LOCAL ORGANIZATIONS AS MECHANISMS FOR RURAL DEVELOPMENT IN BORNO STATE, NIGERIA: ANALYSIS OF SPATIAL PROCCESSES AND PATTERNS

By

Joseph Alumona Ijere

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Geography

1983

ABSTRACT

LOCAL ORGANIZATIONS AS MECHANISMS FOR RURAL DEVELOPMENT IN BORNO STATE, NIGERIA: ANALYSIS OF SPATIAL PROCESSES AND PATTERNS

By

Joseph A. Ijere

Rural development is of paramount importance to the well-being of people in developing countries, yet a variety of well-intentioned measures have failed to produce results commensurate with need. Using Borno State in Nigeria as a case in point, this research was focused on participatory organizational approaches to rural development which involve collaboration between center and periphery. Patterns of development were examined and local organizations' inputs to rural development were evaluated.

To determine reasons for differential development, the researcher examined: intensity, direction and content of linkage among local organizations and between local organizations and state authorities; development problems and priorities as perceived by heads of local organizations; the impact of political patronage and factionalism; and the areas's historical patterns of administrative

structure. Data were drawn from documentary sources and from interview questionnaires given to heads of local organizations in sample areas, and analyzed using proportions, t-test and Spearman rank correlation measures.

Major findings showed a generally low level of development with significant regional differences. Of the local organizations, only local governments possessed a hierachical structure and were linked regularly with state authorities. Horizontal linkage was virtually non-existent and vertical linkage was primarily top-down, with greater linkage between more developed villages and their Local Government Area (LGA) councils, than others. There was a notable lack of symmetry between the efforts of local governments and development problems and priorities identified by village leaders. Political patronage and factionalism were also found to impede mobilization of local resources for rural development. While the LGA spatial structure has tended to reduce spatial inequalities, it has also increased the dependence of local governments on state government.

Overall, findings show that local organizations in Borno State have not functioned in ways which effectively promote development. The implications for policy are that, if organizations are to be successful in bringing about effective rural development, institutional reforms and

spatial reorganization of LGAs are necessary to increase the power of local organizations vis-a-vis state authorities.

ACKNOWLEDGEMENTS

In the course of this research many people, especially members of my Guidance Committee, contributed immensely to the successful completion of this dissertation. Profound gratitude goes to Dr. Joe T. Darden, the chairman of the doctoral committee, Dr. Asefa Mehretu, Dr. David J. Campbell of the Department of Geography and to Dr. M. Bratton, of the Department of Political Science, for their guidance, comments and interest in the research. Despite Dr. Bratton's absence from Michigan State for research work in Zimbabwe, his comments were received in record time. I am also indebted to Dr. Bruce W. Piggozi for his direction in the statistical analysis.

Thanks are also due to Micheal Lipsey of the Center for Cartographic Research and Spatial Analysis who provided valuable guidance in making the maps and diagrams. I am also indebted to Dr. Stanley D. Brunn of the University of Kentucky who continued to show interest in my work following his departure from Michigan State University.

Appreciation is also extended to the University of Maiduguri for awarding me a fellowship which made my

study at Michigan State possible. I am also grateful to Flight Lieutenant Chinwero Onah for loaning me his car for three months to enable me carry out the field research.

Finally my special love and appreciation go to my wife Felicia, who did all the typing and to my children--Chinwe, Ifeyinwa, Okechukwu and Nnenna--whose presence made life enjoyable. It is with their efforts that I have reached this frontier.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Rural development is of paramount importance, especially for developing countries where a great majority of people live on and derive their livelihood from the land. Rural development in this study means the ability of rural people to improve their well-being on a self-sustaining basis. Thus, adequate food, health, education, income, equity in the means and benefits of production, and self-reliance are considered essential for improving rural residents' well-being. Realizing these objectives has been problematic in most developing countries where rural poverty is, not only intractable and pervasive, but also increasing.

Contemporary conditions of development and underdevelopment, in most developing areas, are traceable to government political and economic arrangements which modify existing conditions. Thus the major means through which rural development has taken place has been administrative action, in which governments directly intervene to promote rural development and rural welfare. Programs, projects and ideologies are promulgated through which innovations are expected to diffuse to the periphery.

The other means have been self-help activities, in which people undertake to promote their own development (with or without government assistance). These two approaches, labelled "top-down" and "bottom-up", respectively, have proved inadequate because of the failure of each to generate equity-oriented development that is self-sustaining.

Organizational Approaches to Rural Development

Because of shortcomings of top-down and bottom-up approaches in promoting rural development, attention has recently been focused on comprehensive strategies which take into account the role of local organizations in supplementing or correcting earlier approaches. Many specialists in the field of rural development (Uphoff and Esman, 1974; Aziz, 1978; Bryant and White, 1982) have come to the conclusion that the main constraint to rural development is essentially lack of organization.

A participatory organizational approach to rural development envisages mutual collaboration between people at a grass roots level and higher-level authorities in matters affecting the well-being of the former. Such arrangements call for the bargaining power of people at local levels to be greater than is the case at present.

Many center-locality rural development interactions in developed countries take place on a person-to-person basis. This occurs less often in developing countries because high rates of illiteracy, poor means of communication and the peripheral role of peasants in the national political economy impede such interactions, often to the disadvantage of the periphery. Correction of such situations may require using multiple organizational channels if people at a grass roots level are to be involved in their own development.

The participatory organizational approach to rural development draws heavily from organization and communications theories and concepts. The organizational concepts include goals, leadership and hierachical structures. The communications concept emphasizes interaction and movement.

Local organizations for rural development have goals consistent with improving the lot of a majority of rural people; have a hierachical structure to match problems of different intensity at various spatial scales; and are accountable to the local consituency as well as to higher level authorities. Such local organizations include local governments, traditional authorities, political associations, cooperatives, farmers' associations, womens' groups and improvement or self-help associations and other voluntary associations.

Individuals, special interest groups, international agencies, religious groups, governmental and local organizations all may be involved, to some degree with promoting rural development. However, this research focuses only on the collaboration of local organizations with higher level government authorities in matters of rural development. Thus, one part of the study concentrates on the political processes of rural development in which leaders of local organizations and higher level government functionaries are the principal actors. The other part focuses on patterns of rural development which influence and are influenced by the processes of rural development.

Unfortunately, reliable documentary data to measure rural development are limited. The data on interactions between the principal actors in rural development necessitated data collection during a questionnaire survey. The determination of development patterns and the analysis of political processes of rural development, in this study, are based on such documentary and survey data.

Need for the Study

Research in rural development in Nigeria has concentrated on top-down extension services, cooperatives, projects, programs and on self-help development projects. Little attention, if any, is paid to the fact that

development itself is a political problem because it is a question of who gets what, when, where and how. Rural development in Borno State with emphasis on participatory organizational approach has not (to the best of my knowledge) been studied by geographers and others. Knowledge of the political processes and patterns of rural development in Borno State are important to the academic community; and to those politicians, local people and administrators who are concerned with rural development. Therefore, such local organizational activities and patterns of rural development are the focus of this research.

Statement of the Problem

The problem of this study consists of three main parts. First, how have physical and human factors influenced the patterns and processes of rural development in Borno State? Second, what are the existing patterns of rural development? Third, what are the political processes of rural development?

Objectives

The research aims to answer these questions:

1. Do functioning local organizations exist in the area?
2. Is there a balance in top-down and bottom-up vertical linkage among local governments and between Local Government Area (LGA) local governments and state level authorities?

3. Does intensity of linkage vary with levels of development?

4. Do the heads of local governments have confidence in the ability of their organizations to solve rural development problems confronting their communities?

5. Are the efforts of heads of local governments mutually consistent with their priorities and problems identified?

6. Does the area of the LGA affect how well the LGA performs on the rural development scale?

7. Is road accessibility in an LGA significantly related to the level of rural development in the LGA?

8. Are there relationships between political patronage/political factionalism/historical administrative structure and developmental processes and outcomes in the state?

Hypotheses

Based on these objectives a number of research hypotheses that relate to the patterns and political processes of rural development in Borno State are formulated. The hypotheses are as follows:

1. Local organizations operate effectively by embracing all relevant aspects of rural development.

2. There is a significant difference in top-down and bottom-up linkage (a) between the LGA local government and the state level authorities (b) among different tiers of local governments (LGA, district and village).

3. There is a significant difference in vertical linkage between the village and LGA local governments on different categories of rural development.

4. The heads of local governments have positive attitudes about the efficacy of their organizations to solve rural development problems confronting their communities.

5. The priorities of heads of local governments and the rural development problems they identify are not mutually consistent with the efforts they put in rural development.

6. The area of an administrative unit (LGA) is negatively related to the level of development in the LGA. Therefore the smaller the size of an LGA the higher its rank on the rural development scale.

7. Road accessibility is positively related to the level of development. Therefore the higher the accessibility index of the LGA, the higher the rank of the LGA on the rural development scale.

8. There is a relationship between political patronage, political factionalism and historical administrative structure in the state and processes and spatial inequalities in rural development achievements.

Organization of the Study

The remainder of the study is divided into eight chapters. Chapter II contains a review of pertinent literature on rural development and local organizations for rural development. Chapter III examines the physical, cultural and historical factors which influence the processes and patterns of development in the state. In Chapter IV the methods of research are described. Chapter V focuses on the determination and analysis of the patterns of rural development. Chapter VI concentrates on the conceptualization, measurement and analysis

of linkage. In Chapter VII attempts are made to find relationships between linkage and levels of development. Chapter VIII examines other variables which impinge upon or relate to the political processes and spatial patterns of rural development. In Chapter IX, final comments are made on the major findings, in the context of the political geography of rural development. Policy implications of the findings and recomendations for improvement are stated. The Chapter concludes with suggestions for future research.

CHAPTER II

REVIEW OF LITERATURE

Concepts and theories in the field of rural development are discussed in this chapter. Since an exhaustive review of the development literature is not possible here, only that portion most relevant to the study is discussed. Major areas of interest are the concept of development, development studies by geographers and other social scientists, organizations for rural development participation and patterns of development.

The Concept of Development

Contemporary studies in development are often hampered by a lack of clarity on the exact meaning of the term, development. Conceptual shifts in its meaning, especially since the late 1960s, have produced several redefinitions (de Souza and Porter, 1974, pp. 2-8; Seers, 1977a, 1977b). It is necessary, therefore, to state clearly how the concept of development is used in this study.

Development is often equated with economic growth, in which national aggregates of economic performance such as GNP, or levels of technology are used to determine development (Samuelson, 1973, p. 765; Rostow, 1960; Berry, 1960). Such measures ignore the distribution of benefits of growth among the national population. Ambiguity also arises because industrialization and modernization or westernization are often used as synonyms to describe development.

The application of industrialization and modernization development concepts in less developed countries (LDCs), has led mainly to the pursuit of capital-intensive development, the consumption of modern goods and services, and the degradation of traditional conditions. Even though development may encompass all the above, they are seen only as products of a wider process of social change, which may result in development or underdevelopment.

It is argued that there have to be positive quantitative and qualitative changes in the economic, socio-political and cultural lives of people for development to take place (Axinn, 1978, p. 27). Development entails not only such concepts as economic growth, but other conditions such as adequate food, employment, health, education, reduced inequality, equality of access and self-reliance (Seers, 1977a, 1977b).

These attributes of development involve the satisfaction of "basic needs." Despite the dialectics of "basic needs" (Streeten, 1977; Friedmann and Weaver, 1979, pp. 189-196) which create confusion as to the exact meaning of the term, the concept of satisfaction of "basic needs" used in this study includes adequate food, water, education, health and transportation. The rural poverty pervasive in most LDCs is due to poor performance in providing for these basic needs.

Since most LDCs are predominantly rural, rural development should be of paramount importance if real national development is to be achieved. Rural development studies in the LDCs have contributed to several conceptual definitions with a high degree of concensus. In them, rural development is defined in terms of agricultural productivity, improved technology, rural welfare, rural security, rural employment, popular participation, equity in income distribution (Uphoff and Esman, 1974, pp. 32-59) and rural renaissance which induces positive changes in the lives of rural people (Axinn, 1978, p. 27).

As a result of disruptive colonial experiences in most LDCs, rural development must include integrating rural economies into the national political economy, in such a way as to maintain economic self-reliance, social equity and popular participation. Achieving these

objectives require the transformation of socio-political structures, such as land reform, transportation networks, rural settlement, territorial and administrative structures, and cooperation in production and distribution (Mabogunje, 1981, pp. 104-116). Thus, rural development is "an holistic process in which transformations in the economic, social and political spheres are interwoven." (Bratton, 1980, p. 5)

This contemporary view of rural development is at variance with concepts of economic growth based on industrialization and modernization. Industrialization and modernization concepts of development, however, still have many adherents in developing countries, among ordinary citizens and administrators and politicians responsible for inducing development. Consequently, development is generally uneven and results in dualisms--developed and underdeveloped, modern and traditional, rural and urban. These dualisms have economic, political and spatial implications of interest to geographers and other scholars.

Development Studies by Geographers and other Social Scientists

Development Process

Geographers are interested in how development takes place. Their concern with the process in a spatial

context is to examine man's behavior in space. To understand the process of development and underdevelopment, one must go beyond examining numerical indicators and concentrate on relationships between the organization of production and distribution in a particular institutional setting. According to Smith (1979) the spatial and structural impediments that produce uneven development in developing countries, result from core-periphery relationships (236-238). This spatial concept has been reinterpreted by dependentistas and radical Third World development and political economists (Chilcote, 1980), as a doctrine of dependency to explain underdevelopment of the periphery on a global scale. These interpretations of the core-periphery concept (wowen from central place and diffusion paradigms) form a basis for analysis of the spatial processes of development by economic geographers, regional planners and others concerned with development at various spatial levels.

