COOPERATIVE AGREEMENT ON HUMAN SETTLEMENTS AND NATURAL RESOURCE SYSTEMS ANALYSIS

REGIONAL CITIES, AGRICULTURAL PRODUCTIVITY, AND EMPLOYMENT GENERATION: THE CHALLENGES OF URBAN TRANSITION AND RURAL DEVELOPMENT

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PREFACE

This study of the relationships among regional city growth, agricultural productivity, and employment generation in developing countries is the result of a series of studies conducted for the Regional and Rural Development Division of the U.S. Agency for International Development under a cooperative agreement with Clark University and the Institute of Development Anthropology.

I have drawn heavily on working papers prepared for the project listed in the Appendixes. I am grateful to their authors for providing the information needed to document the conclusions presented here. In addition, the contributions of Gerald J. Karaska and Eric Belsky at Clark University are reflected throughout the monograph, as are comments and suggestions on earlier versions made by Eric Chetwynd, Jr., Robert Walter and Avrom Bendavid-Val, USAID.

The opinions and conclusions, however, are my own and do not necessarily reflect the policies of the U.S. Agency for International Development or the consensus of my colleagues who prepared the working papers.

The last chapter summarizes the monograph's arguments and offers policy recommendations. Those readers who seek an overview of the study may use Chapter IV as an "executive summary," reviewing it before reading the other chapters, which offer more detailed analyses of the issues and examples from developing countries.

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CHAPTER I

REGIONAL CITIES AND THE URBAN TRANSITION

Over the next two decades developing countries will undergo crucial demographic and economic transitions. Neither the governments of less developed countries (LDCs) nor the U.S. Agency for International Development (USAID) are prepared to cope adequately with the consequences.

Rapid population growth and stagnating agriculture now offer the greatest challenges to development. But in many countries in Latin America, the Caribbean, North Africa, the Middle East, and East and South Asia, high levels of urban concentration also pose serious problems. By the end of the 1990s not only will a majority of people in these areas be living in urban places, but many will be living in very large cities. The number of people in African urban areas is projected to increase from 103 million in 1975 to 345 million in the year 2000, in Latin America from 198 to 466 million, in East Asia from 308 to 662 million, and in South Asia from 265 to 790 million. More than half the population in middle, northern, and southern Africa are expected to be urban by the end of the 1990s, as will more than 75 percent of Latin America, nearly 65 percent of the Caribbean, 45 percent of East Asia, and 68 percent of South Asia [1].

Many of the urban dwellers in developing countries, according to United Nations projections, will be living in large metropolitan centers at the end of this century. In both Latin America and East Asia nearly half of the population will live in cities of two million or more (53 and 44

percent, respectively). Similarly, more than one-third of Africa's and 64 percent of South Asia's population will be in cities of more than a million. Not only will developing countries have about 66 percent of the world's urban population by the end of this century, but 21 of the world's 30 largest metropolises will be in poor countries.

Moreover, developing nations will see a dramatic shift in the incidence of poverty. Traditionally, the large majority of the poor, and especially those living in absolute poverty, were rural. By the end of this century, the majority of the poor in many less developed countries will be concentrated in cities. Although about two-thirds of the absolute poor are now living in rural areas, the World Bank predicts that by the end of the 1990s, more than half will be living in urban places [2]. Over 90 percent of the poorest people in Latin America and the Caribbean will be urban dwellers, as will be about 40 percent in Africa and about 45 percent in Asia. The number of urban households living in poverty is expected to more than double--increasing from the 1975 level of 33.5 million to about 74.3 million and adding roughly 245 million poor people to the populations of Third World cities--over the next 20 years.

While urbanization has accompanied industrialization, economic development, and expanded agricultural production in Western Europe, North America, and Japan, the pace and pattern of urbanization in developing countries differs significantly from these historic trends. In much of the developing world, unlike in the West, high rates of urban population growth are occuring simultaneously with high rates of rural population growth.

Industrialization in the urban areas of the West absorbed much of the labor freed from agriculture as its productivity increased, thereby providing off-farm jobs, higher income for the more productive farm households who remained in rural areas, and plentiful food supplies at decreasing costs for cities.

However, agricultural growth rates remain below both total and urban population growth rates in many developing countries. Neither the secondary nor tertiary sectors in Third World cities are growing fast enough to absorb the rapidly expanding urban populations. For example, in the 34 countries classified by the World Bank as the poorest in the world--those with per capita GNP of less than $390 in 1982--the average annual urban population growth rate was 4.4 percent from 1970 to 1982. If China and India are excluded, the rate was 5.2 percent. Twelve of the 34 countries had average annual urban population growth rates of more than 6 percent. Yet the rate of manufacturing growth in the poorest countries during the same period was less than 4 percent and agricultural output grew on average by only 2.3 percent. Four of the countries had negative agricultural growth rates. Only Burma, Sri Lanka, Malawi, and Sierre Leone had increases in agricultural output significantly above the average. In nearly half of these countries, agriculture's share of the contribution to GDP declined beween 1960 and 1980; 21 of the 34 countries increased their imports of cereals and grains [3].

Unlike the pattern of urban population growth in developing countries, the historical pattern of urbanization in Western countries was relatively

diffuse. A fairly strong, integrated, network of market towns, small cities, and intermediate urban centers based on agricultural trade, commerce, and small scale manufacturing supported the large metropolitan areas and provided stimuli for the commercialization of agriculture, off-farm employment, and relatively widespread economic development in rural areas. In contemporary developing countries, on the other hand, the pattern of urbanization is far more concentrated in one or two very large urban metropolises with industrial bases that are still too small to provide sufficient employment for either their residents or the migrants attracted to them. The prospects for significantly expanding that industrial base are poor.

More importantly, the "middle level" settlements of the urban hierarchy--market towns, small cities, and secondary urban centers--tend to be few in number, economically weak, and unevenly distributed geographically. These towns also tend to be weakly linked to each other, to larger or smaller urban settlements, or to their rural hinterlands. In most countries, they have little capacity to absorb large numbers of rural-to-urban migrants, who for lack of viable alternatives move from small rural villages directly to the country's largest metropolis. This results in high concentrations of poverty in the big cities, seriously straining urban services, facilities, and infrastructure. Moreover, this rapid urbanization often drains the more educated, productive, ambitious, and entrepreneurial elements of the rural population, leaving nonmetropolitan

regions in still worse condition. Insufficient investment in market towns, small cities, and intermediate urban centers restricts their capacity to support agriculture, provide markets for increased farm production, or offer sufficient numbers of jobs to attract rural migrants. In many of these countries, both the settlement system and the national economy tend to become more polarized and more dualistic.

Problems arise, not from the process of urban transition alone, but from the pace and pattern of urbanization in countries with too few resources to cope with its rapidity and concentration. Once a concentrated and polarized pattern of urbanization develops it is extremely difficult for governments to reverse it, or to stop the growth of the largest metropolitan areas.

Much could be done, however, to mitigate the adverse effects on cities: governments could provide alternatives for rural to urban migrants, by strengthening the rural economic base to retain some of the large numbers of people who will be added to it, create a more diffuse system of intermediate sized cities and towns to supply agricultural areas, market their surpluses, and absorb labor that will inevitably transfer from the agricultural sector. In any case, within the next 15 years, AID, other international assistance organizations, and governments in developing countries will be facing substantially different problems arising from this urban transition than confront them now. The longer they wait to try to cope with these problems the fewer options they will have open to them.

This monograph attempts to make explicit the relationships among urbanization, agricultural development, and employment generation in developing countries. It assumes that rural and urban development are inextricably related and that an understanding of those relationships should inform development policy and foreign assistance strategy. It focuses on the potential roles of intermediate-sized cities and towns in nonmetropolitan regions--referred to here as "regional cities"--in promoting agricultural development and employment generation ans growth centers for more widespread rural development and for a more diffuse pattern of urbanization. Based on an understanding of rural-urban linkages and the experiences of a few countries that have tried to strengthen them, this report proposes some directions that AID might take to assist governments in LDCs to anticipate and cope with the inevitable process of urban transition that will occur over the next two decades. The position taken here approaches critical development problems from a regional development perspective and places emphasis on the important spatial dimensions of agricultural and employment generation programs.

THE PROBLEM

For most of its history AID has viewed rural-agricultural development and urban-industrial development as separate, and sometimes conflicting, sources of economic and social change. During the 1950s and 1960s, American foreign aid programs, and those of other international assistance

organizations, emphasized investment in export-oriented industries in large cities. Rapid industrialization was expected to produce "trickle down" and spread-effects from cities to surrounding rural areas, thereby incorporating the rural population into the growth of the national economy and stimulating agricultural production. The agricultural sector was viewed as a source of food and natural resource exports, cheap staples for urban workers, and capital for industrialization, which in conventional economic development theory, was the "engine of growth." Many economists saw agriculture as a sector to be "squeezed" to obtain the resources needed for urban industrial development, and thus agriculture received a relatively small share of national investment. Many governments kept agricultural prices artificially low in order to reduce the costs of food for urban workers and alleviate political discontent among the large numbers of the poor who came to cities hoping to find jobs.

But policies promoting industrialization in large metropolitan areas did not lead to rapid and widespread economic growth in most developing countries. Nor did the benefits of those investments in the largest cities trickle down and spread to rural regions. Instead, in many poor countries a small, modern metropolitan manufacturing sector provided high returns to a small group of capital investors, while the urban "informal" sector and much of the rural economy remained underdeveloped, traditional, and poor. As a result, agriculture stagnated in some countries and in others failed to grow fast enough to meet the food needs of a rapidly increasing

population. Food deficits, high levels of malnutrition among the urban poor, and widespread rural poverty now characterize conditions in much of the developing world.

The underdevelopment of agriculture and the slow pace of industrialization reinforced each other in preventing strong internal markets from emerging in many developing countries. In the early 1950s, Myint argued that one of the most important reasons why the poor countries, "have been prevented from enjoying the stimulating effect of manufacturing industries is not the wickedness of foreign capitalists and their exclusive concern with raw materials supplies, but merely the limitation of the domestic market for manufactured articles" [4]. Industrialization simply cannot take hold in countries where the vast majority of the people live in poverty and where cities do not have strong or diversified economies to absorb the growing numbers of people migrating to them in search of jobs [5].

During the 1970s, the priorities of international assistance organizations and governments in developing countries shifted dramatically. The World Bank pointed out that, despite what seemed to be relatively good records of national economic growth in many developing countries, the distribution of benefits was highly skewed. It found that in 1970, more than 85 percent of the 750 million poor people living in developing countries subsisted in absolute poverty. More than four-fifths of the 600 million people living in destitution could be found in rural areas, and the principal occupation of the overwhelming majority was agriculture [6].

In 1973, the United States Congress mandated AID to refocus American foreign assistance on improving the living conditions of the "poor majority" in developing countries and to concentrate its efforts especially on increasing the incomes and living conditions of the rural poor. Congress declared that American foreign assistance should be concerned not only with promoting high levels of economic growth but also with assuring a more equitable distribution of the benefits of development, and with helping governments in developing countries to alleviate their high levels of poverty. AID and other donor organizations realized that rising food deficits could be reduced, the incomes of the rural poor increased, and the economies of rural regions strengthened only by increasing agricultural productivity and creating new sources of employment. Underlying the new mandate was a strong conviction that agricultural and rural development, rather than urban industrialization, held the key to both economic growth and poverty alleviation in the vast majority of developing countries assisted by AID. John Mellor, AID's chief economist during the mid-1970s, perhaps expressed that conviction most clearly. He argued that agricultural development played two key roles in promoting economic growth with social equity.

> First, because food grains make up the bulk of marginal expenditures among the poorer classes, agriculture provides the physical goods to support increased employment and higher wage earnings. In other words, the agricultural sector is a crucial source of wage goods--goods purchased with wages. And, it provides much of the increase in employment--directly through raising agricultural production, indirectly through the stimulus of increased income to the cultivator class and the demand effects of the consequent expenditure [7].

The success of industrialization in predominantly rural economies would depend, not on squeezing agriculture for capital to be reinvested in export-oriented manufacturing in large cities, but on increasing agricultural productivity and rural households' incomes, a substantial portion of which would be spent on nonagricultural commodities. Mellor concluded that agriculture could provide a "demand drive" for development in poor countries similar to that claimed for export-led growth in industrial societies.

Although AID's economists recognized that the expansion of agricultural productivity would depend on the application of appropriate technology, the provision of a wide range of supporting services, infrastructure, and inputs--much of it produced in urban centers--and the ability of farmers to market their goods in both rural areas and cities, few of those who formulated AID's policies explored the relationships beween the urban and rural sectors in great detail. The perception that urban and rural development were "zero sum" games, or that they were antithetical, has been deeply ingrained in AID philosophy since the late 1960s.

This belief was reinforced during the late 1970s by theorists who argued that the heavy allocation of investments in cities was an obstacle to effective rural development and that widespread rural poverty in the Third World was due in large part to the "urban bias" of national and international development strategies and to the exploitation of rural areas by urban elites. Lipton, one of the most prominent critics of "urban bias" in development policies, notes that in most developing countries the

concentration of public expenditures and investments in metropolitan areas, the policies that raise the price of industrial goods relative to agricultural products, and the heavy investment in educational facilities in large cities, all have adverse effects on agricultural and rural development. He and others argue that these policies accelerate rural to urban migration; artificially depress prices for agricultural goods; push private rural savings into the urban industrial sector, where the value of manufactured output has been artificially raised; and encourage the brightest of village youth to go to the cities for education and training primarily for urban jobs. Lipton concludes that the "concentration on urban development and neglect of agriculture have pushed resources away from activities where they can help growth and benefit the poor, and towards activities where they do either of these, if at all, at the expense of the other" [8].

During the 1970s, AID and most other international assistance agencies refocused their efforts on increasing agricultural productivity and the incomes of the rural poor by deliberately attempting to shift the bias of aid activities from urban to rural areas.

The Importance of Urban Centers for Agricultural Development

Analyses of development problems based on the "urban-rural dichotomy" or on urban or rural bias, however, often lead to the formulation of development policies and aid programs that not only misrepresent the

relationships between urban growth and agricultural development, but overlook or ignore the mutually beneficial linkages between them. As a result, agricultural and urban development policies largely have been planned and implemented separately. Indeed, the U.S. Senate Appropriations Committee, in its 1978 report on the foreign assistance bill, noted that "much of the discussion to date on development efforts to help the rural poor has shown an inadequate appreciation of the relationship between rural dwellers and urban centers located in rural areas" [9]. By ignoring the mutually beneficial linkages between urban and rural development, or emphasizing the conflicts between them, AID along with LDC planners and policy makers often lost the opportunity to strengthen both sectors in ways that might promote regional and national development more effectively.

However, a small group of development theorists and practitioners, both within and outside of AID, long has recognized that rural and urban development are inextricably related. Even in countries that are predominantly rural and where agriculture plays the major role in economic growth, urban centers in the form of market towns and small cities are important focal points for agricultural services and market outlets for farm products.

In a study that was influential in shaping AID's "new directions" approach to development in the early 1970s, Owens and Shaw pointed out that more equitable and widespread economic development required the organization of space in such a way as to reinforce the mutually beneficial interactions between cities and countryside. They noted that "a national economy requires organization of space, concentation of development

activities in urban centers [of different sizes], a system of infrastructure within and between spaces, and the integration of agricultural and industrial development." Further, "each level of urban center should contain the activities appropriate to its size. This would overcome the current gross imbalance between investment in the large cities and the rest of the country" [10].

Nearly a decade ago, AID's Working Group on the Rural Poor also pointed out that "the system of cities and towns in any country is a totality. There are a number of linkages and interdependencies between the essentially rural based centers at the lower end of the urban hierarchy and the larger cities in an urban system which ought to flow in both directions, both up and down the hierarchy" [11]. It noted that to increase agricultural productivity in developing countries a wide range of supporting services, facilities, infrastructure, inputs, and market facilities had to be located in towns and cities of appropriate sizes to support them efficiently, and that these towns had to be accessible to large numbers of farmers living in surrounding rural areas.

Weitz and his associates, reviewing the problems of agricultural development in poor countries with mixed economies, came to a similar conclusion, pointing out 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 [12].

Other studies have found that the most important services and facilities for agricultural development cannot merely be scattered over the rural landscape, but must be located in towns and cities that are sufficiently large and diversified to offer economies of scale and proximity. In a review of the spatial dimensions of regional development and the roles of urban centers in rural development for AID's Office of Urban Development, Rondinelli and Ruddle pointed out that appropriately locating agricultural support services and facilities in urban centers in rural regions can have important impacts on the pattern of regional production and exchange. Rather than urbanization being detrimental to rural development, the growth of urban centers could provide economies of scale that increased the efficiency of agricultural support services, facilities, and infrastructure. They noted that

> urban centers organize the economy of their hinterlands through supply, market and administrative systems, attract creative and innovative personalities and draw entrepreneurs with values, attitudes and behavior patterns that create an environment favorable to further innovation. Returns on previous investments provide a substantial portion of the capital available for future development, and this accumulated stock of assets creates not only comparative locational advantages for communities but also opportunities for future growth through "inducement effects." Investment in public infrastructure lowers production costs and attracts new economic activities, which, in turn, increase the pressure to extend social services and facilities, thus creating a continuing cycle of expansion and growth. Moreover, "complementary effects" from the proximate location of related economic activities and public facilities create new markets for raw materials and semifinished goods and external economies for other producers. Through backward and forward linkages, opportunities for yet more investment lead to higher levels of development [13].

They argued that market towns, small cities, and regional centers are important not only for the efficient location of services and infrastructure needed to support agricultural development, but also because they function as markets for agricultural goods, as channels through which agricultural products from rural areas are distributed to larger urban markets, and as sources of off-farm employment. They stressed that, historically, increasing agricultural productivity has freed from cultivation large numbers of surplus rural workers who must find their livelihoods in towns and cities. If employment opportunities are not available in regional cities, people migrate to large metropolitan areas.

A more recent study of the role of secondary cities, for AID's Regional and Rural Development Division, points out that just as agricultural development depends in part on services and markets in urban centers, the growth of many cities in developing countries depends in large measure on agricultural output. The economies of many secondary and intermediate-sized cities in developing countries are inextricably linked to the productivity of agriculture in their regions, and through agricultural processing and manufacturing activities these towns provide employment and income for their own residents and for those living in nearby rural areas [14].

This recognition of the importance of thr relationship between the growth of towns and cities and rural development is not confined to capitalist or mixed economies. Some socialist governments have begun to see the need for integrating their urban and rural economies if

agricultural production is to be increased and their surplus rural workers are to be employed. Faced with the prospect of feeding and employing an additional 200 million or more people by the end of the 1990s, the People's Republic of China is now giving increased attention to building the capacity of small and intermediate-sized cities to support agricultural expansion and to absorb rural labor. The Chinese Institute of Economic Research on Urban and Rural Development, for example, points out that "serving as centers of economy, culture, science, technology, small cities and towns can develop facilities to promote local industries, especially processing of agricultural and sideline products." Its staff emphasizes that in China "small cities and towns are also important links for both urban and rural commodity circulation and can provide quick information about demand and supply of both industrial and agricultural products" [15].

Urban-Rural Linkages in AID Policy and Programs

Although the relationships between rural and urban development seem obvious, AID's policy papers in agricultural and urban development give relatively little attention to them, nor do they provide much guidance to USAID missions on the nature of the linkages and how they can be strengthened in urban and rural development projects.

AID's Policy Paper on Food and Agricultural Development, issued in 1982, makes no mention of the linkages between urban and rural development in achieving the Agency's goals of increasing food availability and

improving food consumption in developing countries [16]. The Agency's Urban Development Policy Paper, while recognizing that there are linkages between urban and rural economies, provides virtually no guidance on how USAID missions can strengthen those linkages, or how governments in developing countries can develop programs that increase the capacity of cities to provide the services, institutions, and infrastructure that will support agricultural development. Thus it does not provide the guidance needed by USAID missions to help LDC governments revise policies "which inhibit the potential contribution private sector investments in urban areas can make in stimulating rural productivity" [17].

The clearest recognition of the relationships between urban growth and agricultural development appears in AID's 1983 rural development strategy paper. In that statement, AID's long-standing goal of improving the incomes and quality of life of the rural population is reiterated. The strategy identifies two major means of achieving that goal: increasing agricultural productivity and increasing nonfarm employment. The major target of the rural development strategy is improving the living conditions of rural households by increasing their productivity and incomes. According to this strategy, the primary inputs needed to achieve these goals are natural resources, human resources, effective rural institutions, and appropriate technology. Within this framework, AID's rural development strategies define seven high priority activities:

1. Increasing local institution and local government capacity;
2. Increasing access to productive resources;
3. Developing and diffusing appropriate rural technology;
4. Developing small-scale enterprise;
5. Improving natural resource management and utilization;
6. Developing markets;
7. Applying spatial-regional analysis and planning.

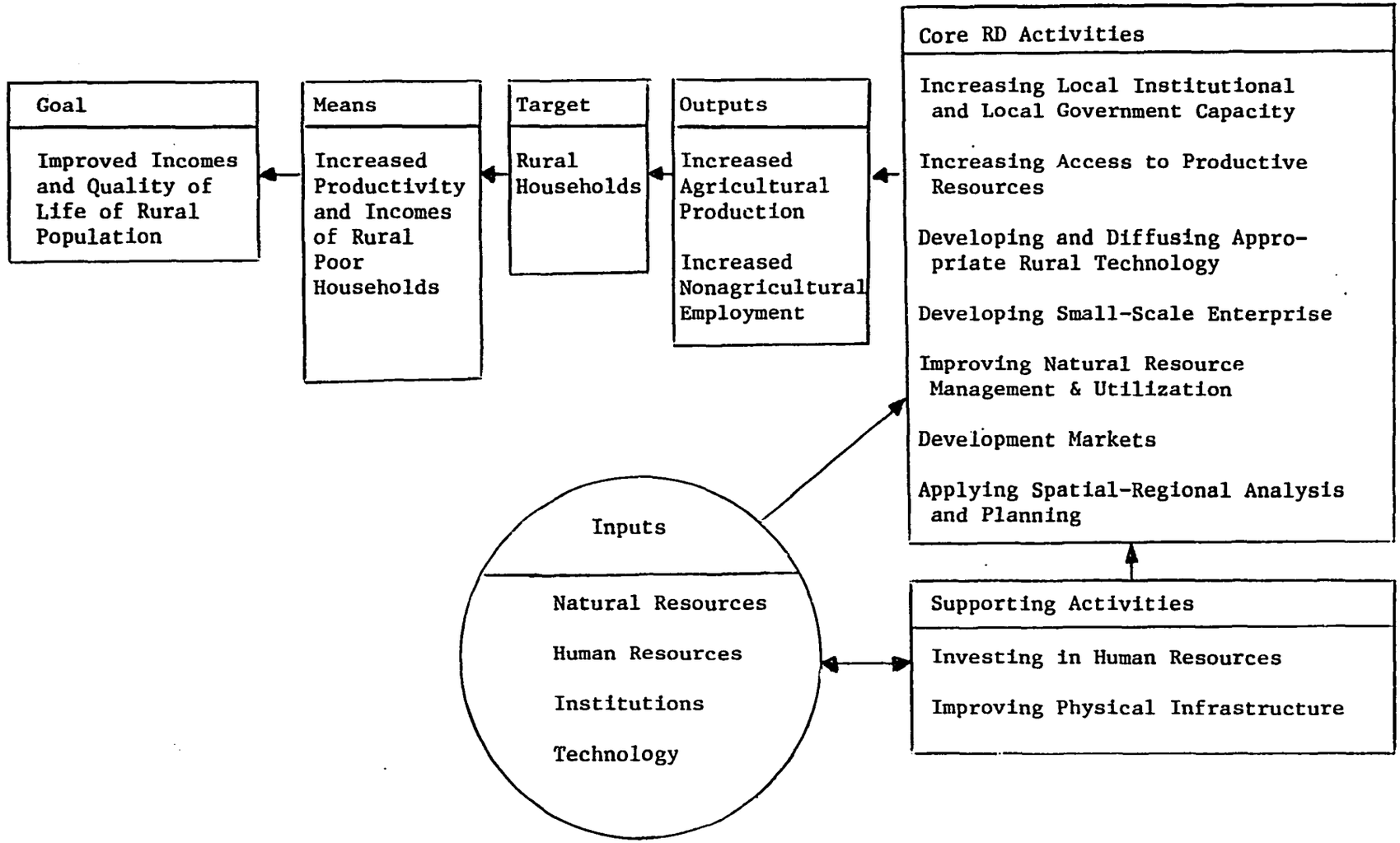
In addition, where serious constraints are found in physical infrastructure or human resources, AID would undertake projects to overcome them. AID's conceptual framework for rural development is depicted in Figure 1.

