food retailing system in most urban regions of developing countries consists of fragmented and dispersed market places and large numbers of small specialized shops and vendors, with relatively stable clientele, operating at low margins of profit, and employing the labor primarily of the operator and members of the operator's immediate family. Most groceries and food shops in Third World cities sell in small lots, have little product mix diversification, and must be highly accessible to consumers in their location and business hours.

Although as household incomes rise there is a tendency to shop less frequently, for larger and more diversified "food baskets," and in larger supermarkets, in much of the developing world urban food marketing is highly segmented and strongly fragmented into numerous small-scale enterprises and individual vendors.

Marketplaces continue to play as important a role in food distribution in big cities as they do in rural areas. In La Paz, Bolivia, for instance, sales in urban markets account for most of the provision of fresh fruit and vegetables in the city, most of the fresh meat, and a substantial portion of dry goods, clothing

and basic household items (Buechler, 1978). Market vendors buy their goods directly from rural producers or from wholesale and retail depots near the city. The "backward linkages" from the city to rural areas in food procurement are extensive. Potatoes, yams, corn, carrots, onions, tomatoes, cabbage and lettuce sold in La Paz markets come as far as 300 kilometers from the Cochabamba Valley and from the altiplano around Lake Titicaca, as well as from small temperate valleys surrounding the city. Farmers living in the rural areas surrounding La Paz often go to the city for several days at a time to sell their goods directly to consumers. Others living farther from the city sell to truckers, brokers and intermediaries who resell goods in the La Paz markets or to wholesalers, or both. Migrants to La Paz often obtain agricultural products from their home communities to sell in the city markets.

In most urban regions, central markets and district markets continue to flourish because they offer consumers fresher products at lower prices than either neighborhood retailers or street vendors, although the costs of transportation to and from the markets must be borne by the consumer. Within many large cities, a hierarchy of urban markets evolves to serve dispersed consumers throughout the city. Handerwerker (1981: 13) describes the urban market structure in Monrovia, Liberia, where

> the central and neighborhood markets constitute qualitatively different shopping environments and exhibit the step differences of trading area and population served characteristic of a central place hierarchy. Whereas the neighborhood markets are almost exclusively foodstuff retailing sites whose variety of stocks range s from 50-75, servicing populations no larger than about 4,500, at the central markets one can choose from among 200-300 different items and buy from 700 to 1,000 firms. Each day the central markets serve from 23,000 to 33,000 people. Whereas the neighborhood markets are visited occasionally by a hawker of cloth or clothing--and each usually has one resident tailor--both of the central markets are extensive sections of nonfood sellers: tailors and firms handling cloth, clothing, household wares, jewelry, and sundries. Only at the central markets can one obtain such indigenously crafted goods as mortars, pestles, brooms, rice fanners, chairs and pots.

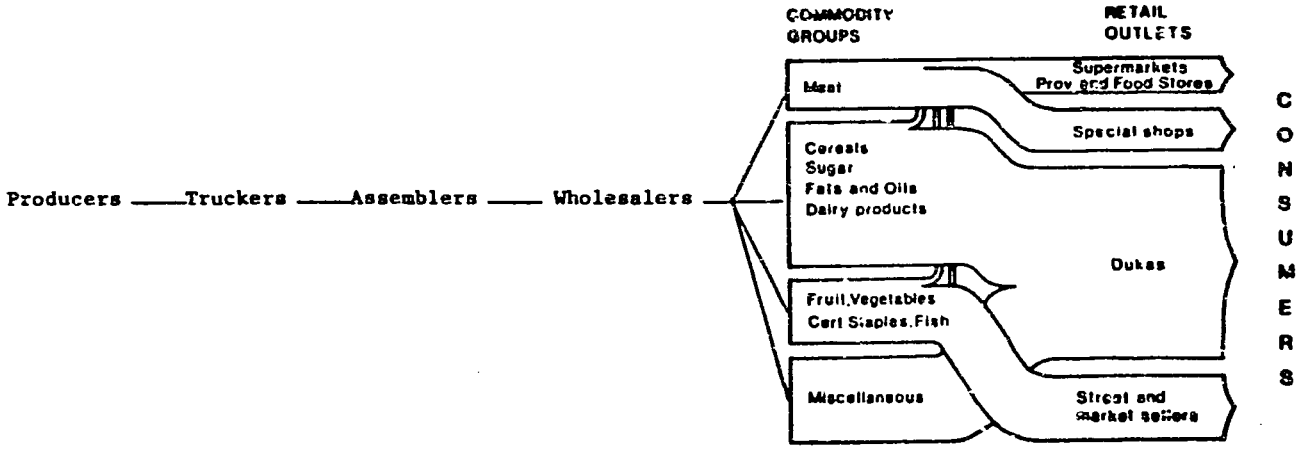
Monrovia's central and neighborhood markets have adjusted their locations to minimize overlaps in trading areas, and thus markets in the city are almost equidistant from each other.

Goods sold in urban markets usually come from the immediately surrounding rural areas as well as more distant rural regions. Thus, wholesalers and assemblers play an important role in the urban food marketing system. For example, in Tanzania, farmers from the hinterlands of Dar es Salaam, Morogoro, and the Coast Region, Mbeya, Arusha, and Lushoto all supply the major wholesale market in the city of Dar es Salaam (Sporrek, 1985). The largest amounts of food are bulked at assembly points well known to producers in the supply areas by truckers, middlemen, and small-scale wholesalers. The intermediaries travel to various assembly points in rural areas until they have enough to fill a lorry and then proceed to Dar es Salaam to sell the produce at the wholesale department of the city's Kariakoo market. The wholesale market then distributes food to the major outlets, including a small number of supermarkets and numerous provision and food stores, small groceries or "dukas," and special shops. The dukas are located throughout the city in small shop-houses in which the owners live on the second floor or in the back. About 60 percent of the food in Dar es Salaam is marketed through dukas and shops, and about 25 percent is sold by street and market vendors or by the producers themselves. (See Figure 5-1.)

Similarly, wholesalers of fruits and vegetables in Kuala Lumpur obtain their products from rural areas throughout Peninsular Malaysia. Most fruits are grown by small-scale farmers in

FIGURE 5-1

Channels of Food Marketing in Dar Es Salaam
Tanzania



Adapted from Sporrek, 1985.

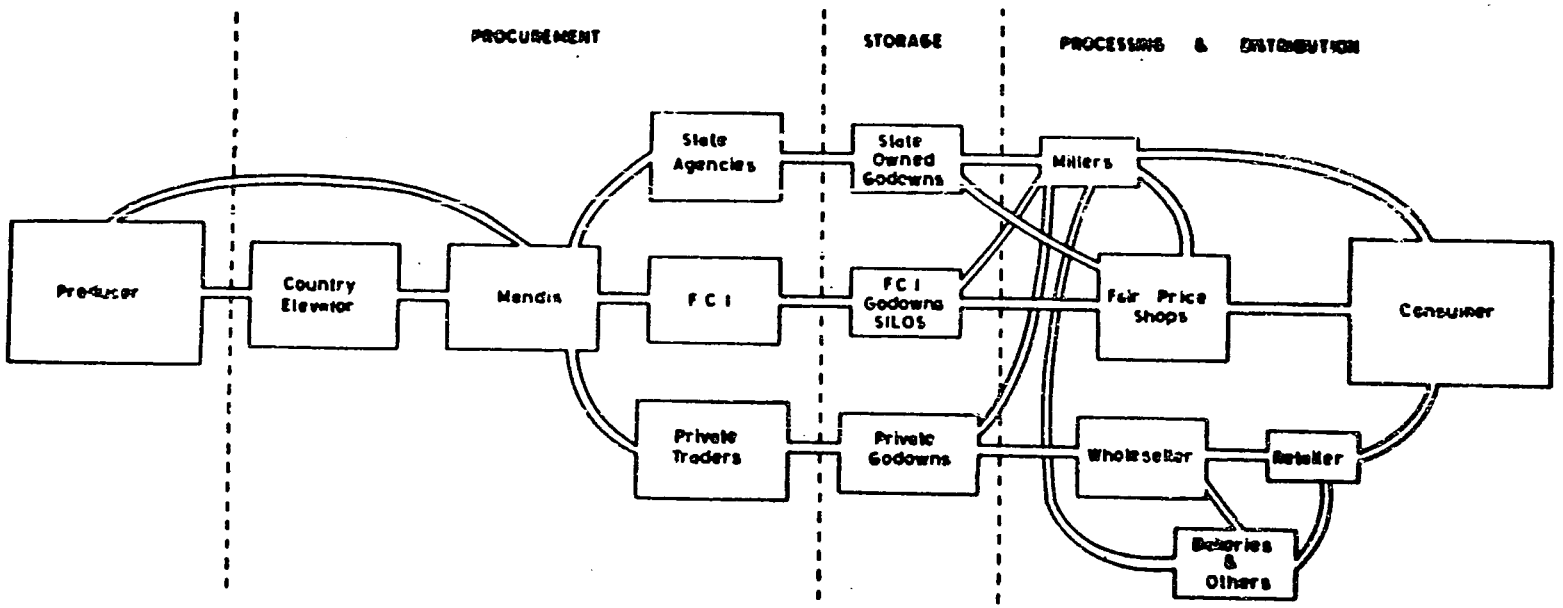
gardens or small orchards. The largest amounts of fruits, however, come from distant regions, especially from Jahore, Perak, and Pehang, which are up to 200 kilometers from the city. Much of the fruit is assembled by wholesalers through truckers and buying agents in producing regions and transported by lorry to Kuala Lumpur. Temperate climate vegetables are acquired from highland areas of Malaysia more than 220 kilometers north of the city (Jackson, 1978).

Usually, wholesalers and assemblers in Third World cities operate bulk- breaking sites that allow small retailers and vendors to obtain appropriate amounts of goods for their customers. Since many cities with large numbers of poor households cannot efficiently support large-scale assembling and warehousing firms, the marketing costs of suppliers can be held to a minimum by maintaining specialized bulk-breaking sites (Handwerker, 1981).