Economic geographers have put forward various models to explain the processes of development in developing countries. Logan's (1970, 1972) export, transportation and growth center models and Igbozurike's (1976) commercialization, idustrialization and agro-industrialization models focus on economic forward

and backward linkages between the core and the periphery in the economic processes of development. The six models, which are in many ways complementary, emphasize the place of urban systems in the generation of spread effects necessary for the development of the periphery. Thus, the processes arising from center-periphery relationships in economic activities form the backbone of their analyses of the processes of urban and rural development.

The inadequacy of the growth center model for realizing rural development is well documented (Logan, 1972; Darkoh, 1977; Friedmann and Weaver, 1979, pp. 125-129; Mabogunje, 1978). It is now widely accepted that the processes of the growth center model do not function perfectly in developing countries because of distance and imperfections which prevent innovations from diffusing to the periphery. However, the concept is still much alive among politicians and administrators in many LDCs.

The city-dominant thesis, which is implicit in all growth-center and diffusion paradigms of development, forms the basis of Omuta's (1981) analysis of the process implications of the 1976 local government reform in Nigeria. Omuta sees the Local Government Area (administrative unit) headquarters as third order cities which have the potential for integrating rural-urban sectors of the economy. Thus he sees the process of development from the

viewpoint of rural-urban symbiotic relationships in economic activities. This contention is in line with the agropolitan strategy of development advocated by Friedmann and Douglas (1978). The strategy envisages a spatial framework in which lesser order cities are created to generate functional linkages between the cities and their hinterlands. The linkages which the third or lesser order cities are expected to generate for the development of the periphery are also emphasized in spatial closure strategy which Stohr and Todtling (1977) argure is necessary for self-reliant development.

The spatial closure strategy emphasizes reduction in vertical top-down linkages, through filtering to assure that only linkages beneficial to the periphery are encouraged, and the promotion of horizontal linkages between areas. Thus, the spatial closure strategy put forward in regional planning parallel the participatory organizational approach (Uphoff and Esman, 1974) in rural development administration.

Agriculturists concerned with agricultural development also subscribe to the core-periphery paradigm. The vent-for-surplus model described in Eicher and Baker (1982, pp. 31-32) and the commercial agriculture model (Colburn, 1982, pp. 442-443) are rooted in the traditional classical economics law of comparative advantage. This global theory advocates cash cropping for LDCs and

implicitly calls for the continued dependence of developing economies on the benevolence of international trade, which is regarded as the engine of growth for the subsistence economies. Since many areas in LDCs depend on cash crops, this process of dependency operates at different levels.

These analyses by economic geographers and others show that such processes make for polarized and dependent development. They are responsible for some of the socio-spatial structures (for example rural depopulation) which militate against rural development. Furthermore, these explanations are based mainly on economic activities and are, therefore, inadequate for analyzing process in the context of political geography.

Process in Political Geography

Political process involves transactions (Cohen and Rosenthal, 1971; Soja, 1968), the making of decisions and the allocation of public goods and services within a territiorial unit (Muir and Paddison, 1981, p. 150). These aspects of political process are essential for rural development to take place. Thus, political process is closely related to both communications theory and structural approaches, when considered within the context of a political system.

Political geographers concerned with political process modify Easton's model of a political system to

provide a framework for analyzing process over space as well as between levels of power (Bergman, 1975, pp. 4-11; Cohen and Rosenthal, 1971; Johnston, 1979, pp. 16-24; Muir and Paddison, 1981, pp. 13-20). Muir and Paddison (p. 152) stress that the systems framework brings into focus the interactions (within any polity), which are loaded with demands, supports, decisions and actions. However, Burnett and Taylor (1981, p. 4) regret that systems ideas are poorly integrated into political geography studies.

Not all political processes in rural development lend themselves easily to systems analysis. Therefore, this study is limited to analysis of the interactions (linkages) between different points of power concerned with effecting rural development. Thus, the systems approach used here is designed only to analyze how politically organized areas, and the institutional organizations operating in them, function to link rural people with higher level authorities who control vital resources needed for development. The linkage model (Figure 2.1) may be useful for analyzing such processes because it depicts the interactions of human decision-makers within the institutional setting of Borno State. In a spatial context, the model depicts patterns of horizontal interaction flows between hierachical points of political power in ways

Linkage for Rural Development in Borno State

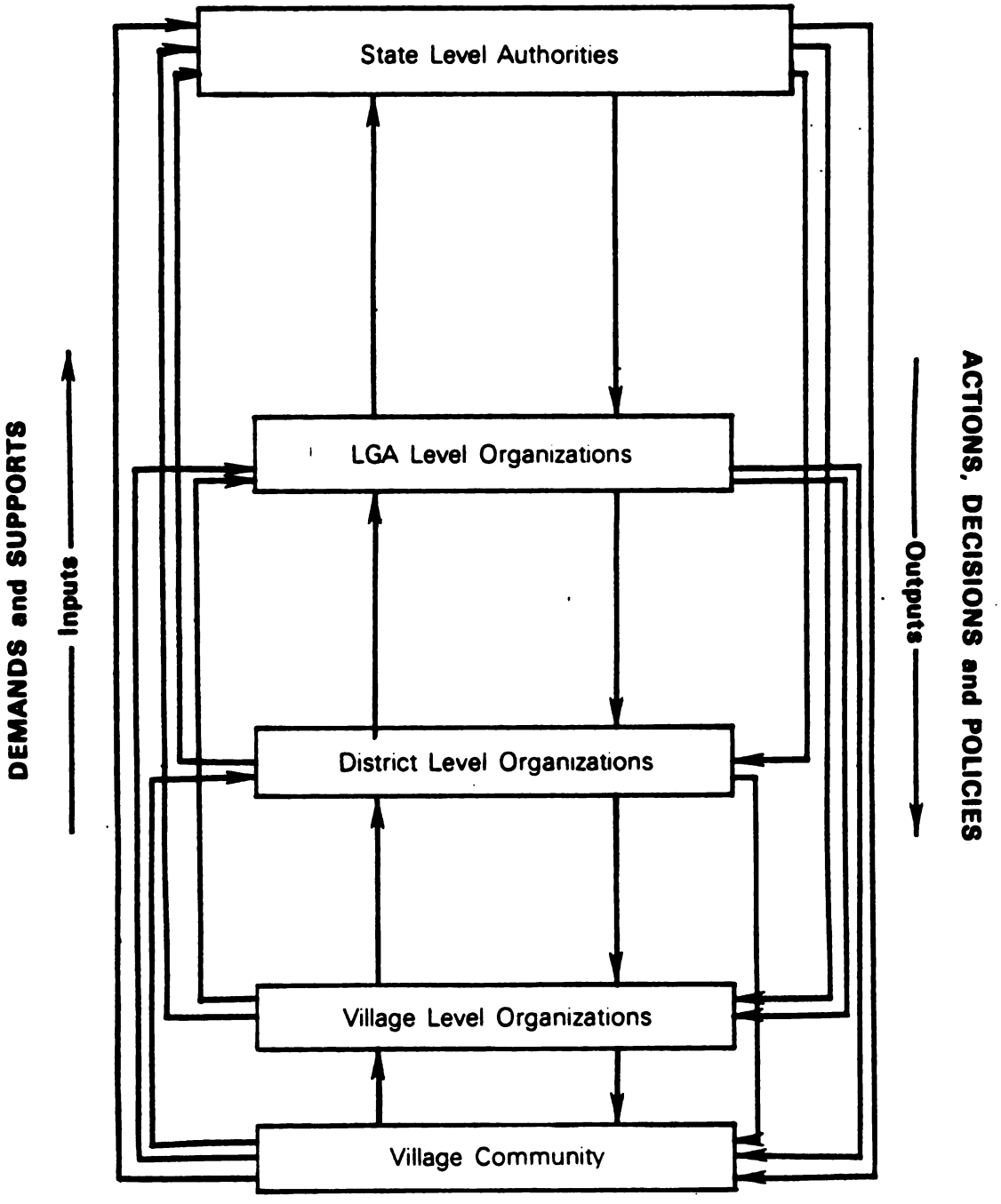


Fig. 2.1

similar to models of central places in economic and urban geography.

Despite their analytical limitations and charges of being overtly descriptive that are leveled at such models in political geography (Burnett and Taylor, 1981, p. 48), they have the utility of attempting to answer traditional geographic questions--who, what, where and how. They may also provide a way to analyze some opportunities and constraints in rural development, thereby paving the way for the generation of other means of alleviating such constraints (Lakshmanan, 1982, p. 886).

Political process also focuses on concepts of behavior and decision-making. Human spatial behavior is conditioned by perceived environment. Behaviorism in geography, despite criticism in some quarters (Bunting and Gulke, 1980), provides new and powerful explanations of spatial behavior patterns and movements (Downs, 1970) within a political system. Thus, in rural development, the political behavior of individuals, organizations, government officials and politicians constituted part of the process. Such behaviors consist not only of messages and movements, but also of actions, decisions and the setting of priorities.

Decision-making, which is causally related to behavior, is influenced by real or perceived political

power and such power is used subtly or aggressively to effect favorable locational decisions (Brunn, 1974, p. 100). Prescott (1968) develops a similar theme, emphasizing the need to examine geographical factors that influence decisions and policies. It is pertinent in this study to examine the impact of geographical factors, not only on policies and decisions, but also on all other facets of the analysis.

The policies, decisions, actions, interactions and movements which constitute important aspects of the development process in this study, are products of collaboration between leaders of local organizations and higher level authorities for rural development. Therefore, an examination of local organizations for rural development is necessary for understanding these political processes.

The Concept of Organizations

An organization is an open social system with internal interactions between its parts and external interactions with its environment. Organizations are frequently divided into: formal and informal (Blau and Scott, 1962, pp. 27-28), governmental and non-governmental (Chambers, 1977), administrative, technocratic and participative (Johl and Mudahar, 1974). None of these classifications is all inclusive and the divisions adopted depend on what one intends to explain. Any organization has one or more

of the following attributes: certain goal(s), a systems framework and a hierachical structure.

Since informal organizations are numerous, less open and difficult to identify in society, only formal organizations were examined in this study. Formal organizations are those deliberately established and structured for the purpose of achieving certain goals. Because they are instruments of resource allocation, production and distribution (Blau and Scott, 1962, p. 1), they are, therefore, important in development since such functions are intrinsic for realizing development.

Organizational Approaches to Rural Development

Several empirical studies (Hunter, 1970; Reddy, 1974; Williams, 1975; Aziz, 1978; Blackton, 1974) focus on the roles of organizations in various aspects of rural development. "There has always been some diversity...but in Africa extension services (which are primarily top-down) have been a major organizational instrument" (World Bank, 1981, p. 74). Self-help, which is primarily bottom-up, has been another type of organizational instrument. Imbalanced emphasis on either one or the other means of realizing development leads to its corresponding doctrine-paternalism (top-down) or populism (bottom-up)--in rural development.

In most developing countries, including Nigeria, the emphasis has been heavily in favor of the paternalistic

approach involving extension services and development projects. The principal reason put forward for this approach is efficiency. It is argued that efficiency results from planning and the highly centralized nature of the bureaucratic and technocratic organizations (Hunter, 1970; Moris, 1981, p. 91; Chambers, 1977, pp. 125-126; Montgomery, 1979, p. 59). Populism emphasizes the waste, duplication and elitism of bureaucratic and technocratic organizations, with their urban-biased development. Populists argue that only new institutional infrastructures, which emphasize local participation, can be effective in transforming rural life (Montgomery, 1979, p. 50; Chambers, 1977, p. 22). This approach is in line with the harambee or self-help and community development efforts in English-speaking LDCs (Barkan et al, 1980; Thomas, 1979; Okpala, 1980; Smock, 1971, pp. 104-106) and the animation rurale (during initial stage) in Francophone LDCs (Meister, 1977; Gellar et al, 1981; Charlick, 1974).

Evidence abounds, from analysis of experimentation with harambee or self-help community development and co-operatives, to show that the participative approach is also no panacea (Barkan et al, 1980; Thomas, 1979; Okpala 1980). Its main weakness lies in excessive concentration on services, while ignoring production.

Analysis of the two organizational instruments shows that both approaches contribute to development. The

main criticism has been emphasis on one to the exclusion of the other. Thus, current organizational strategies call for a relationship which is neither predominantly top-down nor predominantly bottom-up (Uphoff and Esman, 1974).

In determining a balance, the approach to rural development should always depend on the nature of the problem. Some problems are best tackled at the local level while others are best handled from a centralized, administrative level. Peoples' ability to play their parts well will depend on the community organizations which unify their diverse interests, so as to maximize community welfare (Uphoff and Esman, 1974; Esman, 1978; Aziz, 1978).

Local Organizations for Rural Development

Local organizations for rural development are those that have formal equality of access for individual members, dual accountability to the local constituency and to the government, opportunities for participation and part of a hierachical structure (Uphoff and Esman, 1974; Esman, 1978). They are effective only when they perform as a set of complementary institutions to provide a two-way flow of information, influence and resources with the center of power, at various levels, where policy decisions are determined and resources allocated (Esman, p. 168). Consequently, local organizations should be actively involved in any rural development process in their areas.

Local organizations for rural development include local governments, traditional local authorities, political organizations, cooperatives, women's groups, eithnic or improvement unions, and other voluntary associations. Several of these may exist in one area. Uphoff and Esman (1974) provide evidence to show that they have been sucessful in promoting rural development in different ideological settings.

A Cornell University series on local organizations and rural development (Reddy, 1974; Johl and Mudahar, 1974; Blackton, 1974; Stavis, 1974) shows that local organizations focus on different aspects of rural development. The consensus discerned from these studies (Uphoff and Esman, 1974) is that local organizations are a necessary, if not sufficient, condition for rural development. Uphoff and Esman found that countries where multiple local organizations are in continuous mutual linkage with central authorities (in areas of rural development) from a position of relative strength, are more developed than countries where local organizations are linked with central authorities from a position of weakness. They argue that to effectively realize needed development, local organizations have to be active participants in their links with central authorities.