The Rural Development Strategy Paper stresses the "need to include in the design of sectoral activities an understanding of regional characteristics--settlement patterns, transport and marketing patterns, institutional capacity and the characteristics of local ecozones and resources." It emphasizes that "regional analysis provides such a perspective within which local linkages and interdependencies become clear. ...A regional perspective encourages consideration of the interaction of geography and ecology on the one hand and patterns of public investment and marketing on the other" [18].

Moreover, the policy recognizes explicitly the importance of locating those investments in services, facilities, and infrastructure that support agricultural development and employment generation in settlements that provide economies of scale and access to the rural population:

FIGURE 1

AID FRAMEWORK FOR RURAL DEVELOPMENT



Source: USAID, Rural Development Strategy Paper, 198[illegible].

> Rural development is enhanced when careful investments in services, facilities and productive inputs among larger villages create a network of rural service centers, market towns and tertiary centers. These centers provide direct marketing and service links for farmers and are capable of absorbing increased population and providing employment for surplus rural labor. Moreover, the regional settlement system is an important channel for disseminating technological innovations from larger urban centers to rural regions and for providing an efficient hierarchy of services that can increase the productivity and income of rural residents.

SUMMARY

Although AID's rural strategy recognizes the spatial dimensions of regional development and the important roles of market towns, small cities, and regional urban centers in the rural economy, it gives relatively little attention to the nature of those relationships, how they affect agricultural development in rural areas and employment generation in cities, how the linkages between city and countryside might be strengthened, and how governments and international assistance organizations can intervene to promote or reinforce mutually beneficial linkages between regional cities and their rural hinterlands. Whatever the attention rural and urban linkages have received thus far in AID is focused on market centers and comes primarily from those in AID concerned with urban development. The roles of larger secondary cities in rural and agricultural development are only beginning to be examined. Moreover, AID's rural and agricultural programs and projects continue to be planned and carried out with only superficial--if any--reference to the spatial dimensions of rural development, and to the linkages between rural and urban development by agriculturalists.

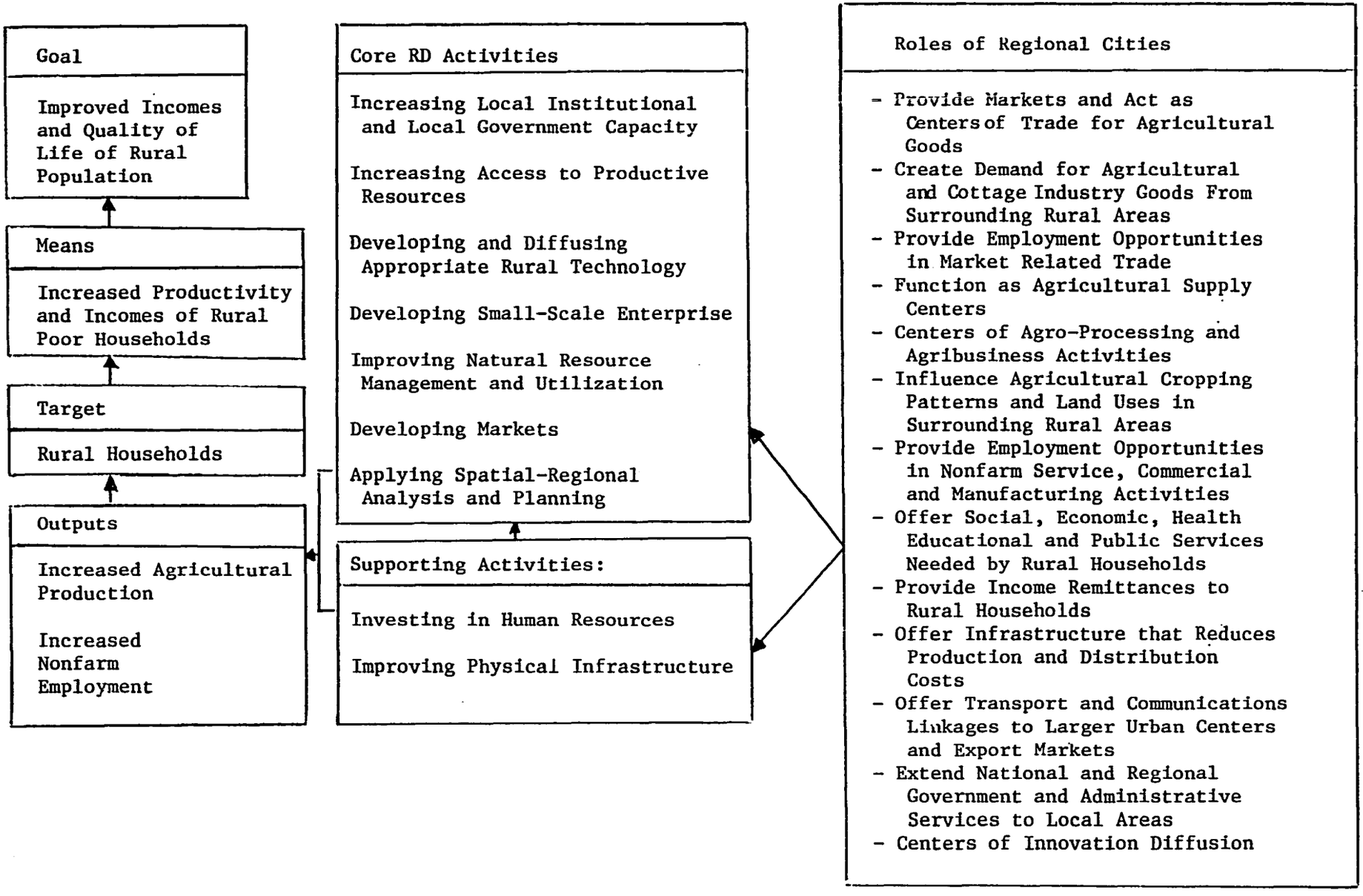
This report attempts to address some of these important issues. It identifies and explains the linkages between urban and rural development, and the roles of secondary and intermediate sized regional cities in supporting agricultural development and in providing off-farm employment. It contends that regional cities--ranging from urbanized market towns to secondary urban centers--play important roles in rural and regional development. They affect and are affected by nearly all of AID's core rural development activities aimed at promoting increased agricultural production and nonfarm employment (see Figure 2).

Specifically, in Chapter II, this report will show that regional cities can:

1. Provide markets and act as centers for the trade of agricultural goods;
2. Create demand for agricultural and cottage industry goods from surrounding rural areas;
3. Provide employment opportunities for both urban and rural residents in a wide range of agricultural and market related trade activities;
4. Function as agricultural supply centers, providing equipment, seeds, fertilizers, machinery, repair services and information needed for agricultural development;
5. Act as centers for agro-processing and agro-business activities;
6. Influence the agricultural cropping patterns and land uses in surrounding rural areas;
7. Provide employment opportunities in a wide variety of nonfarm service, commercial and small-scale manufacturing activities;

FIGURE 2

ROLE OF REGIONAL CITIES IN RURAL AND AGRICULTURAL DEVELOPMENT



8. Offer a wide range of social, economic, personal,commercial public services needed by rural households to improve their productivity and quality of life;

9. Provide income remittances through urban workers to kin remaining in rural areas;

10. Offer a location for physical infrastructure and network based utilities that reduce agricultural production and distribution costs;

11. Serve as transport and communications centers that link rural settlements to larger urban centers and export markets as well as to services and facilities that must be located in cities with high population thresholds;

12. Extend national, regional or provincial government and administrative services to local populations by making them available within the regional cities; and

13. Act as centers of innovation diffusion for new information, methods and technology developed in larger urban centers, and means by which rurally-developed innovations are made known in other parts of the region or country [19].

The report also examines, in Chapter III, policies and programs in selected developing countries that have attempted to promote the growth of regional cities in support of rural development. Actions that AID might take to assist these and other LDCs interested in using regional cities as instruments of rural development are suggested in Chapter IV, and the kinds of programs and projects that AID might use to strengthen the linkages between cities and their rural regions are reviewed.

This report summarizes preliminary research undertaken for AID by the Cooperative Agreement on Settlement and Resource System Analysis (SARSA) at Clark University and draws as well on relevant studies of the same topic

undertaken by other institutions. No attempt has been made to be exhaustive or comprehensive in coverage. This report is intended to be a preliminary exploration of a subject that requires far more extensive research. However, these preliminary ideas may serve usefully as guidelines for agricultural and rural development programs and urban assistance projects being undertaken by AID. They may stimulate further research on secondary and regional cities and urban-rural linkages by Clark University and other organizations.

FOOTNOTES

1. United Nations, Patterns of Urban and Rural Population Growth (New York: Department of International Economic and Social Affairs, 1980).

2. World Bank, "Poverty," Shelter, Poverty and Basic Needs Series (Washington: World Bank, 1980).

3. World Bank, World Development Report-1984 (Washington: World Bank, 1984); see Tables 1, 2 and 22.

4. H. Myint, "An Interpretation of Economic Backwardness," originally published in Oxford Economic Papers (June 1954); reprinted in A.N. Agarwala and S.P. Singh (eds), The Economics of Underdevelopment (New York: Oxford University Press, 1970): 93-134: 130.

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6. World Bank, Rural Development Policy Paper (Washington: World Bank, 1975).

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18. Ibid., p. 9.

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CHAPTER II

REGIONAL CITIES AND AGRICULTURAL DEVELOPMENT: THE NATURE OF THE RELATIONSHIP

The growth of cities in developing countries has a pervasive impact on agricultural production; and agricultural development seems to accelerate the growth and shape the economies of many secondary and intermediate-sized 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.

The nature of the relationships between urban centers and agricultural development in rural areas is the focus of this chapter. Regional cities--those urban centers that act as "central places" for economic, social, productive, administrative, market, transport, distribution, or infrastructural functions in their regions--differ in their population sizes and economic characteristics among developing countries, and even among regions within the same country. They may range from market centers with populations of from 15,000 to 20,000 or more, serving a cluster of towns and villages within a district, to small administrative-commercial centers of from 50,000 to 70,000 serving a large number of towns and market centers within a province. They may also include intermediate-sized cities of

100,000, to 500,000 or more, with a wide range of functions, serving several districts and provinces, and large secondary cities--perhaps with populations of a half to several million residents--that provide a diversity of functions for a subnational region. Indeed, for some purposes even national capitals and large metropolitan centers may be viewed as "regional cities" for the provinces surrounding them.

The essential features of regional cities are not necessarily their population sizes, but the functional characteristic of their economies and the range of functions they perform for their surrounding areas. Regional cities are settlements that have a significant portion of their labor forces working in nonagricultural activities and that have economies dominated by the tertiary sector (commercial, service, and administrative activities). They also may be local centers of agro-processing and small-scale manufacturing. In any case, the urban character of these cities is shaped not only by their relative size and density of population, but by significant employment in nonagricultural activities. Because of the diversity of forms in which regional cities appear in developing countries their definition is best left broad and flexible. Moreover, an important theme of this report is that the distinction between "urban" and "rural" is often difficult to draw clearly in most developing countries, especially at the lower levels of the urban hierarchy. The settlement system in most developing countries is more accurately seen as a continuum rather than as dichotomous.

The purpose of this chapter is to describe and analyze the ways in which urban settlements influence, and are influenced by, agricultural development in rural areas. It will identify the types and nature of relationships between cities and rural areas, focusing on cities that are relatively large and economically diversified, that is, secondary or intermediate cities that serve a regional hinterland. While reference will be made to small market centers serving local areas and major urban agglomerations serving large metropolitan areas, the primary emphasis will be on cities that are located in predominantly rural regions. First, a conceptual framework for understanding the relationships between urban and rural development will be examined, then the forms of linkage between intermediate or regional cities will be identified. Finally, the types of relationships between regional cities and agricultural development will be explored in some detail, drawing on specific illustrations and examples from developing countries.

THE CONCEPTS OF URBAN-RURAL RELATIONSHIPS

Neither development theorists nor aid officials have given much attention to the relationships between rural and urban sectors in the economies of developing countries. Previous research has emphasized migration labor movements and the organization of food marketing. Less effort has been made to understand the broader, more dynamic interactions between rural-agricultural development and urbanization in a regional context.

Much of the economic theory relating to urban-rural relationships focuses on labor movement and population migration between the two sectors. Lewis' classical theory of labor transfer was based on a 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. 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 expanded investment and production, both the demand for and the wages of labor would increase, as would profits, thereby generating still 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 which time wages would rise, increasing workers' disposable income and creating greater internal demand for manufactured goods. With continued industrial growth and the transfer of surplus labor from the rural sector, developing countries would be transformed from rural-agricultural to urban-industrial economies.

As noted in Chapter I, however, many of the underlying 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 continues at a rapid pace despite the relatively slow growth of industry and despite high levels of urban unemployment. Moreover, since the early 1970s, migration studies in developing countries have confirmed that the decision of rural people to move to the city, while influenced predominantly by economic factors, is quite complex: it involves social, psychological, and other factors as well. Todaro's studies have shown that much of the rural migration in developing countries is the result of perceived or expected--rather than actual--employment opportunities. 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, with the advantages of staying in the rural area [1].

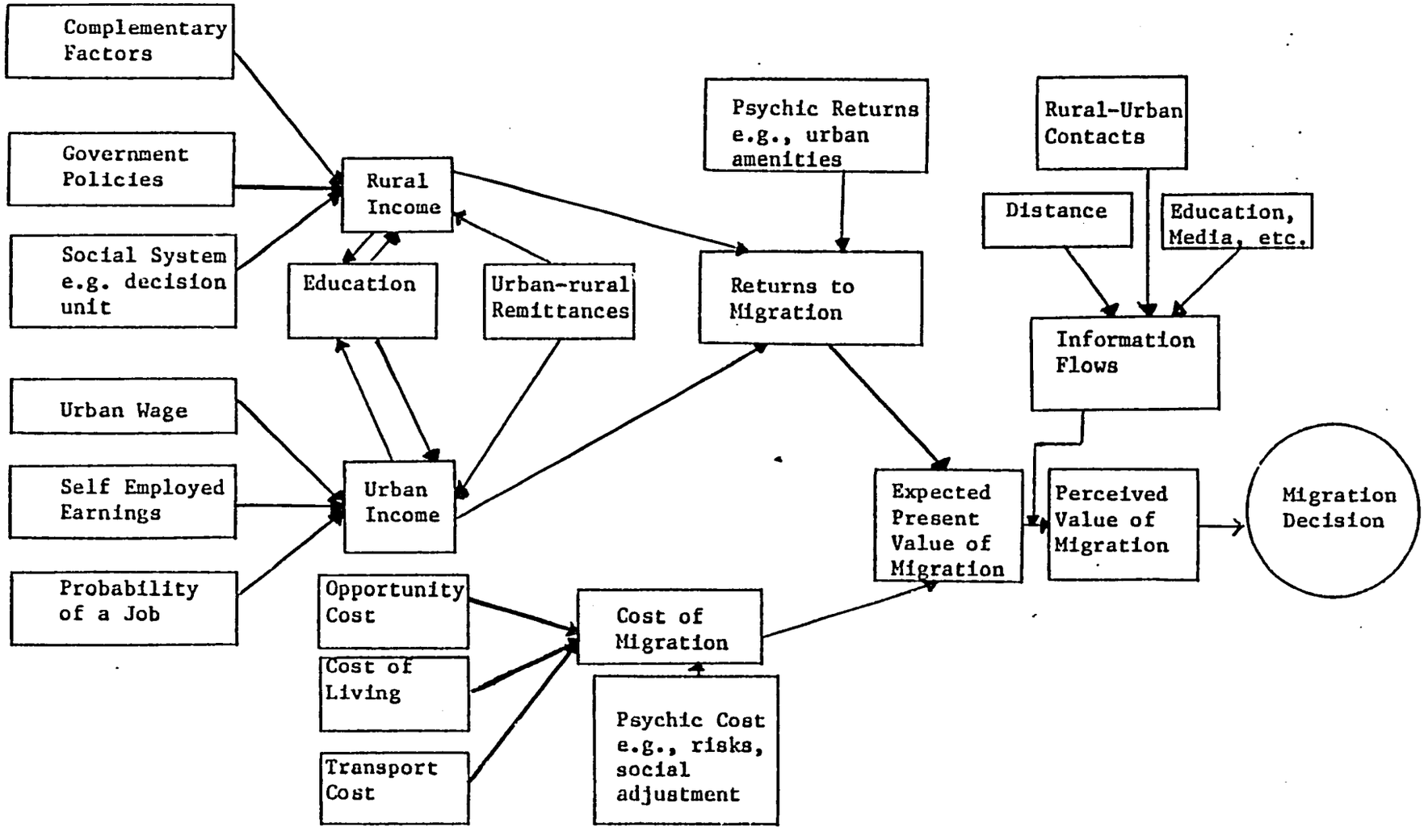
But a large number of demographic, economic, social, and psychological factors influence rural people's expectations of finding better opportunities in cities. Byerlee noted a wide range of factors influencing rural perceptions about migration: land distribution, rural development policies, levels of rural income, constraints of the rural social system, the level of education of rural people, levels of urban to rural income remittances, 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 villagers and urban kin. Those perceptions are shaped as well by levels of urban wages, costs of living in cities, social and economic costs of migrating, willingness to accept risks, the ability to adjust to urban life styles [2]. The

relationships among these factors influencing migration decisions are depicted in Figure 3.

In addition, Findley has emphasized that these factors themselves are perceived differently by various groups of people in rural areas and are weighted differently in the decision to move [3]. For younger, higher status, better educated, single young males--the more mobile migrants who are more open to change and innovation--migration is primarily motivated by the "pull" of potentially better economic opportunities in cities and by opportunities for educational advancement. They have a strong desire for occupational mobility and are more sensitive to urban wage levels. They often have a greater awareness of urban life and life-styles. They seem willing to migrate long distances to find better opportunities in cities, but also have a higher tendency to migrate in step-wise fashion, going first to smaller or intermediate-sized cities and to larger cities later. The older, less educated, married, more dependent and less mobile migrants tend to move because of rural poverty and unemployment, that is, because of "push" factors. They are likely to be less attracted by urban living and educational opportunities than by the perception that job opportunities may be greater in the city. They are more likely to be short-distance migrants who prefer to remain in rural areas, but move initially as temporary urban workers. In either case, however, strong relationships exist between economic conditions in urban and rural areas that are reinforced by social, political and psychological factors influencing rural to urban migration decisions.

FIGURE 3

FACTORS INFLUENCING RURAL TO URBAN MIGRATION



Source: Byerlee (1974)

While the primary focus of conventional development theory concerning urban-rural relationships focused on labor transfers and migration, by the late 1960s agricultural economists began to take a stronger interest in food marketing systems that cut across urban and rural sectors. A number of studies of food marketing systems in developing countries were done in the 1970s that concentrated primarily on organizational structure and arrangements for farm product distribution, but implicitly revealed a strong, underlying, spatial dimension. While the spatial aspects were not examined in detail, the organizational studies showed clearly that rural areas were strongly linked to the urban settlement hierarchy by a complex network of food marketing interactions. Lele's study of food grain marketing in India in the late 1960s and early 1970s was representative of the genre [4]. Lele found that in low income agricultural areas in India, large amounts of the food produced never left the farm. Much of it was retained for family consumption, seed, feed, and payments-in-kind to agricultural laborers.

Marketed food surpluses, however, moved through a complex organizational structure that was based in several levels of the settlement hierarchy. Wheat and rice, for example, were marketed by farmers in small amounts in local villages with periodic markets through village retainers who resold them in small amounts to other consumers or to subagents in the villages. The subagents resold the surpluses to commission agents in district towns or larger cities. In some places farmers sold directly to commission agents who assembled food grains in larger market towns. Some

of the grains were sold to itinerant village agents who, in turn, sold them to wholesalers and millers in district towns. Commission agents distributed some of the surpluses through secondary markets in larger villages and towns or sold them to millers and wholesalers in "terminal markets" in big cities. The wholesalers would break bulk and resell smaller lots to numerous urban retailers and consumers.

Studies of rice marketing systems in Ghana indicated a similar, although less complex, organizational structure [5]. Paddy farmers sold whatever surpluses remained after retaining crops for family use to traditional rice traders in nearby villages, illegal trader-smugglers, itinerant traders who resold the rice in larger market towns, or state sales agents. The surpluses gathered in village markets were assembled by traders in "feeder markets" located in district towns and resold to millers and wholesalers in larger cities. Some of the rice was sold in the feeder markets to state sales agents who resold it to private stores in the cities. Private wholesalers distributed the rice through urban markets to retailers and institutions.

Although the study by Lele and those by most other agricultural economists focused on the organizational aspects of food marketing, the spatial dimension was evident but largely unexplored. Lele noted that village markets provided the primary outlets for farmers with small amounts to sell or trade for basic consumer goods. Market towns were the network through which itinerant traders assembled food grains for resale to larger urban markets, urban wholesalers and city consumers. District towns

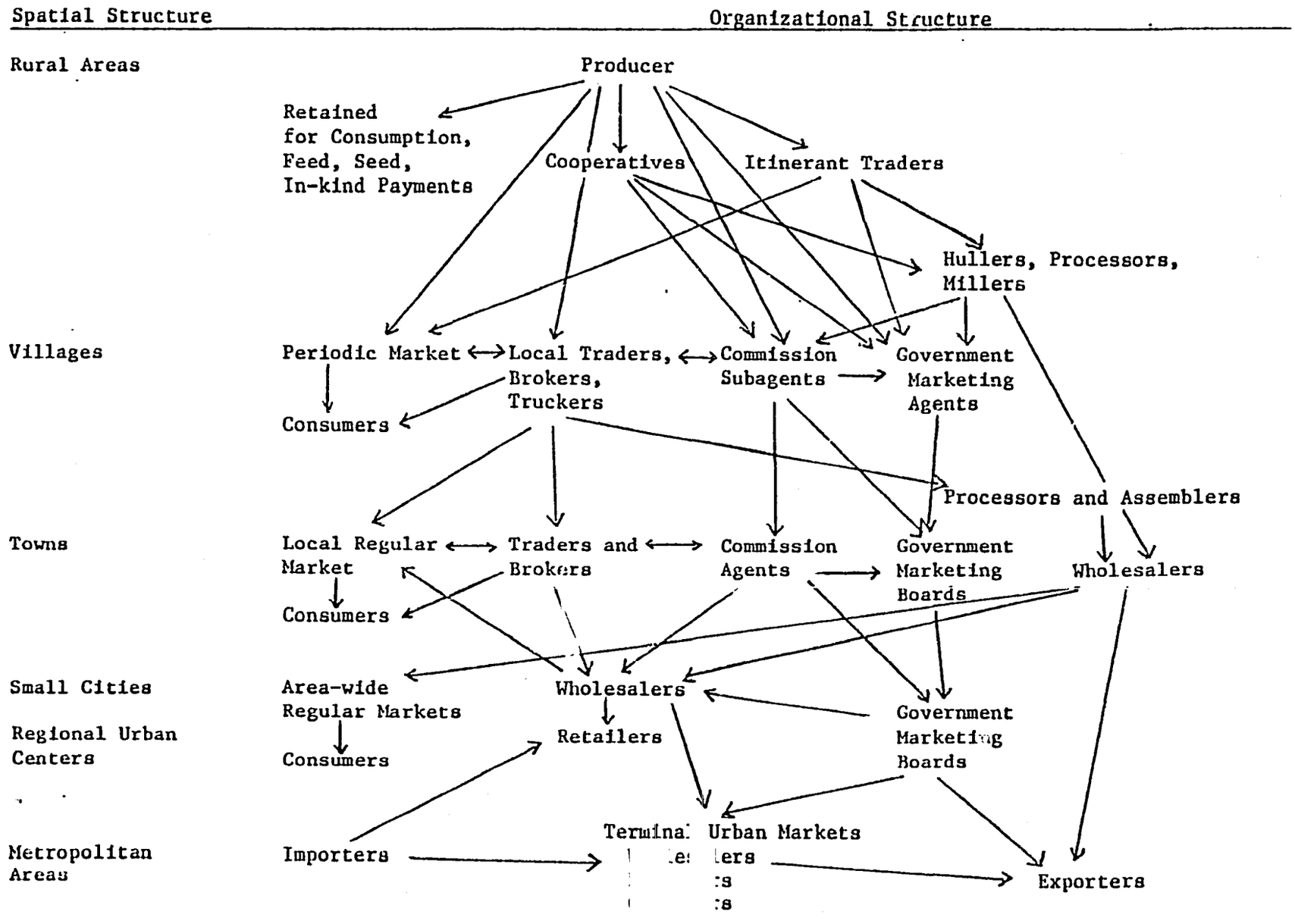
provided the locations for millers, processors and regional wholesalers. The larger cities served as processing, packaging, and distribution centers, while the metropolitan areas were the terminal markets for large wholesalers and hundreds of retailers serving urban consumers. The studies showed that once agricultural surpluses left the farmgate, or village, distribution depended almost entirely on networks of urban-based intermediaries--brokers, traders, millers, wholesalers and retailers.