In some countries, such as India, the food marketing chain consists of both private and public channels of exchange. (See Figure 5-2.) The public food procurement and distribution system is operated by the Food Corporation of India (FCI), which obtains food grains from farmers in rural areas through a network of more than 135 district offices in 19 states (Ahmad and Singh, 1982). Food grains are purchased in regulated markets and mandi centers,

FIGURE 5-2

MARKET LINKAGES IN THE PUBLIC FOOD DISTRIBUTION SYSTEM IN INDIA



Source: Ahmad and Singh, 1982

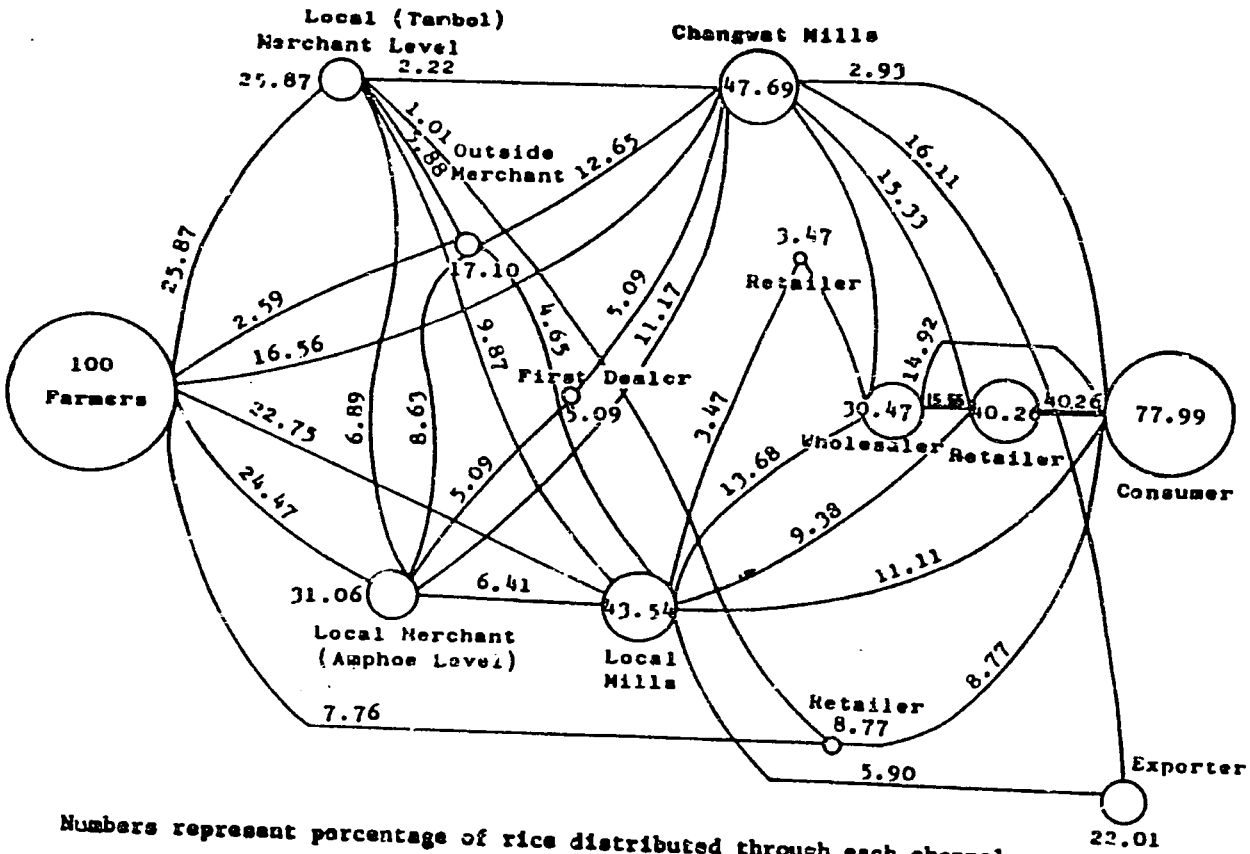
and hauled to more than 2,000 FCI warehouses, depots and storage facilities. Food grains are then processed by millers and distributed to fair price shops in large cities and resold to registered consumers. Food grains purchased by large private traders follow a similar marketing chain: they are stored in private warehouses and depots, sent to millers for processing, sold to wholesalers, who in turn sell to retailers and to bakeries and other shops.

The rice marketing chain in Thailand is also complex. Rice passes through a number of small enterprises going from the producer in rural areas to the consumer in Bangkok. (See Figure 5-3.) Paddy often passes through village merchants, town merchants, external buyers and rice dealers, local millers, district millers, and retailers, most of whom sell some portion of the milled rice locally and send some to wholesalers in Bangkok. Some retailers in towns and provincial cities sell to other retailers in Bangkok, who then resell directly to consumers. Some millers sell directly to wholesalers and retailers in Bangkok, and others sell as well to city-based exporting firms. Urban wholesalers sell to a wide variety of retailers in Bangkok (Savit Bhotiwihok, 1978).

In urban areas of Malaysia, food products are marketed by farmers living near big cities directly to urban retailers or

FIGURE 5-3

Marketing Channels for Rice in Areas Surrounding Bangkok, Thailand



Numbers represent porcentage of rice distributed through each channel.

Source: Savit Bhotiwihok, 1978.

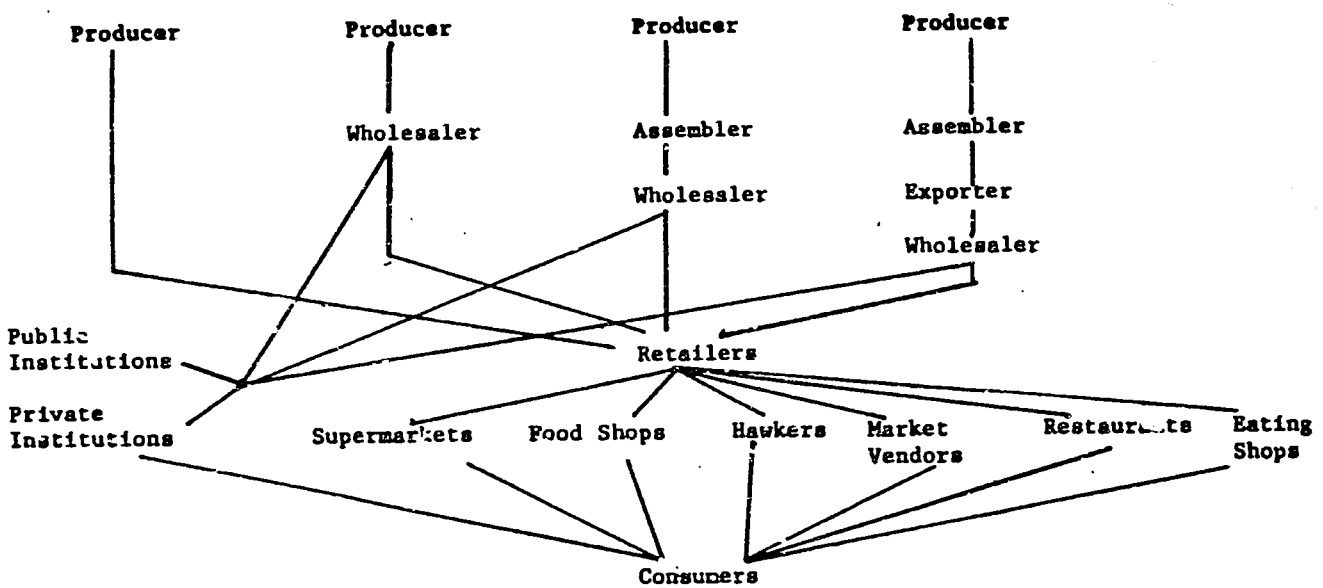
indirectly through wholesalers. Those farmers living far from the city often sell their products through assemblers who distribute to wholesalers, who in turn sell to exporters or retailers. Consumers buy food products for home preparation through supermarkets, shops, and hawkers and vendors and for consumption outside the home through restaurants, eating shops and hawkers and vendors. Supermarkets tend to cater to a small percentage of the wealthier urban households and carry a wide variety of imported goods and more exotic foods. Far more food is marketed through shops that sell rice, sugar, bottled, canned and preserved foods, beverages, prepared sauces, salt, cooking oils, biscuits and cereals, but usually not fish and vegetables. The shops are family businesses operated by working proprietors and extended family members. Hawkers and market vendors sell the bulk of fresh meat, fish, vegetables and fruits. They work either in individual stalls at fixed markets in the city of sell from house to house working from pushcarts, tricycles, bicycles, and small motor vans (Lim, 1982). (See Figure 5-4.)

URBAN FOOD MARKETING BY INFORMAL SECTOR AND SMALL-SCALE ENTERPRISES

Much of the food distributed in urban regions of developing countries is through hawkers, market vendors, street food

FIGURE 5-4

Food Marketing Chains in Kuala Lumpur, Malaysia



Adapted from Lim, 1982.

preparers, and small-scale shops. Not only do the small-scale and informal sector enterprises provide a livelihood for a large number of urban residents in most Third World cities, but they also generate employment and income for low- and middle-income families. In addition, both small enterprises and informal sector food sellers play a crucial role in providing affordable amounts of food for middle- and low-income urban households. Moreover, many informal sector vendors and small shop operators are willing to provide credit to their customers and thus udevelop a strong social relationship of mutual interdependence.

About half of the retail food establishments in Peninsular Malaysia are small enterprises providing a living for about two persons per establishment and employing one worker for every two shops. The other half of the food retailers are hawkers and vendors. Studies of the informal sector in food distribution in Malaysia conclude that "hawkers play an important role by providing good fresh and cooked food to urban consumers cheaply and efficiently, and thus lubricate the workings of the urban economy. Because of their low overhead, hawkers are able to supply food at low prices not only for the urban poor but also for the wealthy." Hawkers and vendors also sell in small lots that allow the poor who do not have the means to store perishables, to obtain enough food for a single day.

Street food vendors and street food preparers make up a large portion of the food distribution system in urban regions of developing countries. It is estimated that about 85 percent of all food purchases in Accra, Ghana, for example, are made from market and street vendors. One street vendor exists for every 35 inhabitants of the city (Sporrek, 1985). Street food sellers in the Philippines offer whole meals, fried snacks, beverages, packaged snacks, soups, ices, native cakes, barbecued meat, sandwiches, meats and eggs, fruits, vegetables, bakery goods and boiled snacks. About 69 percent of the expenditures made for food for home preparation in the city of Iloilo were to market vendors, mobile vendors and sari-sari stores (Barth, 1983).

Studies of Santiago, Chile, indicate that low- and middle-income households buy most of their food for home preparation from small shops within the district in which they live. Between 72 and 81 percent of total expenditures on foodstuffs of the lower income households is spent in small shops. More than 90 percent of bread and cooking coal, more than 80 percent of fish and milk, and more than 60 percent of meat and vegetable purchases are made in small amounts at neighborhood shops (Tokman, 1978). Most shops specialize in particular food items and few are general provision stores. Most small shops in Santiago, for example, sell less than 15 products, usually of a single quality.

Sporrek (1985) found in his surveys of shops and vendors in Dar es Salaam that the range of goods offered there was also relatively narrow. No more than one percent of them sold more than 25 products; most vendors and shops sold only three or four types of vegetables or fruits. The average number of products sold by all shops and vendors was four.