Efforts toward this end in rural development administration, which aim at strengthening the barganining

power of the local people vis-a-vis the center, have been varied. The panchayati raj in India (Hunter, 1970; Hohl and Mudahar, 1974; Reddy, 1974), the Ujamaa in Tanzania (McHenry, 1979; Cliffe, 1973; Kazimoto, 1973; Svendsen, 1973, Cliffe and Saul, 1970; Freyhold, 1979; Hyden, 1980) and the Chinese communes (Aziz, 1978) are the best known examples. These rural development administrations entail decentralization, spatial reorganization of administration and the creation of local organizations such as development committees, local governments, cooperatives and political committees, at various levels, to stimulate rural development from below.

The problem for many developing countries is that many such local organizations are adaptations patterned on organizations of ex-colonial powers. Their adaptation has not been complete and whether such local organizations are 'appropriate' institutions for diverse local situations in developing countries, is an open question. Other problem areas (neglected in the literature) include the question of legitimacy and colonial electoral and majority opinion decision-making principles which run counter to the consensus and gerontocracy principles prevalent in many societies in the LDCs. Because of these problems some local organizations have had difficulty in mobilizing their communities for rural development.

The overwhelming of the panchayati raj and the Ujamaa village organizations by the forces of the center point to the difficulties in realizing the desired development objectives in many countries. In the light of these experiences, intermediate institutions may be necessary to protect local organizations from being overwhelmed in their relations with the center in rural development efforts (Gran, 1982).

Because increasing and maintaining bargaining power at the local level is crucial for realizing rural development, the variety and number of local organizations and the intensity of their interactions with higher level authorities can make a difference in development. Despite the importance of having a variety of local organizations involved in rural development, emphasis is often put on either extension services, as in Nigeria, or development (political) committees, as in Zambia.

Local Governments and Rural Development

The Cornell studies (Reddy, 1974; Blackton, 1974; Mlinar, 1974; Johl and Mudahar, 1974; Uphoff and Esman, 1974) emphasize the critical role of local governments in the LDCs, where they are widely used as instruments for rural development. However, their performance has generally been dismal (McIntosh, 1974; Reddy, 1973; Johl and Mudahar, 1974; Blackton, 1974; Gboyega, 1979; Oyewole, 1978;

Amucheazi, 1973). The reasons identified for their failures stem from the constitutional barriers placed in their way, low caliber of local officials, dependence on central financing, centralization of authority and bureaucratization. An examination of these factors, in any setting, provides an analytical framework for examining whether local governments function effectively to realize development.

Cooperatives and Rural Development

The place of credit in improving agricultural capabilities, craft industries, and local entrepreneurships is recognized in many LDCs, where individuals' capacity to generate savings and investment is very low or non-existent. In such countries, cooperatives are used to fill the void and serve as conduits for central short term loans to a rural sector. Despite this institutional mechanism for improving rural sectors, the history of cooperatives in the LDCs has been one of failure (Reddy, 1974; Johl and Mudahar, 1974; Lele, 1975, pp. 109-112; Isiogugu, 1981). The reasons adduced for poor performance which are pertinent to this study include: preoccupation with the granting of credits, the inability to mobilize local financial resources and the single-purpose nature of most cooperatives.

Neglected in the literature is the issue of ownership of the cooperatives. This is not in conformity with traditional communual ownership which is characterized by

premordial attachments. An examination of cooperatives in the mobilization of central and local resources, ownership and the degree of equity in the distribution of benefits and services provide the basis for determining whether cooperatives function in a way to facilitate development.

Other Voluntary Associations

Other voluntary associations include political associations, religious groups and improvement unions. Bratton (1980, p. 7) points out that in many African countries, political organizations usually constitute the main channels through which development resources are made available from centers of power to the localities. However, research in this area is often difficult because of political partronage and factionalism in local politics, where bargaining is usually informal and secretive and little information is made available to the public. The outcomes of this method of resource allocation are always clear. Areas represented by party bosses are often favored in the distribution of resources and services. Thus, what accrues to an area may depend on the political clout of a patron or faction. The estimation of such political power is beyond the scope of this research.

The dialectics of whether religion, especially the Islamic religion, is an obstacle to development are not new (Wilber and Jameson, 1980; Ragab, 1980; Mehden, 1980;

Sutcliffe, 1975). Religion can have a positive or a negative impact on some aspects of development. For example, the Christian Missions in Africa have had a positive influence on education and health (Mabogunje, 1981). Because of this controversy of whether contributions to development are negative or positive, conclusions on the role of religious organizations in development have to be properly qualified.

Improvement or self-help associations have been known to play important roles in rural development in many LDCs, including Nigeria. Smock (1971), in an empirical study of these organizations in Abriba and Mbaise in Eastern Nigeria, found that there is a proliferation of these organizations at village, district, divisional and provincial levels. The contributions of such organizations have been mainly in education and the provision of services like roads, clinics and water (Smock, 1971; Okpala, 1980).

The Harambee (self-help) movement is part of Kenya's strategy for self-reliant development through local initiative (Thomas 1979; Barkan et al 1980). The organizational structure of the Harambee and the legitimacy accorded to its organizations are positive contributions to this bottom-up organizational approach. These self-help organizations in Nigeria and Kenya also function as channels of linkage with political party machines, central and regional governments,

the bureaucracy and administrators. The main problem for such organizations is conflicts with local governments which militate against cooperation between all local organizations (Amucheazi, 1973). Because of the positive role of such organizations, an examination of their existence and roles in the study are worthy of investigation.

The main argument for the organizational approach is to broaden participation. The approach enables people at the grass-roots level to be involved in determining matters affecting their own well-being. Therefore, a brief discussion on development participation is necessary in understanding the political processes of rural development.

Participation in Rural Development

An important factor implicit in all sucessful local organizations for rural development is popular participation. Much emphasis on popular participation in LDCs actually turns out to be merely electoral participation. Electoral aspect alone seems to be inadequate in rural development.

Cohen and Uphoff's (1980) review seems to be a comprehensive discussion of the place of participation in rural development. However, only the aspects relevant in this study are discussed. Cohen and Uphoff argue that the concept of development participation is not well defined

but that it can be understood in two clearly definable strands--dimensions and context.

The dimension aspect is focused on questions of who participates and who benefits, where does the initiative come from and what are the channels and structure of participation. Answers to these questions focus on the process aspects of the study and on patterns which depict spatial inequality in the benefits. The context aspect is focused on the technology used vis-a-vis the society concerned and the physical, political, cultural and historical factors which impede participation. Thus, Cohen and Uphoff recognize the multi-faceted nature of rural development. However, their analysis gives no attention to how the participants are to be selected, since every body cannot take part in determining policy and making decisions.

The electoral aspect is crucial to any discussion on participation for rural development in LDCs where historical and cultural factors militate against popular participation. For example, Charlick (1974, pp. 44-50) points out that despite a rosy picture of the place of participation in rural development, a review shows considerable doubt about its efficacy, due to cultural diversity and other unexplained variables.

Charlick's pessimism seems to advocate continuation of the top-down approach since the grass-roots are impotent to act. This contention ignores the fact that successful local organizations' participation in rural development is a product of a learning process and not a blueprint (Korten 1980). Consequently gradual trial and error institutional reforms are necessary before rural people in LDCs can be galvanized to participate in rural development. Such a step becomes more crucial when countries, like Nigeria, enshrine rural development participation in their constitutions.

The literature shows that center-locality interactions and demands, supports, actions and decisions by political actors constitute diverse ways that participation takes place in the process of development. These processes occuring over time are manifested in space as tangible and intangible spatial structures with distinctive observable patterns.

The relationship between process and spatial form is a fundamental concern in geography (Harvey, 1979). According to Harvey there are "...strong interdependencies between pattern and process and the only way to avoid purely circular relationship is to recognize clearly the nature of these interdependencies." (p. 386) Thus, the the processes and patterns of development are equally

important because they reinforce one another. In the section to follow the concept of spatial patterns will be discussed.

Spatial Patterns of Development

Since development and underdevelopment are visualized in terms of tangible and intangible spatial structures, the patterns these structures form are of interest in development studies. Spatial patterns can be expressed in terms of scale, distance, direction, mass, diffusion rate and nearest neighbor and can be used to show real or perceived changes in a landscape (Cohen and Rosenthal 1971, p. 321). Patterns in development studies are used mainly to show scale and direction of development.

The dynamic nature of spatial patterns of development, which results from the on-going processes, brings to the forefront the question of the direction of change (Haggett, 1979, p. 514). Changes in patterns are inferred by measuring the various indicators of development.

Social scientists use statistics and data from various sources, such as documents, reports and case studies, to measure and analyze spatial and temporal patterns of development (Williamson, 1965; Berry, 1960, 1961; Board et al, 1970; Weinand, 1973). Given the present meaning of development, the major obstacle in measurement is the difficulty in quantifying its social and welfare aspects (Drewnowski, 1972, Seers 1972).

Methods of Measuring Development

Researchers sometimes use a single quantitative index (mostly GNP) to generate coefficients which they use to show spatial patterns of development (Williamson, 1965; Board et al, 1970). Recent studies advocate using several indicators for better results. No universal set of indicators has been developed (Axinn, 1978, p. 22) but the use of a multiple index of socio-economic indicators is emphasized (Haggett, 1979, p. 501). The generation of multiple index patterns of development is amply demonstrated by Berry, 1960; Board et al, 1970; Smith, 1977; Weinand, 1973.

Berry (1961) uses factor analysis on 43 rank-ordered variables to analyze economic development in 95 countries in order to identify basic global patterns of economic development. "Ranks were chosen rather than the actual value of each index...because more faith was placed in the relative positions of the countries than in the precise value of any index...." (p. 10)

Weinand (1973) and Board et al (1970) use a regression model to analyze several socio-economic variables (GNP, education, employment, age, transportation, urban hieracy, urban water supply, urban electricity output) to identify variations in levels of development in Nigeria and South Africa. Less sophisticated statistics, such as rank

correlations and descriptive statistics, are also widely used in analyzing relationships between development indicators and development outcomes. The indices used in any study and the correlations sought, depend on the nature and availability of reliable data and also on the spatial units in which the data are collected.

The most frequently used indicators, in the LDCs where many vital statistics are unavailable or unreliable, include extension services, fertilizer consumption, school enrollment, health facilities and personnel, road transport and water supply. These indicators are used in generating coefficients of variations for analyzing patterns.

Other measures are used to complement the scale measures, in order to emphasize mathematically and graphically various inequalities in regional studies. These measures include the Lorenz curve and the Gini index (Smith, 1977, pp. 133-134; Darden and Tabachneck, 1980) and location quotient (Isard, 1963, pp. 123-126). Darden and Tabachneck's statistical program computes and plots an adaptation of a Lorenz curve and summarizes the resulting distributions in terms of Gini, segregation and fair-share point indexes. These indexes are not perfectly correlated with each other but can be useful for measuring the magnitude of spatial, temporal and social inequalities in

development. The location quotient is used, "for comparing a region's percentage share of a particular activity with its percentage share of some basic activity...." (Isard, 1963, p. 124). Thus it is a useful measure for social welfare conditions which emphasize per capita distributions. Even though these measures (Lorenz curve, index of segregation, Gini index, fair-share point index and location quotient) do not give any clues to scale of development, they provide powerful ways of analyzing spatial, social and temporal inequalities.

Summary

Rural development is a multi-faceted phenomenon which touches on the economic, social, political and cultural lives of people. Achieving rural development in LDCs has proved problematic. Past strategies, which entail much direction from the top, have failed to bring about equity-oriented development that is relevant to needs of the majority of people. The top-down approach has resulted in patterns of development that are dualistic and exploitative of rural people.

The bottom-up approach, as the self-help development efforts show, has also not proved to be a panacea for rural development. Lack of planning, over emphasis on services which lead to excessive demands on technical requirements, and little or no effort on production are

production are the main weaknesses of this approach. Consequently the bottom-up approach results in many abandoned and stillborn projects because of the inability of local people to sustain the projects without inputs from the top.

The thrust of the current approach is toward more comprehensive strategies which take local organizations into account as supplements or corrective measures to previous approaches. The current approaches envisage partnership, on a more equal basis, for the purpose of stimulating rural development that is self-sustaining, self-reliant and of mutual benefit to both partners. Such an approach, to be successful, entails continuous linkage and mutual collaboration between the organizations of the center and those of a locality in matters relating to rural development.

The participatory organizational approach is credited with successes in realizing rural development in China, Taiwan and Korea. What is not known, however, is how and to what extent this organizational approach can be successful in realizing rural development in the diverse political, administrative, cultural and physical environments, in the LDCs, as the experiences of the panchayati raj and Ujamaa rural development administrations have demonstrated. Therefore, the focus of this study is to

examine the physical, cultural, administrative and political constraints which impinge on local organizations' involvement in rural development in Borno State, Nigeria; to analyze how local organizations function to realize development; to access the relationship between local organizations' activities and development outcomes; and to determine to what extent local organizations have been successful in accelerating development. Better understanding of these political processes of rural development can come about only when existing patterns of development are correctly perceived. Thus, existing patterns of rural development are also investigated.

CHAPTER III

BACKGROUND OF THE STUDY AREA

Borno State, one of the nineteen states in the Nigerian Federation (Figure 3.1), covers an area of 116.081km^2 (Nigeria, 1975, p. 3). Based on the 1963 census, the state's projected population is estimated to be around 4.7 million.

The study area excludes Chad Basin Development Authority projects (Figure 3.1). These projects which cover 290,000 acres or 1 percent of the state area when completed are aimed at promoting agricultural development by harnessing rivers, lakes and underground water for irrigation (Chad Basin Development Authority, 1977; 1982). The projects are capital intensive, dependent on imported technology and top-down in approach. Since these projects depict enclaves of development, their exclusion will probably give a better picture of the levels of rural development in Borno State.