Later studies began to make more explicit the importance of the urban hierarchy and of the physical and economic linkages among rural areas, market towns, small cities, regional urban centers and large metropolitan areas in the food marketing chain (see Figure 4). They also noted the importance of adequate market services and infrastructure for facilitating food distribution in settlements. Road networks from farm to market and from village market centers to intermediate and terminal urban markets also facilitate food distribution. Moreover, they began to note the impact of urbanization on rural production and food marketing. Studies of urban marketing systems in Latin America, for example, concluded:

> 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 vegetbles. Major investments are required for transportation equipment, highways, and other physical facilities [6].

FIGURE 4

MODEL OF SIMPLIFIED FOOD MARKETING SYSTEM IN DEVELOPING COUNTRIES



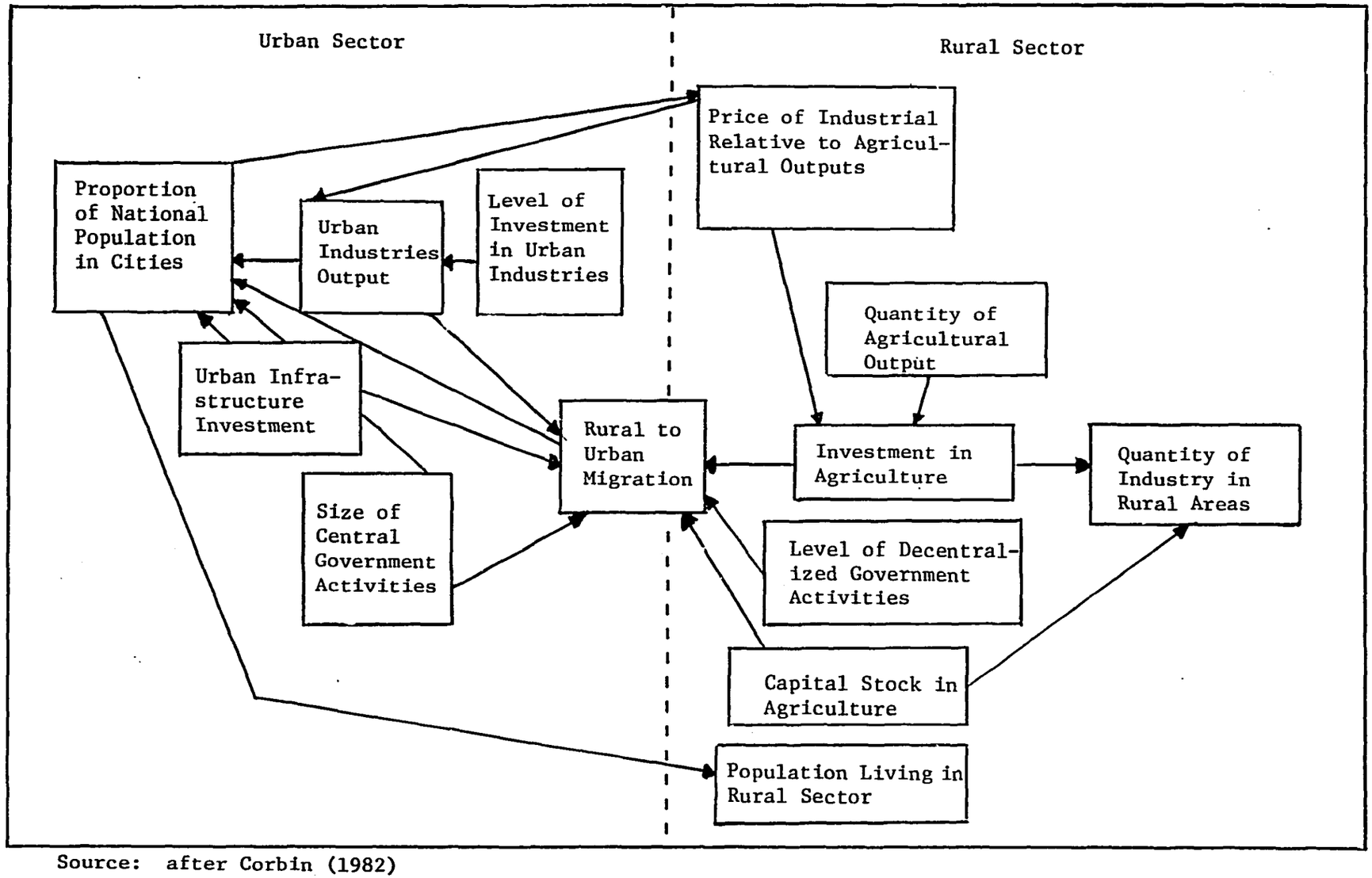
They also pointed out, however, that little is known about the operation of urban-rural food marketing systems in developing countries at different levels of economic development and under different political and economic structures. Further, little attention is paid to the effects of spatial structure on the efficiency or effectiveness of food marketing systems.

Clearly, while labor transfers and migration are important dimensions of the linkages between urban and rural areas, the mutual interactions betwen them are more diverse and complex. One framework for describing the relationships between urban and rural economies is offered by Corbin [7]. Using the classical two-sector economic approach--an urban sector composed of large and intermediate cities and a rural sector with villages and small towns--Corbin argues that the population of, production in, and migration between the two sectors depend on a number of related factors that are depicted in Figure 5.

Corbin contends that the proportion of population in the urban sector depends not only on the volume of rural to urban migration, but also on the output of urban industries that create employment opportunities. Perhaps just as important is the perception of employment opportunities in cities, the size of central government activities in the urban sector, and the level of urban infrastructure investment. The latter two factors not only create urban amenities, but also reduce the costs of industrial production, contributing to employment generation.

FIGURE 5

MODEL OF URBAN-RURAL RELATIONSHIPS



Source: after Corbin (1982)

The output of urban industries--presumably including not only manufactured goods but also production-related services--is influenced by two other factors: the prices of industrial relative to agricultural goods, and the level of investment in urban industries. The higher the industrial investment and the prices of industrial goods vis-a-vis agricultural goods, the greater the output of urban industries.

In turn, the volume of rural to urban migration depends primarily on six factors. It will tend to be higher with: (1) larger output from urban industries; (2) greater central government activities in cities; (3) higher levels of investment in urban infrastructure; (4) lower levels of agricultural output; (5) lower levels of infrastructural investment in rural villages and small towns; and (6) lower levels of decentralized government activity in rural areas.

The quantity of agricultural output is a function of the relative prices of agricultural to industrial output and capital stock in agriculture. Agricultural output should be greater with higher prices for agricultural goods compared to industrial goods (i.e., favorable terms of trade for the rural sector) and with larger amounts of capital stock in agriculture.

Moreover, the quantity of industry in rural areas, which would presumably affect the volume of migration indirectly, is a function of the quantity of agricultural output and the level of infrastructural investments in rural villages and towns. Finally, the prices of agricultural

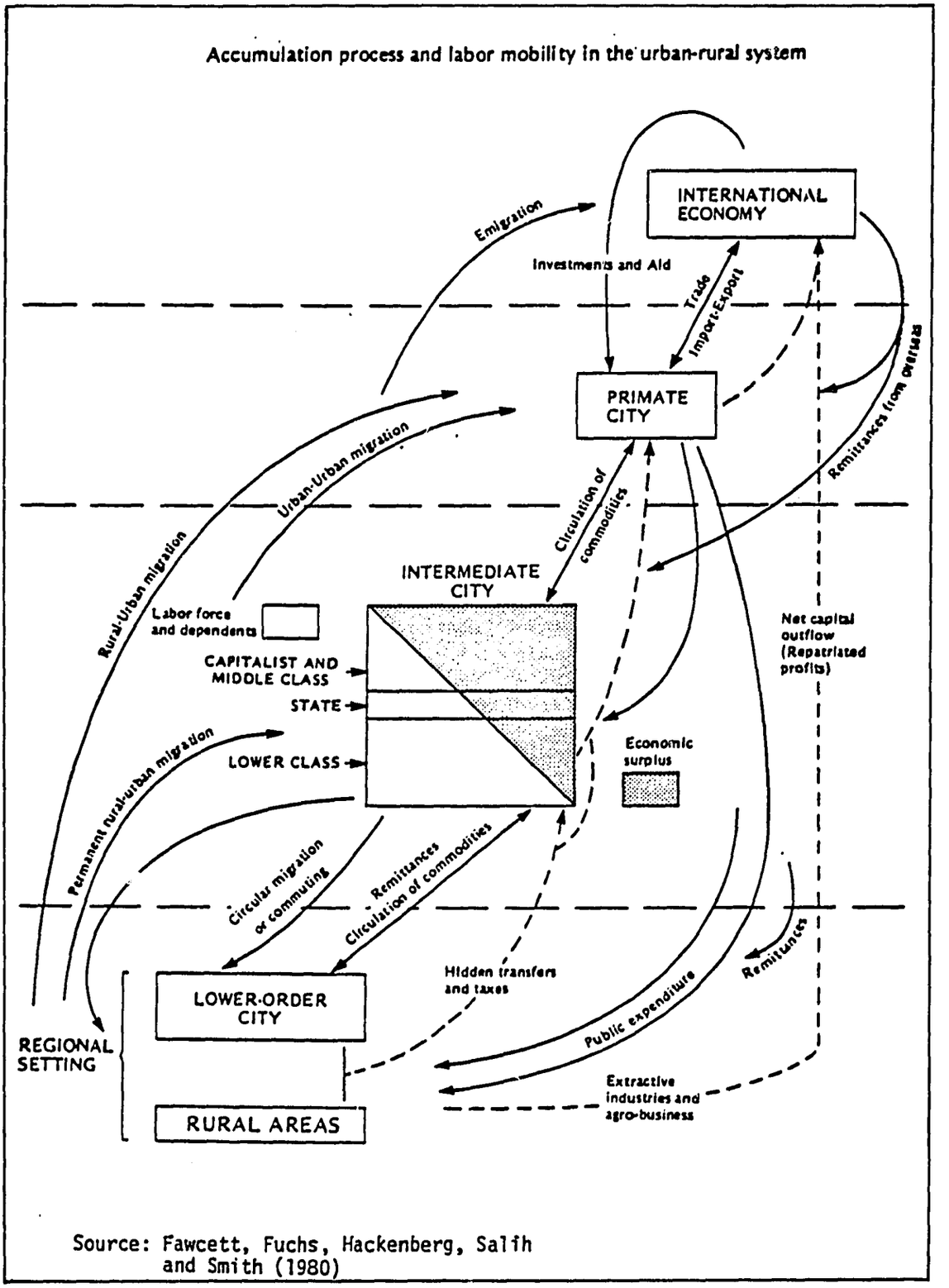
relative to industrial output--that is, the terms of trade between the two sectors--are largely a function of the size of the urban sector and the proportion of population in the rural sector.

Corbin attempted to show not only the types of interactions between urban and rural sectors that affect their population sizes, productive output, and levels of migration, but that government price, investment, and economic policies directed toward the two sectors can influence the size and distribution of the nation's urban and rural settlements.

Studies of intermediate-sized cities in developing countries commissioned by the Population Institute of the East-West Center also showed that urban centers can play important roles in linking urban and rural economies [8]. As Figure 6 indicates, intermediate cities seem to play a crucial role in: distributing manufactured goods to rural areas and agricultural commodities to large cities; serving as channels of urban-to-urban, and for rural-to-urban migration; generating remittances to rural areas; channelling international investment and aid outside of the primate city. Additionally, intermediate cities serve as locations in rural regions for public expenditure and investment benefitting the rural economy; sources of employment for surplus rural labor, and locations for private investment in nonagricultural activities.

In a recent study for AID, using case histories, Rondinelli has shown how secondary city growth and development are both influenced by and contribute to rural and agricultural development [9]. By examining the

FIGURE 6



Source: Fawcett, Fuchs, Hackenberg, Salih and Smith (1980)

urban functions of secondary cities, the specific ways that urban-rural linkages operate become clearer. Rondinelli contends that the mutual effects of urban and rural development are manifested in at least ten specific ways [10]:

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 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. Rural-to-urban migration and the employment of migrants in cities are sources of income remittances to farm households in rural areas.

9. 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.

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

Rondinelli contends that regional cities are central locations for the supporting services needed in agricultural production, and that they can provide markets for agriculural outputs and sources of off-farm employment. As such their development must be considered as an essential part of rural and agricultural development programs.

The remainder of this chapter explores these rural-urban linkages in more detail and provides examples from developing countries.

LINKAGES BETWEEN URBANIZATION AND AGRICULTURAL DEVELOPMENT: THE ROLES OF REGIONAL CITIES

In much of the developing world, regional cities--market centers, intermediate and secondary cities and even large metropolises--have grown and developed directly or indirectly as a consequence of agricultural development. In turn, these cities provide the services and markets for promoting agricultural development in their surrounding hinterland. An expanding body of research indicates the strength of the linkages between the growth of regional cities and rural agricultural development.

Agricultural Development as a Stimulus for the Growth of Regional Cities

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

The impact of agricultural development on urban growth is particularly strong at the lower end of the settlement hierarch ibb's studies of market towns and small cities in the Philippines, Malaysia, and Sierre Leone conclude that these places have grown ma a consequence of agricultural development in their regions [11]. In the urban centers 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. The growth of market towns and regional cities was linked directly to agricultural development in the region and to the level of disposable income in rural households. Using Mosher's classification, Gibb found that lower order market centers, up to the level of intermediate sized cities, grow primarily because they provide: commercial and personal services needed by farm households; small-scale or cottage industries goods; agro-industries that provide inputs for or use the outputs of local agricultural production; and local public services such as education, health, and community infrastructure [12].

The economic activities most frequently found in market centers and regional cities in the countries Gibb examined consisted mostly of formal and informal sector retail trade; personal and recreational services; light transport; market trade; crafts; construction; cottage and small-scale manufacturing using local materials; basic government, educational and health services; agro-business; and agricultural service and trade activities. The economic base of market centers and regional cities--and thus their growth and diversification--depends strongly on agricultural production and increases in farm household income.

Studies of other countries provide further evidence of the impact of agricultural development on urbanization. In Pakistan, increased agricultural production resulting from the introduction of Green Revolution technology during the 1960s stimulated the demand for manufactured goods, farm equipment and supplies, inputs and fertilizers primarily produced in 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 artisans and craft shops in smaller cities [13].

Similarly, the Sri Lankan government's policies of colonizing and

extending irrigation services and transportation in the 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" [14]. Indeed, some of the new towns and cities grew fast enough to overtake the coastal cities and the towns in the densely populated districts that predated the period of agricultural development in the Dry Zone.

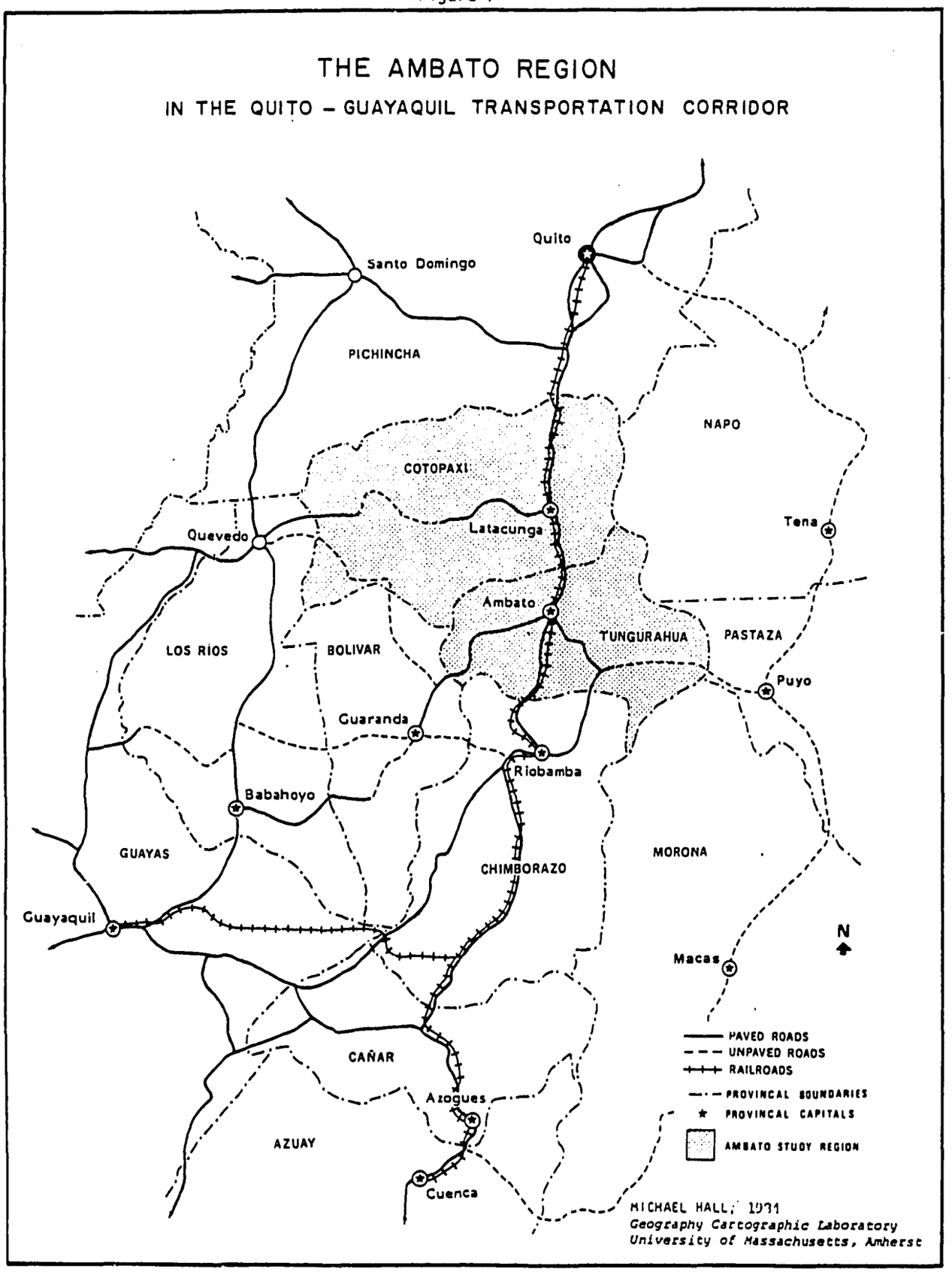
In Ecuador, the regional city of Ambato has grown largely as a result of its strategic location in the heart of an agricultural area in the central highlands, and because of its role as a marketing and distribution center for the region's agricultural goods. The city, with a population of a little more than 100,000 in 1982, grew by 31 percent since 1974 to become Ecuador's fifth largest city. Ambato's development has been 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,gives it a major role as a distribution point for agricultural goods grown in the surrounding areas and makes it a major link in the food marketing systems between smaller villages and towns (see Figure 7) [15].

More detailed and extensive illustrations of the agricultural stimulus to urban growth can be found in de Alcantara's studies of the state of Sonora in Mexico, where the growth and diversification of the state's regional cities--Obregon and Hermasillo--were a direct response to agricultural development. DeAlcantara 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. The offices and state government bureaus are also to be found there, interspersed among farming and business pressure groups of various kinds. Ciudad Obregon and Hermosillot thus emerge 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 [16].

Although these regional 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 expansion of commercial and service functions they provided for agriculture. Manufacturing's role in their development was insignificant. De Alcantara 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" [17]. Most of the busineses that grew in Obregon and Hermasillo were small

Figure 7



Source: Carroll, Lentnek & Wilkie, 1984

scale; they were founded by local residents (or recent immigrants) 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 especialy 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," de Alcantara recounts. "Money was easy and the need for repairs constant, since the sudden increase in purchases of farm machinery had not been accompanied by any immediate increase in knowledge of how to handle it on the part of the buyers" [18].

The implication of this evidence demonstrating the impact of agricultural development on the growth and diversification of regional cities is that governments can stimulate the growth of regional cities through agricultural programs and careful location of investments in support services, marketing facilities and infrastructure, thereby taking advantage of locational proximity and economies of scale.

Agricultural Develpment and Migration to Regional Cities

Paradoxically agricultural underdevelopment as well as increasing agricultural productivity seem to promote rural-to-urban migration. In some developing countries the stagnation in agriculture and the lack of

opportunities for economic advancement in rural areas create "push" effects that are strongly reinforced by the "pull" of the city in offering better employment, educational, and entrepreneurial opportunities. Studies of migration in developing countries indicate that low wages and lack of employment in agricultural areas are important "triggering" factors in rural emigration [19].

The migration resulting from underdevelopment of agriculture has strong impacts on both the rural areas people leave and on the cities to which they go. Many of the rural migrants are young, relatively well-educated, and often more productive and ambitious than the people who remain behind. Studies of rural migration during the 1960s to Korea's third larest city, Taegu, indicate that over 50 percent of the immigrants moved to the city to escape poverty in the countryside. Those who were attracted to the city during its period of rapid growth were relatively young; nearly three quarters were under 30 years old, with the majority in their late teens and early twenties. Nearly 60 percent came directly from the countryside and a little more than 31 percent came from smaller towns and cities. For them, Taegu presented opportunities for jobs and education that they did not have access to in rural villages [20]. Similar characteristics were seen in migrants to cities in the Philippines during the 1970s. Nearly 60 percent of the migrants to Iligan City were between 15 and 29 years old and most were from agricultural areas with stagnating economies. The median age of male household heads was 24 years old, and of female migrants, a little over 21 years old. Many were better educated and

more skilled than the average rural Filipino; and many came, as do migrants in many developing countries, because they already had friends and relatives working in the city.

In Indonesia, much of the recent migration to Jakarta and to other large cities has resulted from the lack of employment opportunities in areas of subsistence agriculture, but it also stems in part from the displacement of labor in areas where the Green Revolution has encouraged modernization, mechanization, and the introduction of new cultivating and harvesting methods. In areas where the newer technologies are successful, harvesting is now done with sickles rather than with the traditional hand-knife, reducing the number of harvestors needed. In some areas of Indonesia contract harvesting arrangements have further displaced local workers, and the use of mechanical hullers reduces employment opportunities for village women who previously hand-pounded rice [21].