Despite the narrow range and small amounts of products they sell, small shops, market stalls, and street vendors form an important link in the food marketing chain between rural and urban areas. Street food vendors and other informal sector distributors use large amounts of domestic food supplies, usually purchased locally or regionally. Studies of hawkers and vendors in Iloilo, the Philippines, indicated that about 85 percent of them bought at least some items from farmers in the surrounding rural areas of the city. About 56 percent of the vendors sold items that were grown in the six districts of the city that still had substantial gardening or agricultural activity (Barth, 1983). Cohen (1984a) found that "of the fifteen most extensively consumed street foods in Ziquinchor, Senegal, all used domestic and regionally grown ingredients. In addition, all the six cereal based foods in this group either used millet or corn, locally grown stables that the government is trying to promote."

The informal sector in most Third World cities is closely linked to formal sector firms. Many hawkers and vendors buy their products from retailers, wholesalers and groceries,then break bulk and sell the products in small lots. In Dar es Salaam, most market and street sellers obtain their supplies from the Kariakoo Market Corporation, the government controlled national food procurement and wholesaling center. Indeed, the corporation depends on the purchases of these informal sector participants for a large portion of its sales (Sporrek, 1985). Many of the items sold by sari-sari stores in the Philippines also come from larger groceries and retailers. Barth (1983) found in his studies of the street food sector in Iloilo that about 78 percent of the street vendors sold some manufactured or processed items such as soft drinks, beer, liquor, canned pineapple, and packaged snacks originating in Manila; beer and flour from Cebu, and flour and other products from Mindanao. Most of the pasteries, breads and baked goods came from local bakeries, and some fresh vegetables and fruits came from commercial warehouses and distributors. Moreover, three-fourths of the vendors use cooking fuels including wood, charcoal, kerosene, bottled gas, electricity, or some combination of them, purchased from the formal sector.

Studies of small food enterprises in Santiago, Chile, indicate that the primary source of supplies for nearly half of them is La

Vega, the city's largest wholesale food market, about 25 percent obtain their goods from assemblers and wholesalers, 12 percent get most of their products directly from farmers, and about 16 percent obtain their goods primarily from supermarkets or other retailers (Tokman, 1978).

In Kuala Lumpur, nearly all fresh fruits and vegetables are sold by mobile vendors and in market stalls, and the source of supply for nearly half of the fruit vendors is one of the city's large central wholesale markets. But between the wholesalers and the vendors is a large and complex hierarchy of assemblers, traders, brokers, and handlers. In his study of the Kuala Lumpur food marketing chain, Jackson (1978: 56) found that as commodities "move through space from producer to consumer they are handled by varying numbers of intermediaries. Concurrently, however, they are also moving through a hierarchy of traders who differ sharply in their role as breakers of bulk; in their relations with the rest of the urban, and indeed, the national economy; in the scale of their operations; and in their place in the network of credit."

In addition, many of the informal sector activities are linked closely to each other. The main customers of many urban street food vendors are other people involved in informal sector activities. Studies of street food vendors in Iloilo (Barth,

1983:96) found that they also bought many of their supplies from other informal sector firms, from market stalls, and from sari-sari stores.

EMPLOYMENT AND INCOME GENERATION IN URBAN FOOD DISTRIBUTION SECTORS

The formal and informal food marketing and distribution sectors in urban regions of developing countries generate a relatively large amount of income and employment. Wholesale markets in the Seoul metropolitan region of Korea, for example, have "stalls for wholesalers, intermediate wholesalers, retailers and peddlers, mat stalls, administration offices, wholesalers and retailers offices, chilled and cold storage, auction floors, parking lots, loading and unloading sites, commodities owners' lounges, garbage and disposal sites, and sanitary facilities," all of which employ people to operate and maintain them (Sung, 1980: 128). The number of participants earning a living in Seoul's wholesale markets is large. Sung (1980) surveyed more than 2,000 wholesalers marketing agricultural goods, and nearly 5,000 retail and wholesale stalls in fishery markets, and found that each stall usually employed 2 to 3 workers each in agricultural markets and about 4 workers each in fishery markets.

In most developing countries, the food marketing and distribution sector is heavily dominated by informal sector participants and micro-enterprises. Although informal sector activities are often considered ineffective employment generators, they do absorb the labor of the operators, and often of their family members, on a full or part-time basis. They provide a crucial source of income, especially for poor urban households. While street vendors and hawkers often work alone, market vendors, small shop owners, and stall vendors usually work with their spouses, children, or members of their extended family. Many small food distribution and preparation enterprises engage the labor of from one to three family members and sometimes one or two full or part-time employees (Cohen, 1984). In Bogor, Indonesia, a city of nearly a quarter of a million people, one of every sixteen residents is involved in some aspect of street food enterprise (Cohen, 1984a). In Dar es Salaam, food shops require two full time operators or several part-time employees. Many of the shops, however, are run by several members of the same family working part-time on different days of the week or at different times of the day. Informal sector enterprises selling street foods in Davao City, the Philippines, operate with about three people each, and some sellers in market places hire part-time help for specific tasks (Barth, 1984).

In the small-scale industrial sector (firms with less than 10

employees) of cities in Colombia, food and beverage enterprises account for about 16 percent of all employment. In the secondary cities of Pasto, Neiva, Santa Marta, and Cartagena, more than 25 percent of the employment in the small-scale industrial sector is provided by food and beverage enterprises (Uribe-Echevarria and Forero, 1985).

The number of urban residents who depend directly on informal sector activities for all or part of their income can be four to six times the number of such activities within a city. The number of people who depend indirectly on income from informal activities--if formal sector suppliers are taken into account--can be as high as ten times the number of informal sector participants.

Moreover, many of the food vending and preparation activities in Third World cities are operated by women and provide a source of employment and income that can supplement that of male members of the family. Indeed, street food preparation and selling is dominated by women in many Asian and African countries. Studies of street food vendors in Ziguinchor, a secondary city in Senegal reveal that 77 percent are women (Cohen, 1984a). Surveys of the street foods sector in Iloilo, the Philippines, indicate that 80 percent were female and that women were the dominate partners in activities operated by both husbands and wives (Barth, 1983).

Street food activities are conducive to domination by women because of the relatively low capital requirements for entering the business. And because it can be started on a small scale, sometimes with only a single table outside of the house. Street food sales can be done part-time, leaving women time to take care of other household duties. Moreover, the skill requirements are relatively low. Often street food businesses can be operated on a small scale by women who simply add larger amounts of food to the family cooking pot (Cohen, 1984a).

Although small enterprise and informal sector activities usually return a small margin of profit for their owners, many of those engaged in small scale and informal food vending activities earn higher than minimum wage incomes, and among the poor have higher than average incomes (Cohen, 1983; Barth, 1984).

RURAL-URBAN DYNAMICS RESULTING FROM URBAN GROWTH

Clearly, the growth and development of urban regions provides strong markets for agricultural goods from their own hinterlands and from other regions of the country. But urban regions in developing countries do not only provide outlets for agricultural products and create market-related employment opportunities for urban dwellers. As they grow, cities create increasing demands for non-agricultural goods by farm households in surrounding

rural areas and in other regions of the country; they create pressures for intensifying and changing the cropping patterns on farmlands in surrounding areas; they supply modern inputs for agricultural development to rural regions in other parts of the country; and they increase capacity for processing, packaging and marketing food supplies from rural regions.

Recent World Bank (1983: 86-88) studies of Thailand show the strong impact of demand in the Bangkok Metropolitan Area on farm and rural nonfarm activities in areas surrounding the city. They indicate that Bangkok's growth has provided new opportunities for nonfarm employment in agricultural households located within commuting distances of the city. Moreover, the expansion of Bangkok has offered farm households greater opportunities for home production of a wide range of goods for sale in the city. The World Bank found that "farm households in adjacent districts benefit from the proximity of Bangkok by having a substantially wider set of opportunities in farm activities and in a variety of off-farm activities including salaried employment." But even more significantly, Bangkok's growth and development has diversified the economy of the region and provided a more stable situation for farmers on its rural periphery. "Diversity of economic opportunities provides rural households with a benefit quite independent of income," the World Bank's study reports. "It reduces income risk by lowering the exposure to income

fluctuations arising out of heavy concentration in a single agricultural enterprise such as rice. Furthermore, whatever the source of income decline, it is easier to shift to other economic activities whenever one activity becomes less profitable."

It was noted earlier that food tastes tend to change when people move to urban areas and this change in preferences often alters the production and cropping mix in rural areas surrounding large cities. The continued growth of Bangkok has transformed farming from semi-subsistence to commercial production in areas surrounding the city. Because of increased demand for their products, farmers in areas formerly producing little or no surpluses have adopted modern inputs produced in Bangkok and have substantially raised their output. Studies of the area report that "heavier use of such inputs is the result of the intensification of land use and expansion of double cropping" that came with greater demand for agricultural products with the growth of the city's population (Pakkasem, 1981). For example, proximity to Bangkok markets is important for poultry production: farms in provinces adjacent to Bangkok produce three to four times the number of fowl than in other regions of the country. Also production of pork and fruit is greater than in provinces farther away from the city (World Bank, 1983).

The growth of the Bangkok Metropolitan Area has had a pervasive

impact on agricultural regions surrounding it, creating increased demand for food and the conditions that brought "Green Revolution" technology, land consolidation, and structural changes in agricultural production to those areas in order to meet the demand. Extensive studies of the rural regions adjacent to the Bangkok Metropolitan Area show that during the 1970s (Pakkesem, 1978):

1. Cropping patterns changed drastically. Greater specialization in rice production took place in areas close to Bangkok and broadcasted rice planting was displaced by more productive and labor-intensive transplanting methods. This created more employment opportunities in the rural areas.

2. Traditional transplanted varieties were rapidly displaced by modern short-duration high yielding varieties, allowing larger numbers of farmers to engage in double cropping.

3. Yields of both wet season and dry season rice increased substantially in areas where land consolidation took place.

4. The double cropping and land consolidation allowed farmers to use machines for land preparation and for transport and threshing, and the widespread use of locally made farm

tractors expanded employment in tractor production industries and in local assembly and repair enterprises both in the rural areas and near the city of Bangkok.

5. Fertilizers and other manufactured inputs began to be used widely for dry season rice production.

6. Government extended into the rural areas basic infrastructure such as roads and irrigation networks and agricultural extension services that allowed farmers to make better use of modern inputs such as high yielding seeds, fertilizers, pesticides, and credit that contributed to higher levels of production and income.