Physical Environment

Rainfall

Rainfall is a critical physical variable that affects rural development in the state. There are two

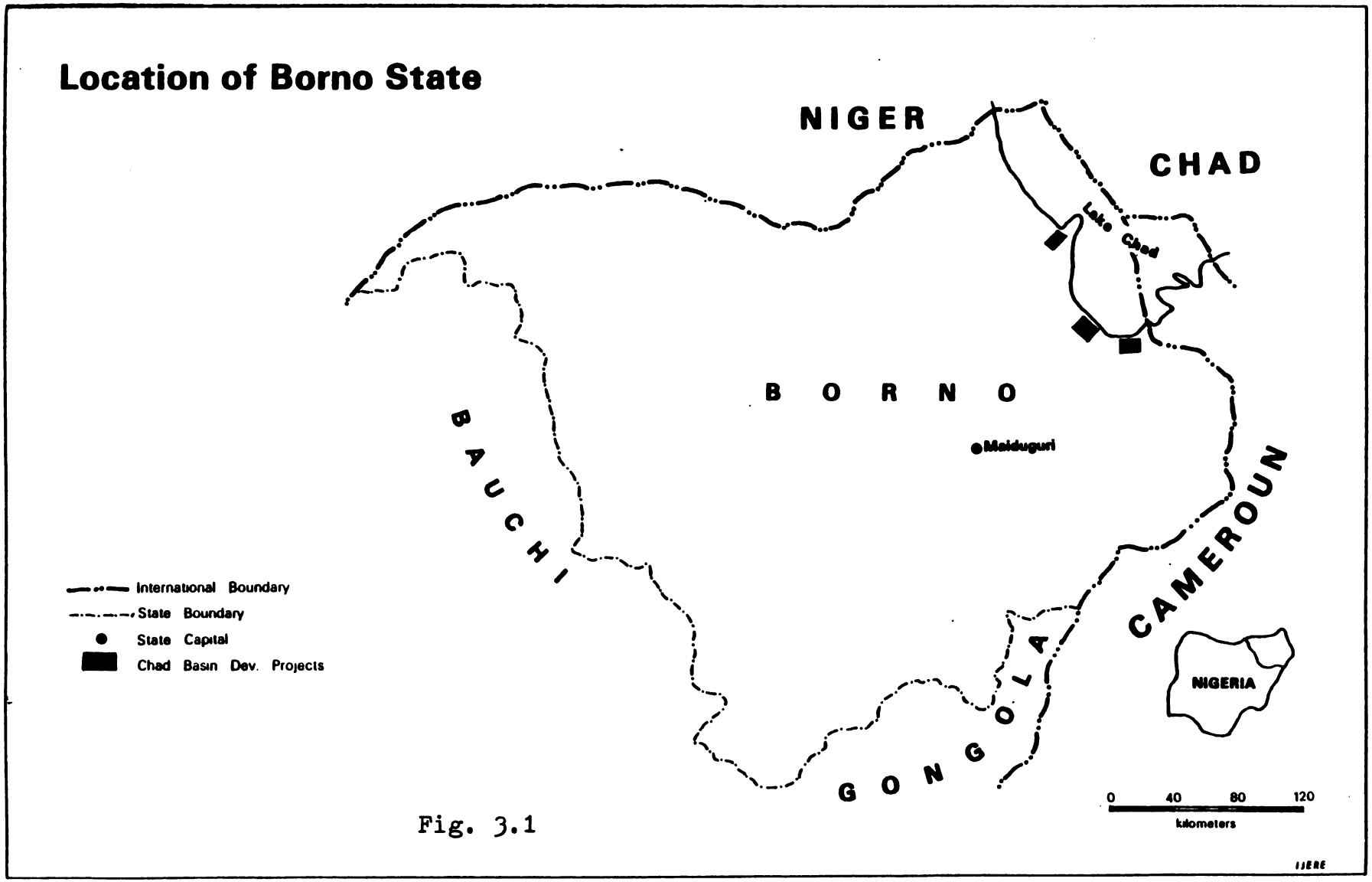

Location of Borno State
NIGER
CHAD
Lake Chad
BORNO
Maiduguri
BAUCHI
GONGOLA
CAMEROUN
NIGERIA
International Boundary
State Boundary
State Capital
Chad Basin Dev. Projects
0 40 80 120
kilometers
IJERE

Fig. 3.1

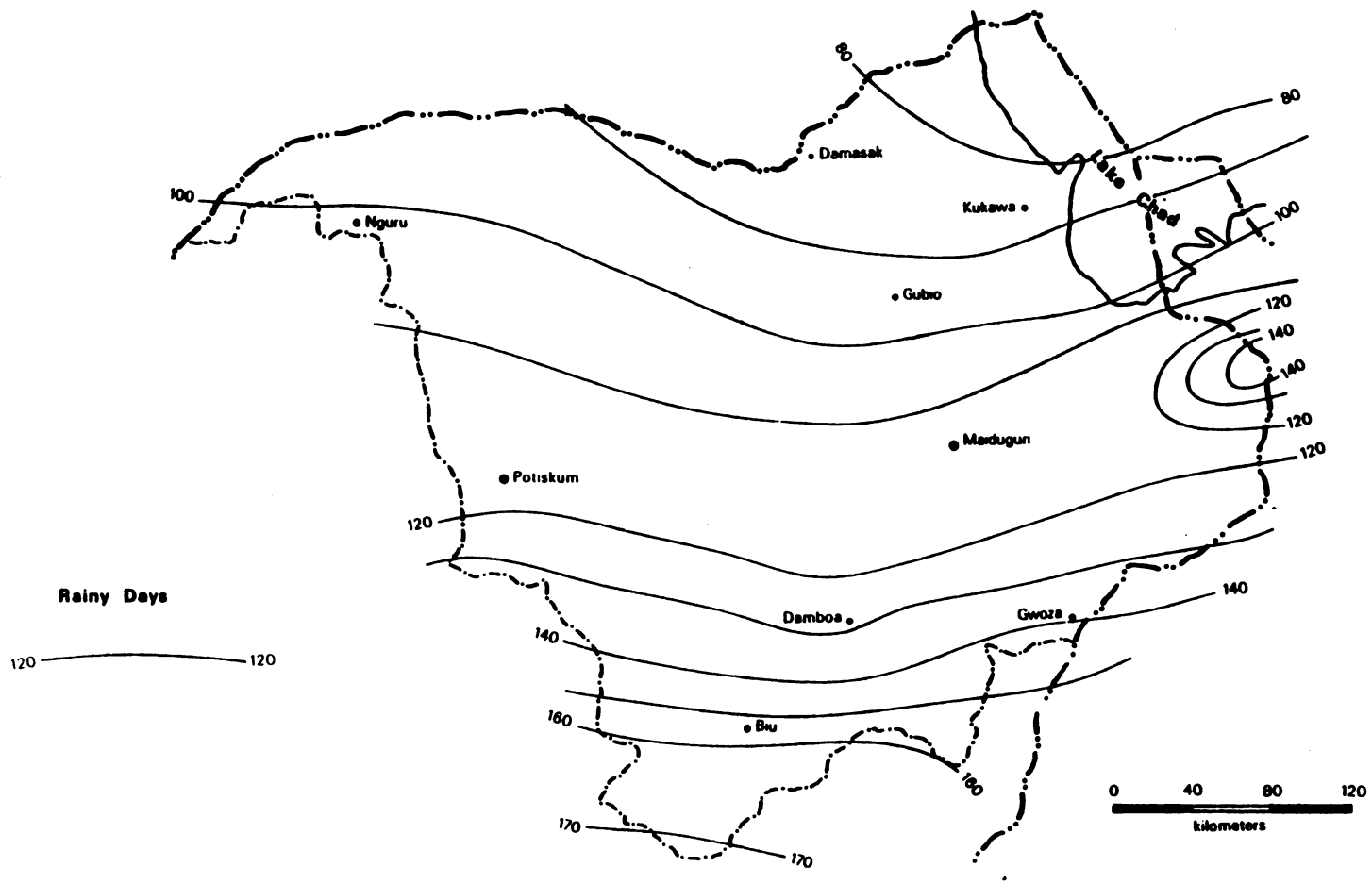
alternating air masses: the moist maritime and the dry continental. The zone of discontinuity (intertropical convergence zone-ITCZ) between the two contrasting air masses, oscillates during the year.

The movement of the ITCZ is related to the seasons. Its position lies farther north in Niger in the rainy season and farther south towards the coast in the dry season. Such movements of the ITCZ cause spatial variations in the dates of onset and cessation of the rains. Generally the rains start in June and end in September. The duration of rainfall varies between 160 days in the southern parts of the state to 80 days in the extreme north around Lake Chad (Figure 3.2). There are spatial variations in the amount of annual rainfall. Annual rainfall ranges from 500mm in the extreme north to 900mm in the extreme south and southeast.

Marked deviation from the expected pattern is highest for the more northerly areas where the amount and duration of annual rainfall are lowest. Historically, such deviations cause periodic droughts and widespread famine in that area. The most notorious drought of recent times was the Sahelian drought of the early 1970s. Such droughts constrain agricultural development since people depend on rainfall for crop cultivation and animal husbandry.

Fig. 3.2

Duration of the Rainy Season in Borno State



Source After Walter, 1967

IJERE

Relief

The high relief of the Mandara mountains to the south and southeast ameliorates the rainfall problem and that region has more rainfall than the surrounding low lying areas. This high relief is of recent volcanic origin. Its steep slopes and narrow winding valleys impede movement and agricultural development.

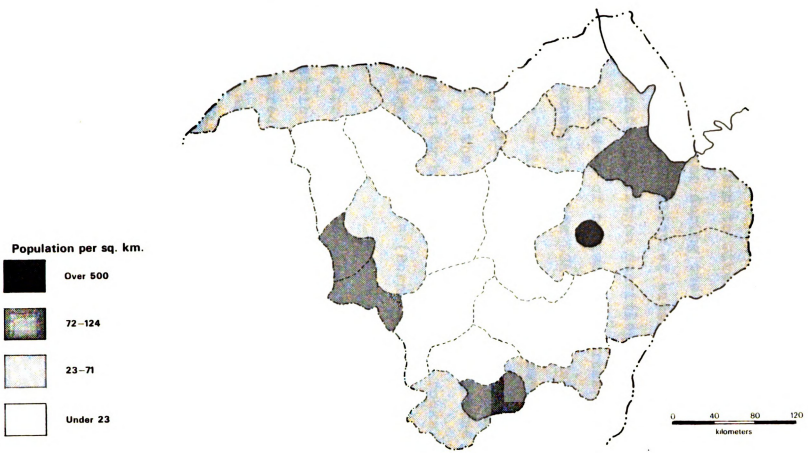
The low undulating plains of the Chad Basin cover the greater part of the state. Most sections of the plains are overlaid with sand and dust from the Sahara. The consequent infertile sandy soils increase problems for agricultural and road development which are critical for rural development. Throughout the state, the rainfall, soils, relief and drainage restrict settlement to favorable locations.

Human Environment

Settlement Pattern

Water is the main constraint on settlement in the state. The arithmetic density of rural population in the state ranges from 22 to 124 persons per km^2 (Figure 3.3). The pattern of population distribution shows that rainfall is not the most critical variable influencing population distribution in the area. Settlement is restricted to a few widely dispersed favorable locations near perennial streams and lakes; and where the water table is near the

Fig. 3.3 **Distribution of Population in Borno State, 1980/81**



Source: Based on 1980/81 Population Projection

surface to permit digging of wells. Thus, from time immemorial both herdsmen and farmers have moved towards the shores of Lake Chad and to river valleys to avail themselves of fresh water during the long dry season.

It is this availability of water that accounts for the high to moderate population densities in the drier northeast vis-a-vis some of the southern areas with higher rainfall. For example, Damboa LGA with higher rainfall but with no rivers or lakes is the most sparsely populated area with only 22 persons per km^2. The water problem is also exacerbated in the south and southeast because these areas are underlain by hard basement complex rocks which constrain the digging of wells (Borno State Water Board, 1981).

These circumstances centered around water make population distribution in the state to be concentrated in favorable scattered locations with potentials for agriculture and animal husbandry. Because only the fadamas (alluvial plains) are cultivated in the drier north, the agricultural density there is bound to be much higher. The dispersed settlements pose problems with regard to transportation and the provision of services by various levels of government.