In other countries such as Nigeria, Brazil, Thailand, the Philippines, Mexico, and Colombia, government subsidies for agricultural mechanization have reduced the number of jobs in rural areas and stimulated greater outmigration [22]. Labor displacement is not only an important source of population growth in regional cities, but also increases urban population densities, placing severe strains on urban services. Although migrants may contribute to urban economic growth and create increased demand for consumer goods, they also "burden the city's economy through increased underemployment and unemployment levels, lower levels of productivity, greater demand for costly municipal services, lower per capita tax revenues

and higher city budget deficits" [23]. Thus, although agricultural development can create new jobs for rural people and help to stimulate rural economies in ways that can slow the rate of rural-to-urban migration, it also is likely to displace some workers--especially where it is technology intensive--and create surplus rural labor that must subsequently be absorbed in towns and cities. Unless the impact of agricultural development programs on migration and urbanization is taken into account, and provisions are made to strengthen the labor-absorbing capacity of regional cities, rural migrants are likely to move directly to the largest metropolitan areas. This may further drain the resources of the rural regions and contribute to the overconcentration of urban population in one or two primate cities.

Regional Cities as Sources of Remittances to Rural Areas

If provisions are made to increase the employment capacity of regional cities in tandem with policies and programs for agricultural development, urban centers can offer new employment opportunities for migrants and provide income that is, at least in part, remitted to members of households remaining in rural areas. Relatively little is known about the magnitude of flows of remittances from regional cities to rural areas, but scattered evidence suggests that it can be substantial. Studies of a sample of recent male migrants to urban centers in Kenya conclude that only about 13 percent of the income earned was remitted home; but surveys of India report

that as much as 38 percent of the income earned by migrants working in urban factories was sent back to their villages. Studies of 48 rural villages in India found that remittances were received by up to 40 percent of the households [24]. In Thailand, nearly half of the migrants surveyed intended to take money with them when they returned to their rural homes [25]. In some rural areas of Nepal more than half of the households receive money from relatives who migrated to Kathmandu. Likewise in Ghana, 40 percent of rural households with members working in cities have received cash or in-kind remittances.

Studies of remittances in African countries conclude that the proportion of income remitted by migrants to rural villages varies greatly among countries. Factors contributing to this variation include the strength of social and economic ties between migrants and their families, the amount of income the urban dwellers earn, and their length of stay in the city. However, even when remittances were large, they tend to become smaller as migrants remained in the city for longer periods of time and as ties to their home villages became more tenuous. The money sent back from cities seems to be used by rural relatives to meet social obligations; support elderly kin; pay for marriages, school fees, and house repairs; and for investment in productive activities [26].

Moreover, a good deal of evidence indicates that the monitary flow is not simply one way. During the initial period of residence in the city, migrants receive support from relatives in rural areas until they find a

job or can earn enough to survive [27]. Whatever the magnitude of the flows, however, regional cities are, clearly, channels through which money from rural areas comes to migrants seeking urban employment, and earnings from urban migrants are sent to rural villages and towns to help support family and kin.

Regional Cities as Market Centers and Distribution Channels for Agricultural Goods

One of the most important and visible relationships between urbanization and agricultural development is that regional cities provide markets and act as channels for the distribution of agricultural products. In much of the developing world regional cities grew as marketing and trade centers, providing the primary outlets for increased agricultural production. This is not only an historical function of cities, but one that continues to be of crucial importance for regional and national development [28].

Studies of the central highlands in Ecuador provide a clear illustration of the important role played by market centers and intermediate sized cities in regional and national agricultural marketing systems. Carroll, Lentnek, and Wilkie point out in their study of the city of Ambato that it has emerged as a spatial link-pin in a marketing system serving two distinct sets of outlets--the export markets for bananas, coffee, cocoa and other crops that are located primarily in Quito and Guayaquil, and domestic markets for a wide variety of food and livestock products located in market towns and cities throughout the region. Within both of these market

systems the city of Ambato serves as a key assembly and transshipment point, linking smaller periodic markets in the Sierra, Costa and Ecuadorian Amazon farming areas with major domestic and export markets in the larger cities [29].

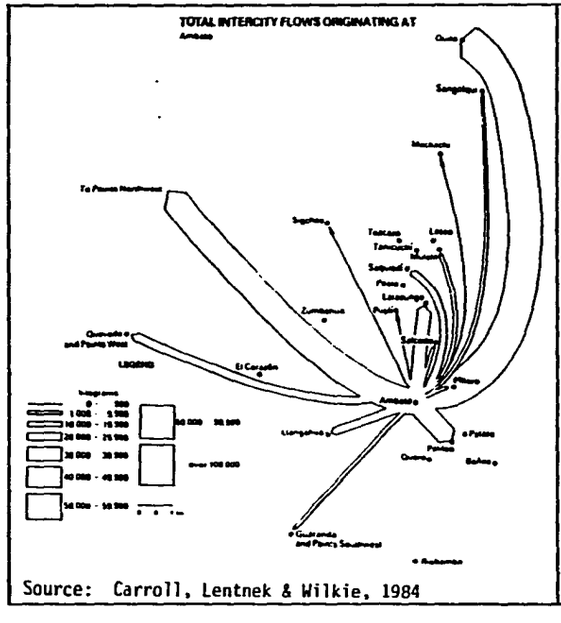
The smaller towns and cities in the central highlands serve as outlets in the domestic market for wheat, rice, dairy goods, livestock, sugar, legumes, potatoes and bananas. The surveys of market towns note that:

> the periodic rural market continues as an important institutional arrangement for organizing the purchase and sale of agricultural products and the distribution of farm inputs and consumer goods. Municipalities provide space, rudimentary facilities, and supervision of market activities. The market day has great social, religious and political, as well as commercial, significance in the life of the community. With the improvement of transportation and communication services, however, these markets are increasingly drawn into the regional and national market network. This broadens the variety of products available in local markets and creates additional potential competition for surplus agricultural commodities that can be transshipped to other markets [30].

The central highlands marketing system in Ecuador, in fact, is a hierarchy of towns and cities serving as periodic and regular market centers through which nearly all of the agricultural products of the provinces of Cotopaxi and Tungurahua flow (see Figures 8, 9, and 10). The city of Ambato--with a little more than 100,000 population--is a main market and distribution point for agricultural goods of the region:

> Traditional arrangements for the marketing of potatoes and other vegetables and fruits are reflected in the situation at Ambato, the major assembly center for the Sierra and Guayaquil. Specific streets

Figure 8



Source: Carroll, Lentnek & Wilkie, 1984

Figure 9

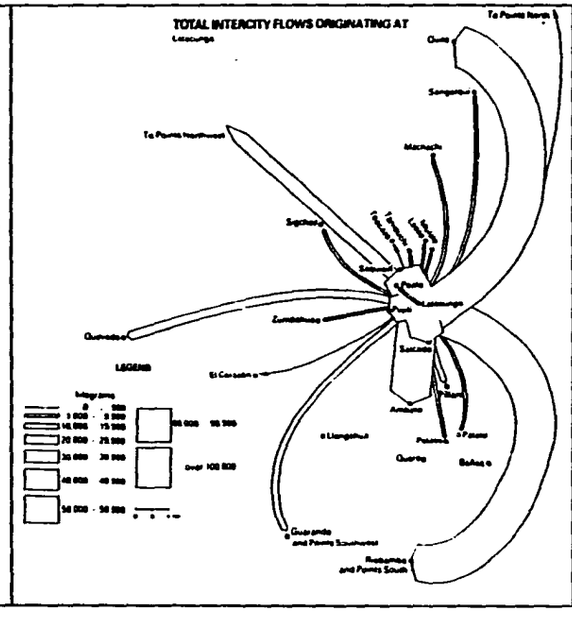
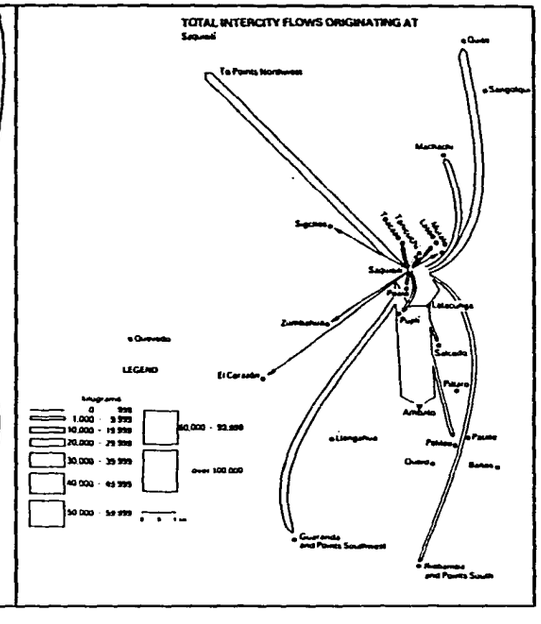


Figure 10



> and squares have become the focus for the marketing of particular products. Trucker wholesalers and some farmers display their produce in the squares and along the street. Resident wholesalers occupy buildings nearby, combining display space for products currently on sale and in warehouse storage.
>
> Tomatoes, another important product of the region, are sold in boxes graded informally to a fairly uniform quality, size and color. Most of the fruits are moved through market channels in bulk, graded informally without any specific packing. Fruits and vegetables are sold from the back of trucks, both wholesale and retail, with a small discount for larger quantity purchases [31].

The city of Ambato also serves as a center for marketing, and distribution of livestock and dairy products:

> A key role in livestock marketing is played by specialized wholesalers called "introductores." They buy animals directly from farmers or at periodic livestock markets, have them slaughtered at the municipal abattoir, and sell meat in quarters to retail butchers with whom they have a continuing association. They may also provide short-term financing. Slaughterhouses in Guayaquil are supplied by wholesalers based in Ambato. The meat is transported in quarters daily in sealed vehicles, but without refrigeration. Deliveries are made directly to retailers by pre-arrangement. Dairy production, concentrated in the Sierra, involves mostly small producers who each raise a few native cattle. There are also a number of large modern dairy farms in the Ambato area with high production [32].

Ambato acts as a market for its own residents and for those of surrounding towns and villages, while playing an equal if not more significant role as a distribution point for agricultural goods going to markets in Quito and Guayaquil. Ambato receives produce shipments from nearly every settlement in its region and redistributes them in large urban markets ordinarily unaccessable to most farmers from rural hinterlands.

The other provincial capital in the region, Latacunga, with a

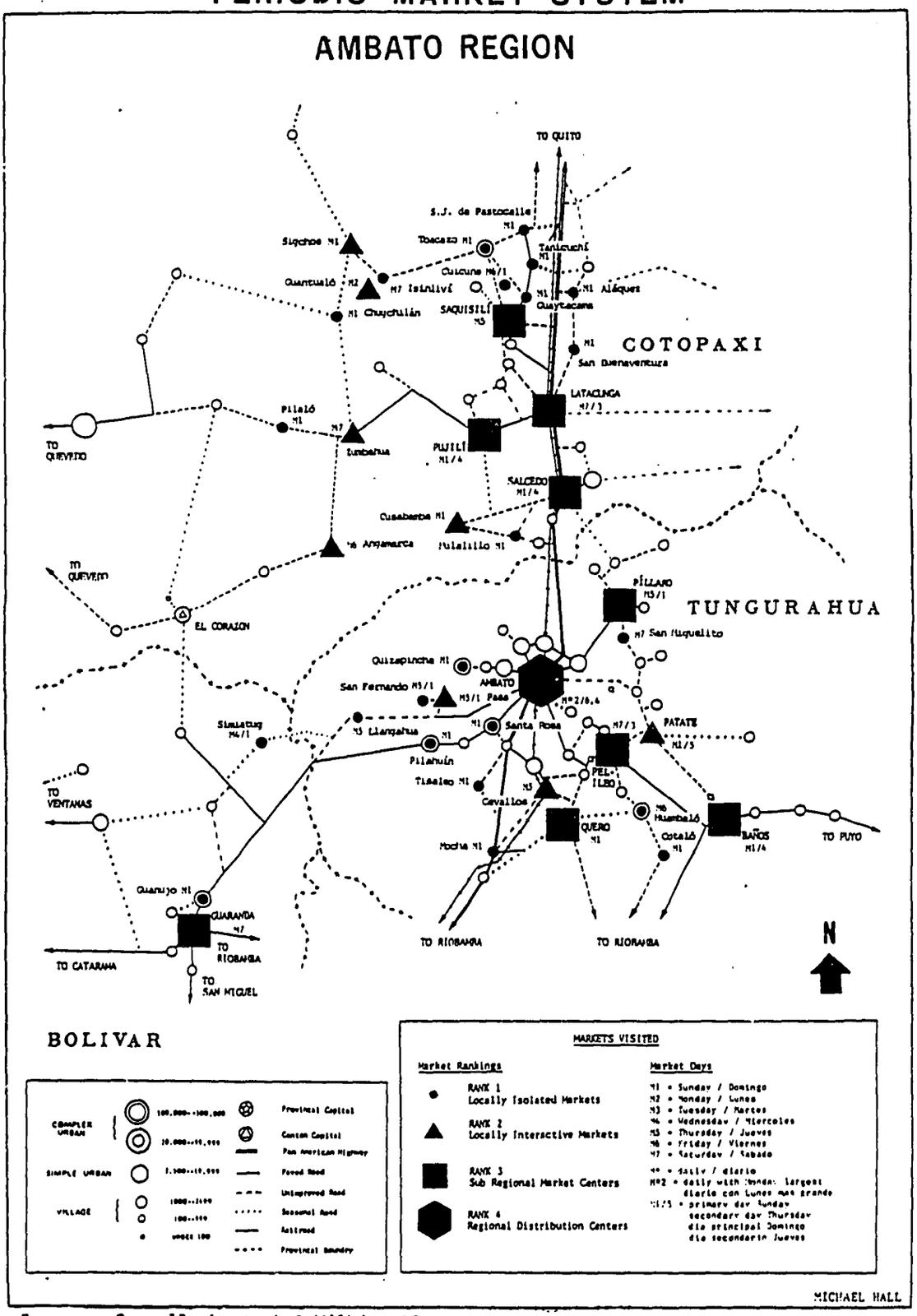
population of about 30,000 also is important for both marketing and distribution. Ambato is supplied by Latacunga, which acts as a market for its own residents and as an assembly point for goods that are sent directly to Quito and to other nearby provinces. Latacunga, in turn, is supplied by smaller towns such as Salcedo, Pujili and Saquisili, which are linked through market transactions to numerous nearby periodic market centers (see Figures 11 and 12).

Studies of regional cities in other developing countries support the findings in Ecuador that urban centers play important roles in agricultural marketing and distribution [33]. Chiangmai grew as an important regional market for northern Thailand early in the 20th Century. The introduction of modern production techniques and the strengthening of its transport and communications linkages with Bangkok reinforced and expanded its agricultural marketing functions. The city now plays an important role as a distribution point for locally produced goods that are sold in other towns in the northern region and in Bangkok. It serves, as well, as a local market for fresh and processed agricultural products brought in every day from surrounding farms to be sold or traded in the city's markets and grocery stores [34].

In his study of India, Hazelhurst found that markets organized and operated by local or provincial governments or by private stallholders are crucial economic activities in middle sized cities [35]. The urban markets meet daily or several times a week affording numerous small scale operators, vendors, and merchants the opportunity to establish regular

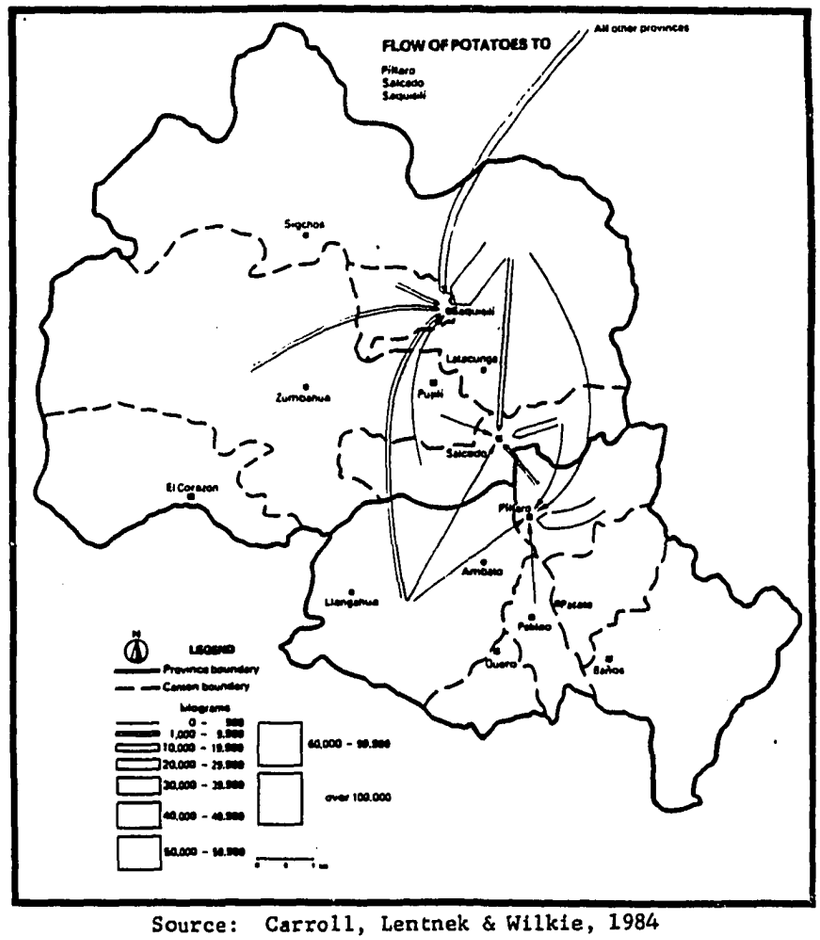
Figure 11

PERIODIC MARKET SYSTEM



Source: Carroll, Lentnek & Wilkie, 1984

Figure 12



Source: Carroll, Lentnek & Wilkie, 1984

trading relationships with agricultural suppliers and urban customers. The fact that regional cities serve a larger agricultural region is crucial to their economic stability, as well as to the productivity of agriculture in the regions in which they are located. Similarly, cities such as Dagupan, in the Philippines, serve as important trade and distribution centers for their regions. Markets in Dagupan City transfer agricultural produce raised in the northern Luzon plain to smaller towns and market centers in the surrounding provinces and to larger markets in Manila [36].

In southeastern Nigeria, towns and cities with from 30,000 to 70,000 residents are important bulking and distribution centers for agricultural goods grown in their region. "In these towns foodstuffs are bulked either for sale in other markets in the region or for onward transportation to bigger urban markets," one analyst notes [37]. "Foodstuffs are assembled from the surrounding periodic markets by the middlemen and then lorry loads of the produce are taken to the required destinations." Yams and cassava, for example, are bulked in the larger towns and then taken to food deficit markets, where the bulk is broken for retail sales in local periodic markets.

Thus, accumlating evidence confirms that many regional cities play a crucial role in the agricultural development of their regions. They serve as market outlets for their own residents, assembly, bulking and distribution centers for larger urban markets, and break of bulk and dissemination points for smaller market centers.

Regional Cities as Centers of Market Trade Employment

Markets in regional cities create large numbers of jobs in agriculturally-related market trade activities, and provide outlets for agricultural goods--thus stimulating the commercialization of agriculture in surrounding rural areas. The employment opportunities in urban markets not only provide off-farm jobs for rural households, but also for both newly arrived migrants and permanent city dwellers.

In cities in the Middle East, the suq, and in Latin America, the plaza, play important roles in the economies of cities. Beal's description of the influence of the market in Oaxaca, a small city in Mexico, could just as well describe the importance of the market place in many other cities of the developing world. In Oaxaca, the market is a vital base of the city's economy; it offers opportunities for small farmers and poor campesinos to trade their produce, vegetables and grains; for stockraisers to sell cattle, goats, sheep, and dairy products; for gatherers to exchange firewood, lumber, charcoal, lime and other uncultivated products; for fishermen to sell their catches; for artisans to sell or trade textiles, pottery, baskets, woven materials, iron, brick or wood work, household utensils and an enormous variety of household goods. The markets offer opportunities for purveyors of services to reach the mass consumers most efficiently. Carpenters, masons, bakers, butchers, barbers, midwives,

blacksmiths, tailors, seamstresses, stonecutters, traditional healers and marriage brokers ply their trades in or near the markets. Though in permanent shops near the market's location, typically on the plaza, mechanics, repairmen, doctors, druggists, agricultural suppliers, and others benefit from the market by providing services to participants.

The market also offers an outlet for many goods produced in the city--shoes, textiles, ready-made clothing, furniture, soap, processed and packaged goods, flour, coffee, sugar, soft drinks and bakery goods. Moreover, the market in Oaxaca supports travelling vendors, storekeepers, agents, brokers, middle-men and truckers. It stimulates business for bus, truck and taxi owners and creates opportunities for commission agents, moneylenders, warehouse-owners and others who facilitate market trade. The main market in the city influences the process of inter-village and town trade within its region, serves as a channel of distribution for farm and handicraft products from rural areas, and for manufactured goods from Mexico City and other large urban centers. It organizes a good deal of the small scale trade within the city and provides much of the revenue for the city's budget [38].

Although the markets of middle-sized cities often bring only subsistence or near subsistence incomes for many participants, and only a small margin of profit is returned to stall-holders and vendors, they do engage the labor of large numbers of urban residents and satisfy their basic needs. Dannhaeuser's studies in the Philippines note that not only has the agricultural marketing sector grown in many cities, but in places such as Dagupan "numerous cases exist in which third-order traders have

been able over the course of one or two decades to establish substantial enterprises." This produces a demonstration effect that stimulates and maintains entrepreneurial activities. Dannhaeuser observes, "such successful careers are known and appreciated by the city's traders, which is part of the reason many individuals, especially those with some capital resources to start with, enter trade and maintain their positions in it even if success is not immediately forthcoming" [39].

Regional cities not only generate market-trade employment for their own residents, but urban growth often creates demand for processed food and cottage industry products in villages and towns in surrounding rural areas. Studies of northern Nigeria report that the growth of the regional city of Zaria stimulated demand for the production of fura--a cooked ball of grain eaten with sour milk--by women in nearby rural villages. The women who made fura often employed other women in the village to process and prepare it; and children and students to carry it to market. Moreover, the increasing demand for consumer goods in Zaria created many opportunities for women from nearby villages who acted as brokers between village enterprises and suppliers in the city. The expanding market in Zaria created demand for crafts, apparel, mats and decorative household goods [40].

Even large metropolises provide employment in market-related trade. The World Bank reports that Bangkok's growth, for example, provides farm households in provinces immediately surrounding the city with "substantial opportunities for home production of goods for sale of all kinds" [41].

In many Third World cities, large numbers of recent migrants and the poor living in slums and squatter settlements depend on "informal sector" activities that are closely related to agriculture, and they depend on urban-rural marketing networks for a substantial part of their income. Many work as food sellers, processors, brokers and traders. In slums and squatter settlements in Colombo and Sri Lanka, for example, a large number of the poor make their living from marketing activities that depend directly on agricultural inputs and exchange. Karunatilleke's study of the Pamankade East slum area of Colombo indicates that "many dwellers in this community are engaged in selling raw food (vegetables, fish and friut), processed food and miscellaneous items. The Kirillapone informal market is an ideal spot for their sales. They draw their clients from different income categories. Vegetable and fruit sellers thrive in this market area" [42]. More than 25 percent of the slum dwellers earn their incomes from selling or processing agricultural goods in the city.

Regional Cities As Centers of Agro-Processing, Small-Scale Manufacturing and Service Employment

Many regional cities in developing countries, in addition, offer employment in a variety of agro-processing, commercial, manufacturing, and service activities. Indeed, many regional cities grew primarily as commercial and service centers for their regions. In his study of Tripoli in Lebanon, Gulick found that the city functioned historically as an agro-processing center [43]. Citrus orchards occupied much of the unbuilt land

in and around the city. Commercial establishments in the city export oranges, lemons, olives, and other crops. Confection industries, extractors, and sugared fruit and nut manufacturers are also an important part of the city's economy. Olive processing and production provides inputs to the soap manufacturing industries as well as to the olive oil processors, residue fuel, and fertilizer processing industries. It was in these agro-processing industries that residents and those who have migrated to the city from nearby rural areas found their livelihood.