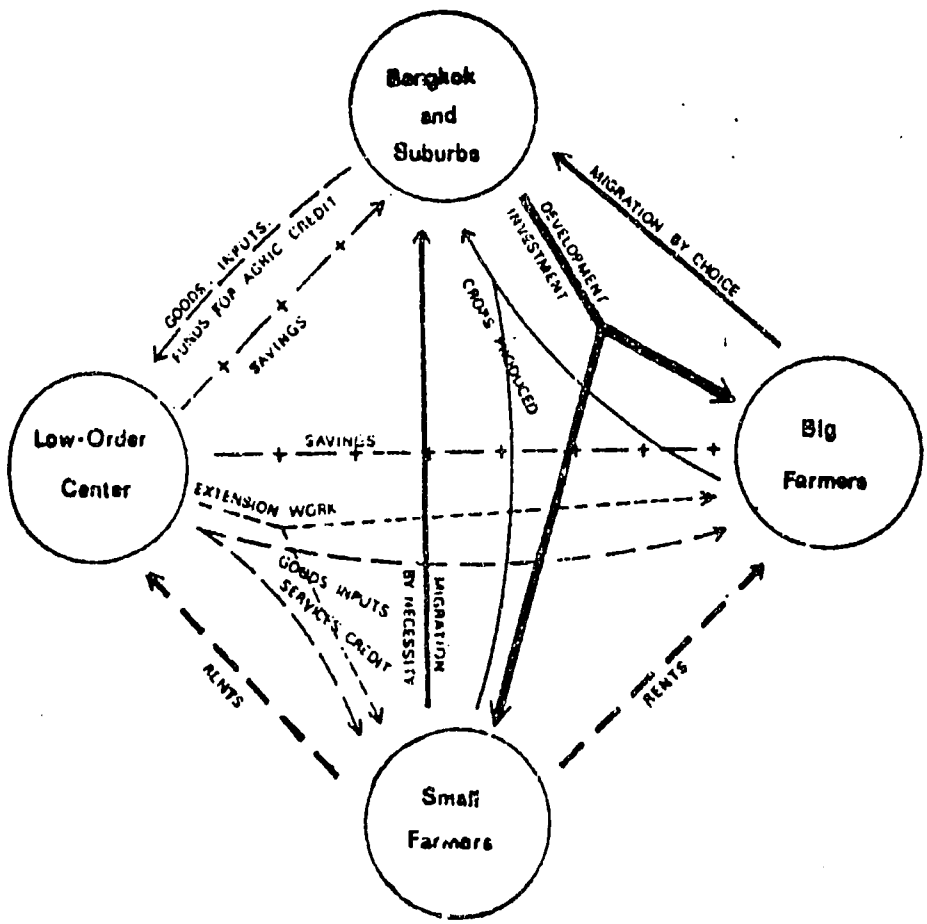
7. Urban growth in the Bangkok area created new opportunities for production and employment in the rural areas and towns surrounding it, including new job opportunities in commerce, custom ploughing, and off-farm services.

8. Employment in Bangkok provided opportunities for rural households to increase their income through remittances by family members working full or part-time in the city. About 75 percent of the rural households from surrounding areas who had members working in Bangkok received income remittances.

FIGURE 5-5

URBAN-RURAL RELATIONSHIPS FOR FARMERS IN RURAL AREAS

SURROUNDING BANGKOK, THAILAND



Source: Utis Khaothien, 1978.

9. Small towns and cities located in the Central Plains and other areas surrounding Bangkok became more important marketing, bulking and assembly points for agricultural goods shipped to Bangkok. These places began to perform important financial functions, since large amounts of money flow through them in the form of credit from Bangkok to local farmers.

These towns and cities also began to provide a larger range of social services, especially the health and educational services demanded by rural households as their incomes increased.

As the linkages between Bangkok and the surrounding rural areas became stronger, the lower order settlements in the rural regions became the main links between the rural and urban economy for both small- and large-scale farmers. The towns became the major sources of credit, services, agricultural inputs, and extension services for the rural population. In addition, the towns were places where large-scale farmers placed their savings (Utis Kaothien, 1978). A simplified depiction of the complex set of rural-urban dynamics in regions surrounding Bangkok is found in Figure 5-5.

Similar results have been seen in the growth of urban regions in other developing countries. The construction of a new national capital city in Brazil during the 1960s, for example,

created strong demand for food that increased the opportunities for 90,000 people in the surrounding state of Goias to supply food and nonagricultural goods to Brasilia's residents, and changed the cropping patterns in the rural areas surrounding it. Traditionally, farmers from Goias provided beef and rice to Rio de Janiero and Sao Paolo, but with the growth of Brasilia, new markets were created for traditional products within the state and substantial amounts of agricultural land were cultivated in perishable fruits and vegetables (Katzman, 1975).

Such changes in land uses, cropping patterns, and production activities could also be seen in rural areas surrounding the city of Lahore, Pakistan, as it grew during the 1950s and 1960s (Elahi, 1976). As the city grew larger in population and physical size, dominant crop belts began to emerge in large patches of land around the city. The land in the belt nearest the city was devoted to growing perishable vegetables that depended on close proximity to markets in Lahore; the next belt was dominated by fodder crops; the third by cereals and grains that were less perishable and cheaper to transport farther distances; and the farthest by other crops such as cotton, sugarcane, fruits and oilseeds. Vegetable cropping has tended to follow the extension of roads and irrigation systems outward from Lahore into the belts formerly cultivated in fodder and cereals. The fodder belt has expanded with increasing urban demand for

dairy products and for draft animal feed. Over a thirty year period from 1940 to 1970, cropping patterns have changed markedly and intensity has increased significantly on land surrounding Lahore.

POLICY IMPLICATIONS

AID can focus its assistance on helping governments and private organizations in developing countries to strengthen urban regions as agricultural markets and food distribution systems. A strong potential exists for dealing with all three of AID's high priority concerns for increasing agricultural production, generating employment, and promoting private enterprise by focusing assistance on the small-scale enterprise and informal sector activities in cities that deal with food distribution, preparation, and sales.

Small-scale enterprises are likely to be the most important components of the food distribution system in Third World cities for a long time into the future. Large wholesaling, retailing, and food preparation firms are most likely to be able to provide for themselves, but small-scale enterprises and informal sector vendors face a myriad of problems that are sometimes caused by government policy and that often can be ameliorated through policy reforms and technical assistance programs.

The informal sector, which constitutes a large part of the food marketing system in urban regions, has often been harassed and restricted by governments in devleoping countries. Attempts have been made in many Third World cities to clear vendors from the streets or to confine them to restricted areas. Some municipal governments have passed laws against hawking, imposed high license fees on vendors, and enacted sanitary standards for food preparation that vendors and hawkers could not possibly meet, or that consumers necessarily want. Street vendors are often subjected to harassment by police or local government officials who solicit bribes to allow them to operate (McGee and Yeung, 1977).

No amount of harassment or restriction has, of course, reduced or eliminated informal sector activities in urban food distribution. Nor are those results particularly desirable given the segmentation of the food market in urban regions and the crucial role that vendors, hawkers, and small shops play in providing food at prices that most low- and middle-income families can afford.

McGee and Yeung (1977) have suggested that governments in developing countries take a more positive role in assisting the small-scale enterprise and informal sectors by perceiving them as

entreprenuers and educating the public to use their services more effectively, by allowing them to operate legally throughout the city except in situations where they truly threaten public health or safety, and by encouraging the expansion of the small enterprise and informal sectors by providing credit. Governments can also relax regulations against employing children in stalls and shops, provide infrastructure and services that will allow vendors to operate more efficiently and effectively, and offer basic management assistance and strengthen the marketing chains of which they are an important part.

Even the small- and medium-scale urban food enterprises in the formal sector suffer from inadequate public attention to their needs and from inadequate public marketing facilities in many cities. Sung (1980: 147) found in his study of wholesale food markets in Seoul, Korea, that merchants lack access to commercial credit needed to expand their businesses and to operate them effectively. Merchants "depend heavily on private loans because of their narrow access to institutional bank credits and because they had to render large amounts of in-advance, interest-free loans to producers to secure a consistent supply of commodities." His study of the operation of wholesale markets in Seoul disclosed a number of other problems that also inhibited more efficient food distribution in the city. Those problems include:

-- Market facilities that were too small in size to provide economies of scale and that were located in congested residential areas where operating costs for wholesalers and retailers, and social costs for the neighborhoods, were high.

-- Shortages of and poor physical conditions in markets, especially inadequate sanitary facilities and the lack of covered auction floors where business could be transacted in bad weather;

-- Shortages of operating funds for wholesalers, limiting their ability to advance credit to producers and suppliers.

-- High taxes and lease costs for traders in wholesale markets, driving up the costs of food for consumers.

-- Growth of quasi-wholesale and illegal market stalls alongside the public markets, where operators undercut prices and did not follow grading and sanitary standards required of wholesale market participants.

-- Inadequate standards for grading, sorting and packaging fruits and vegetables within the wholesale markets, thereby undermining consumer confidence in the quality of goods and accelerating the deterioration of perishable products.

-- Inadequate market information about prices and standards.

Moreover, many merchants complained of the lack of government or private training courses that would help them improve their operations. "Seventy percent of the merchants thought such programs were necessary," Sung (1980: 148) discovered. "Priority contents requested were general information, business morality, business operation techniques, and tax education."

A substantial amount of evidence now indicates that one of the biggest problems for both small-scale enterprises and informal sector activities in urban food distribution is access to capital. An extensive review of experience with street food trades in urban regions of developing countries, led Cohen (1984a: 33) to observe that for both processors and vendors "the biggest constraint may continue to be the atomization of the unit of production." Many government credit programs are small and expensive to administer. She concluded that "the challenge in replicating these programs without a subsidy must lie in bringing down the cost of their administration to levels where the interest rates are not only affordable for street vendors, but cover the costs of capital, collection, and default, as well as allow for an add-on for inflation."

Although the capital costs of starting and operating a

small-scale or micro enterprise is relatively low in most Third World cities, micro- entrepreneurs have great difficulty obtaining loans from formal institutions. Most must rely on personal savings, loans from family or friends, or credit from private moneylenders at high interest rates. About 42 percent of the street vendors surveyed in Iloilo City in the Philippines borrowed from moneylenders to start their enterprise and paid from 5 to 40 percent a month in interest. Most loans were very short term and had to be repaid within a month (Barth, 1983).

Surveys of small-scale enterprises in Colombian cities also found that for 68 percent those employing less than five workers, lack of financial resources was their primary problem. For 20 percent of the firms it was a secondary, but still important, problem. For enterprises with from five to ten workers the lack of financial resources was identified as a primary problem by 53 percent, and a secondary problem by nearly 19 percent of the firms. In both cases lack of adequate financial resources was by far the most serious problem reported. The other problems were in obtaining adequate supplies of raw materials, excessive competition from other small-scale enterprises, and personnel management (Uribe-Echevarria and Forero, 1985).

Research on small and micro enterprises in Third World cities indicates that cheap and reliable credit is also needed for

entrepreneurs to operate effectively, and to expand. Where governments and the private sector have provided loans to micro-entrepreneurs, they have been used to pay off moneylenders charging high rates of interest, reduce the time-consuming trips to purchase small amounts of raw materials or supplies, reach new markets, improve service quality, and start additional businesses (Ashe, 1981). These studies of small-scale enterprises also show that most need assistance with securing and expanding their markets, and with basic book-keeping and management skills.