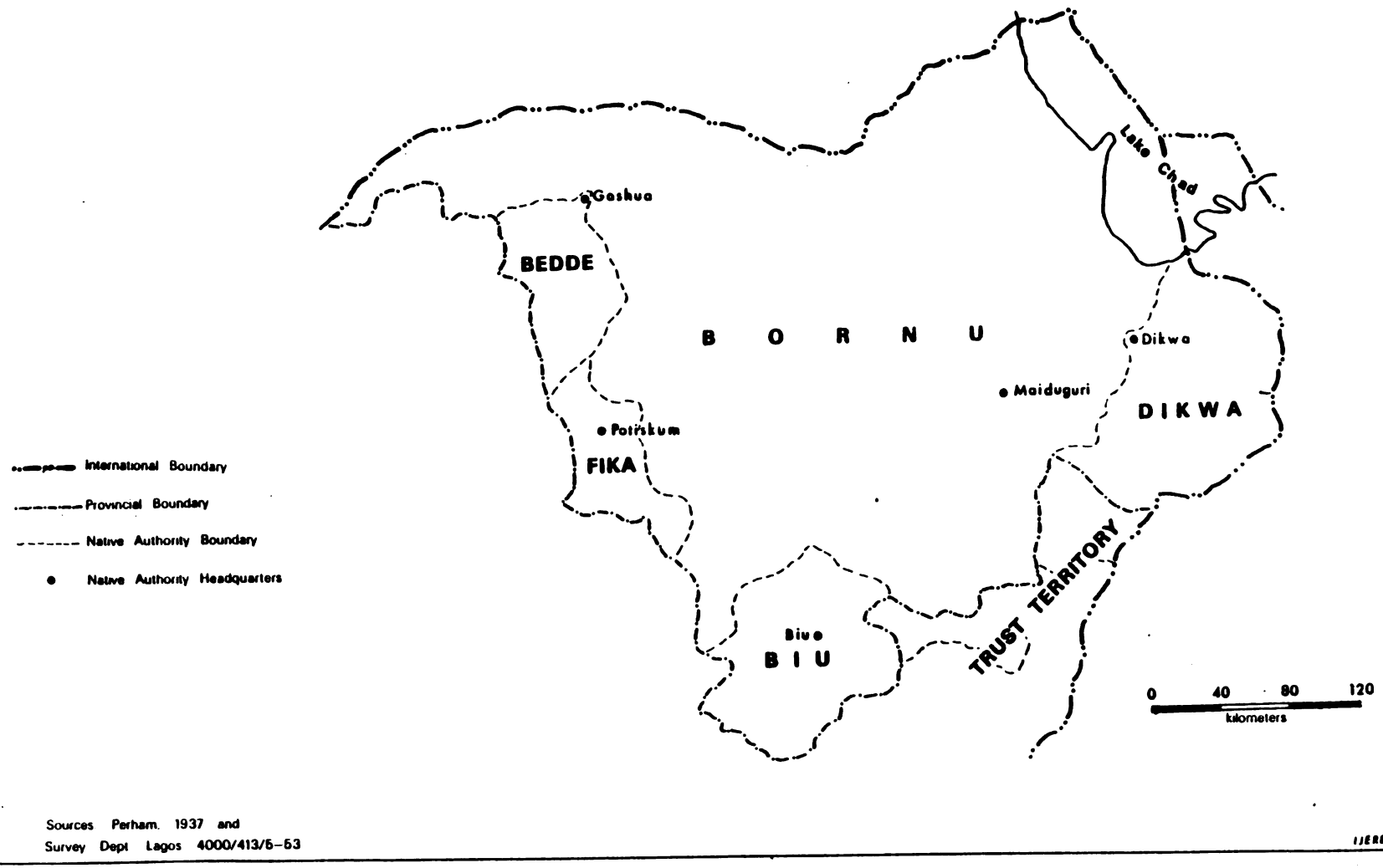
Local Governments

The present local governments can be understood by examining the development of local administration in the area. The pre-colonial system of administration in Bornu, with its three tier system--village, district and emirate--was fashioned by the Sokoto Caliphate and the Bornu Sheikhdom for religious as well as civic reasons (Adelelye, 1971, pp. 30-31; Tukur, 1979, pp. 95-113 and 204-206). An emir who owed allegiance to Sokoto was in charge in each emirate. Only the Bornu Sheikhdom was independent of Sokoto. The Lawans (village heads), the district heads and other officials were appointed by the Emirs and the Shehu of Bornu.

A colonial administration supplanted this traditional system of administration in 1902. By 1910, the traditional system had been adopted and adapted to establish the Native Authority (NA) system of Indirect Rule. What was then Bornu Province (Figure 3.4) had five NAs. Each emirate was a Native Authority. The NAs were reorganized into districts and the districts into villages. Bornu Emirate was largest in size and population and most powerful in the province.

Fig. 3.4

Bornu Province—Native Authorities



Sources Perham. 1937 and
Survey Dept Lagos 4000/413/5-53

IJERE

The NA administration was highly centered around the Emir appointed by the British colonial administration. The Emir appointed his friends, inlaws, and relatives to be village heads, district heads, and other officials (Perham, 1937, pp. 106-107). The NA system of administration was highly centralized around the Emir who ruled at the pleasure of the Colonial Administration.

The power wielded by the ruling class was greatly enhanced during the colonial period. The traditional methods used by the people to make their rulers responsible and responsive was taken away from them and vested in the British Colonial Administration (Fitzpatrick, 1970, p. 121; Murray, 1929, pp. 274-279; Crocker, 1936, pp. 213-223; Abubakar, 1946, p. 22).

Murray stresses that the NA system renders the people impotent to participate in matters affecting their well-being, does not encourage complaint and lays emphasis on Koranic education. Consequently, relationships in the NA system are primarily top-down, a factor that is reinforced by Islamic religion which requires absolute obedience from superiors.

The NA system of local government (with minor reforms) continued until 1976 when local government reform came into effect throughout the Nigerian federation. The reform is based on the premise that people who elect their

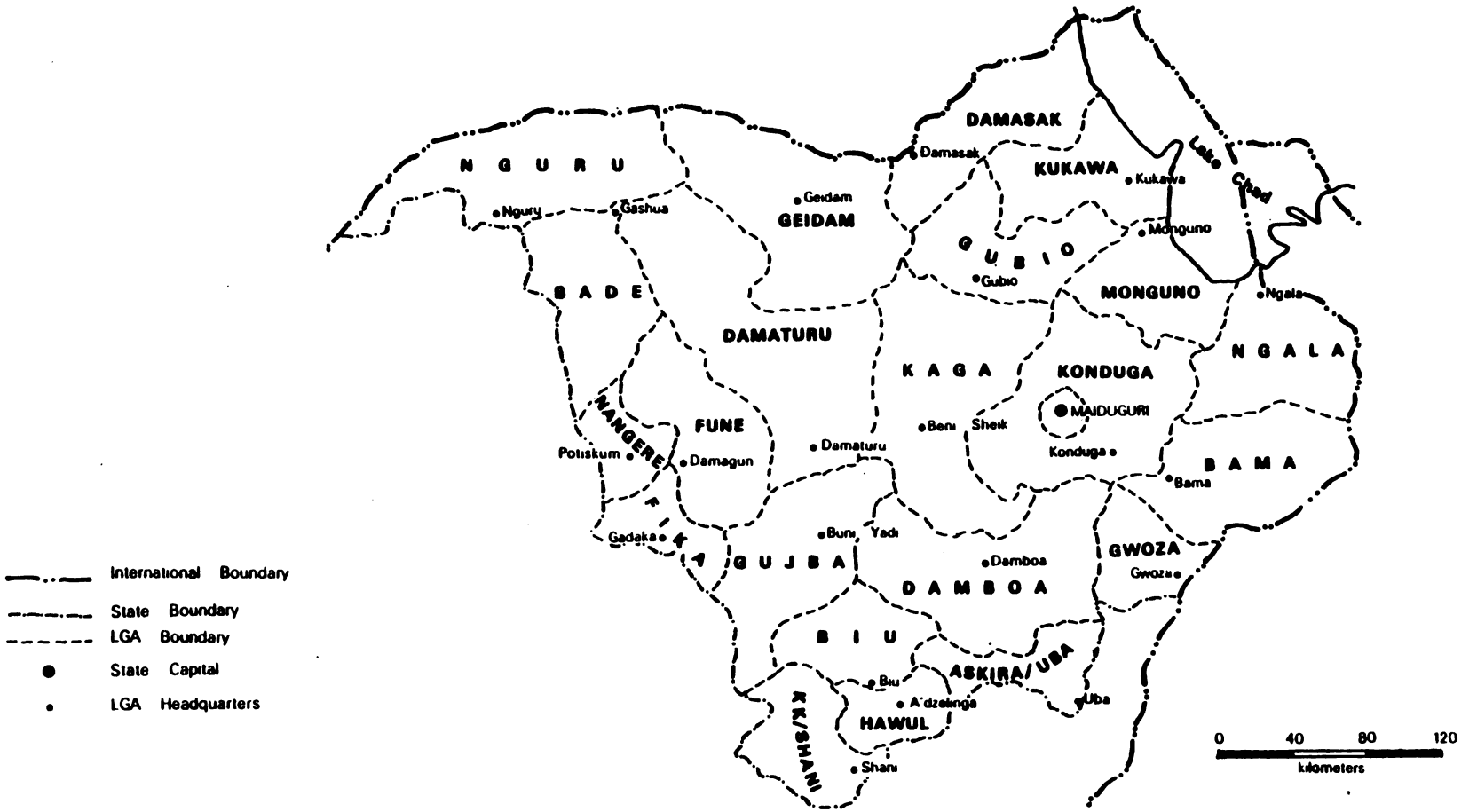
chosen representatives are thereby stimulated to care for their own welfare. In Borno State, the reform led to the creation of 23 administrative units--Local Government Areas (Figure 3.5) which still retain important elements of the NA system. Village and the district structures are retained and a third tier--the Local Government Areas (LGAs)--are created. Many of the LGAs are conterminous with the districts, though small districts are merged to form an LGA. Although LGA local government is democratic, village and district heads continue to be the sole representatives of their areas. The Emirate Councils remained but without their jurisdiction over the districts. They perform only traditional functions.

The district local government now consists of the district head and the village heads sitting in an ad hoc basis. The village head and his bulamas (ward heads) constitute the village local government. Since village and district heads hold their positions for life, unless removed by the State Government, it is difficult to determine to what extent different village and district heads are responsible to local constituencies.

Members of the LGA local government are elected by popular vote for a three year term. However, this aspect of participation was pre-empted by the Borno State Government in 1979 when the life of the council elected

Fig. 3.5

Borno State—Local Government Areas



Source: Ministry of Land and Survey, Maiduguri

IJERE

in 1976 expired. Four members were appointed to each LGA, as portfolio councillors, to manage the affairs of the council. This mini-cabinet of "portfolio councilors where members individually had charge of a department or group of departments for whose efficiency they are responsible..." (Gboyega, 1979, p. 36) constitutes the LGA local government.

The functions of the village and district local governments are not spelled out. They are expected to collaborate with the LGA councils for the well-being of their people. The functions of the LGA councils include markets, motor parks, primary and adult education, sanitation inspection, information, libraries, agricultural extension and roads (Oyewole, 1978). Throughout Nigeria LGA financing to bring all these to fruition depends almost entirely on grants (Ola, 1979, p. 19). Further problems for local governments include low caliber of the officials, undue state government interference and excessive politicization. Such stresses weaken the local governments and encourage greater central control of local government affairs.

Cooperatives

There were in 1979 548 village cooperatives in Borno State with a membership of 107,402 and a share capital of N398,581.25 (Borno State 1978/79). Most of

these cooperatives are farming cooperatives which the state government uses as conduits for government lending to the rural sector.

The cooperatives are under the Ministry of Trade, Industry and Cooperatives. Their effectiveness in promoting agricultural development is hindered by coordination problems between the Ministry of Trade, Industry and Cooperatives, that gives out the loans, and the Ministries of Agriculture and Animal Health that provide the extension services.

Summary

In this chapter pertinent physical and human environments under which local organizations, in Borno State, advance rural development are examined. The main handicap in improving such circumstances is the awkwardness of the organizational structure. Yet, physical, cultural and administrative influences cannot be discounted.

The physical environment, especially rainfall, has great impact in developing areas, such as Borno State, where technical capacity is low. The history of the different administrative structures influences administrative organizations' activities especially at the local level. The structures play a critical role in rural development. Their influence on spatial patterns of development also is worthy of analysis.

CHAPTER IV

RESEARCH DESIGN AND METHODOLOGY

Data for this study were obtained from documents of the Borno State Ministries, responses to a formal questionnaire and situational observation during the period of the research. The questionnaire (Appendix A) involves a combination of open and closed response questions. These were administered to the chairmen and heads of local organizations in selected LGAs, districts and villages using the interview method.

The Sample Design

It was not possible to consider all the administrative units (LGAs) in Borno State within the limitations of time and money available. Consequently, a sampling of local organizations in selected areas were studied.

Spatial units in different stages of development were represented in the sample. The sampling was done in this manner:

1. The LGAs were ranked based on their perforance on rural development indicators.
2. The ranks of each LGA on the indicators were totaled.

3. A final rank was computed to show the relative position of each LGA on the development scale.

4. The quartile method was used to divide the LGAs into four stages of development.

5. A stratified random method was used to select two LGAs from each category of the development scale. Thus eight LGAs were selected.

6. Eight villages were randomly selected (from each of the 8 LGAs) using random table numbers (Gregory, 1963, p. 91). Thus 64 villages were selected as a maximum number of villages where local organizations were studied.

Sample Frame and Sample Size

The multi-stage nature of the sampling design requires different sample frames with different sample sizes. Eight (34.7 percent) LGAs were selected for the field study. Due to the inaccessibility (by car) of some villages selected in the sample, ten replacements were made. Despite this flexibility, not enough replacements could be effected in five of the LGAs (Table 4.1). The final study was carried out in 53 (30.1 percent) of the villages (Figure 4.1).

The timing of the research in the dry season and the elimination of inaccessible villages introduce spatial and dry season biases in the analysis (Chambers 1981). The result was that only responses from the better-off side of the study area were collected. These responses came from 8 chairmen of LGA councils, 8 district heads, 53

Table 4.1.--Distribution of Sample Villages in Borno State by LGAs

LGA	Total No. of Villages	No. of Sample Villages	Percentage of Villages
Bade	22	7	31.8
Damboa	19	7	36.8
Fika	26	8	30.8
Gubio	27	5	18.5
Gujba	15	8	53.3
Kukawa	19	4	21.1
Kwaya	22	8	36.4
Mongonu	21	6	28.6
Total	171	53	30.1

Source: Survey data.