Similarly, in Chiangmai, Thailand, growth resulted primarily from agricultural processing and agro-business activities. Establishments in Chiangmai export agricultural and forest products, minerals, and crafts made from local wood and timber. Tobacco and timber have been especially important to the city's economy [44]. In 1977, the largest percentage of gross provincial product in Chiangmai--nearly one third--was contributed by agricultural industries, with wholesale and retail trade contributing one-quarter.

Strong contributions to gross regional product are also made by agriculture and agriculturally-related businesses and industries in secondary cities in Thailand. Nearly 91 percent of Chiangmai's industries now consist of rice mills, wood product and craft establishments, and food processing firms. The largest industrial establishments in Chiangmai are the 76 tobacco companies employing an average of 81 workers each [45].

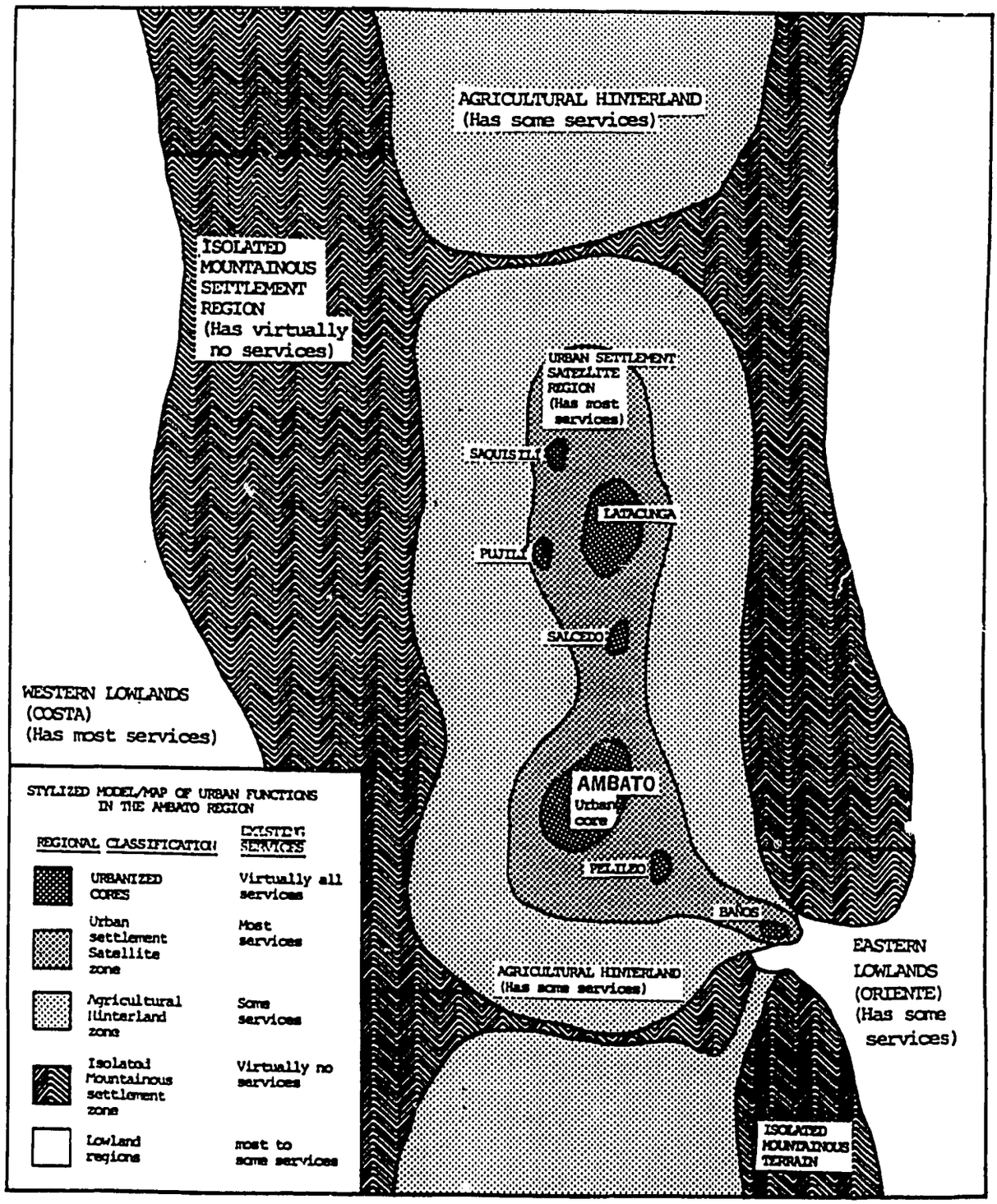
Many of the intermediate cities in India have grown, and continue to expand, as agro-processing and service centers. They have diversified into other industries and services largely as a result of their agricultural processing and supply activities [46].

Carroll, Lentnek and Wilkie illustrate quite clearly the importance of the city of Ambato in providing services and employment in manufacturing and commercial activities for the Cotopaxi-Tungurahua region in Ecuador. As Figure 3 indicates, a substantial portion of the commercial, productive and personal services available in the region are concentrated in the Ambato urbanized area--Ambato and Latacunga and their satellite towns [47]. The availability of services declines with distance from the urban core which is centered on the regional city of Ambato. The city and its satellite towns provide nearly 65 percent of the total nonfarm employment in the region, including 67 percent of the jobs in manufacturing and 66 percent of the employment in commerce (See Figures 14 and 15). In 1980, nearly 59 percent of all manufacturing and commercial employment in the region was located in the city of Ambato alone.

In countries where governments have made a concerted effort to deconcentrate industries, from the largest metropolitan areas to regional cities, experience has shown that secondary and intermediate sized urban centers can provide not only tertiary employment but also jobs in manufacturing as well. South Korea's industrial deconcentration policies have played a major role in strengthening regional cities' capacity to provide increased off-farm employment [48]. As a result of industrial

Figure 13

STYLIZED MAP OF REGIONAL SETTLEMENT TYPES RELATED TO THE EXISTENCE OF URBAN FUNCTIONS

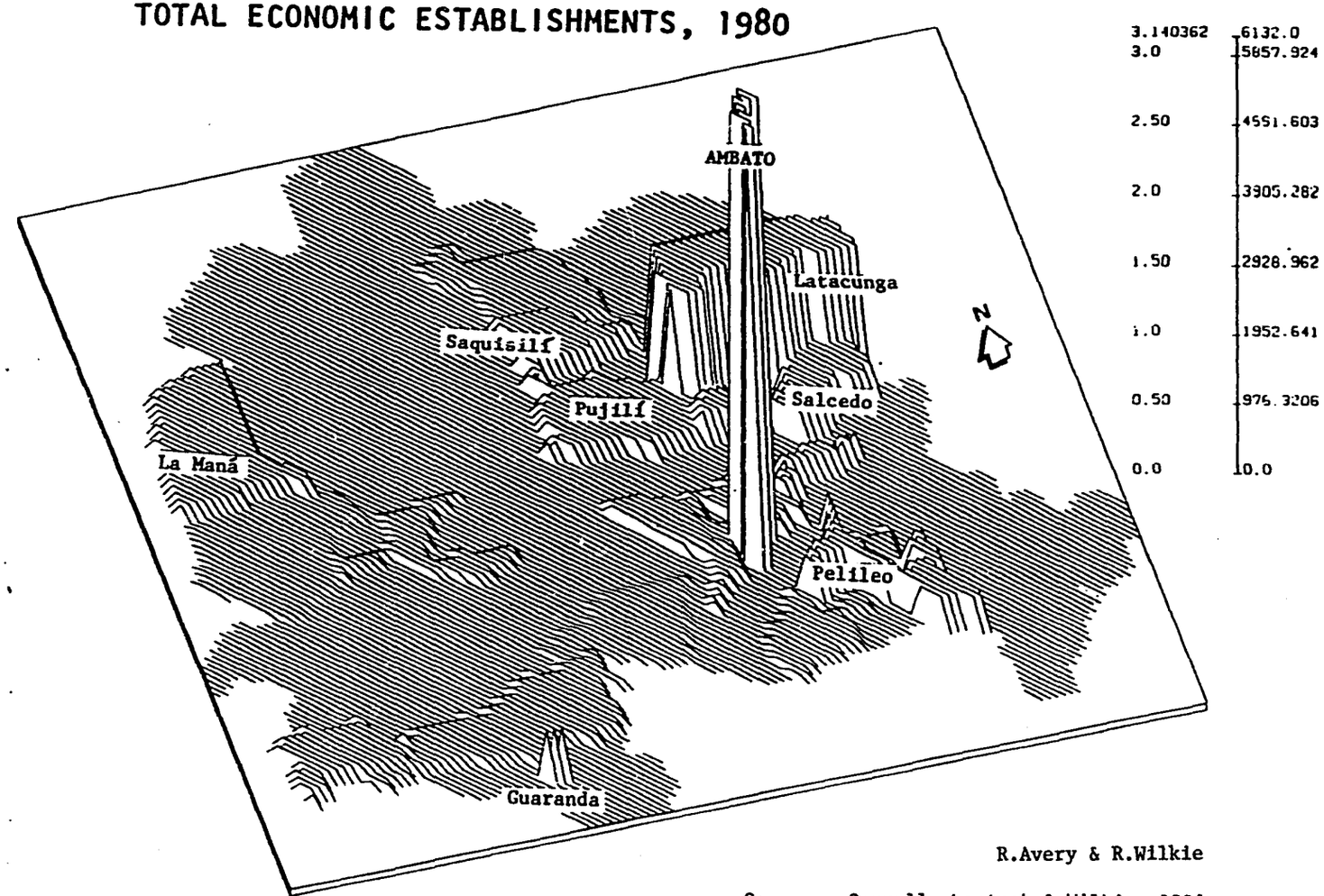


Source: Carroll, Lentnek & Wilkie, 1984

Figure 14

AMBATO REGION

TOTAL ECONOMIC ESTABLISHMENTS, 1980

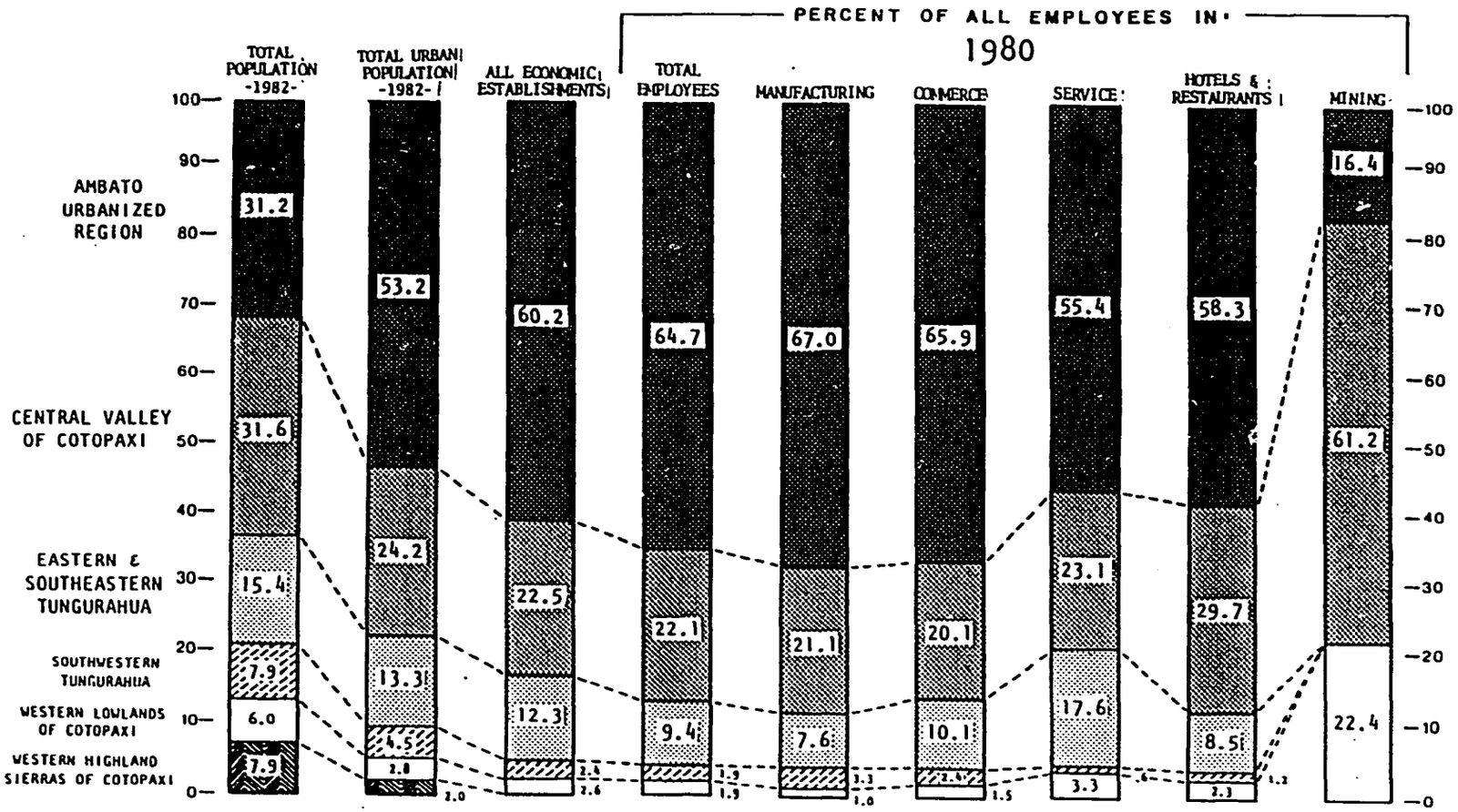


R.Avery & R.Wilkie

Source: Carroll, Lentnek & Wilkie, 1984

FIGURE 15

PERCENT OF TOTAL POPULATION IN SIX SUB-REGIONS OF TUNGURAHUA AND COTOPAXI
EARLY 1980's



Source: Carroll, Lentnek & Wilkie, 1984

deconcentration policies, manufacturing employment in cities outside of the Seoul Metropolitan Area in 1980 increased to an average of 55 percent of the labor force in urban centers with more than 200,000 residents, and to 40 percent in regional cities with from 100,000 to 200,000.

By 1980, although small scale establishments still accounted for about 90 percent of all industrial firms in intermediate cities, large industries--those employing more than 100 people--engaged more than half of the industrial labor force in nearly half of those cities with 100,000 or more residents. In larger cities such as Pusan, Incheon and Daejeon, large factories employed from 55 to 68 percent of the industrial workers. In smaller secondary cities where the government created industrial estates, a large majoriy of the manufacturing work force is employed by large industries: for example, 82 percent in Masan, 80 percent in Ulsan, 61 percent in Cheongju, 70 percent Pohang, and more than half in Chuncheon, Iri, Gunsan, Weonju and Andong. In only one-third of Korean intermediate cities did more than 60 percent of the manufacturing labor force still work in small scale industries by 1980, although small-scale firms still accounted for the overwhelming majority of the industrial establishments in those cities (See Table 1).

Korea's policy of extending highways, providing utilities, upgrading power and energy capacity and establishing essential infrastructure in middle-sized cities allowed them to support successfully large-scale industries that generated more employment. By 1980, half of the

TABLE 1

DISTRIBUTION OF EMPLOYMENT BY SECTORS IN INTERMEDIATE CITIES BY DIFFERENT SIZE CATEGORIES, 1960, 1974, 1980

Population Size Category 1978	Number of Cities	Percent Distribution of Employment														
		Agriculture and Mining			Manufacturing			Wholesale and Retail Trade			Constr., Util. Transp. & Commnc.			Services		
		1960	1974	1980	1960	1974	1980	1960	1974	1980	1960	1974	1980	1960	1974	1980
500,000 or more	5	14.5	6.3	1.4	21.3	30.4	55.6	19.9	27.8	21.7	11.1	15.3	12.6	32.0	19.8	9.6
499,999-200,000	7	17.4	14.2	6.6	16.9	28.7	55.2	17.4	22.1	16.5	10.4	14.2	8.8	34.0	20.5	13.2
199,999-100,000	18	28.1	20.4	4.7	14.1	21.3	39.7	17.5	23.4	29.2	8.8	12.9	9.2	31.0	21.4	17.1

Source: Compiled from Ministry of Construction, 1980; and Ministry of Home Affairs, 1980.

intermediate cities with populations of less than 200,000 had more than 5 large factories, as did all larger cities.

Although the share of employment in the tertiary sector declined in regional cities during the 1970s, commerce and services still played an important role in their economic and occupational structures. Likewise, it provided a dominant one in smaller cities and towns. In 1980, the tertiary sector accounted for about 44 percent of employment in regional cities with more than a half million residents, and for about 39 percent in urban centers with 200,000 to 500,000 population. It remained a strong source of employment--accounting for nearly 56 percent of the jobs--in cities with from 100,000 to 200,000 dwellers.

In 1980, commercial establishments provided employment for nearly 450,000 people in intermediate cities, production-oriented services offered jobs to about 197,000, and social and commercial services employed about 280,000 workers. Employment in wholesale and retail trade increased on average in the largest and smallest intermediate cities, as did employment in production oriented services. Employment in both these sectors decreased slightly in cities of from 200,000 to 500,000 where gains in manufacturing employment were greatest.

With the growth of manufacturing, employment in transport, communications and storage services increased in a number of regional cities. Those with populations over a half million had about 9 percent of the labor force employed in tertiary sector activities in 1980. Those urban centers with from 100,000 to 500,000 residents had over 7 percent of their workers

employed in production oriented services.

Impact of Regional City Growth on Agricultural Production and Land Use

Not only do Third World cities provide outlets for agricultural products and create market-related employment opportunities, but as they grow they increase demand for food and nonagricultural goods produced by farm households in surrounding rural villages. The growth of regional cities can have a strong impact on agriculture, both by extending services that reduce costs of production and distribution, and by generating demand for new or more valuable crops.

In Latin America, the extension of urban transportation and communications facilities has not only stimulated the growth of small cities in rural regions, but has helped to integrate and extend their market areas. Beals notes that the modernization of transportation systems and the extension of highways in and around the city of Oaxaca in Mexico, for example, stimulated changes in urban and rural markets, allowing them to achieve greater efficiency. The highways increased access of rural producers to the urban market place. Because of their ability to use trucks more effectively, Oaxaca's traders could carry more goods and visit more villages after the highway system was extended. The highways not only extended the city's market area farther into the rural hinterland, but increased inter-village trade as well [49].

Both spontaneous and planned urban growth increased demand for

agricultural products in some developing countries. The construction of Brazil's new capital city, Brasilia, for instance, created opportunities for 90,000 households in the state of Goias to supply food to the city. The increased demand strongly influenced cropping patterns in the state. Traditionally, the Goias farmers provided beef and rice to Rio de Janiero and Sao Paulo. With the growth of Brasilia, new markets were created for traditional products within the state and substantial amounts of agricultural land was planted to new products such as perishable fruits and vegetables [50].

In South East Asia, the continued growth of Bangkok also transformed farming from semi-subsistence to commercial production in the areas surrounding the city. Because of increased demand for their products farmers in the areas formerly producing little or no surpluses adopted modern inputs produced in Bangkok and substantially raised their output. One analyst reports that "the 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 Bangkok [51]. The increased demand for agricultural products in Bangkok also strongly effected the patterns of agricultural production in surrounding areas. Proximity to Bangkok markets is important for poultry production, for example; farms in provinces adjacent to Bangkok produce three to four times more birds than in other regions of the country. Also production of pork and fruit is greater in nearby areas than in provinces farther away from the city [52].

Studies of the farming areas surrounding Lahore in Pakistan, show that the growth of that city also had a strong influence on cropping patterns [50]. Research on changes in agricultural land use indicates that as the city grew larger in population and physical size, predominant crop belts began to emerge around Lahore, not in the classical "von Thunen rings," but in large patches. The areas nearest the city were dominated by vegetable farming that depended on urban markets in Lahore, the next by fodder crops, the third by cereals and grains and those farthest from the urban area by other crops such as cotton, sugarcane, fruits and oilseeds.

The growth of Lahore also had other effects on agriculture in the surrounding areas. Between 1940 and 1970, for example, about 5,600 acres were lost to cultivation primarily because of changes in land use brought about by urbanization. Improvements in irrigation systems and access to farm inputs, however, allowed farmers near the city to increase their production on the remaining farmland. Other changes in land use have come with urban sprawl into surrounding farmland. The vegetable areas, for example, pushed farther out as land was steadily converted to urban uses. Vegetable cropping tends to follow the extension of roads and irrigation systems into the areas formerly cultivated in fodder and cereals. The fodder-growing areas have expanded with increasing urban demand for dairy products and for draft animal feed. Costs of transporting bulky fodder restrict the distance it can be grown profitably. Because cereals and grains are not perishable and can be grown long distances from the city, these areas and the acreage planted in other non-perishable crops remain

quite stable.

Over a 30 year period, cropping intensity increased as a result of Lahore's expansion. However, cropping intensity has tended to be low on the land immediately adjacent to the city, primarily because of the uncertainty and instability of land use, and the high probability that it would be converted to urban use. Overall, cropping intensity tends to rise with distance from the city on land adjacent to roads and irrigation channels. The cost of transportation to the city seems to be one of the most important factors affecting cropping patterns around Lahore [54].

CONCLUSIONS

Then, it can be seen that in much of the developing world, complex economic and physical relationships inextricably link regional cities and their agricultural hinterlands. Thus, agricultural and rural development policy must not only recognize this important set of relationships, but attempt to strengthen them and increase those linkages that are beneficial to both urban and rural populations. Because agricultural development seems not only to promote urbanization but to shape the economies of regional cities, attention to this sector in national economies is critical. It has been shown that the growth of regional cities not only increases demand, but provides markets for agriculture surpluses and influences the patterns of cropping and distribution in areas surrounding them.

The relationships identified and explained in this Chapter suggest that regional development policies should seek to stimulate agricultural productivity, and strengthen the economies of urban centers that serve as markets for agricultural outputs, sources of employment for surplus rural labor, and sources of agricultural supplies and inputs. With appropriately placed investment, regional cities can become more dynamic forces for the development of their agricultural hinterlands and serve to integrate urban and rural economies within regions.

To further contribute to the understanding of these concepts and processes, some of the recent attempts by governments in developing countries and international assistance organizations to strengthen regional cities as instruments of rural development, and of rural development projects to use regional cities as instruments for increasing agricultural production and off-farm employment, are reviewed in Chapter III.

FOOTNOTES

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18. Ibid., p. 295.

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CHAPTER III

GOVERNMENT PROGRAMS FOR REGIONAL CITY DEVELOPMENT: EXPERIENCE IN KENYA, MEXICO, PANAMA, AND SOUTH KOREA

Understanding the complex relationships between urban and rural development is crucial for increasing agricultural output and expanding off-farm employment in developing regions. But that understanding must be translated into policies, programs, and projects in order to generate the desired effects. This chapter explores, through a series of case studies, some attempts made by governments in developing countries and by international assistance organizations to strengthen the capacity of regional cities to support rural development, thereby increasing agricultural production, and expanding off-farm employment.

Any discussions of experience in developing countries must be prefaced, however, by the recognition that few governments have pursued deliberate, sustained, detailed, and comprehensive policies for regional city development aimed at increasing agricultural production and stimulating employment. Most governments in developing nations ignore the spatial dimensions of development in their national strategies. Regional planning typically focuses on developing special areas such as river basins or arid land, on coping with the rapid growth of areas surrounding large

metropolitan areas or primate cities, on improving those "economically backward" areas in which social conditions threaten political stability or on placating strong political demands on national governments to reduce developmental disparities. During the 1950s and 1960s some governments attempted to develop a few regional cities as industrial "growth poles" in order to relieve population pressures on the primate cities. But such attempts had relatively little impact on slowing the growth of large metropolises or on promoting the development of the regions in which they were located [1]. Nor have international assistance agencies, such as the World Bank or AID, provided much funding or technical assistance to developing countries to strengthen the role of regional cities in promoting rural development. Some of AID's agricultural and rural development projects now have components that attempt to strengthen selected rural-urban linkages, but these tend to be relatively minor elements of larger, more encompassing, development efforts.