The operation of food marketing systems and of small-scale and micro- enterprises within them can also be improved by the provision of basic infrastructure and services, such as adequate market facilities, potable water and electricity in markets, public transportation to market centers from low income areas of the city, and improved access roads to major urban market centers from surrounding agricultural supply areas.

Transportation costs and access tend to be important factors in the urban food marketing system. Barth (1984: 41) found in his studies of Davao City in the Philippines, for example, that "numerous middlemen and food vendors travel nearby roads in search of farmers selling their products, but an improved road system is needed to increase their reach and reduce transportation expenses for these buyers and for producers who

wish to transport their own products." His analysis concluded that if road improvements were made that reduced transportation costs and increased access to urban markets for producers living in the periphery of the city, "an efficient food marketing network can supply local food requirements and farmers will be encouraged to produce enough to meet urban demand."

By giving greater attention to improving the effectiveness and efficiency of food marketing systems in large cities, AID and national governments can contribute substantially to expanding markets for agricultural goods in rural areas, generating employment in small-scale businesses and informal sector activities, and strengthening private enterprise in developing countries.

CHAPTER SIX

STRENGTHENING RURAL-URBAN DYNAMICS: TOWARD A MARKETING SYSTEM IMPROVEMENT POLICY

This study has described in detail the nature and characteristics of rural-urban dynamics in agricultural, employment, and enterprise development in subsistence production economies, regional economies undergoing a transition to commercialization and diversification, and urban regions, and indicates the importance of rural-urban linkages in regional and national development. It has reviewed the characteristics of the three types of regional economies, the dynamics of rural-urban interaction within them, the private enterprises that are crucial to their development, their employment sources, and their settlement systems. Special emphasis was placed on food production, distribution, and marketing in each type of regional economy and on programs that are necessary to promote regional economic growth.

Although AID and other international assistance organizations have extensive programs in agricultural development, employment generation, and enterprise promotion in developing countries,

relatively little attention has been given to the relationships among these activities or to the crucial role of rural-urban dynamics in the commercialization of agriculture and the diversification of regional economies.

RURAL-URBAN RELATIONSHIPS IN FOREIGN ASSISTANCE POLICY

The rapid urbanization and serious employment problems in developing countries call for a new perspective on rural-urban relationships in economic development and foreign assistance policies. International assistance policies have largely ignored rural-urban dynamics in the economic development process because they have usually been influenced strongly by macro-economic theories that have focused almost exclusively on labor movement and population migration between the rural and urban sectors. Conventional economic theories oversimplified or obscured the dynamic interactions between the two sectors and the pervasive and inextricable linkages between them.

Lewis' (1954, 1955) classical theory of labor transfer, which dominated development economists' thinking about rural and urban relationships for two decades, for example, was based on a dichotomous two-sector economy consisting of a low productivity, labor surplus subsistence rural sector and a high productivity, modernized industrial urban sector. Lewis argued that the

primary cause of labor transfer from the rural to the urban sector in developing countries was the expansion of urban employment opportunities through growth of the modern sector, and that the pace of the transfer was determined by the rate of capital accumulation in industry. Lewis believed that increases in industrial investment would expand production in the modern sector, which in turn would increase the demand for labor. With increased investment and production, both the demand for and the wages of labor would increase, as would profits, thereby generating more capital to be reinvested in industrial expansion. Modern sector growth and employment expansion would continue until all surplus labor was absorbed in the urban industrial sector. At that time wages would rise, increasing workers' disposable income and creating greater internal demand for manufactured goods. With continued urban industrial growth and transfer of surplus labor from the rural sector, the economy would inexorably be transformed from a rural-agricultural to an urban-industrial base.

But many of the assumptions of the two-sector model and of the impact of industrialization on national development in LDCs have been seriously questioned. Migration from rural areas to cities has continued at a rapid pace despite the relatively slow growth of industry in many developing countries and despite high levels of urban unemployment. Moreover, studies of migration in

developing countries since the early 1970s confirm that the decision of rural people to move to the city, while influenced predominantly by economic factors, is more complex: it involves social, psychological and other factors as well. Todaro's studies have shown that much of the migration from rural areas in developing countries is the result of perceived or expected rather than actual employment opportunities and higher earnings. Migrants consider expected rather than actual gains in deciding to move to cities, comparing the probabilities of obtaining a job and of eventually obtaining higher wages in the cities with those in the rural areas (Todaro, 1969).

Conventional economic theory overlooked or simplified the large number of demographic, economic, social and psychological factors that influence rural people's expectations of finding better opportunities in cities. Byerlee (1974) found that land distribution, government policies on rural development, the levels of rural income, the constraints of the rural social system, the level of education of rural people, the level or urban to rural income remittances,all influence migration decisions. These decisions are influenced as well by the value of urban amenities, distances and travel costs to cities, the level and types of information flows from cities to rural areas, and the degree of social contact between rural villages and cities all influence rural people's perceptions about migration.

Perceptions of the value of migrating are also shaped by levels of urban wages, costs of living in cities, the social and economic costs of migrating, willingness to accept risks, and the ability to adjust to urban life styles. Findley (1977) has emphasized that these factors are perceived differently by various groups of people in rural areas and are weighted differently in the decision to move. Clearly, while labor transfers and migration are important dimensions of the relationships between urban and rural areas, the mutual interactions between them are more diverse and complex.

In reality, then, the dynamic relationships between rural and urban economies in countries and regions with commercializing agriculture are far more complex than traditional two-sector models implied (Corbin, 1982).

Crucial Role of the Marketing System in Rural-Urban Dynamics

The findings of this study suggest a different perspective on rural-urban relationships from that found in conventional economic development theory. They indicate that urban and rural areas do not grow and decline independently of each other. Instead, they are pervasively and inextricably related spatial dimensions of the national economy that intimately influence each

others' growth and development. Moreover, this study shows that the most important set of linkages between rural areas and towns and cities, and among agriculture, employment and enterprise development are marketing linkages. Agricultural production will not expand in subsistence or low surplus areas--regardless of the new inputs introduced through agricultural development programs--unless farmers have access to outlets for their surplus production and receive a fair price for it. The transformation and commercialization of agriculture in transitional regions likewise depends on rural households having access to modern inputs, services, information, and infrastructure--all of which require the existence of vertically coordinated marketing channels to distribute modern inputs and services from towns and cities. And rural households in commercializing agricultural regions must also have access to marketplaces and food distributors in towns and cities in order to sell their goods. Finally, the ability to supply rapidly growing populations in urban regions with food and nonagricultural goods produced in rural areas depends on strong marketing linkages between rural areas--through an efficient network of market towns and small intermediate cities--and metropolitan areas.

This network of marketing linkages between rural areas and metropolitan markets that was described briefly in Chapter Two and more elaborately in Chapters Three, Four and Five, is

depicted in simplified form in Figure 6-1.

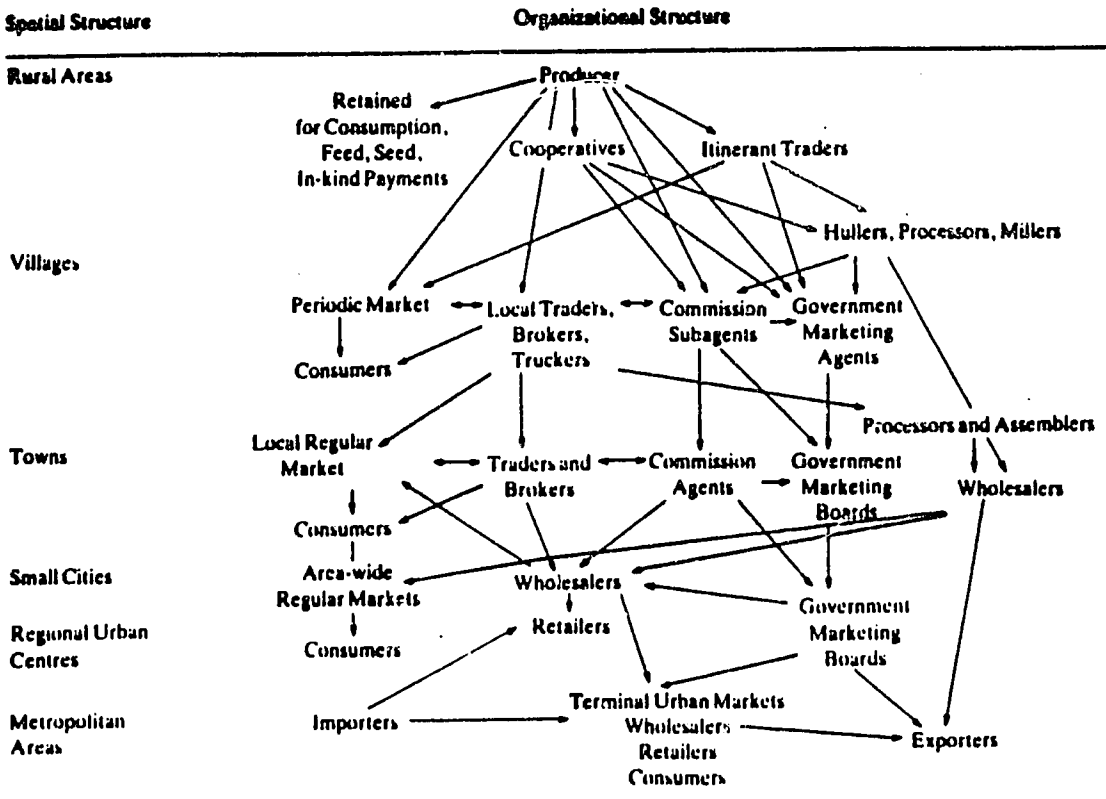
Although AID and other international assistance organizations have provided marketing assistance for poor farmers and for small- scale enterprises involved in urban food distribution, they have not thusfar focused their attention on ways of strengthening the regional marketing systems on which increased agricultural production, employment expansion, and enterprise development so heavily depend. Nor have they given serious consideration to locating their investments in agricultural support services, infrastructure, and social services and facilities more effectively in market towns, small and intermediate cities, and metropolitan areas in ways that will strengthen both the relationships among these investments and the capabilities of towns and cities to facilitate the marketing process.

Given the rapid pace of urbanization in developing countries and the urgent need to increase food production and expand employment opportunities in both rural areas and urban centers, policies that focus on strengthening rural- urban marketing systems and the relationships among agriculture, employment, and enterprise development will become crucial to the economic progress of developing countries over the next two decades.

FIGURE 6-1

Simplified Model of Food Marketing Systems

in Developing Countries



Source: Rondinelli, 1986.

AID and other international assistance orgnaizations can make an important contribution to solving the food and employment problems in developing countries and to strengthening the capacity of their towns and cities to facilitate agricultural production by providing financial and technical assistance that strengthens their marketing systems.