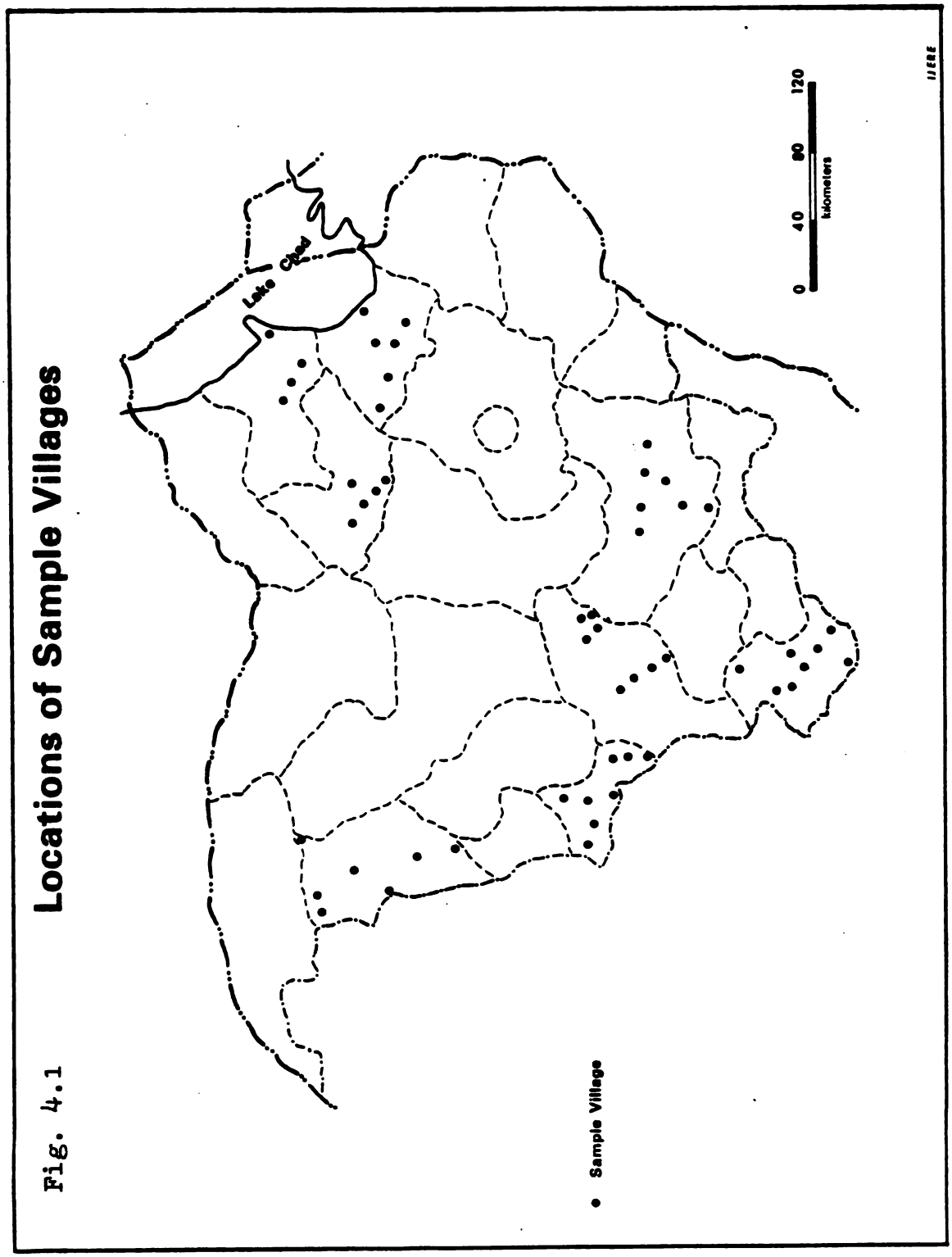


Fig. 4.1
Locations of Sample Villages
Lake Chad
0
40
80
120
kilometers
• Sample Village
IIERE

village heads, 46 heads of village cooperatives and group farmers' associations and heads of four Christian Fellowship groups.

Collection of Data

The first data collected were secondary data on rural development indicators used in computing the development scale on page 69.

A pilot study to verify the suitability of the questionnaire was undertaken. The questionnaire was pretested in two villages in Konduga LGA in January 1982. The questionnaire was subsequently revised based on feedback and finally used for the study.

Significant features of the revision are the elimination of political organizations and Islamic religious organizations as objects of study. Frequent tensions between the two major parties and the rise in Islamic fundamentalism in the state had led to conflicts and deaths in some areas. It was risky and probably unproductive to investigate these two organizations. Therefore, some explanatory information may have been lost in the analysis of the processes of rural development. Since neither organization is constitutionally responsible for rural development, it is unlikely that the analysis has been significantly affected.

Administration of the Questionnaire

The first phase involved the administration of the questionnaire (Appendix A) to the chairmen of local organizations at the LGA, district and village levels. A group method, involving the heads of organizations and interested people, was used in some of the interviews. The debates generated on such occasions were illuminating, especially with regard to development problems and priorities.

Due to the diversity of local languages and dialects, and the need to get people who know the areas well, field assistants were recruited in each LGA. The assistants were primary school teachers and civil servants (at the LGA headquarters) who could translate fluently and knew the tracks to the settlements where the heads of village organizations reside. The second phase included sorting out correspondence at the LGA headquarters according to subjects and periods. Correspondence clerks who were conversant with the filing system as well as the location of the files at the LGA secretariat contributed necessary expertise to this task.

Analysis

The final phase involves the analysis of the data and presentation of the results. For the analysis, rural development is viewed as a dependent variable whereas the activities of local organizations in areas of rural development, political patronage and factionalism and the history of the administrative structure are independent variables responsible for patterns of development in the state.

Various statistical tests are used in the analysis. Simple measures involving descriptive statistics are used for initial familiarization with the data and for the analysis. A more detailed examination of the data on linkages between village local governments and the LGA councils uses students' t-test. These tests yield coefficients of correlation to show the strength and direction of relationship between the independent variable (linkage) and the dependent variable (level of rural development).

Specifically descriptive statistics and cross-tabular tabulation of responses are used to test hypotheses 1, 2, 4 and 5. The t-test is used to test 3 and the Spearman rank correlation is used for hypotheses 6 and 7.

Data Limitations

It is noted that data, especially on development indicators, are difficult to come by in developing countries including Nigeria. Although data are supposed to be collected by the Ministries, they are rarely kept. Some information that is available may not be up to date, may contain some gaps that neutralizes its usefulness, or may not be reliable. Consequently, only five indexes of rural development: road accessibility, agricultural technology, agricultural extension, medical services and education are used to derive patterns of rural development in this study. Variables used for measuring these indexes (Table 5.1), except two for the education index, focus on development inputs. Data on outputs for the other indexes such as agricultural yield, death rate and accessibility by road and rail would have given a more realistic pattern of rural development in the state.

Reliability of the spatial patterns of development may be affected because the scores are standardized with the 1980/81 population estimates (Appendix B) which are based on the controversial 1963 census in Nigeria. In some instances the projections are not easily reconcilable. For example, there are discrepancies in the projections used by the Ministry of Local Government.

Another major limitation pertains to data with regard to correspondence and visits used in determining the extent of linkage. The amount of correspondence at the village and district levels and visits at all levels is derived from respondents' recall. It is possible that some respondents over-estimated and others underestimated the amount of correspondence and numbers of visits in 1981. This is equally true about their responses to the contents of the correspondence and about visits on which development effort is based. In the case of correspondence at the LGA level it was observed in the field that not all relevant correspondence was available. What to and what not to file depends on the judgement of the officials. However all the important correspondence is filed. Such uncertainties require that the patterns of development generated and the findings on linkage be interpreted with caution.

CHAPTER V

DETERMINATION AND ANALYSIS OF PATTERNS OF RURAL DEVELOPMENT

The objective of the following chapter is to show the magnitude of spatial inequalities in Borno, using scaled indexes of rural development, and to describe how these indexes reflect development and underdevelopment. The procedures used in computing scales of development, simulations of spatial patterns (based on performance on the scale) and descriptions of the patterns are presented in this chapter.

Measuring Development

The areal unit on which the data were collected was the LGA. Accordingly, all calculations presented in this chapter were based on this administrative unit.

Achievement in rural development was determined here by computing the performance of each LGA on five indexes of rural development: (1) education, (2) health care facilities, (3) accessibility (all-weather roads), (4) agricultural technology and (5) extension services (Appendices C, D and E). Access to safe water supply,

another important index of development, could not be included because data were not available on two vital sources of water supply: local wells and perennial streams.

Any index of rural development, like development itself, is a multi-faceted phenomenon and requires the measurement of more than one variable. Table 5.1 shows the variables used for each index. Because of lack of relevant data, only five indexes were used to derive patterns of rural development. Furthermore the variables used in measuring the indexes focus mainly on rural development inputs. These variables reflect on economic aspects of rural development. Data on rural development outputs such as agricultural yield, mortality rate, accessibility by different classes of roads, literacy rate, percentage of children of school age attending school, daily water consumption per capita, and extent of participation would have given a more realistic pattern of rural development in the state.

The performances of the LGAs on four of the five indexes used (education, health care facilities, agricultural technology and extension) were computed using location quotient (LQ) analysis. LQs measure socio-economic conditions based on per capita distribution and were computed using Isard's formula (1963, p. 124):

Table 5.1.--Variables used for Measuring Indexes of Rural Development.

Index	Variable
Education	Primary schools primary school enrollment Post primary school enrollment
Health Care Facilities	Doctors Midwives Dispensaries Hospital beds
Agricultural Technology	Farm tractors Other farm implements
Extension Services	Extension workers
Accessibility	Length of roads

$$\frac{S_i/S}{N_i/N}$$

where S_i is the size of the variable in LGA_i
S is the number of the same variable in all the LGAs
N_i is the population of the LGA_i and
N is the population in all the LGAs.

An LQ which exceeds unity indicates that an LGA has more than its fair share of the development attribute measured, while an LQ of less than unity indicates that the region is disadvantaged in distribution of that attribute.

The LQ of each index, in this study, was derived by calculating and then averaging the LQs for all the variables that make up that index. For example, the education index LQ for each LGA was obtained by summing the LQs for numbers of primary schools, primary enrollments and post-primary pupil enrollments and dividing by three. The use of the mean LQ for determining the performance of the LGAs on the indexes gives equal weight to all the variables. This may not provide for optimum accuracy, but was considered sufficient for the purposes of this study, since no weighting guidelines for the variables were available.

The accessibility index (AI) is based on distance from a road. For this study it was assumed that any point within 5km (straight line distance) on either side of a road benefits from that road, while points farther

than 5km from the road do not benefit from it. Thus, along any road, a corridor 10km wide is considered to be the area where the presence of a road has an appreciable impact on development.

The accessibility index (AI) formula used for this study was

$$AI_k = \frac{\sum dij \cdot W - (W^2 \cdot x)*}{A_k}$$

where dij is the summed length of various segments of road within an LGA,
A_k is the area at LGA_k,
W is the width of the corridor (10km) and
x is the number of intersections (vertices).

The AI index indicates the proportion of the LGA that lies within 5km from a road. An AI less than unity indicates that there are portions of the LGA that are inaccessible by this standard. An AI more than unity indicates that the entire LGA is accessible, or within the 10km corridors created by the area's network of roads.

Determination of Spatial Patterns

The LQs of each of the LGAs on the four indexes of education, health care facilities, agricultural technology and extension, and their AI scores, indicate how the LGAs performed on these indexes of rural development. The four

---

*The formula was provided by Dr. Asefa Mehretu of the Department of Geography, Michigan State University.

LQs and the AI for each area were added and divided by five to obtain a mean LQ of development for each area (Table 5.2). Three methods of manipulating the LQ and AI scores were used in generating patterns of development (Table 5.3).

The first method was based on the mean LQ. The distortion arising from this measure is related to weaknesses inherent in using an average to generalize for a population. Four categories (scales) of performance on the development scale, based on the clustering of scores, were derived from the mean LQ of the LGAs. The first (highest) category had five LGAs, the second category had five LGAs, the third category had five LGAs and the fourth (last) category had eight LGAs.

The second method ranked the LGAs by scores obtained on each index. Thus LGAs were ranked from 1 (the LGA with the best performance) to 23 (the LGA with the least or worst performance). The ranks of each LGA on the five indexes were summed (Table 5.3). Four categories (levels) of development were then derived, using the cluster method to classify the sum of the ranks.

The third method was to rank the LGAs according to their performance on the summed ranks, which were arranged in ascending order (Table 5.3). Gwoza came first with 11 points and Gubio the last, with 108.5 points. The LGAs were then divided into quartiles: the first ranking

Table 5.2.--Location Quotient Scores on Indexes of Development in 1980/81.

LGA	Edu.	Health	Accessi-bility	Agric. Tech.	Exten-sion	Mean
Maiduguri	1.49	6.90	6.60	1.31	1.70	3.60
Gwoza	1.94	2.41	.30	2.39	2.71	1.95
Biu	1.56	1.01	.20	1.64	2.59	1.40
Askira/Uba	1.32	1.40	.36	1.46	2.26	1.36
Bade	1.74	1.73	.25	1.56	1.45	1.34
Fika	1.20	.99	.35	2.26	.70	1.10
Gujba	1.22	.36	.11	1.67	1.97	1.06
Bama	1.24	1.01	.17	1.27	1.40	1.01
KK/Shani	1.56	1.01	.18	.62	1.38	.95
Hawul	1.56	1.01	.32	.59	1.19	.93
Ngala	.93	.61	.20	1.64	.90	.85
Nangere	1.20	.99	.75	.31	.70	.79
Nguru	.82	.84	.08	1.43	.63	.76
Damboa	1.31	.18	.08	1.22	.92	.74
Damaturu	.78	.27	.27	1.00	.80	.62
Damasak	.40	.17	.00	1.36	.79	.54
Fune	.64	.19	.12	.84	.93	.54
Monguno	.78	.18	.26	.89	.49	.52
Konduga	.81	.23	.26	.85	.37	.50
Kukawa	.40	.17	.12	1.01	.81	.50
Geidam	.57	.58	.05	.63	.48	.46
Kaga	.71	.11	.13	.41	.78	.42
Gubio	.40	.17	.06	.53	.33	.29

Source: Calculated by the author.

Table 5.3.--Different Classifications of Patterns of Development.