The few countries that have recognized the importance of regional cities for increasing agricultural production and off-farm employment often are still more concerned with ways of limiting or slowing the growth of primate cities than with rural development per se. But even in these countries, governments have not gone far beyond outlining broad goals in national development plans. The formulation and implementation of policies has been sporadic, discontinuous and sometimes inconsistent. Needless to say, the results of such policies have been limited. The sporadic attempts of governments in developing countries to implement programs and projects

to strengthen the marketing and employment capacity of regional cities have met a variety of problems and obstacles, because of both their low priority and lack of experience in designing and carrying them out.

AID and other international assistance organizations can make a substantial contribution to policy formulation, program design, and project implementation by expanding programs of applied research on the role of regional cities in agricultural development and employment generation; by funding selected and well designed pilot and demonstration projects and programs; by disseminating experience; and by providing training and technical assistance.

First, however, it is important to review the experience of some countries that have attempted to promote the development of regional cities. The cases presented here are selective and illustrative, and draw on more detailed studies commissioned by AID through the Settlements and Resources Systems Analysis cooperative agreement. They draw most heavily on the experiences of Mexico, Kenya, Panama, and South Korea.

EXPERIENCES WITH REGIONAL DEVELOPMENT PROGRAMS

Attempts to strengthen regional cities in support of agricultural development and employment generation almost always have been nationally conceived regional development strategies. In these plans, settlements ranging in size from market centers to secondary cities play an important

role. Most have used industrial or infrastructural investment as the primary instrument for expanding the production and employment base of regional cities. Some used multisectoral programs in which investments from a number of sectors are coordinated within regional cities. These efforts attempt to promote development and increase capacity of the city to function as a regional service and production center.

A growing number of governments in development countries now emphasize in their national plans and policies, at least rhetorically, the importance of regional development for economic growth. Kenya, Mexico, and South Korea, for example, have formulated national policies for rural and regional development that give attention to the development of secondary and intermediate sized cities as instruments of agricultural production or employment generation. Kenya has used a multi-sectoral approach, attempting to locate a wide range of infrastructure and service investments in secondary cities, market towns and local "service centers," whereas Mexico has concentrated on industrial deconcentration and investment in rural infrastructure and services. Panama has tried to implement a more narrowly defined set of projects that build up the capacity of a few secondary cities to serve as agro-processing and agro-industrial centers. Korea's attempts at a comprehensive approach uses rural community development, national land use regulations, industrial deconcentration and wider distribution of investments in social services and infrastructure.

Rural-Regional Development Strategy in Kenya

Kenya is a country in which agricultural underdevelopment and the lack of employment in rural areas reinforce the attraction of one or two large cities in promoting a high rate of urban growth. Although Kenya remains self-sufficient in the production of basic food crops, it has increased substantially its imports of wheat, rice and other cereal grains in the face of rising consumption and decreasing production. During the 1970s, per capita agricultural production declined by one percent a year. The agricultural sector's growth rate during the 1970s fell to about 2.6 percent a year, while Kenya's labor force has been growing annually by about 4 percent. Economists predict that at the present rate of labor expansion, Kenya's economy will need to create about 8 million new jobs over the next 20 years. Even if annual agricultural growth rates over the next 20 years were to double, it would only create sufficient employment to absorb about 3.5 million workers. Off-farm employment is also growing much too slowly, and it is concentrated in and around the largest urban centers. Thus, many of the poor (45 percent of the Kenyan population) now have insufficient income to obtain the minimum caloric intake to maintain basic levels of health. Moreover, they are concentrated in rural areas, provinces, and regions with low levels of urbanization. In fact, the ovewhelming majority of Kenya's poor are rural smallholders, pastoralists, landless laborers and agricultural squatters [2].

Kenya can expect increasing rural-to-urban migration over the next two

decades. Demographers estimate that the urban population will increase from 2.2 million in 1979 to 8.5 million by the end of the 1990s. Although this will still make Kenya only about 23 percent urbanized, much of the urban population is concentrated in Nairobi and Mombasa, and the economies of these cities have not been growing fast enough to absorb an expanding labor force [3].

For the past decade, the government of Kenya has made rural development the focus of its national economic growth plans and has sought to promote the development of intermediate sized cities and market towns in order to relieve population pressures on Nairobi and Mombasa. It is attempting to increase the capacity of smaller market centers and towns to offer off-farm employment in rural areas, and to provide service and marketing facilities in regions with agricultural development potential [4]. Beginning with the Second Development Plan, covering the period from 1970 to 1974, the government sought to create an integrated settlement hierarchy with four levels: (1) urban centers serving a population of 150,000 or more; (2) rural centers with service areas of 50,000 or more people; (3) market centers with at least 15,000 population, and (4) local centers with 5,000 or more residents. Seven "growth centers"--Nakuru, Kisumu, Thika, Eldoret, Kakamega, Nyeri and Embu--were given high priority in the allocation of investments for public works and infrastructure. Four of the larger towns--Nakuru, Kisumu, Thika and Eldoret--were designated as centers of industrial development. In the Third Development Plan for 1974-1978 the number of growth centers was increased to nine, adding Kitale and Meru to the original seven. As Obudho has pointed out, Kenya's strategy

has been [5]:

> to bridge the rural-urban gap by decentralizing downwards, creating an urban hierarchy to spread the benefits of modernization to the traditional rural hinterlands. The government's policy is to provide the infrastructure to aid the growth of towns in rural areas. As the towns become large enough, they function as service centers equipped with public water supply, sewage disposal, good electricity, improved access roads, postal and telephone services and banking facilities.

Although both plans identified a large number of cities and towns that might function as urban growth, rural service, market and local centers, and the types of investments that were needed in them, the government was unable to shift the allocation of investments sufficiently during the 1970s to change the pattern of urban development. Much of the public investment in physical infrastructure, services and productive activities continued to be concentrated in Nairobi. Rural-to-urban migration to Nairobi and Mombasa also continued unabated, and disparities in regional development continued to grow. The government was unable to forge effective programs for containing the growth of the two largest metropolitan areas. Richardson has concluded that although "Kenya has professed to have a growth center strategy, it has been more nominal than real" [6]. He argues that "the growth center policies adopted in Kenya during the 1970s hardly merit the name since the designations were insufficiently selective, the centers were not integrated into an overall strategy for the country as a whole, and implementation was ineffective" [7].

The difficulties in implementing the policies stemmed from a number of sources: problems of coordinating, even in a highly centralized

government, the actions of the large number of ministries and agencies making investments affecting urban and rural development; restrictions placed by international assistance organizations on the use of their grants and loans for rural development; strains on the managerial capacity of government agencies to carry out the plans in a relatively large number of places; and political conflicts over changes in the allocation of resources [8].

However, the government of Kenya is persisting in its strategy of urban development from the "bottom up" including the dispersal of infrastructure and services, despite initial problems in implementing its plans. Even critics recognize that the shortcomings of the strategy lie primarily in implementation rather than in the appropriateness of the policies. Richardson, for example, points out that plans to promote a dispersed settlement pattern as a strategy for rural development "are fully consistent with Kenya's comparative advantage in agriculture and resource based industries" [9].

The Development Plan for 1979 to 1983 extended the theme of alleviating rural poverty by creating new sources of employment and providing basic services needed to increase rural productivity. It emphasized that:

> in the past the concentration of development in a few urban areas has attracted large numbers of people to move to them in the hope of sharing in the benefits of that development. The fact that many migrants could not be productively occupied in the urban areas has created problems for the municipalities and attempts to provide essential services for the poor in cities has often increased the influx of people. By increasing development in the rural areas and by

increasing incentives for industrial dispersal, the government expects to enhance the attractiveness of living in rural and semi-urban areas [10].

Beyond its impact on the growth of Nairobi and Mombasa, however, the Plan stressed the importance of dispersed urbanization for rural development. It pointed out that "rural development cannot be a self-contained process. The rural areas must be knit closely to urban markets for both supplies of farm inputs and consumer goods and outlets for farm produce if they are to become an integral part of the monetary economy." The planners argued that "self-sufficient rural communities are settings for subsistence living; their scope for development is limited until links with urban areas are established." The plan identified 1,681 local, market, rural and urban centers, of which 68 with more than 2,000 residents were designated as places that would receive priority investments in services, facilities and infrastructure. The purpose of this investment is to serve better their surrounding rural areas. Three new cities were added to the set of growth centers, and two additional cities, Machakos and Malindi, were given priority for industrial development. They would act a "countermagnets" to reduce the growth of Nairobi and Mombasa.

In the early 1980s, Kenya entered a third phase in its urban decentralization and rural growth strategy. With World Bank, USAID, and British assistance, the government identified more than $40 million worth of infrastructure and shelter investments in thirty cities and towns throughout the country, mostly in settlements at the lower end of the urban hierarchy. A local authority improvement program has been established to provide capital

improvements, housing, employment-generating activities, community services, training and financial and administrative assistance to the priority settlements. With USAID assistance, Kenya has initiated a "small towns shelter and community development project" that will provide shelter, infrastructure, community facilities, and employment-generating activities in 15 towns ranging in population from 5,000 to 50,000. All 15 towns are in the second level of Kenya's urban hierarchy. They will play important roles in supplying goods and services to surrounding rural areas and in providing local markets for agricultural goods grown in their hinterlands. About half are district administrative capitals and provide a wide range of social and adminitrative services. None has a significant level of manufacturing.

All, of these towns were found to have serious deficiencies in shelter, physical infrastructure, and in the community services and facilities necessary to perform their regional service and production functions at full capacity. Although the services that will be provided to these regional cities and towns must come from a wide range of national ministries and agencies, responsibilities for identifying and implementing the community projects rests with local authorities. A 12-step local planning process is being tested in these towns that will serve as a prototype for other local authorities when the project is extended in the future [12].

Although it is too early to determine if the new programs will be more

effective than earlier ones, it is clear that a national program of regional city development will require stronger political commitment, new and more serious efforts at coordination by the dozen or more major ministries and agencies responsible for various aspects of the program, and expanded administrative capacity at the local level to carry out and sustain the projects that will be funded in intermediate cities and small towns. If the local authorities are to carry out their responsibilities effectively, their planning and administrative capabilities will have to be strengthened, their local revenue bases expanded, and their ability to maintain services and facilities improved. As one high-ranking official in the Ministry of Local Government has emphasized, "improvements in budgetary procedures are required at both the national and local levels. Expansion of existing revenue sources such as land rates is required. And to accomplish these and other measures, a gradual and orderly shift of urban planning and management responsibilities from the central government is required" [13].

Regional Development Policy in Mexico

Promoting rural development in regions outside of the Mexico City Metropolitan Area (the Federal District) has been an element of national development policy in Mexico since the early 1970s. Serious problems are created by the high degree of economic and urban population concentration in Mexico City and its surrounding area. That concentration also creates

serious regional economic disparities. Mexico City's population has been growing rapidly over the past three decades. It is now estimated to be more than 16 million, and if current trends hold, demographers predict that it will reach more than 30 million by the end of this century, making it the largest city in the world. Mexico City already faces severe consequences of overconcentration: shortages of housing, the proliferation of slums, strains on services and facilities, an inability to provide jobs for the large numbers of poor who migrate there, crippling traffic congestion, and inadequate public transportation. Moreover, Mexico City is one of the world's most polluted cities [14].

Since the early 1970s national development policies have sought to promote economic growth in rural areas to relieve some of the population growth pressures on Mexico City, and to reduce the inequities in the distribution of income and wealth between the capital and the rest of the country. The Echeverria Administration (1970-1976) first called attention to the growing social adversities of the country's highly concentrated urbanization pattern and explicit policies were formulated to change it. National policies gave strong emphasis to rural development. Federal government investments in agriculture were increased from a little more than 14 percent of the total in 1970 to more than 26 percent in 1976. In 1973, with assistance from the World Bank, Mexico embarked on a massive integrated rural development program (the PIDER project) covering more than 100 "micro-regions," encompassing 15,000 small communities and 60 percent

of the rural population [15]. The program sought to finance the agricultural credit, infrastructure and social services needed by rural communities for economic development, to provide employment for the rural labor force, to raise the productivity of rural workers, and to reduce the inequities in the distribution of services between urban and rural areas [16]. Special regional development programs were established for arid zones, Baja California, and the Isthmus of Tehuantepac. Financial incentives were used to encourage industrial decentralization from the three largest metropolitan centers; industrial parks and complexes were constructed in some secondary cities; and credit and other assistance was provided to small and medium scale industries in order to generate more urban employment. The government introduced some degree of administrative decentralization and required Federal agencies to relocate workers from Mexico City to regional field offices.

These programs, however, had little visible impact on promoting rural development or on deconcentrating urbanization. PIDER's potential impact was undermined by the difficulties of coordinating the inputs required from various government agencies; the fiscal incentives for industrial deconcentration were considered too small to entice businessmen from Mexico City; only a small portion of the planned industrial estates were completed; and funding for the small and medium sized industries program was inadequate. Moreover, many Federal officials in Mexico City resisted reassignment to regional offices [17].

The strong emphasis on rural development was mitigated by the Lopez

Portillo Administration (1977-1982) in 1977, and the government reverted to an industrial strategy for regional development. However, Lopez Portillo did institutionalize urban and regional planning by creating a Secretariat for Human Settlements and Public Works with responsibility for coordinating policies to develop Mexico's entire settlement system. Moreover, the Federal government's substantial oil revenues were used to finance the National Plan for Industrial Development, which sought to reduce Mexico City's share of industrial output, and to increase the production capacity of other cities and towns [18]. Special incentives were made available in industrial ports and for urban industrial estates in interior cities, and regulations were enacted to control industrial growth in the Federal District.

A National Plan for Urban Development was enacted in the late 1970s that sought to slow the growth of Mexico City, Guadalajara and Monterrey, to promote the growth of eleven other cities to a million or more population, to generate employment sufficient to develop seventeen additional cities to population levels of 500,000 to one million, and 74 cities to populations of 100,000 to 500,000. Nine relatively large urban areas were given high priority for investment in services, infrastructure and industry, based on their capacity to absorb population and to generate employment.

A Global Development Plan, enacted in 1980, called for the integration of national social and economic development and spatial planning. However by the early 1980s, with the drastic decrease in oil revenues, Mexico experienced severe economic problems and many of the programs for urban and

regional development were not adequately funded. Even before the onset of the financial crises, the industrial development program was weakened by making too many towns and cities eligible for assistance. Similarly, the types of incentives made available were inappropriate for attracting industries from the three largest metropolitan centers. Much of the assistance for small and medium scale industries went to businesses in the Mexico City Metropolitan Area. Reviewing these plans, Brennan concluded "the plans were contradictory; incentives were extended to too many areas and thus substantially diluted; and incentives were generally too weak to influence locational decisions....Spatial plans and policies have mirrored the preferences of the incumbent President, with little continuity between administrations, and therefore have not been pursued over a sufficient period of time" [19].

In 1983, the de la Madrid Administration proposed a National Development Plan for 1983 to 1988 that seeks, once again, to improve economic and social conditions in rural areas. It argues that the terms of trade between the agricultural and industrial-sectors must be changed to retain a larger share of the economic surpluses in rural areas, and that services, infrastructure and jobs must be provided in rural communities to reduce regional inequities. Plans to build the employment capacity of regional cities are still based primarily on industrialization, however, and the role of agriculture in regional development is left rather vague. The Plan calls for a new emphasis on state-level integrated spatial

planning that would strengthen the relationships between rural and urban economies [20].

But as Hansen notes, the Plan does not really come to grips with the problems of rural areas or of agricultural development. It fails to reverse the trend towards large scale capital-intensive agriculture, which provides rural peasants little hope for increased income or employment. Moreover, the de la Madrid Administration is likely to have fewer financial resources to distribute and faces more serious economic problems than did its predecessor, making it more difficult for the government to change the current trends in urban concentration in Mexico City and to stimulate rural underdevelopment in other regions of the country.

Rural Growth Center Program in Panama

Although Panama is substantially smaller in territory and population size than Mexico, it has a pronounced urban concentration. In 1970, more than half of all Panamanians lived in the Panama City-Colon metropolitan region, and more than 70 percent are expected to be concentrated there at the end of the century. The two provinces encompassing the metropolitan region generate 70 percent of the country's Gross Domestic Product. Eighty-one percent of manufacturing, 94 percent of construction, 96 percent of transport, warehousing, and communications, 83 percent of commerce and more than 75 percent of other services output for the national economy are found in the urban corridor. Moreover, substantial income disparities exist between the Panama-Colon Metropolitan Area and the rest of the

country [21].

At the same time, nearly 40 percent of Panama's population lives in poverty; almost 21 percent are so poor that they do not have sufficient income to provide for even basic economic and social needs. Many of the urban poor live under extremely high densities with inadequate housing, drinking water or sanitary waste disposal facilities. The unemployment rate in the metropolitan area was estimated at about 16 percent during the early 1980s. Nearly half of the children in some of the more crowded squatter settlements suffer from malnutrition. Large numbers of the poor also are concentrated in the central and western provinces of Chiriqui and Veraguas. The high levels of rural poverty are due, in large part, to the underdevelopment of agriculture. The agricultural sector in Panama has performed poorly in recent years. According to studies conducted by USAID, "per hectare yields of crops in Panama are among the lowest in Central America. With the exception of rice, trends are discouraging. Yields from most crops either have been virtually stable or have declined over the last decade." Part of the reason has been farmers' lack of access to services, technology and markets in rural areas. USAID's studies reveal that:

> many of Panama's small producers make no sales to local markets; this relationship is reciprocal, these farmers do not buy significant quantities of goods and services from local markets. Basically, these farmers are subsistence producers or producers tangentially linked to local markets, incentives and a cash economy. One reason for this situation is that the markets themselves either do not exist, do not function adequately, or are inaccessible. They are neither adequate outlets for farmers to sell their products nor are there adequate facilities in the countryside where agricultural inputs and supplies

> can easily be procured. Farmers have virtually no source of information about prices of agricultural commodities, locally or in major population centers. ...In addition to the problems of farm markets at the local level, major urban center facilities have also deteriorated to the point that they cannot adequately serve producers or consumers [22].

The low levels of agricultural productivity, lack of services and facilities, and lack of employment continue to push the rural poor toward the Panama City-Colon metropolitan corridor, placing even greater strains on the services and facilities, housing supplies and job opportunities there.

Since 1968, the government of Panama has sought to promote agricultural development and employment generation in the rural areas beyond the Canal Zone in order to slow rural migration to the metropolitan area, raise incomes of the rural poor and integrate the now largely dualistic national economy. The government's development strategy has been to balance urban industrial and rural agricultural growth, diversify both agricultural and manufacturing exports from the rural areas, and expand public sector investment in order to supplement and guide private sector investment.

Rural Growth and Service Center Development. One part of the development strategy has been to encourage the growth of agro-processing industries and other employment-generating activities in rural growth and service centers, that is, in secondary cities and towns in regions outside of the Panma City-Colon metropolitan area. An extensive $30 million multisectoral development program (URBE), initiated in 1978 with a loan from the USAID, sought to provide the services, facilities, and infrastructure

needed to improve production and processing of agricultural products and to help create a network of large and small scale enterprises that would generate employment and income through private investment. It was projected that an improved hierarchy of urban centers with strong administrative and marketing functions would provide the efficient rural locations for public investment in services and infrastructure and feasible sites for private investment in agro-processing and related enterprises [23].

The program was to focus on Herrera and Chiriqui Provinces in the Western and Central Regions, where a large majority of the rural poor are located, and where the potential for increased agricultural production is high. In the Western Region, the city of David (about 40,000 population) served as the regional growth center; in the Central Region, the city of Chitre-Los Santos (about 22,000 residents) was selected to serve the same function. Six other communities ranging in size from about 3,000 to 14,000 population were chosen as service centers on the basis of the number of economic and business activities already located in them. The target region is important for several reasons. The areas to be served by the growth and service centers contain about 700,000 people, contribute much of the economy's value-added in agriculture, but also have a high concentration of subsistence farmers and a highly skewed land ownership structure. Much of the production comes from large agricultural estates, on which laborers earn low wages.

The program was designed to provide about $11 million of investment in

productive and supporting enterprises in the form of loans to small businesses and agro-processing industries, for the construction of industrial sites, and for training workers and small businessmen. Nearly $15 million was intended for housing and infrastructure development in the growth and service centers. Housing, transport terminals, sewerage systems, and recreational facilities would be constructed to make the cities and towns more attractive for private investment in the small business and agro-industries, and to provide amenities that would slow the rate of outmigration. More than $1.4 million was to be spent for institutional development and training of local government officials.

Two industrial parks, one intended for each of the two regional cities, would provide water, power, prepared sites, factories, sewerage, and transportation access. Municipal corporations composed of local government officials and businessmen would manage them. New agro-industries would be promoted through low interest loans. Preference would be given to industries producing farm inputs and processing local agricultural products. The program would also supply research funds to identify feasible new agro-industrial activities to attract investments. Small business loans would be made available for firms locating in or near the growth and service centers and that would provide new services and commercial and manufactured goods. Passenger and freight terminals would be constructed in David, Chitre-Los Santos and Santiago (a town located midway between the two cities) to relieve congestion and better link the service centers to the growth centers, and the more distant region with the

Panama City-Colon metropolitan area.

The Impacts of URBE. Assessments of URBE at the end of its five-year life in 1983 indicate that it produced mixed results [24]. By 1982, 265 small business loans had been made to entreprises in eight growth and service centers. About half the loans went to retail grocery, supermarket and food stores, furniture manufacturers, metal welding and fixture shops, retail merchandise enterprises, butcher, poultry and fish processing shops, clothing manufacturers, and other food processing and retail enterprises. Both food and furniture enterprises aided by the loans were heavy users of local raw materials. This investment yielded about 2.2 jobs per enterprise at a cost of about $3,000 per job. Altogether about 1,000 jobs were expected to be created in the two regional cities. Moreover, the loans produced a relatively high quality of employment, with about 70 percent of the jobs being in managerial, skilled or semi-skilled occupations. The small loan program was considered by evaluators to be very successful in strengthening commerce in the growth centers, increasing the volume and improving the variety of goods and services available in the regions, and using local raw materials and generating new employment. In addition, the program stimulated the development of town plans for seven of the eight centers, although there is little evidence that either local or national officials use the plans in making local investment decisions. Two municipal sewer systems scheduled for completion under the project were in fact completed.

However, the housing program fell short of its targets. About 700 units were constructed for lower income groups and the beneficiaries made substantial labor and material contributions. But about 80 percent of the budget for housing in the URBE project was reallocated by the Ministry of Housing for sites and services projects that were not part of the URBE program.

Moreover, the agro-industry loan program awarded only $2 million to 13 enterprises by the end of 1982. The loans helped establish honey, meat, fertilizer, feed, fish, seed, and fruit juice production and processing enterprises in the region. A few were successful, but about a third of the companies went out of business after a short period, and loan repayment delinquencies were high. Many of the business failures were due to inexperience and mismanagement. The loans helped to create 225 jobs, but at a relatively high average cost of more than $14,000 each. Linkages between the agro-industries and small businesses were never forged, nor were trade relationships developed among complementary industries to increase their overall impact on regional development. After five years, the construction of industrial parks in the growth centers had not proceeded beyond site procurement and partial preparation. None of the transport terminals had been built. Some technical assistance was provided and training offered, but both programs also fell short of their targets.

Thus, although some aspects of the program were successful, the intended impact on building the capability of regional cities and rural service centers to increase agricultural production and generate employment

was weak.

The problems of implementation arose not so much from the concept underlying this approach to regional development as from the complexity of the projects and the inability or unwillingness of national ministries and agencies to coordinate activities. When individual agencies received funds for providing the wide variety of services and facilities needed to strengthen the regional cities and towns, they spent the money as they wished, rarely referring to the project's overall strategy, or conferring with each other or with local officials and private investors. Moreover, project planners scheduled too many programs at the same time; better sequencing would have permitted them to build one upon the other. The fragmentation of responsibility for implementation not only created delays, but weakened the spatial focus of the project. Placing implementation authority exclusively with central government ministries also led to problems. As the Hackenberg evaluation report concludes:

> a localized management option would have placed representatives from each of the units of government under one roof and on site within one or both growth centers. The enforced interaction between agencies and with the community thus achieved might have served to advance the project. As a group, the localized administration could have acted as a lobby to obtain essential administrative decisions from headquarters in Panama City [25].