TOWARD A RURAL-URBAN MARKETING SYSTEM IMPROVEMENT

POLICY

For most developing countries, employment expansion depends on increasing agricultural production and small- and medium-scale industrial and commercial activities. Large scale industrialization can provide only a limited number of jobs and is often labor displacing rather than labor-intensive. If widespread economic growth is a goal of national development policy, then programs and projects must be tailored to the needs of regions with different ecological, resource, and demographic characteristics, and with different production potentials.

Bendavid-Val (1986) contends that these relationships or linkages must be strengthened as a region undergoes the transformation from subsistence to surplus production because spatially extensive agricultural production depends on

1. Means of production--such as information, credit and other support sevices;

2. Motivators for production--such as goods and services for maintaining and improving their living conditions;

3. Markets for production--including facilities for bulking, storage, processing and sales to consumers.

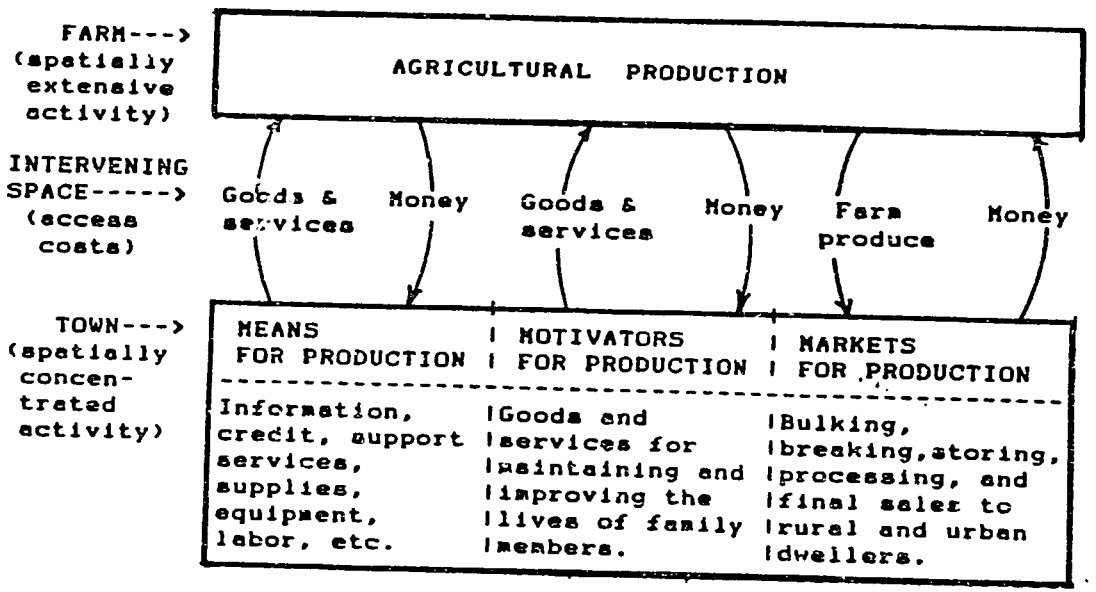
The means, motivators and markets for agricultural production are largely concentrated spatially in towns and cities. The degree of agricultural development in a region in large part, then, depends on the degree of access that spatially dispersed farmers have, and its costs primarily in the form of transportation expenses, to means, motivators and markets that are spatially concentrated in urban centers. (See Figure 6-2).

Often, the markets for production have either been assumed to exist, or it has been assumed that farmers have easy access to them; and thus little attention has been given by governments and international assistance organizations to strengthening the rural-urban market system.

The concept of marketing system that is used here is broad. The

FIGURE 6-2

Spatial Linkages in the Agricultural Production System



Source: Bendavid-Val, 1986.

marketing system is composed of market functions, market processes, and market centers. Marketing is usually defined as the set of business activities affecting the flow of goods and services from producer to consumer, excluding only those activities that involve changing the form of goods (Gupta, 1975). Marketing includes three sets of functions:

1. Exchange functions including buying, assembling and selling goods;

2. Physical functions such as transporting, storing and warehousing goods; and,

3. Facilitative functions such as classification and grading, financing, market information and risk-bearing.

The marketing process involves three sets of activities related to these functions:

1. Concentration or assembly-- through which the small marketable surpluses of individual producers are bulked at one point in sufficient quantity to allow marketing functions such as transportation, storage, grading, and processing may be done efficiently and economically;

2. Equalization-- through which the flows of supplies are matched with the rate of demand by wholesalers, processors, and retailers who store, release and distribute adequate stocks of seasonally produced goods at appropriate times and places to meet demand;

3. Distribution-- through which arrangements are made to supply commodities in appropriate volume and quantity for use by intermediaries and consumers.

Market centers are the locations at which these functions and processes are performed. As it was noted in Chapter Four, market centers often form an integrated hierarchy ranging from periodic markets, bulking centers, regular market towns, intermediate market centers, and terminal markets at which increasingly diverse, complex and numerous marketing functions and processes are performed.

The promotion of widespread economic growth requires policies that focus on both the substantive and the technical aspects of market system improvement.

The findings of this study support Mittendorf's (1981: 141) conclusions that future strategies for the development of effective marketing systems in developing countries should

include:

1. More systematic planning of food marketing systems to serve large urban areas. Plans should be aimed at improving the vertical coordination of marketing functions among rural areas, market towns, intermediate cities and metropolitan areas, and the training of marketing personnel at all levels of the settlement hierarchy.

2. The testing of alternative forms of marketing organization at the farm level to meet the needs of farmers at different levels of income and with different size land holdings.

3. The testing of marketing services for various types of commodities and in different types of regions.

4. Strengthening training programs in food marketing, agro-processing and agribusiness that are tailored to the needs of developing countries.

5. Promoting the exchange of experience and technical cooperation in marketing systems improvement among developing countries.

Both substantive and spatial relationships must be considered in

planning and implementing policies aimed at improving regional market systems. Technical assistance and capital investment projects in agriculture, employment, and enterprise expansion will only work well if the linkages between rural and urban areas are strong enough to provide marketing conditions that are conducive to economic expansion. And the linkages between rural and urban areas will be strengthened only if investments in marketing facilities, services and infrastructure are well chosen and appropriately located in those market towns, intermediate cities, and large urban centers that form crucial nodes in the marketing network. Thus, if AID and other international assistance organizations want to implement strategic policies for agricultural, employment and enterprise expansion, they must focus their policies and projects on rural-urban marketing system improvement activities.

SUBSTANTIVE COMPONENTS OF A RURAL-URBAN MARKETING SYSTEM IMPROVEMENT POLICY

The substantive elements of a rural-urban market system improvement project should include the particular package of investments necessary to promote growth in each type of regional economy that was examined in this study, and on the investments necessary to link the market centers with each other. The

regional economic profiles described in Chapters Three, Four and Five provide a basis for identifying the essential elements for strengthening the rural-urban marketing system in each type of region.

It was noted in Chapter Three that in subsistence or low-surplus agricultural regions, an accelerated growth strategy must give attention to a "package" of investments that remove frictions that are adverse to the poor. Mellor (1986: 83) contends that "the emphasis should be given to infrastructure development to bring remote rural areas into the production and exchange process, credit for small, labor intensive enterprises, and technical assistance in production and marketing of vegetables and other less capital-intensive small-scale activities." The argument made in Chapter Four is that in regions undergoing a transition from subsistence to commercial agriculture, emphasis should be given to providing inputs and infrastructure that cannot be provided by the private sector, to creating a network of social services and facilities that improves the productivity of the labor force and raises the living standards of the rural population, to strengthening marketing linkages between rural areas and market towns and regional cities, and to providing the conditions necessary to allow private entrepreneurs to meet the increasing demands for household consumption goods and agricultural production supplies. In urban regions, there is

often a strong need for technical and financial aid to small scale and informal sector enterprises engaged in food distribution, marketing and preparation, and for infrastructure and services that strengthen the economic and physical linkages between urban markets and rural production areas.

Policies for Subsistence and Commercializing Regions

The most important elements of a rural-urban marketing system improvement program for subsistence or low surplus agricultural regions, and for commercializing and diversifying regions, are:

1. A minimum package of agricultural inputs that are needed for the production of surplus, commercially tradeable, agricultural goods as well as for more efficient and effective production of foods for household consumption, and that farmers cannot easily provide for themselves individually or through cooperative activities or that private enterprises cannot provide effectively or efficiently;

2. Basic market-support infrastructure investment, especially on-farm and community storage facilities, basic transportation facilities, and farm- to-market and inter-market roads that can increase the physical access for farmers to market towns and small cities.

3. Public services, facilities and utilities in small towns and cities in rural regions that will provide conditions conducive to small- and medium- scale enterprise development for firms that can provide basic consumption goods and agricultural inputs and expand off-farm employment opportunities.

4. A minimum package of basic health, education and social services that improve the productive resources of rural and town household members as well as their general living conditions, and that create the preconditions that allow private enterprises to provide a wider range of personal and commercial services in proximate locations;

5. Investments in market facilities and credit and technical assistance for small- and medium-scale commercial, farm supply, agricultural processing, and food distribution enterprises in villages and towns that are strategically located to serve a large surrounding rural population.

An important component of any policy to strengthen rural-urban market systems in must be the creation or improvement of regional financial markets and information systems. Many rural households in both subsistence and commercializing agricultural regions are outside of the formal credit system and depend on informal family

arrangements, money lenders, landlords, suppliers, grain dealers, and intermediaries for the funds they need to expand production, or merely to subsist. The lack of information about marketing outlets, current prices, and price trends, often puts farmers at the mercy of informal lenders and intermediaries. As agiculture begins to commercialize there is a growing need for more formal and larger sources of credit "with sufficient liquidity to permit the financing of investments while reducing the excesses of non-competitive positions among lenders." There is also a more urgent need for means of getting current market information to farmers so that they have stronger control over the disposal of their products and can make better marketing decisions (World Bank, 1986).

Unfortunately, many government credit programs have either been inefficiently administered or ineffective in reaching the poor. Crowe (1982: 275) concisely summarizes the problems with providing farmers credit:

> Government agricultural credit banks have frequently failed to help the development of viable, self-sustaining agricultural credit systems. Many in fact, have undermined the long-term development of credit systems. Typical elements which appear in this type of bank include: rapid erosion of capital, because of low recoveries, negative real interest rates or both; very high administrative costs; dependence on constant government funding in one form or another, without which they would very quickly become unable to continue operations; susceptibility to political preasure and intervention; and insulation from the

normal market tests of performance.

Yet, even critics of such programs acknowledge the widespread need for credit in both low-surplus and commercializing agricultural regions. The creation of viable rural financial systems helps to integrate factor and commodity markets, especially in regions undergoing a transition to commercial agriculture, channel resources toward higher-return investments, facilitate the mobilization of savings, encourage savers to hold their wealth in domestic financial assets, increase the flow of trade, and increase the productivity of resources through the adoption and use of modern inputs and technologies (Gonzales-Vega, 1986). A growing consensus is emerging on how rural financial systems--that involve both savings mobilization and credit extension--can be developed more effectively to give farmers greater access to financial resources (Crowe, 1982; Deshpande, 1982; Krishna, 1982; Von Pischke, Adams and Donald, 1983; Lieberson, Kostellos and Miller, 1985; Gonzalez-Vega, 1986). Among the lessons of experience are the following:

-- Strong preference should be given to small farmers in lending by rural credit institutions, specifically by reserving a large portion of funds for them. Large farmers should be referred to commercial banks and lending institutions and rural credit organizations should concentrate on small farm

borrowers.