Mean LQ		Sum of Ranks		Ranked Sum of Ranks	
LGA	LQ	LGA	Ranks	LGA	Final Rank
Maiduguri	3.60	Gwoza	11.0	Gwoza	1
Gwoza	1.95	Maiduguri	23.0	Maiduguri	2
Biu	1.40	Askira/Uba	24.0	Askira/Uba	3
Askira/Uba	1.36	Bade	27.0	Bade	4
Bade	1.34	Biu	28.5	Biu	5
Fika	1.10	Fika	44.5	Fika	6.5
Gujba	1.06	Hawul	44.5	Hawul	6.5
Bama	1.01	Bama	47.5	Bama	8
KK/Shani	.95	Gujba	49.0	Gujba	9
Hawul	.93	KK/Shani	50.5	KK/Shani	10
Ngala	.85	Ngala	53.0	Ngala	11
Nangere	.79	Nangere	63.5	Nangere	12
Nguru	.76	Damaturu	66.5	Damaturu	13
Damboa	.74	Damboa	69.0	Damboa	14
Damaturu	.62	Nguru	71.5	Nguru	15
Damasak	.54	Konduga	77.5	Konduga	16
Fune	.54	Monguno	78.5	Mongonu	17
Monguno	.52	Fune	79.5	Fune	18
Konduga	.50	Kukawa	85.5	Kukawa	19
Kukawa	.50	Damasak	90.0	Damasak	20
Geidam	.46	Kaga	93.5	Kaga	21
Kaga	.42	Geidam	94.0	Geidam	22
Gubio	.29	Gubio	108.5	Gubio	23

Source: Classified by the author.

comprised 6 LGAs, the second ranking included 6 LGAs, the third ranking also involved 6 LGAs and the fourth (least) ranking contained 5 LGAs (Table 5.3).

In observing the results thus far obtained, it is already apparent that the three methods are not independent of one another. There are only a few discrepancies in upward or downward movement between ranks, indicating that the differential categorizations of rural development derived from these methods were quite similar. For this study, however, the first method was chosen because it relates to the actual magnitude of distributions of socio-economic conditions in the state. Accordingly, the clustering of mean LQs has been used to derive categories of rural development in the composite pattern, as well as in other spatial patterns.

Further insights into the extent of spatial inequality in the distributions were derived graphically and mathematically using the Lorenz curve and other statistical measures (Darden and Tabachneck, 1980). The Gini coefficient used in analyzing this inequality was derived from the formula

$$G = \frac{1}{2} \sum_{j=1}^{n} S_j - S^*j$$

where S_j is the cummulative percentage of the variable being measured and S*j is the cummulative percentage of the

population in j (Smith, 1977, pp. 133-134; Darden and Tabachneck, 1980). Perfect equality of the measures of distribution is zero while a score of 100 indicates perfect inequality.

Description of Patterns of Rural Development

Composite Pattern

Table 5.2 summarizes rural development achievement in the LGAs based on each areas mean LQ on the combined total of the five indexes. Many LGAs (in comparison with the favored LGAs) are disadvantaged in all the indexes. The most developed areas (first and second categories of LGAs in Figure 5.1) stretch east and south from the northwestern corner of Borno State to its eastern border in a crescent-shaped pattern. The less developed areas (third and fourth categories of LGAs) are in the northern and central parts of the state. The disadvantaged position of the LGAs in the fourth category is evident in their poor LQ performances which range between .29 and .54.

The composite pattern of rural development (Figure 5.1) differs greatly from the pattern of population distribution in Figure 3.4. Since the indexes used in computing categories of rural development reflect mainly top-down development inputs, the contrast in the two patterns suggests that population distribution is not a

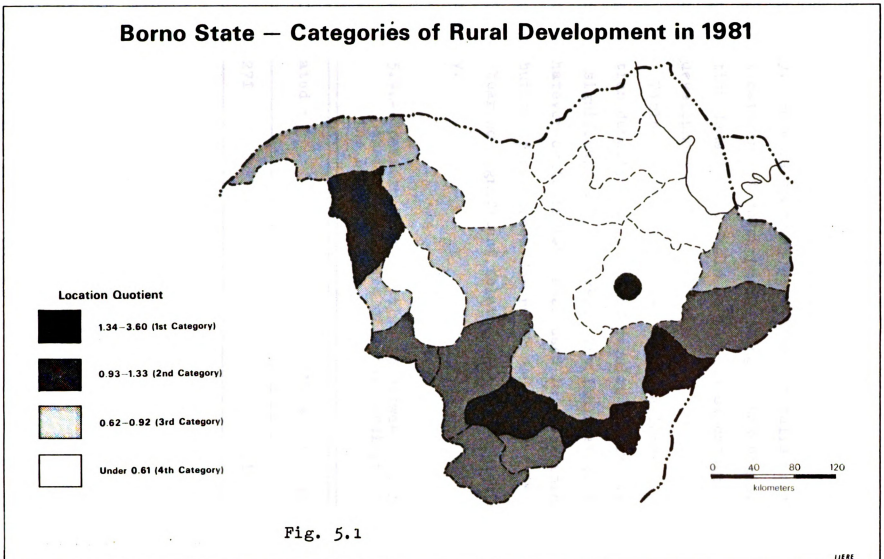

Borno State — Categories of Rural Development in 1981
Location Quotient
1.34–3.60 (1st Category)
0.93–1.33 (2nd Category)
0.62–0.92 (3rd Category)
Under 0.61 (4th Category)
0 40 80 120
kilometers
IJERE

Fig. 5.1

critical factor in the allocation of resources for rural development. Specific rankings for two LGAs confirm this anomaly. Bade is sparsely populated but falls in the highest category of development; Monguno has higher population density but falls in the lowest category of rural development.

Table 5.4 indicates that the relationship between population density and levels of development in the LGAs is not significant at .05 level. The implication here is that whatever criteria have been used in determining the distribution of resources for rural development in Borno State, bear no significant relationship to population density.

Table 5.4.--Spearman Rank Correlation between Population Density and Levels of Rural Development in the LGAs.

Calculated r_s	Level of Significance
.271	.105

The anomaly in the pattern of development investments has been compounded by the technology used in realizing rural development. The emphasis has been on inputs of high technology such as mechanical ploughs, boreholes and hospitals. There are problems in the use of such sophisticated

equipment arising from financial and technical constraints. For example, pump and plough maintenance are key problems in modernizing access to safe water supply and agricultural development. Frequent breakdowns of these equipment (evident in the area during the period of the research) and long waits for repairmen to come from Maiduguri have put more than half of the boreholes and tractors in Borno out of action. Consequently, deep wells equipped with pulleys and buckets continue to be the main source of water for those villages lucky enough to have one, while ox-drawn ploughs are used by a few who can afford them. Thus improvements in and provision of more manually operated deep wells and ox-drawn ploughs would seem to be more practical enhancements to rural development in the area.

The low rural development performance of three LGAs, Kukawa, Monguno and Ngala in which Chad Basin Development Authority projects are sited points to the limitations of using capital intensive development projects as means of diffusing development. Two of the six lowest mean LQs for the 23 areas surveyed (Table 5.2) are for LGAs where the projects are located. Kukawa scored .50 and Monguno scored .52. Ngala in the third category scored .85. Thus, evidence from the mean LQ scores suggests the inability of such top-down capital intensive enclave development to diffuse development

impulses to the surrounding areas. On the contrary, village and district heads in Kukawa and Monguno LGAs complain that lowering of the waters of Lake Chad as a result of these projects has adversely affected fishing as well as rice cultivation in the fadamas along the lake shores. Thus, to what extent rural residents of these LGAs benefit from the multi-million naira development projects in their areas; is an important question for future research.

The composite pattern (Figure 5.1) derived from the five indexes show a regional pattern in levels of development. For example, three out of five LGAs in the first category are in the southern and southeastern periphery while most of the LGAs in the northeast (Damasak, Monguno, Kukawa and Gubio) are in the fourth category. With the 600mm isohyet as the boundary between Sudan and Sahel ecological zones (Campbell and Katz, 1980, p. 59) most of the LGAs in the first and second categories are in the Sudan zone while most of the LGAs in the third and fourth categories are in the Sahel zone. However, the regional concentration of the fourth (least) category of LGAs (Figure 5.1) suggests that other factors may have contributed immensely to the present pattern of rural development.

Ecological efficiency does not provide the only and probably not even the principal explanation for the

present pattern of development in these parts of West Africa (Campbell and Katz, 1980). Historical, economic, political and social factors are all important in the explanation of the patterns.

Historically, northeast region around Lake Chad (now relatively underdeveloped) was the ecumene of Bornu Empire in pre-colonial times (Brenner, 1973; Hallam, 1977, pp. 157-205). The region performed an integrative role in trans-Saharan trade and hajj (Moslem pilgrimage) movements to the Middle East (Cohen, 1966, pp. 12-19; Johnston and Muffett, 1973, pp. 38-60). Colonization led to the fall of Bornu Kingdom and the relocation of its capital from Kukawa to Maiduguri. The interplay of these factors set in motion a chain of social, political and economic processes which result in development and underdevelopment.

The northeast region lost its integrative role in the development of the area. Maiduguri became the focus of trade, administration and transportation. New routes and new economic order based on cash economy led to changes in the social and economic structures. Thus changes in location, political structure, social structure and patterns of production and consumption together with the ecological factor are jointly responsible for the present patterns of rural development in Borno State. Details of these spatial inequalities in rural development are described in patterns that follow which are based on single indexes.

Education Pattern

The education patterns (Figure 5.2a) are based on the LQ performance of the LGAs on three variables: numbers of primary schools, primary school enrollments and post-primary school enrollments (Table 5.5). Four categories of LGAs have been determined from the educational data. The first category of LGAs (Figure 5.2a) has LQs ranging between 1.49 and 1.94 while the fourth category of LGAs has LQs ranging between .40 and .71. There are 11 educationally disadvantaged LGAs with mean LQs less than unity (Table 5.5).

Figure 5.2a shows that the LGAs with high education achievement as measured by the three variables (except Maiduguri and Bade) are located in the south and south-east. Four of the five LGAs in the fourth category are in the northern part of the state.

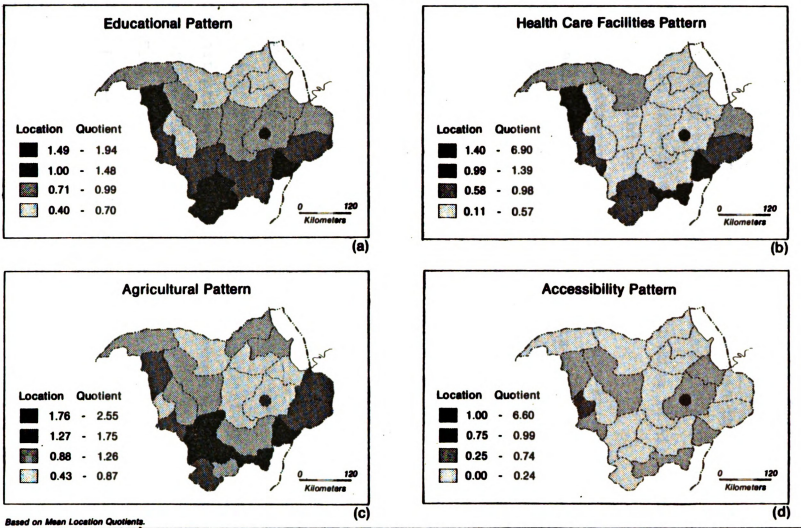
Figure 5.3 shows the Lorenz curves and other measures that indicate the distributions of primary schools and primary school enrollment in the LGAs. Figure 5.3a, showing a Gini index of 19.217, indicates the degree of overall inequality in the distribution of primary school enrollment in the state. The segregation index of 13.431 shows that there is not much concentration, although the disadvantaged population is high, as indicated by a fair-share point of 54.607. Figure 5.3b presents the

Table 5.5.--Location Quotient Scores on Education Variables in 1980/81.

LGA	No. Pri. Schs.	Pri. Sch. Enro.	Post Pri. Enro.	Mean LQ
Gwoza	1.51	2.19	2.13	1.94
Bade	2.19	1.69	1.36	1.74
Biu	1.82	1.21	1.66	1.56
Hawul	1.82	1.21	1.66	1.56
KK/Shani	1.82	1.21	1.66	1.56
Maiduguri	1.17	1.22	2.08	1.49
Asjura/Uba	1.24	1.13	1.61	1.32
Damboa	1.72	1.01	1.20	1.31
Bama	1.01	1.53	1.18	1.24
Gujba	1.20	1.22	1.26	1.22
Fika	1.09	1.25	1.26	1.20
Nangere	1.09	1.25	1.26	1.20
Ngala	1.03	.98	.79	.93
Nguru	.82	.98	.66	.82
Konduga	1.01	.85	.59	.81
Monguno	.72	.87	.76	.78
Damaturu	.74	.91	.71	.78
Kaga	.55	.90	.69	.71
Fune	.70	.53	.69	.64
Geidam	.59	.52	.61	.57
Kukawa	.38	.48	.36	.40
Damasak	.38	.48	.36	.40
Gbio	.38	.48	.36	.40

Source: Calculated by the author.

Fig. 5.2 **Educational, Health Care Facilities, Agricultural, and Accessibility Patterns**



Source: Based on Mean Location Quotients.

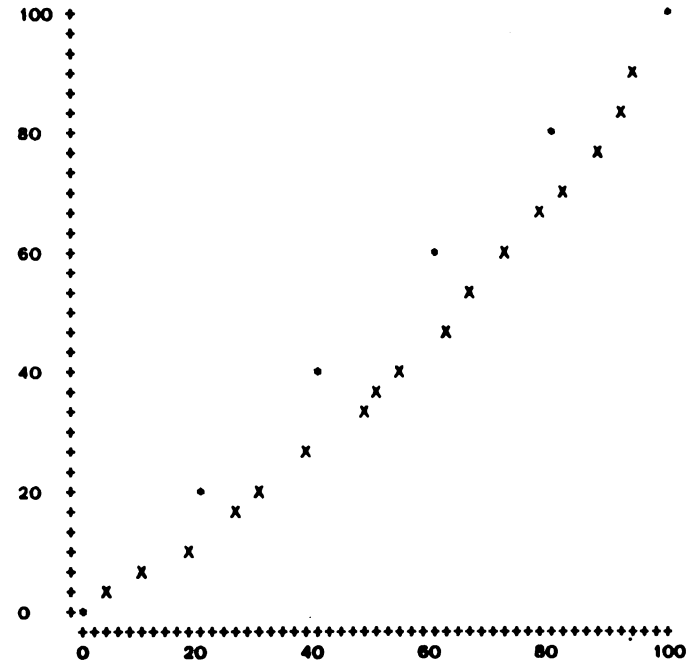
distribution of primary schools in the same way. With a Gini of 24.971 and a segregation index of 17.779 primary schools are distributed less equally between the LGAs than the primary school enrollment because the disadvantaged population in primary schools' distribution is higher with a fair-share point of 70.175.