Those aspects of the program that were uncomplicated in administration and that were responsive to market forces--such as the business loans and some of the housing and agro-industry loans--were much more successful than those for the industrial parks and transport terminals that depended on

bureaucratic management and intervention. The bureaucracies were unable to mesh public sector investments with the needs of private investors. More importantly, those responsible were unable to revise the URBE program to respond to changing market demands.

Urban Deconcentration Policy in South Korea

Unlike Kenya, Mexico, and Panama, South Korea has used a wider variety and stronger combination of interventions over a longer period of time to build up the employment-generating capacity of intermediate cities. Because it has been relatively more successful, Korea's program requires a more detailed discussion.

The comprehensive approach to urban deconcentration policy in Korea was a product of its unusual political, economic and social conditions. Korea is one of the most rapidly urbanizing countries in the developing world. Over the past 50 years it has gone from a predominately rural country to a highly urban one. Korea has experienced rapid urbanization and industrialization over the past 20 years, and also a fundamental transformation in its urban structure. During the 1960s and early 1970s, the government's policy of promoting export-oriented, capital-intensive manufacturing in and around Seoul created a "primate city" structure much like that produced in Kenya, Mexico and Panama. Of course, this resulted in a heavy concentration of industrial activities and employment in the capital

region. Seoul grew so large in population size, and commanded such a large share of modern productive activities as to dominate the country's urban settlement system and the national economy. As in other developing countries, the geographically concentrated pattern of investment resulted in regional disparities in income and wealth and encouraged high levels of rural-to-urban migration. The large majority of migrants moved to the primate city. Another force for spatial deconcentration was the threat of a hostile political regime located less than 100 miles from the capital [26].

To draw attention to the complex of problems, Korean planners argued that the rapid growth of population and the heavy concentration of modern economic activities in the national capital not only created severe social problems, but also diseconomies of scale. They feared that concentrated development might slow the rate of national economic growth. "The excessive concentration of population and industries centered in the [Seoul Metropolitan] region resulted in relative stagnation in other regions," Ministry of Construction planners pointed out, "and a re-examination must be made in terms of the balanced use of the whole land area [in] plans for the location of industries and public facilities" [27]. A former head of the Economic Planning Board also pointed out that "the most pressing demographic problem of the 19/0s in Korea was not total population growth, but migration to the three major cities--Seoul, Pusan and Taegu" [28]. However, the goal of creating a more diffuse pattern of urbanization and a more equitable distribution of economic activities among regions did not

entirely arise from problems associated with Seoul's size, but was inextricably related to other political and security issues.

A fairly consistent set of spatial development objectives have been reflected in Korean land development plans since the late 1960s. The goals have been to: (1) slow the pace of rural-to-urban migration generally; (2) slow the rate of urban population growth in Seoul and to a lesser extent in Pusan and Taegu, the country's second and third largest metropolitan areas; and (3) overcome the most serious and visible disparities in development among regions. The Korean government, through its ten-year Comprehensive National Land Development Plan for 1972, pursued a number of development policies to distribute the benefits of economic growth more equitably, to stem the rising tide of migration to Seoul, and to generate employment for people living in regions outside of the Seoul metropolitan area. It sought to decentralize its industrial structure and to strengthen the role of intermediate cities in order to attain these objectives. A combination of incentives and regulations were employed to control population growth and to disperse industries from Seoul. At the same time, the government used its own investments in overhead capital, social services, physical facilities, and directly productive activities to make secondary cities more attractive for both large and small scale industries. A complex package of agricultural and rural development policies, price and wage controls, land use regulations, industrial estate programs, and infrastructure investment and location policies were used to build the capacity of rural towns and

intermediate cities to absorb larger numbers of people and to support more productive activities.

Agricultural and Rural Development. The primary means of reducing rural to urban migration was through agricultural and rural development policies that aimed to narrow urban-rural income gaps and provide amenities in rural villages. Agricultural programs included price supports, grain subsidy programs, credit for fertilizer, the introduction of high yielding seed varieties, expansion of irrigation, land reclamation, promotion of farm mechanization and wider distribution of fertilizers and insecticides [29]. The land reforms of the late 1940s and early 1950s ensured a wide distribution of land ownership and virtually eliminated tenancy. This allowed the agricultural development policies--and other economic growth programs--to benefit a large majority of people.

Substantial investments were made in land and water resources development. Double cropping methods were introduced and used on a large amount of cultivated land, and price controls were established to keep production at pace with increases in demand. As a result, between 1966 and 1976, foodgrain production increased from 6.7 to 7.9 million tons a year at a time when both the amount of cultivated land and the percentage of the labor force in agriculture were declining. Value added in agriculture grew by an average of 4 percent a year from the mid-1960s to the mid-1970s [30].

The village improvement and rural motivation campaigns conducted

through the Saemaul Undong program were even more important to achieving the government's goal of slowing rural-to-urban migration. The program, which was organized and strongly supported with financial resources and technical assistance by the national government, sought through self-help projects, to provide basic infrastructure and facilities, adequate housing and environmental improvements in "underdeveloped" villages. The program was intended to strengthen indigenous leadership, motivate villagers to work together on community projects and instill a sense of competition and community spirit in poor villages. It assisted local leaders and village groups to organize income-producing activities and increase agricultural output in "developing villages," and to diversify economies and provide new job opportunities in "developed villages" [31].

By 1976, the Saemaul movement had been responsible for building more than 40,000 km. of village roads, nearly [illegible],000 km. of farm roads, and 57,000 small bridges. It accounted for the construction of more than 28,000 agricultural water projects, 118,000 village cooperative facilities and 16,000 village electrification and communications projects. More than 15,000 housing and environmental projects were undertaken and hundreds of thousands of farmers were able to make structural improvements in their houses, or to build new homes. Moreover, the program allowed villages to construct more than 150,000 well and sanitary water projects and nearly 2,000 marketing facilities. More than 450 rural savings programs were also created. Over 10,000 land development projects had been undertaken and more than 170,000 village leaders had received community development

training along with 20,000 social leaders, 68,000 central government officials and nearly 50,000 villagers. Between 1971 and 1978, the Korean government mobilized the equivalent of nearly US $3 billion for investments in the more than 36,000 villages that were participating in the program by 1979 [32].

Saemaul Undong attempted to increase rural employment by making new job opportunities available in rural villages through agricultural projects and "Saemaul factories," small scale industries located in rural areas; by increasing rural villager's motivation to work; and by expanding the market for agricultural and small industry goods. Surveys estimate that between 446,000 and 448,000 households earned income from Saemaul projects every year between 1973 and 1979. By 1979, about 6 percent of the rural labor force was employed in "Saemaul factories."

At the outset of the program, in 1973, more than half of the nation's villages were classified as "underdeveloped" and only 7 percent as "developed." By 1978, using the same criteria, all of the underdeveloped villages had been improved and upgraded in rank and 67 percent were classified as "developed" [33].

National Land Use Planning and Development Regulations. The National Land Development Plan enacted in 1972 aimed to reduce regional disparities, slow the growth of Seoul and create a more balanced pattern of urbanization and economic development. The Plan also outlined programs and policies to increase employment opportunities, develop human resources, increase levels of education and skill, control population growth, provide infrastructure

needed for industrial development, accelerate housing construction and improve social services in regions outside of the Seoul Metropolitan Area.

To reduce regional disparities and promote widespread economic development, the government divided the country into four development regions, based primarily on natural and water resource characteristics. The four regions encompassed the Seoul metropolitan area, the Pusan metropolitan area, a Southern Industrial Development Area around the city of Gwangju, and the middle and northeastern sections of the country. These four regions were further subdivided into 8 intermediate development regions based on their degree of social and economic homogeneity. These 8 sub-regions were again divided into 17 "growth pole" areas each containing a large or intermediate-sized city and a rural hinterland or periphery [34]. The government earmarked special investments for each type of urban center. Transportation corridors were created to link metropolitan regional centers with each other and with Seoul by highway, rail, sea and air, and by energy and fuel pipeline networks.

The objectives of the plan, as Kim points out, were to:

a) Develop new regional growth poles around industrial complexes and corridors formed by major highways and thus reduce the concentration of people and economic activities in the two major metropolitan centers.

b) Organize the national space-economy into a system of regions each encompassing a core city and a rural periphery. With their economies diversified and strengthened through the Industrial Estates Development

Program, the core cities would act as growth centers for industrial development in their sub-regions. Rural communities in their periphery or hinterlands would benefit from agricultural development policies and from Saemaul Undong.

c) Increase social overhead capital investments in industrial complexes and major urban regions.

d) Develop intensively the four major river basins in order to exploit domestic natural resources and increase agricultural prduction.

e) Promote stronger linkages between agriculture and industry in rural areas by locating small and medium scale industries in appropriate Saemaul villages and by developing in others service-oriented activities such as tourism.

f) Increase accessibility and efficiency in the transfer of goods, services and information through development of modern transportation and communications facilities in intermediate and small cities in ways that would be compatible with or promote the new spatial structure of the economy [35].

During the 1970s, the Korean government also experimented with a number of programs for restricting the flow of migrants to the capital and redirecting people, and educational, industrial and commercial activities to secondary urban centers. Among other things, it restricted the expansion of higher education institutions in Seoul and required branches of major universities to be located in cities outside of the capital. It restricted the contruction of new high schools in Seoul, provided funds to increase educational services in regional centers, and made the transfer of

high school students to Seoul more difficult. All of this was based on the observation that much of the migration to Seoul was motivated by the strong commitment of Korean parents to provide their children with the best possible education. The deconcentration of educational facilities from the capital would thus slow its rate of population growth.

The government also attempted, through zoning regulations, by requiring construction permits for factory building or expansion, and by providing financial incentives for industrial relocation, to raise the costs of or make it more difficult for large industries to continue locating in Seoul [36].

Although in retrospect, the plans and policies for land use regulation and development seem detailed, comprehensive, and cohesive, they were not all carried out effectively. Some were never vigorously enforced. Most were implemented in a disjointed fashion, with each government agency being responsible for enforcing the regulations that came under its jurisdiction. Hwang points out that "confusion, inconsistency and sometimes even conflict exist among the objectives and strategies found in the policy measures adopted piecemeal by various government ministries and agencies" [37]. The greenbelts that were reserved around Seoul, for example, played an important role in preventing the continued concentration of industries in the city by severely restricting the amount of land available for development. But they also raised land costs enormously in the metropolitan area and encouraged higher density development in the city, making it even more congested. All of these problems weakened the impact of the regulations on reversing the growth of population in Seoul.

However, the guidelines and regulations did focus attention on the problem. Despite weaknesses in design and implementation, they slowed the continued concentration of people and industries in the national capital.

Incentives for Industrial Decentralization. Coupled with guidelines and regulations were an extensive set of financial incentives for established industries to relocate from Seoul and for new industries--or new branches--to locate outside of the Metropolitan area. A combination of incentives and controls were used to encourage the location of export industries in smaller port cities. Heavy chemical, fertilizer, cement and petroleum refining industries were encouraged or required to build plants in government-created industrial estates in coastal cities such as Pohang, Changwon, Ulsan and Yeocheon. Small and medium-sized processing plants were encouraged to locate in secondary cities such as Daejeon, Chuncheon, Jeonju, Mogpo, Gunsan, Choeongju, Gumi, and Weonju, where heavy investments were made in infrastructure, supporting services and industrial estates.

The industrial estate created at Ulsan in the early 1960s is an example of the process repeated in other port cities throughout the decade and into the 1970s. Between 1962 and 1967 more than 40 billion won, nearly 7 percent of the government's total investments, were allocated to creating an industrial estate in the city. In the following decade an additional 275 billion won, or about 8.6 percent of total national investments, were committed to the Ulsan industrial estate. Ulsan's locational advantages

were that it had a population of about 85,000, already had a deep-water port, water and power could be provided easily, and relatively cheap land was available for constructing industrial sites. Skilled labor could be obtained in Ulsan; it was near an oil refinery and, with proper investment in transportation facilities, it was quite accessible to Seoul, Pusan, and Taegu [38].

Along with construction of the industrial estate, Ulsan city was designated as an open port and the county in which it was located was made a special industrial region. After it was designated as a special industrial area, 22 petrochemical plants, 15 manufacturing plants and three power plants located there.

The impact of the industrial estate and financial incentives on the city's growth and productive capacity were enormous. The population of the city more than doubled to about 200,000 between 1962 and 1974 alone and it experienced an average annual population growth rate of 7.4 percent. Whereas migration to the city had previously only been from the surrounding rural areas of the province in which it was located, by 1974 migration from outside the province exceeded that from within. Ulsan and the five counties around the city achieved a growth rate in manufacturing value added in the early 1970s that was higher than the national average. Food and beverage, footwear, clothing, sawing and wood, furniture and equipment, printing, machinery and metal manufacturing industries in the area all achieved high rates of growth. Both production and exports of the industries in Ulsan increased 300 times between 1962 and 1973. Substantial changes also were seen in the city's economic and employment structures.

In 1962, about 68 percent of Ulsan's labor force was employed in agriculture and about 30 percent was engaged in commerce and services. There were relatively few manufacturing jobs. By 1974, the share of the labor force employed in agriculture had dropped to less than 20 percent, manufacturing employment had increased to nearly 40 percent, and about 45 percent of the jobs were in the commercial and services sector [39].

Financial incentives and other inducements were given to manufacturing firms to locate in other secondary cities. The types of incentives a firm received depended on where it chose to locate. Those moving to designated industrial development areas were eligible for exemptions from land speculation control taxes and from all corporate income taxes for three years, and from 50 percent for three years more. They could also avoid registration, property and land acquisition taxes for five years. Those locating elsewhere outside of Seoul were eligible for exemptions from land speculation control, registration and acquisition taxes, and could take advantage of a special corporate tax rate, which declined with increased corporate investment [40].

The government promoted investment in chemical and heavy industries in coastal estates by building harbor facilities, installing water supply systems, and constructing roads and industrial support facilities. It offered low interest loans, tax waivers, and tax reductions. Companies locating in the estates could take an eight percent tax deduction on money invested in new production capacity. Machines and materials imported for base plants were duty free. Recent studies by Park and Wheeler indicate

that the "industrial spatial policy of the 1970s, especially the development of industrial estates, had a profound impact on the decentralization of manufacturing within the Seoul Metropolitan Area" [41]. A large number of industries moved from the central core to the suburbs and with them went a large number of manufacturing jobs. The policies also seem to encourage industrial decentralization outside of the Seoul metropolitan area.

But in the initial stages at least, many firms simply located in the Pusan area, creating a bi-polar industrial distribution pattern. Moreover, the government's failure adequately to link the large scale export-oriented industries that were located in the industrial estates to local economic activities sometimes made them enclaves that provided little stimulation to the local economy and severely restricted the "spread effects" in the region. Few of the skilled laborers who worked in the Ulsan industrial estate, for example, came from the Ulsan area. Many migrated to the city from other metropolitan areas. Most of the supplies, equipment and raw materials for the factories came from outside of Ulsan.

The incentives, as well as the construction of industrial estates also successfully dispersed heavy manufacturing industries from Seoul and promoted new investment in iron, steel, primary metals, shipbuilding, and petro-chemical industries in other port cities, until the late 1970s, when these "saturated" industries reached a point of overinvestment. When that occurred growth rates in cities like Ulsan began to slow down again, and by

the 1980s employment in Ulsan began to decline.

Investment in Social Services and Infrastructure. The government recognized that neither incentives nor regulations would be sufficient to disperse people and economic activities from Seoul or to retain them in other regions unless there were adequate alternative locations for businesses and industries to operate profitably. Moreover, migration to Seoul and the other few large cities would continue as long as large disparities existed between the capital region and the rest of the country in standards of living, employment opportunities, and educational facilities. Thus, during the late 1960s and early 1970s the government used public investment in social overhead capital and social services and facilities to increase the growth potential and employment generating capacity of intermediate cities outside of the Seoul Metropolitan Area. It first invested heavily in electrical generating capacity, highway construction, and housing in and around selected inland cities. It also improved the cargo handling capacity and transportation access of the coastal cities that were potentially capable of accommodating export industries. It later began to allocate investments in social services and facilities more widely among intermediate and smaller cities.

As a result, intermediate cities in Korea began assuming an increasingly important role in providing social and public services during the 1970s. By 1975, intermediate cities had nearly 44 percent of all elementary, middle and high schools in urban areas and, by 1978, the 30 cities with 100,000 or more residents--excluding Seoul--accounted for 40 percent

of medical personnel and more than 42 percent of all urban medical facilities. In 1980 all of the intermediate cities except Seongnam and Anyang had a lower percentage of shortages in elementary school classrooms than Seoul. Twenty one of the 30 intermediate cities had lower percentages of shortages in middle school classrooms, than the capital city. Although the mix of personnel and types of facilities differed among cities in different size categories--the larger cities tended to have a greater percentage of licensed doctors among their medical personnel, a larger number of general and specialized hospitals among their medical facilities, and a larger percentage of high schools in their share of educational institutions--in most cases, the share of these social services in intermediate cities was in proportion to their share of urban population.

The government also extended public services and utilities in intermediate cities. By 1978, piped water had been extended to a large portion of the secondary cities. In those with more than a half million residents, about 87 percent of the households had access to piped water, and some large regional centers such as Taegu and Gwangju had nearly total coverage. About 81 percent coverage had been attained in those with from 200,000 to 500,000 population and 67 percent in those with from 100,000 to 200,000.

Impacts of Policies on Regional Cities. The Korean government's objectives for the future are reflected in the Second National Land Development Plan for 1982 to 1991 [43]. That plan lays out the government's long term strategy for development of the space economy, calling for

a continuation of efforts to promote geographically widespread productive capacity and economic growth, and employment. The policies had been designed to be incremental and sequential. During the 1970s, and the first phase of the long term strategy, the government had aimed to expand the economy by deconcentrating productive activities from Seoul, and to build up infrastructure in selected "growth poles," such as Pusan, Taegu, Daejeon, and Gwangju, and in some of the coastal cities that were chosen as sites for industrial estates. The emphasis during the 1980s--in the second phase--would be on improving living conditions and spreading the accumulated benefits of development more broadly throughout the country by building up intermediate and smaller cities as growth centers for their areas. In the third phase, during the 1990s, the government would seek to conserve the natural environment and share the benefits of growth through balanced spatial development.

Although not all of the policies enacted during the 1970s to create a more balanced distribution of population and economic activities were coherently formulated and effectively implemented by the government, these and other economic development programs did seem to stabilize Seoul's level of primacy and to have restructured Korea's rapidly expanding urban system. Cities of more than 100,000 grew in number and share of population, and have diversified their economies, providing a base for industrial decentralization and employment generation in regions outside of the Seoul and Pusan metropolitan areas.

Over a 20-year period both the urban structure in Korea and the

occupational composition of intermediate cities changed markedly. As noted in Chapter II, manufacturing became the dominant sector in most of the larger secondary cities that had been designated as growth centers in the first phase of the government's long-term land development policy. Services and commerce decreased drastically as a source of employment in nearly all intermediate urban centers, although in absolute terms the tertiary sector remained an important employer in all intermediate cities and especially in those with populations less than 200,000. As the economy grew and industrial activities were deconcentrated, there was a stronger division of labor among intermediate cities. A larger number gained population and their economies became more diversified.

As a result, intermediate cities in Korea are now more numerous and more heavily populated than in most other developing countries. While about one-quarter of the urban dwellers in developing nations live in small towns of less than 20,000 people, less than 2 percent of Korea's urban residents can still be found in comparable places. But about 82 percent of Korea's urban dwellers now live in cities with 100,000 or more residents, compared to an average of about 64 percent in other developing countries.

The growth and diversification of intermediate cities has helped to decrease the primacy of Seoul and to create new employment opportunities for people living outside of the national capital region. Moreover, as one recent study of small and intermediate cities in Korea points out, they play [43]:

> ...extremely important roles as rural growth centers in the process of rural development. They provide rural areas with markets, agricultural inputs such as fertilizers and farm machinery and urban services including education, medical care, etc. ...Many small and intermediate cities in Korea also play important roles in the development of "folk industries" or "native industries" such as ginseng production, wooden products, stone products and some textiles. They are essential for the development of small and intermediate industries in local areas, which are mostly non-export industries.

The government through the Second Land Development Plan, seeks now to achieve the third-phase goals of its national land development policies: balanced urbanization and equitable participation in the benefits of economic and social progress. To achieve more balanced urbanization and widespread distribution of productive capacity, the country's eight planning regions were divided into 28 "integrated regional settlement areas" (IRSAs) [44].

From among the 28 IRSAs 3 cities were designated as primary, and 12 as secondary, "growth inducement cities." They were selected because of their potential capacity to share with the major metropolitan areas the provision of central government functions, their strategic location to promote regional development, their capacity to accommodate migrants who might otherwise move to Seoul or Pusan, their relatively high concentration of urban services and facilities and their relatively high growth potential and capacity to yield acceptable rates of return on public investment. The government aims to expand the size of their population, industrial sites, residential sites and water supplies by 1991.

Thus, the objective of the first phase of the long term strategy--creating growth poles outside of Seoul has largely been accomplished. By the beginning of the 1980s some progress had been made in achieving the second phase goals of improving living conditions and spreading the benefits of growth through area-wide development. Progress had also been made in promoting the growth of regional urban centers, although much still remains to be done both to strengthen the economic and social functions of regional cities and to achieve more balanced regional development.

LESSONS OF EXPERIENCE

The four cases reviewed here are from a small sample of developing countries, but they represent a cross-section of policies and programs that others are using to deal with the issues of urban growth and rural underdevelopment. They show that developing countries with quite different political, economic social and cultural traditions and in different geographical regions of the world are facing similar problems of urban concentration and declining or stagnating agriculture, and that these two problems are in many ways reinforcing each other.

In each case, the government has recognized emplicitly that urbanization and the increasing concentration of urban population and modern productive activities in one or two large urban centers is both a result of rural underdevelopment and a cause of continued economic and spatial polarization. Their plans are based on the assumption that the economies of rural regions will have to be strengthened if regional disparities are to

be reduced, and the living conditions of the rural poor are to be improved. They all indicate that the large metropolises have limited labor absorbing capacity and that continued migration to them results in increasing urban poverty, congestion, and strains on metropolitan services, facilities and job opportunities. Moreover, they have all proposed as part of the solution building the capacity of regional centers--ranging from rural towns and market centers to intermediate-sized cities--to generate new employment and provide the services needed for agricultural production.

Most of the national plans for regional development, however, remain vague. They often describe the problems in more detail than the solutions. Policies often tend to be either sweeping in scope, or so narrowly defined as to address only part of the overall problem. Few provide specific guidelines for implementation. With the exception of Korea, they usually attempt to deal with the problems of the entire country in standard fashion, without tailoring policies and programs to the needs of specific regions or cities, and without sequencing projects so that they build one upon the other and are of manageable size. Moreover, they often spread relatively small amounts of investment widely over the country, ignoring the importance of critical mass in improving the economic base of an area or city. Although Kenya and Korea have followed a fairly consistent set of policies over a long period of time, political commitment and administrative capacity in the former have generally been weak. In Mexico, changes of regime have usually brought policy changes that have redirected regional development programs every six years. In Panama, the inability or

unwillingness of national ministries and agencies to coordinate their activities within regions has weakened or undermined rural growth center projects, a problem that to some degree seems to have plagued all of the programs examined here.