-- Interest rates must be liberalized in order to mobilize savings in rural areas and guarantee an efficient distribution of credit. Interest on rural credit should be set at market prices. Subsidized interest rates weaken financial institutions and work against the interests of poorer and smaller borrowers by driving up administrative and transaction costs and subsidizing larger borrowers.

-- Priority in setting up credit programs should be given to those areas or regions where farmers are willing and able to adopt new technologies, and where potential markets exist or can be created for increased agricultural output.

-- Screening and lending should be done by local organizations that have first-hand knowledge of the creditworthiness of borrowers and the feasibility of the activities for which the loans are sought. Credit outlets should be located as close to potential borrowers as possible.

-- Production credit, investment credit, savings

mobilization and other financial services should be made available to farmers through a single source, thereby reducing transaction costs, facilitating assessment of borrowers' resources and repayment capacities and improving supervision of the distribution of funds and the collection of payments. Rural credit institutions should accept savings from both farmers and non-farmers in order to broaden their base of assets.

-- Rural lending institutions must take the initiative in seeking loan applicants, assisting them with preparing loan applications, appraising the projects, processing the loan, and negotiating and delivering credit. Poor farmers often lack the knowledge and skill to take advantage of credit programs that are available.

-- Where possible, credit should be extended through community groups, cooperatives, or mutual benefit associations so that peer pressure and community interaction assure honest distribution and administration of loans and more reliable repayment.

-- Short-term credit for modern inputs and technology

should be given to farmers using the expected income or equipment itself, rather than land, as the collateral for the loan.

Another essential component of policies to improve rural-urban marketing systems in low-surplus and commercializing agricultural regions is assistance to rural enterprises. Many studies indicate that the greatest problems for small-scale enterprises in both rural and urban areas is finding adequate markets for their output and obtaining adequate capital to operate and expand their enterprises. Liedholm and Mead (1986) report that the greatest perceived demand among small-scale enterprise owners is for working rather than fixed capital. Many small-scale entrepreneurs face cash shortages at critical times during the production and distribution cycles and cannot get access to credit. Most government sponsored credit programs provide fixed rather than working capital and are perceived to be less useful to small-scale enterprise owners.

Assistance to small-scale rural and urban enterprises can take a number of forms, including credit, technical and production assistance, management assistance, marketing assistance, and provision of common facilities. The major types, forms and channels of delivering such assistance are summarized by Liedholm and Mead (1986) in Figure 6-3.

FIGURE 6-3

Types, Forms and Delivery Channels of Assistance for Small Enterprises

Types of Assistance	Form	Delivery Channels
Credit	Loans in cash and/or kind for fixed assets and/or working capital	Commercial Banks Specialized Banks Finance Corporations Extension Agents Credit Schemes Loan Boards Cooperatives Private Voluntary Agen. Informal Channels
Technical/ Production Assistance	Advice on processes, design of products, tools, equipment machines, quality control, plant layout	Vocational Train. Inst. Trade Centers Extension on-the-spot at Development Centers or through mobile workshops Appropriate tech. units Consultancy Local entrepreneurs
Management Assistance	Bookkeeping Accounting Auditing Production planning Inventory Capital budgets, etc Personnel management Entrepreneurship development	Vocational Train. Inst. Management Dev. Inst. Extension on-the-spot at the Industrial Development Centers, through Mobile workshops Formal & informal meetings Newsletters Consultancy
Marketing Assistance	Advice on packaging, merchandising, product demand Raw material procurement Maintain emporia sales & displays at home & abroad Service as collection centers Buy on consignment basis Undertake export service Offer credit insurance	Extension Services Trading Corporations Credit & Export Schemes Customer Service Cntrs. Handicraft Centers Display Centers Cooperatives Consultancy
Common Facilities	Buildings Roads Engineering Workshops Electricity and Water	Industrial Estate, Areas or sites Workshop complexes Cooperatives

Source: Liedholm and Meade, 1986.

Programs of financial and technical assistance to rural small-scale industries have often been plagued with administrative problems, however, and new programs need to be designed more carefully. Liedholm and Meade (1986) found that successful financial assistance programs for small enterprises have had three major characteristics: first, loans were provided for working rather than fixed capital; second, loans were screened by local organizations on the basis of the borrowers' character rather than technical criteria of project feasibility; and finally, loans were made for small amounts and for relatively short periods of time to encourage and assure high repayment rates.

Studies of small enterprise technical assistance programs suggest (Liedholm and Mead, 1986; Kilby, 1979) that:

-- Programs assisting existing small-scale enterprises were usually more effective and successful than programs helping new enterprises or those attempting to promote new enterprises.

-- Programs providing assistance to small-scale enterprises were most effective when they provided only a single "missing ingredient" to firms that

could otherwise operate effectively.

-- Programs that were task-specific and tailored to the needs of particular industries or product groups were more successful than those attempting to help large numbers of disperate enterprises.

-- Programs that were formulated on the basis of surveys of the industries to be assisted in order to discover the "missing ingredients" needed, and the effective demand for them, tended to be more successful than general purpose programs or those with poorly defined clientele.

-- Programs that were carried out by public, nongovernmental or private organizations with a proven record of effectiveness in delivering nonfinancial assistance to small enterprises were more successful than those implemented by bureaucracies with inexeprienced staff.

The combination of credit and technical assistance for rural enterprises and small-scale farmers can contribute significantly, along with investments in basic social services and physical

infrastructure in rural service centers, market towns and regional cities, to create a more efficient and effective rural-urban marketing system.

Policies for Urban Regions

AID and governments in developing countries must give much more attention to strengthening the food marketing system in urban regions. The impact of urban population growth on agriculture and on the economies of rural regions can be pervasive. Riley and Weber (1979:3) point out that:

> The build-up of urban population and rising levels of consumer income place great pressures on the marketing system to expand and undertake an increasingly complex set of activities which link the rural and urban sectors of the economy. Marketing services become a larger portion of the consumer food bill and the composition of the market basket shifts from low-cost, starchy foods towards higher cost livestock products, fruits and vegetables. Major investments are required for transportation equipment, highways, and other physical facilities.

The primary needs in urban regions are to link more effectively town and intermediate city markets with those in metropolitan areas, and to provide financial and technical assistance to participants in informal sector and small-enterprise food

distribution and marketing activities in metropolitan areas, along the lines suggested in Chapter Five. AID's previous experience in small-scale enterprise development suggests that the most critical problems for micro and informal sector enterprises are 1) lack of capital, 2) lack of business skills, 3) restriction, regulation and harassment by local authorities, and 4) lack of reliable sources for raw materials and supplies (Farbman, 1981). Assistance programs must be tailored to these specific needs of small-scale enterprises and to the capital, skill, and resource requirements of individuals and families involved in informal sector urban food marketing.

Informal sector enterprises are crucial to urban economies in both secondary cities and metropolitan regions. As Ashe (1985) has pointed out, informal sector businesses proliferate in developing countries because they are an important source of income and employment for the lowest income households; they provide goods and services for the poor; they are a major source of technical and entrepreneurial training for the poor; they are a major source of employment for women; and they use a favorable mix of capital, labor and energy. Informal sector activities survive in urban areas because they provide an important link to modern manufacturing and to rural areas; they mobilize savings for people who are usually excluded or have little access to formal credit; and they are resilient even when the national

economy is experiencing difficulties.

Although assistance to micro-enterprises in urban areas has had mixed results because it has often been poorly designed and ineffectively implemented, lessons derived from experience with successful programs provide guidelines for formulating and managing such programs more carefully.

Ashe's (1985) review of AID-assisted informal micro-enterprises found that the successful projects had common characteristics. Most had the strong leadership of a project director who was commited to assisting the poor and helping them increase their incomes. They had concerned and dedicated staff who were interested in helping their clients' businesses to succeed. The successful programs had a developmental philosophy that respected the clients' plans, knowledge and ideas and that sought to facilitate them. Good programs usually had community-based selection processes that drew on local people's knowledge, of the applicants' reliability and character and they reached a reasonable number of clients without creating exhaustive and cumbersome procedures. These programs avoided a tendency toward paternalism and excessive formality. The successful p rograms remained flexible in their procedures; their managers were willing to change to meet clients' needs as they discovered them. In nearly all of these programs the managers were strongly

concerned about efficient management and about keeping transaction costs low.

SPATIAL ASPECTS OF RURAL-URBAN MARKETING SYSTEMS IMPROVEMENT

It is clear from historical experience that the creation of large metropolitan "growth poles" based on investment in capital intensive, export- oriented industries, is neither appropriate nor sufficient to generate widespread and sustainable economic growth in most developing countries. Investing in the service, distribution, commercial, marketing, agroprocessing, and other functions that intermediate cities and market towns can and do perform, along the lines suggested in Chapters Three and Four, offers a far better base for stimulating widespread economic growth and balancing population distribution. These investments in market towns and intermediate cities must be supplemented by assistance to food marketing and distribution enterprises in metropolitan areas, as suggested in Chapter Five.

Although a good deal of evidence suggests that market centers in towns and cities can play important roles in the development of rural regions, in many developing countries the settlement system is neither well developed nor integrated sufficiently to facilitate agricultural, employment or enterprise expansion. Problems arise from three major sources. First, many rural

regions in developing countries lack sufficient numbers of towns and cities of adequate population size to be able to support the wide range of marketing services, facilities, and infrastructure, and productive activities, needed to sustain regional agricultural growth. Second, in many regions the population is scattered widely in settlements of very small size that are simply not big enough or accessible enough to provide marketing functions efficiently. The market towns and service centers that do exist are not distributed widely enough geographically to allow people living throughout a region to have access to them. Third, in many regions where market towns already exist, often they are not integrated vertically with market activities in intermediate cities and metropolitan areas (Rondinelli, 1983a).

Thus, AID and governments in developing countries must recognize that if agricultural productivity and employment opportunities are to be expanded in rural regions, a well developed and physically integrated system of market towns and cities must serve as the base for regional development. Because of the scarcity of investment resources in most developing countries many projects that are needed to support agricultural development and off-farm enterprises cannot be scattered widely over the countryside. They must be concentrated in strategically located settlements that have adequate populations to support them and that are accessible to people living in a large

surrounding rural area.

In formulating spatial strategies for improving rural-urban marketing systems, a number of important lessons derived from AID's previous work on spatial analysis must be kept in mind:

1. Experience in the developing world suggests that if secondary cities and market towns are not to become "enclaves,"--that is, mini-growth poles that drain the resources of the rural areas surrounding them--the investments that are made in them should be closely related to the agricultural economies of their rural hinterlands and stimulate productive activities in their regions. The economies of secondary cities and market towns, and the linkages between them and their rural hinterlands, must be structured in ways that will stimulate internal production and demand, and raise incomes of people living in the region. This requires careful regional analysis and planning, for which AID already has developed methods and techniques (Rondinelli, 1984a, 1985).

2. Rural-urban market system improvement policies should focus not only on the food distribution, preparation and sale activities in larger cities, but also on stimulating and diversifying the marketing functions of small towns that have the potential for development in orfer to increase the number and

geographic distribution of market centers. Richardson (1977) has suggested four specific ways of building up the intermediate level of the settlement hierarchy in developing countries:

-- By promoting the growth of small- and middle-sized cities that are close enough to major metropolitan centers to benefit from their agglomeration economies, yet that are not so close that they will be "swallowed up" in the continued growth of giant cities.

-- By promoting development of regional urban centers or large market towns far away from the major metropolis as countermagnets for rural migrants and high population threshold economic activities that would normally locate in the largest city.

-- By developing small cities in underdeveloped and sparesly populated rural regions through investments in growth generating activities that will allow these towns to expand to a size that will begin generating internal economies of scale.

-- By developing transportation axes that connect existing and potential market centers and that

create conditions conducive to the growth of multiple mid-point or nodal centers at terminal or break points in the transportation network.

3. Although appropriate spatial allocation of investment in market services, facilities and infrastructure can provide the physical conditions for more widespread economic development, it alone cannot change the structure of the economy. National policies on international trade, foreign investment, population growth, migration, agricultural prices, and wages must all support and reinforce spatial policies if they are to have an impact in generating equitable economic growth. This requires a stronger integration of national and regional, and better coordination of sectoral and spatial, planning.

4. Although most governments in developing countries allocate inadequate resources to agriculture and marketing, significant changes in rural-urban marketing systems can be brought about without massive new investment. Careful locational analysis and planning of current investment to promote a pattern of "decentralized concentration" of productive activities and market facilities in existing secondary cities and market towns can begin to strengthen the capacity of these places to facilitate agricultural development. Incremental changes in the allocation and location of already- planned investments can be

the basis for building a stronger network of market centers from which to provide the services, facilities and productive activities needed to stimulate rural economies.

Thus, there is an urgent need in many developing countries to allocate investments in marketing services, facilities, infrastructure and productive activities in a pattern of "decentralized concentration;" that is, in settlements with large enough concentrations of people and with a sufficient hinterland populations to be able to support them economically and efficiently. But secondary cities and regional market centers must be distributed widely enough geographically, and linked strongly enough with their hinterlnds, to provide access for a large rural population throughout the country. Mittendorf (9181: 137) correctly points out that "the mere building of new markets and their regulation is not enough. A rural market has to be coordinated vertically with the next wholesale market or with the wholesale supply agent in the case of agricultural input supply. the form and degree of forward and backward linkages of the rural market must be determined with accuracy."

Strengthening the marketing functions of towns, cities and metropolitan areas must be done carefully, incrementally, and strategically in most developing countries. Not all towns and cities in a region can or should have a full range of marketing

services, facilities and infrastructure. One of the benefits of having a well developed and integrated system of towns and cities is that it provides access to a wide range of functions for a large number of people without each settlement having to provide all of them.

Rural-Urban Market System Linkage Investments

In some regions that do have large numbers of towns, the settlements are not physically and economically integrated and their markets are not vertically coordinated. Rural and small town markets often are not linked to bulking and assembly centers in intermediate cities, and the intermediate city markets are not effectively linked to the larger urban markets for agricultural products. Nor are linkages between market towns and intermediate cities and their surrounding rural areas strongly developed. Thus, only those people living within market towns and cities benefit from the services and facilities located within them. Those living in peripheral or far-distant areas have little or no access to either markets or agricultural inputs.

Investments in physical infrastructure and facilities that strengthen the marketing, processing, bulking and distribution functions described earlier and that link urban marketplaces to rural areas can have a strong impact on accelerating agricultural

development and generating increased income for rural households. Ho (1986: 30) points out that aside from these benefits of rural infructure, such investment also "encourages nonfarm activities to concentrate in small towns, leading to economies of scale and external economies. The return on investment in rural infrastructure can be quite high, since it not only facilitates the development of small towns and rural nonagricultural activities, but also services the production and marketing needs of agriculture."

Recent studies of rural-urban road investments in developing countries, for example, indicate the pervasive impact these physical linkages can have on agriculture and on a regional economy. Among the benefits of these new physical linkages have been the following (Anderson and Vandervoort, 1982; Cobb, et al., 1980; Levy, et al., 1981; van Raalte, et al. 1979):

1. Lower transporation costs. Extension of rural-urban roads or improvements in road conditions lowered the costs in time and money for farmers to get their produce to market. The roads allowed more use of motorized vehicles, encouraged competition among bus and trucking firms, and increased road use.

2. Significant agricultural production increases. The largest increases in output have been seen where complementary

inputs were provided, where transport was competitive, and where the cost of transport was a high percentage of produce price.

3. Changes in crop composition. Increased access of rural households to urban markets induced farmers to change from subsistence to commercial cultivation, and allowed farmers to respond better to market opportunities. It also allowed farmers within a greater distance from market centers to plant more perishable commercial crops.

4. Adoption of commercial inputs. More farmers were able to use new agricultural tools, machines, fertilizers, pesticides and other commercial inputs. Usually the larger and more productive farmers benefited first, but poorer farmers also obtained substantial benefits from the adoption of commercial inputs as the market for food products increased.

5. More effective agricultural extension. Rural areas were served more efficiently and effectively by public agencies providing support services for agricultural development. Extension, demonstration, cooperative, and informational programs were usually established after roads made service delivery easier for city-based government agents.

6. Spread of processing activities. New rural-urban

physical linkages allowed agro-industrial, processing and commercial enterprises providing consumer goods to locate along road corridors as well as in towns and cities. In some places, small-scale manufacturing and processing enterprises competed with cottage industries, but they also made available to rural households a wider variety of manufactured goods at lower cost.

7. Increased land values. The value of land along new access roads usually increased, encouraging more intensive use of land and more extensive cultivation of high-value commercial crops.

8. New and more effective marketing patterns. The construction of rural-urban road linkages increased agricultural and related marketing activities and restructured local marketing patterns. Periodic markets were often consolidated or displaced by daily markets; the farmers closest to roads and market centers could by-pass middlemen and obtain a higher return for their products; and informal sector or small-scale marketing activities increased along roadsides, providing new income-earning opportunities especially for women and children.

9. Increased access to off-farm employment. New roads allowed larger numbers of rural households to obtain income from off-farm employment opportunities in towns and cities by

shortening commuting distances and lowering transportation costs.

10. Easier access to social and public services. The creation of stronger physical linkages between rural and urban areas also increased the intensity of use of social services, recreational facilities, health clinics, and some types of educational facilities in towns and cities were used by rural families who did not previously have access to them.

Governments can do much to strengthen the ability of towns and cities to perform economic and social functions that support and stimulate agricultural development by locating investments in marketing services, facilities, infrastructure and productive activities in places where the rural population will have the most access to them, or by investing in projects that will increase the access to them, or by investing in projects that will increase the access of the rural population to towns and cities performing market functions. But investing in production and marketing facilities, infrastructure and support services in towns and cities, or linking them more effectively to their rural hinterlands, is only one of many actions that must be taken in rural regions to expand agricultural productivity and raise the income of rural households.

A program to strengthen linkages between rural areas and cities

by constructing or improving access roads, for example, can have the kinds of beneficial effects described earlier only if it is a part of a more extensive program supporting agricultural development and raising the incomes of rural households. Evaluators of farm-to-market road projects point out that "only if combined with rising agricultural incomes and policies that supported small-scale commercial and industrial enterprises could rural road construction assist the growth of commerce and production benefiting poor people." They concluded that "to provide farmers with improved access to markets, more than rural road construction was usually necessary. Also needed were a marketing system that could handle increased production, price incentives, complementary services and inputs, and a transport industry that could respond with more and better services at lower prices" (Anderson and Vandervoort, 1982: 16-17).

CONCLUSIONS

In sum, as part of national strategies for agricultural and urban development, a rural-urban marketing systems improvement program can make an important contribution to increasing agricultural production, expanding employment, and promoting private enterprise in both rural areas and cities. But before AID can engage in policy dialogue with governments in developing

countries or extend financial and technical assistance effectively, much more needs to be learned about rural-urban food and input-supply marketing systems in developing countries. Although AID has sponsored a large number of commodity marketing studies in developing countries, neither it nor other international assistance organizations have done extensive research on food marketing systems, market center systems, or the spatial pattern of market interaction. New methods and techniques for describing rural-urban dynamics in regional and national marketing systems are needed, and AID can play an important role in creating the knowledge that will be essential to improving marketing systems in Third World countries.

AID can also take a stronger role in strengthening the institutional capacity of national governments to provide efficiently and effectively the infrastructure, services and facilities that are essential to promoting agricultural development and employment generating enterprises in subsistence, commercializing and urban regions. Although many functions now performed poorly or inefficiently by governments should be shifted in the future to nongovernmental or private sector organizations in regions undergoing commercialization of agriculture and diversification of their economies, and in metropolitan regions, the role of government in many subsistence and low-surplus agricultural regions is likely to remain vital if

for no other reasons than local institutional structures are often weak and few nongovernmental organizations have the massive amounts of resources needed to create the economic and physical infrastructure to promote accelerated growth. Studies of the relationships between government expenditures in agriculture and the growth of agricultural production from 1950 to 1980 in nine Latin American countries--Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru and Venezuela--found a strong relationship between low levels of agricultural growth and low levels of government expenditure in the sector (Elias, 1985). Mellor (1986: 34) contends that "the role of government is critical to an agriculture and employment-oriented strategy. Because agriculture is a small-scale sector there has to be substantial public-sector investment in the support for that sector in the form of, for example, transportation, power, communication, research, education and input supply systems."

The crucial issue is not whether government plays a critical role in agricultural development, but how government uses its resources to promote the growth and diversification of agricultural economies. Public resources in many developing regions can be used most effectively to supply services and infrastructure that cannot be provided profitably by the private sector or to which the poorest households would have little or no access if supplied only by the market. Public resources can be

used most effectively in other regions to strengthen or facilitate the provision of goods and services by the private sector.

In all regions--subsistence, commercializing and urban--one of the major contributions that AID and national governments can make to strengthening the rural-urban dynamics that generate agricultural growth, employment expansion, and the development of private enterprise is to ensure that investments in marketing services, facilities, infrastructure and productive activities are located strategically in towns and cities that can serve a wide area, and that linkages are forged between urban centers and rural areas within regions so that a large majority of people have access to them.

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