Although all of the governments attempted to promote regional development in rural or nonmetropolitan parts of the country, they gave little attention to agricultural development strategy, or to actions needed to strengthen the rural and urban linkages described in Chapter II. All of the countries relied to some degree on a modified industrialization strategy and investment in physical infrastructure to make regional cities and towns more attractive for small and medium scale enterprises. Even South Korea, which has given more attention than most developing countries to agricultural and rural community development, relies primarily on industrial decentralization as the force for regional development. Given its success in export industrialization and its relative disadvantages an an agricultural producer, such a policy may be appropriate for Korea. But the potential for widespread rural industrialization in most other developing countries is at least questionable, and for them agriculture and agrobusiness seem to be a more feasible bases on which to build their regional economies.

Although investment in both infrastructure and small scale industry is undoubtedly an important component of any strategy for regional development, it is far from sufficient in most developing nations. The economic base of most countries that AID assists is in agriculture, and policies to

promote rural development must address the questions of how agricultural output will be expanded to provide higher incomes for the rural poor and how the economies of regional cities can be strengthened to provide off-farm employment and the services and markets essential for agricultural development. The plans of all of the countries examined here lack an agricultural strategy for regional development. The policies fall short of identifying precise and appropriate interventions to locate investments for agricultural and rural development in those regional centers that will provide the greatest access for rural people and that build the capacity of regional cities and towns to facilitate agricultural development in their hinterlands.

The concept underlying the policies in all four countries--that rural and urban development are inextricably related--is based on strong evidence that the relationships between the two sectors must be strengthened if conditions in rural and urban areas are to be improved. Given the problems in Kenya, Korea, Panama, and Mexico of rapid urbanization, growing regional disparities and rural underdevelopment, their general strategies for regional development cover only some of the actions that must be taken to strengthen the role of regional cities in promoting agricultural development and off-farm employment. Implementation of even these limited policies, however, has usually been the responsibility of a wide variety of central technical ministries and agencies that have little knowledge of or interest in the spatial dimensions of regional development and that have little capacity or incentive to coordinate their programs within regions.

Thus, the spatial dimensions that underlie nationally conceived development programs often are lost during implementation.

All four countries have relied heavily on national agencies to implement regional programs and have failed to decentralize or delegate management responsibilities to localities and regionally-based organizations. The experiences in Kenya, Panama, and Mexico suggest that centralized administration often has been unresponsive to local need, is unduly complex and inordinantly slow. Moreover, the programs and projects that have resulted from these policies have rarely been based on detailed analysis of the economies of rural regions and regional cities; often they are merely standard solutions that may not be appropriate and effective in all of the regions in which they are applied.

The cases suggest a number of conclusions that may help to guide future policies and programs:

First, expanding agricultural production, generating off-farm employment and changing the pattern of settlement in a region is a complex and long-term process. It requires detailed and careful analysis of the regional economy and the incremental implementation of a coherent set of policies and programs aimed at strengthening rural and urban production processes. The success of long-term strategies, implemented sequentially and incrementally through a series of manageable investment projects, depends on a recognition at the national and regional levels of the importance of linkages between cities and their surrounding rural areas in regional development and on strong political commitment over a long period

of time to a coherent policy for economic, social and physical change.

Second, a successful policy of regional development requires building the institutional capacity of local governments, subnational administrative units, and nongovernment institutions to participate in the implementation of regional development programs. In Kenya and Panama, the importance of regional and local administration has been recognized, but improvements have been slow to come. In Mexico, some attempt has been made to create regional planning and development organizations, but they remain weak compared to national ministries. Korea has yet to address seriously the question of regional decentralization. Experience suggests that strengthening the administrative and financial capacity of local governments and organizations to initiate regional development projects as well as to carry out nationally funded programs is vitally important.

Third, if regional development policies are to be responsive to local needs and to stimulate private investment, arrangements must be made to have local officials, community groups and private investors participate as well in the identification and design of investment projects. Few of the programs examined here had organizational mechanisms by which regional interests could be represented in planning development programs for their areas.

Fourth, regional development programs and projects, in many cases can be implemented more effectively if national ministries and agencies play supportive and facilitive rather than controlling and executive roles. They may be more effective if they provide technical assistance and expert

guidance on analytical and technical matters and transfer resources and authority to local and regional organizations to carry out the projects. The feasibility of this recommendation, of course, depends on implementation of the previous one.

Finally, national governments and international agencies can play an important role in assuring that nonspatial economic policies support agricultural development, employment generation and growth of cities outside of the major metropolitan areas. Spatial stragegies are necessary but insufficient instruments for national development. Their success in changing the patterns of urban and rural development depend on broader economic policies concerning terms of trade between the two sectors, export and import practices, wages and prices and the allocation of investment to promote regional redistribution. In the absence of supporting policies, the most carefully conceived and effectively implemented spatial development programs will have little impact.

Within these parameters, international assistance agencies such as AID can play an important role in helping developing nations to address the crucial issues of urban transition and rural development over the next two decades. Chapter IV outlines what AID can do within its four major area of assistance--policy reform, institutional development, private enterprise development and technology transfer--and within its recent policy guidelines on urban and rural development.

FOOTNOTES

1. See, for example, Micheal E. Conroy, "Rejection of Growth Center Stratgey in Latin America Regional Development Planning," Land Economics, Vol. XLIX, No. 4 (1973): 371-380.

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3. Ibid., pp. 10-11.

4. For a detailed description see Michael L. McNulty, "Secondary Cities in Kenya: A Review of Recent Strategies," Working Paper (Worcester, Mass: Clark University, International Development Program, 1984).

5. Robert A. Obudho, "National Urban Policy in East Africa," Regional Development Dialogue Vol. 4, No. 2 (1983): 87-110., p.99.

6. Harry Richardson, A National Urban Development Strategy for Kenya (Washington: World Bank, 1977) p. 140.

7. Ibid., p. 150.

8. See McNulty, op.cit.

9. Richardson, op. cit.

10. Government of Kenya, Development Plan 1979 to 1983, Part I (Nairobi: Ministry of Economic Planning and Community Affairs, 1979): 15-16.

11. Ibid., p. 45.

12. See John P. Mbogua, "A Strategy for Secondary Town Development in Kenya," paper prepared for Ninth Annual Conference on Problems of Urbanization in Africa, (Dakar, Senegal, 1984): mineographed.

13. Ibid., p. 45

14. See Gustavo Garza and Martha Schteingart, "Mexico City: The Emerging Metropolis," in W.A. Cornelius and R.V. Knper, (eds.), Metropolitan Latin America (Beverly Hills: Sage, 1978): 51-86.

15. Ellen M. Brennan, "Contradictions in Mexico's National Spatial Policy," Regional Development Dialogue, Vol. 4, No. 2 (1983): 21-41.

16. See Niles Hansen, "Rural Development and the Urban System in Mexico: Issues and Policies," Working Paper (Worcester, Mass: Clark University, International Development Program, 1984).

17. Brennan, op.cit., pp. 27-30.

18. Hansen, op.cit., pp. 8-10.

19. Brennan, op.cit., pp. 36.

20. Hansen, op.cit., pp. 13-14.

21. U.S. Agency for International Development, Panama: Country Development Strategy Statement, FY 1982 (Washington: USAID, 1980).

22. U.S. Agency for International Development, Panama: Country Development Strategy Statement, FY 1984 (Washington: USAID, 1982; quote at p. 22.

23. For a more detailed description of this case see Robert A. Hackenberg and Beverly H. Hackenberg, "Developing Intermediate Cities as Agro-Industrial Processing Centres: A Project in Western Panama," Regional Development Dialogue, Vol. 5, No. 1 (1984): 74-104.

24. Ibid., pp. 87-99.

25. Ibid., p. 100.

26. A more detailed description see Dennis A. Rondinelli, "Intermediate Cities Role in Industrial Decentralization, Employment Generation and Economic Development in South Korea," Working Paper (Worcester, Mass: Clark University, International Development Program, 1983; mimeographed).

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CHAPTER IV

THE ROLE OF INTERNATIONAL ASSISTANCE IN AGRICULTURAL, EMPLOYMENT, AND REGIONAL CITY DEVELOPMENT

Many developing countries are undergoing a crucial transition from predominantly rural to urban economies. By the end of the 1990s a large number of poor countries in Latin America, the Caribbean, North Africa, the Middle East, and East and South Asia will be highly urbanized. By the year 2000, a majority of the poor in developing countries will be living in urban rather than in rural areas. Rapid urbanization is occurring along with high rates of rural population growth and low levels of agricultural development. But the pattern of urbanization emerging in these countries is highly polarized. Many have economies in which neither the rural-agricultural nor the urban-industrial sector is growing rapidly enough to absorb the growing labor force. The agricultural sector is unable to produce and distribute enough food to allow the population to be agriculturally self-sufficient, and the urban-industrial sector struggles to reduce the growing disparities in income and wealth between one or two large metropolitan regions and the rest of the country.

International assistance agencies and most governments in developing countries are unprepared to cope with the pressing problems of urban transition and regional development. Many governments in developing countries have recognized the need to increase agricultural productivity, generate off-farm employment and redistribute population as urbanization

occurs, but few have formulated effective strategies for doing so, and others have had difficulties implementing them.

For much of the past 30 years international assistance organizations, such as AID, have viewed the urban and rural sectors as separate and conflicting sources of development. Early AID strategies, based on conventional economic growth theories, sought to promote development through capital-intensive industrialization, assuming that concentrated industrial development would generate benefits that would trickle down and spread to stimulate agricultural and rural economies. When these benefits failed to materialize, later theories and policies attempted to offset the "urban bias" in international assistance and concentrate on agricultural development as the "engine of growth."

Only recently has it been clearly recognized in AID policies that urban and rural development are inextricably related. As was seen in Chapter II, a growing body of research now shows that rural and agricultural development depend in large measure on the expansion of urban markets; on widespread access by rural households to those markets; on the existence of effective distribution networks that link rural areas and cities; on a wide range of services, production inputs and supporting facilities that must be based in settlements of various sizes; on physical infrastructure and road networks that link rural areas to village service centers, market towns and intermediate cities; and on off-farm jobs in urban centers to absorb surplus agricultural labor and supplement rural household incomes.

As also noted in Chapter II, the growth of cities is a powerful influence on the level of agriculture output and composition of farm production in surrounding rural areas. The growth of urban markets both

creates opportunities for and places strains on productive capacity in rural regions. But, at the same time it is clear that the growth of many cities in the developing world--market towns, small commercial centers and large cities in non-metropolitan regions--depends on agricultural development in their rural hinterlands. The tertiary sector--formal and informal--of urban economies in these regions is closely tied to agriculture. Often the manufacturing sector in regional cities processes local agricultural goods and caters to the consumption needs of rural households.

Although some attempts have been made by governments in developing countries and by international assistance organizations to strengthen the capacity of regional cities to support rural development, increase agricultural production and expand off-farm employment, as Chapter III indicates, few developing countries have pursued deliberate, sustained, detailed and comprehensive policies for regional development. Most governments in developing countries have generally ignored the spatial dimensions of regional growth in their national development strategies.

The few governments that recognize the importance of regional cities for agricultural production and employment generation, however, are still more concerned with ways of limiting or slowing the growth of the primate cities than with rural and regional development. Their policies have generally been vague, sporadic, discontinuous and ineffectively implemented. They have relied primarily on investment in physical infrastructure and on the promotion of industrialization in rural areas, rather than on agriculturally-based strategies for strengthening the role of regional cities as markets, agro-processing, agro-business, and rural service centers. The results of these policies have been mixed. Most have not had the desired effects on promoting new patterns of population distribution,

agricultural development and off-farm employment because they receive low priority, and because international organizations and governments in developing countries have little experience in implementing them.

But AID and other international assistance organizations can make a greater contribution to policy formulation, program design and project implementation by increasing their applied research on the nature and dynamics of the relationships between urban and rural development, and on the roles of regional cities in agricultural development and employment generation. By funding selected and well designed pilot and demonstration projects and programs, disseminating the results of that research and experience, and offering training and technical assistance, AID can help governments in developing countries to cope with problems of urban transition and regional development over the next decade.

This chapter outlines, first, the broad, longer-term, forms of assistance that USAID Missions can now provide to governments requesting help with urban-rural linkage policies and with their regional city development programs, and second, the more specific and immediate research that can be done to prepare the Agency to provide that assistance.

WHAT AID CAN DO OVER THE LONG RUN

Overall AID strategies for development assistance focus on four major forms of intervention: policy dialogue, private enterprise development, technology transfer, and institution-building. The broad parameters of this assistance for promoting population redistribution, agricultural

development, and employment generation in nonmetropolitan regions are defined in the Agency's most recent urban and rural development policy papers.

The first part of the discussion reviews the interventions now sanctioned by AID and the last section offers a new and innovative research and development program that could be undertaken over the next five years to prepare the Agency to carry out the tasks specified in its urban and rural development policy papers.

Urban Development Policies

Aid's 1984 Urban Development Policy Paper clearly states that the Agency should be concerned not only with activities in urban centers that can help cities absorb the growing numbers of urban dwellers, but also with "urban links to the rest of the national economy and to rural areas through the national settlement system" [1]. Among the ways that USAID Missions can assist governments in developing countries to strengthen regional cities are the following [2]:

1. Help plan and formulate country development policies that identify appropriate strategies to strengthen the linkages between urban and rural areas and that "lead to the appropriate allocation of resources between urban and rural areas in support of national development objectives."

As the case studies in Chapter III clearly illustrate, coherent, consistent and stable national urban development policies are crucial for guiding programs and projects aimed at redistributing population, increasing agricultural production and promoting off-farm employment. Policy

reforms must be based on adequate analysis and planning, and on effective strategies that make the best use of scarce financial and human resources.

2. Promote the growth of the private sector through activities that improve the operation of capital and labor markets and enhance the productivity of private enetrprises in providing employment opportunities and for the urban poor.

Each of the case studies examined earlier underline the importance of greater private sector investment in urban centers to expand job opportunities for labor that is "pushed" from rural areas either because agriculture is not growing fast enough, or because new methods and technologies required for greater productivity free a segment of the agricultural labor force for employment in other sectors. Private sector investment in manufacturing and commerce in cities and towns is likely to be the most important source of off-farm employment in rural regions. Projects and programs that facilitate private investment in those places are crucial to regional development.

3. Assist governments with "shelter policies and programs for the urban poor, particularly sites and services, and settlement upgrading programs stressing affordability and cost recovery.

Through its Housing Investment Guarantee (HIG) program AID has the resources to help governments in developing countries to meet the increasingly important needs for shelter and related community facilities in secondary and small cities in rural regions. Unless these facilities are available it will be extremely difficult to attract rural migrants to regional cities and towns.

4. Support the needs in regional cities and towns "for education, health and community development programs which develop human resources and promote an overall urban development strategy."

Human development support services are an important factor in increasing productivity in regional cities and towns, assisting people to develop the knowledge and skills needed for nonagricultural employment and attracting rural migrants to urban centers other than the primate city.

5. Help governments in developing countries with "urban institutional development at the national and local levels of government through programs to increase efficiency, training to strengthen capacity, and modification of policies to better respond to the needs of the urban poor and enhance the private sector contribution to development."

The most important lesson that emerged from the cases described in Chapter III is the need for improved institutional and administrative capacity among national ministries involved in urban development to improve and coordinate their service delivery in regional cities. Equally important is the development of municipal governments' managerial capacity to raise adequate revenues and execute decentralized development projects for their regions. Unless national and urban governments can carry out policies for regional development, policy reforms alone will have little impact on achieving desired goals.

6. Assist governments to develop, in disaster-prone areas, "national and metropolitan policies which encourage the establishment of safe settlements and buildings."

The rapid urbanization that has occurred in many developing countries has generated physical growth in both large metropolitan areas and intermediate sized cities without careful planning and control. Both extensive

squatter settlements and permanent building construction have taken place in cities subject to earthquakes, flooding, fire or serious environmental degradation, placing large numbers of people in physical jeopardy. Projects that improve the physical development of regional cities and towns can contribute to their economic and social development as well.

In brief, AID's urban policy paper calls for efforts to improve analytical methods in support of urban policies and programs. USAID Missions are encouraged to include an urban development dimension in their programs where it is justified, and to take into account in the design and implementation of their sectoral programs and projects the impact on urban development.

Rural Development Policies

Similarly, USAID Missions have available a wide range of interventions, not only to improve agricultural production and promote off-farm employment in rural areas, but also to locate rural development projects in regional cities and towns, thereby strengthening the linkages between these settlements and their surrounding rural areas. Projects can also be developed to improve the access of rural houeholds to town-based services, productive inputs, supporting facilities, markets, and job opportunities. AID's 1983 rural development paper recognizes that urban and rural development are mutually dependent and encourages USAID Missions to use regional and spatial analysis in planning, designing and implementing rural development programs and projects [3].

Among the rural development activities that USAID Missions can use to strengthen the role of regional cities and towns in agricultural development, employment generation and population redistribution are the following [4]:

1. Help build "sustained development capacity for mobilizing

   and managing local resources within countries" by strengthening the planning, managerial and implementation capabilities of participatory community organizations and local governments.

Such interventions, as noted in Chapter III, are especially needed in market towns and small cities that are targeted for development in regional growth projects. Increased institutional capacity is needed for community organizations to participate in planning and implementing regional development programs, and for local governm to take a stronger role in creating and managing new services, ties and infratructure. Stronger institutinal and managerial capacit essential if local organizations and governments are to initia wn programs and projects for regional development.

2. Help to design and implement projects that increase the opportunities for poor rural households to use productive resources to increase their output and incomes.

Such projects can help improve the use of productive resuorces such as agricultural land and water; increase the influence of representative rural organizations over policies that determine production incentives, distribution of income, and access to job opportunities; and make more equitable the distribution of resources in rural areas. Such programs may be useful not only in altering the terms of trade between urban and rural sectors, but also in making the distribution of resources more equitable so that larger numbers of people can benefit from the stronger linkages between rural production and urban marketing and distribution activities.

3. Focus research and development activities "on

   identifying, creating and disseminating new and improved technologies suited to small farms or private entrepreneurs."

Such projects can be used to enhance the capacity of regional cities and towns to diffuse and disseminate new ideas and methods of agricultural production and marketing, a role that urban settlements have historically played in both less developed and richer societies.

4. Encourage the creation and growth of small-scale enterprise to achieve increased production efficiency and rural employment.

Such projects are most likely to be effective in market towns, small urban commercial and administrative centers and intermediate sized cities serving a rural region. Not only can they be an important element of rural development projects, but also of regionally-based development programs that use cities and towns as instruments for employment expansion in rural regions.

5. Develop marketing institutions and market incentives to stimulate agricultural production and nonfarm enterprise.

These projects can be the most crucial in programs designed to strengthen urban-rural linkages and the roles of regional cities and towns in agricultural development and employment generation, for all of the reasons outlined in Chapter II. Marketing linkages and networks form the economic structure of rural regions and are the primary channels of urban-rural economic interaction.

Each of these interventions, and combinations of them, can make important contributions to improving programs for agriculturally-based

regional city development. They can also help to strengthen the relationships between urban and rural development.

Although USAID Missions now have available many means of promoting development in nonmetropolitan regions, the knowledge and skill within AID to use them effectively has not been adequately developed. The effective use of these interventions depends on a stronger base of knowledge than the Agency now has about the nature of urban-rural linkages, the roles of regional cities and towns in promoting agricultural production, off-employment and population redistribution, and the most effective strategies for implementation.

Before USAID Missions can make full use of the potential interventions available, the Agency must develop a stronger research and development capacity to support and assist them.

A PROGRAM FOR RESEARCH ON REGIONAL CITIES AND RURAL DEVELOPMENT

Six new, high priority, research and development tasks are needed to expand the knowledge within AID to provide technical assistance to strengthen urban-rural linkages in agricultural development and to increase the capacity of regional cities and towns to expand off-farm employment opportunities. They include research on:

1. The characteristics and dynamics of urban-rural food marketing systems.

Special attention needs to be given to: a) the roles of regional cities and market towns in facilitating the exchange and distribution of

agricultural goods; b) the relationships between urban marketing structures and rural production patterns; c) the backward flows of consumer goods and production inputs from urban markets to rural households; d) linkages between rural periodic markets and urban regular markets in the distribution of agricultural surpluses; e) the roles of urban and rural marketing intermediaries in both food and income distribution within regions; and f) ways in which investments in services, facilities and infrastructure in regional cities and towns can improve regional food marketing system.

2. The dynamics of economic growth and development in regional cities and how that growth affects urban employment expansion capacity and rural development.

Relatively little is known about the dynamics of economic growth in regional cities and towns. Nearly all studies done thus far concentrate on employment and occupational structure, and are essentially static descriptions of regional city or town economies at a particular point in time. Little research has been done on the changes in regional cities' economies as they develop, on the dynamics of the linkages between regional cities and their surrounding rural areas and on the means by which regional city growth affects and is affected by changes in surrounding rural economies. Interventions to promote economic growth and employment expansion in regional cities and towns are difficult to plan and implement without better "models" of regional city economic development.

3. The dynamics of regional labor markets through which labor transfers and is absorbed in the economies of regional urban centers.

Although it is usually assumed that investments in regional cities will increase their capacity to absorb labor, little is known about the growth and dynamics of regional labor markets. Attention must be given to a) the processes by which labor transfers from rural to urban occupations; b) how regional city and town labor markets attract and absorb surplus rural labor; c) the ways in which rural migrants and regional city residents are recruited into urban jobs; d) the stages or processes through which urban workers improve their occupational status; and e) the factors that influence the absorptive capacity of urban labor markets in rural regions.

4. The evolution of and changes in spatial and demographic structures as regions undergo economic development and how changes in the spatial structure of a region facilitate or inhibit agricultural development, population distribution, and employment generation.

Spatial structure (the location of and interaction among human settlements in geographic space) is thought to change with economic growth within a region over time, either facilitating, obstructing or simply responding to economic and social forces. However, little is known about the nature of the relationships between regional development and underdevelopment and

changes in spatial structure in countries with different political, economic and cultural characteristics. Much more needs to be known about which aspects of human settlement are merely responsive to economic changes and which can be instrumental in facilitating or obstructing change. Comparative historical studies of changes in spatial and demographic structure in economically growing regions can help to formulate models of regional development that can guide planners and policy-makers to a better understanding of the dynamics of change and the potential effectiveness of alternative investment strategies.

5. The dynamics of informal sector expansion in regional cities and towns.

The informal sector is a major source of employment for rural migrants and for the poor in regional cities and towns in many developing countries. But relatively little is known about how the informal sector in these cities compares with informal sectors in large metropolitan areas, and how it can be strengthened to support larger numbers of the urban poor. Research is required on: a) the nature and operation of the linkages between informal sector commercial and processing activities in cities and the production, distribution and consumption processes in surrounding rural areas; b) on mechanisms of entry and exist of labor in the informal sector of the economies of regional cities and towns; and c) on the characteristics of various types of participants--such as women--in informal sector occupations.

6. The institutional and administrative development needs of municipal and local governments in nonmetropolitan regions of developing countries.

A good deal of evidence indicates that the successful implementation of regional cities development programs requires substantial administrative and institutional capacity in both national ministries and local and regional organizations. Beyond general knowledge of the needs of increasing administrative capacity in developing countries, an understanding of the special or unique requirements for regional or decentralized institutional development is sorely lacking. If AID is to be more effective in assisting governments in developing countries to implement their urban and rural development programs, much more research is needed on the characteristics and processes of "successful" local and regional development institutions and how those characteristics and processes can be developed in regions where decentralized administration is essential to the successful implementation of such programs.

These research tasks form a new and innovative research agenda that is essential if AID is to be successful in helping governments in the countries it assists to deal with problems of urban transition and rural development over the next two decades. The results of this research can provide the knowledge through which AID can more effectively provide technical and financial assistance, engage in policy dialogue and develop private enterprise and local and regional institutions.

FOOTNOTES

1. U.S. Agency for International Development, Urban Development Policy Paper (Washington: USAID, 1985): 1.

2. Ibid., pp. 2-3, 9-11.

3. U.S. Agency for International Development, Rural Development Strategy Paper: Considerations for Program Design and Implementation (Washington: USAID, 1983): 24-25.

4. Ibid., pp. 11-24.

APPENDIX A

Clark University/IDA Working Papers on

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APPENDIX A

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APPENDIX B

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