The patterns discussed here do not reveal the fact that overall educational development is low in the state. Table 5.6 shows that the percentage of the population enrolled in primary schools is low for most of the LGAs, ranging between 38 and 8.4. The 38 for Gwoza suggests that most children are enrolled in schools while only few children attend primary schools in the three northeastern LGAs with 8.4. The percentage of population enrolled in post-primary schools is much lower. It ranges between .84 and .14 percent. The relative scarcity of higher education in the state is supported by the fact that only about 2.3 percent of the total primary school population go on to the post-primary level. This percentage is much lower in many of the LGAs.

Some of the LGAs are better served than others in terms of population per primary school. Kukawa, Gubio and Damasak are the least served LGAs with the highest ratios of population per primary school (6,100:1). Even taking into account the dispersed settlement pattern in the

Lorenz Curves, Gini, Segregation and Fair-share point Indexes for Primary School Enrollments and Primary Schools in Borno State, 1981

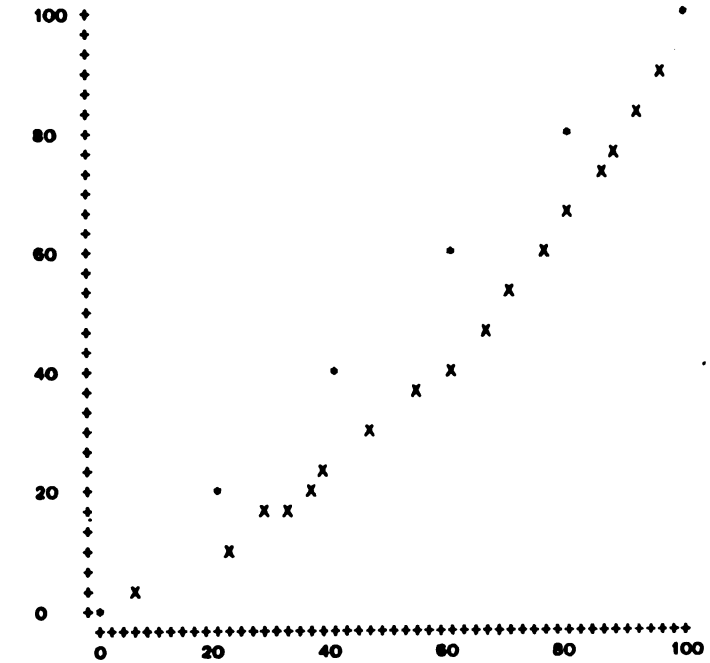
(a)



VARIABLE ON THE ABCISSA = SCHENR
VARIABLE ON THE ORDINATE = POP

GINI INDEX = 19.217
INDEX OF SEGREGATION = 13.431
FAIR-SHARE POINT = 54.607

(b)



VARIABLE ON THE ABCISSA = PRISCHS
VARIABLE ON THE ORDINATE = POP

GINI INDEX = 24.971
INDEX OF SEGREGATION = 17.779
FAIR-SHARE POINT = 70.175

Fig. 5.3

Table 5.6.--Percentage of Population Enrolled in Schools and Population per Primary School in 1980/81.

LGA	Pop. per Pri. Sch.	% Pop. Enrolled	
		Primary	Post Primary
Gwoza	1,550	38.0	.84
Bade	1,070	29.3	.53
Biu	1,280	21.1	.66
Hawul	1,280	21.1	.66
KK/Shani	1,280	21.1	.66
Maiduguri	1,930	21.2	.82
Askira/Uba	1,880	19.6	.63
Damboa	1,370	17.6	.48
Bama	1,310	26.7	.47
Gujba	1,950	21.3	.50
Fika	2,120	21.7	.50
Nangere	2,120	21.7	.50
Ngala	2,260	17.0	.32
Nguru	2,840	17.2	.26
Konduga	2,310	14.9	.24
Damaturu	3,140	15.8	.28
Monguno	3,250	15.2	.30
Kaga	4,240	15.7	.27
Fune	3,340	11.1	.27
Geidam	3,970	9.1	.24
Kukawa	6,100	8.4	.14
Damasak	6,100	8.4	.14
Gubio	6,100	8.4	.14

Source: Calculated by the author.

area, such a ratio is quite high.

The educational patterns noted suggest to the researcher two factors which are beyond the scope of this study but deserve mention at this point because of their possible influence on the patterns found here. First, the LGAs with LQs greater than one on the education index (Gwoza, Bade, Biu, Hawul, KK/Shani, Askira/Uba, Damboa, Gujba, Fika and Nangere) are largely inhabited by minority groups that, in pre-colonial times, were in varying degrees subjugated by the dominant Kanuris. Second, these LGAs are areas where Christian Missions have been active. The likely influence of these factors raises the issue of whether or not ethnicity or religion are determinant variables affecting educational development in the state. While the issue is beyond the scope of this work, the patterns noted above suggest questions needing further study in future research.

The Health Care Facilities Pattern

The pattern is based on the mean LQ scores derived from data on numbers of doctors, midwives, dispensaries and hospital beds (Table 5.7). Figure 5.2b shows that the LGAs with relatively more of these medical services index scores of one and above are located in the northwestern, southern and southeastern periphery of the state, while the northern and central LGAs scored relatively lower on this index of rural development.

Table 5.7.--LGA's Location Quotient Scores on Health Variables in 1980/81.

LGA	Doctors	Midwives	Dispen-saries	Hosp. Beds	Mean LQ	Rank
Maiduguri	10.66	8.49	1.10	7.38	6.90	1
Gwoza	1.43	2.22	1.76	4.24	2.41	2
Bade	.71	1.64	2.39	2.19	1.73	3
Askira/Uba	.80	1.85	1.72	1.24	1.40	4
Biu	.78	1.03	1.28	.98	1.01	6.5
Hawul	.78	1.03	1.28	.98	1.01	6.5
KK/Shani	.78	1.03	1.28	.98	1.01	6.5
Bama	.93	1.24	.86	1.01	1.01	6.5
Fika	.84	.83	1.46	.85	.99	9.5
Nangere	.84	.83	1.46	.85	.99	9.5
Nguru	.93	.72	.57	1.17	.84	11
Ngala	.00	.00	2.45	.00	.61	12
Geidam	.46	.51	.66	.72	.58	13
Gujba	.00	.00	1.44	.00	.36	14
Damaturu	.17	.33	.52	.06	.27	15
Konduga	.00	.11	.84	.00	.23	16

Table 5.7.--Continued.

LGA	Doctors	Midwives	Dispen-saries	Hosp. Beds	Mean LQ	Rank
Fune	.00	.00	.78	.00	.19	17
Damboa	.00	.00	.75	.00	.18	18.5
Monguno	.00	.00	.75	.00	.18	18.5
Kukawa	.00	.13	.57	.00	.17	21
Damasak	.00	.13	.57	.00	.17	21
Gubio	.00	.13	.57	.00	.17	21
Kaga	.00	.00	.47	.00	.11	23

Source: Calculated by the author.

Figure 5.4 shows the Lorenz curves and other measures which define the extent of spatial inequality in three of the variables: doctors, midwives and dispensaries. Overall inequality in distribution is relatively high for doctors and midwives but lower for dispensaries. The concentration of health personnel (doctors and midwives) is also high but lower for dispensaries. However, the fair-share points for all three are quite high, indicating that there are a relatively high number of LGAs that are disadvantaged in respect to the three variables. Because there are only nine hospitals in the state, the distribution of hospital beds exhibits inequalities similar to those found for doctors and midwives.

Table 5.8 shows a high concentration of doctors in Maiduguri where the doctor to population ratio is 1:4,800 as against 0:2.1 million in ten LGAs with 45 percent of the population. Midwives render vital services in the LDCs, particularly in light of the scarcity of physicians. The LGA best served with midwives is Gwoza where the ratio is 1:4,000 population. The worst served areas are the six LGAs where the ratio is zero midwife to 1.3 million people. The problems are exacerbated by the concentration of midwives in the LGA headquarters, many of which are far from where the majority of the population live. Consequently the services of the midwives are not available

Lorenz Curves, Gini, Segregation and Fair-share point Indexes for Doctors, Dispensaries and Midwives in Borno State, 1981

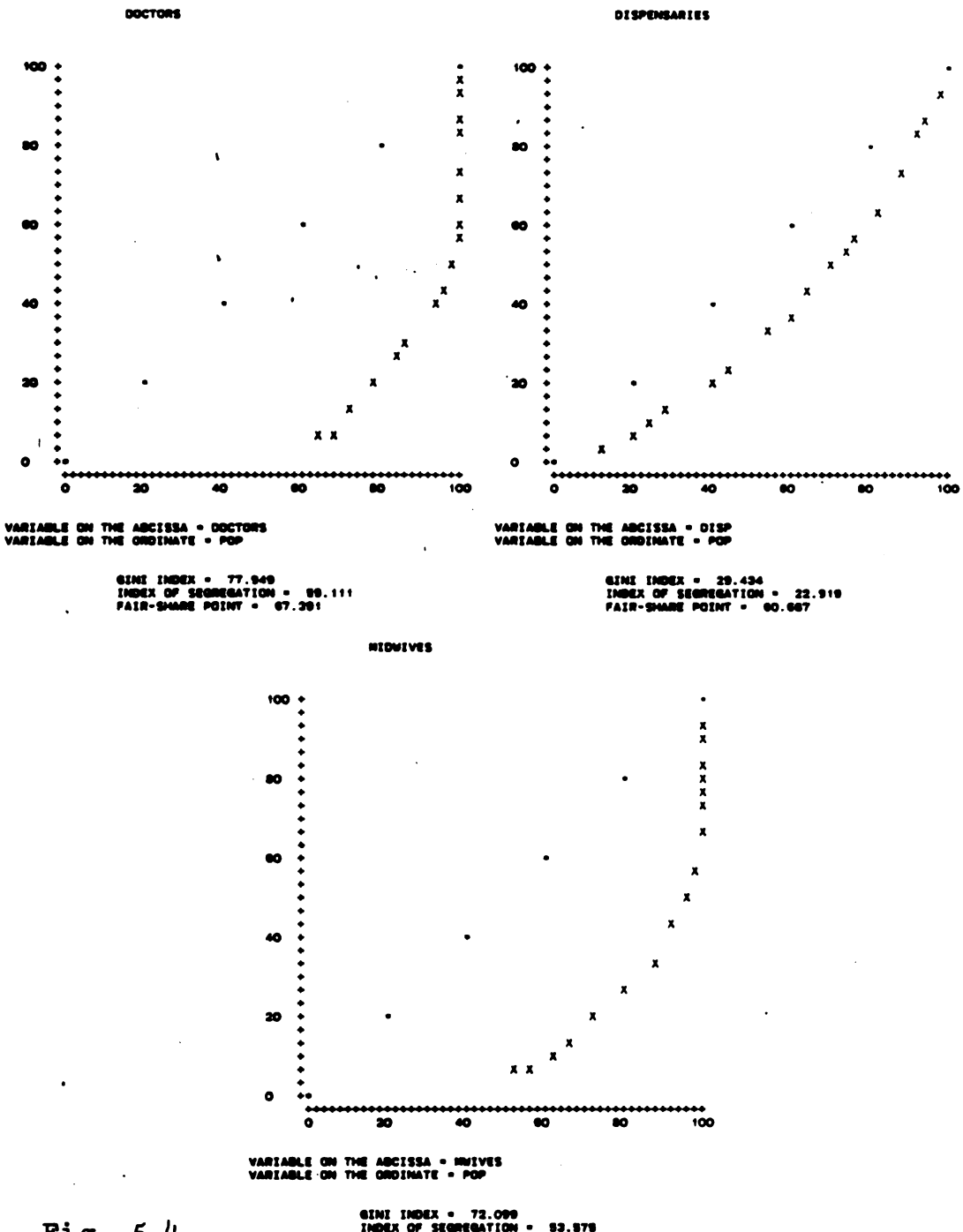


Fig. 5.4

Table 5.8.--Population (000) per Doctor, Midwife, Dispensary and Hospital bed in 1981.

LGA	Doctor	Midwife	Dispen-sary	Hosp. Bed
Askira/Uba	63.3	18.1	18.1	1.8
Bade	71.4	20.4	13.0	1.5
Bama	54.1	27.0	36.0	2.1
Biu	54.2	32.4	24.3	3.1
Damasak	None	243.3	54.1	None
Damaturu	297.1	99.0	59.4	49.5
Damboa	None	None	43.0	None
Fika	60.1	26.5	21.1	3.6
Fune	None	None	39.7	None
Geidam	108.5	65.1	46.5	4.2
Gubio	None	243.3	54.1	None
Gujba	None	None	21.6	None
Gwoza	35.3	4.0	17.6	.7
Hawul	54.2	32.4	24.3	3.1
Kaga	None	None	65.8	None
Konduga	None	295.5	36.9	None
Kukawa	None	243.3	54.1	None
KK/Shani	54.2	32.4	24.3	3.1
Maiduguri	4.8	15.1	28.1	.4
Monguno	None	None	71.8	None
Nangere	60.1	26.5	21.2	3.6
Ngala	None	228.4	12.7	None
Nguru	54.2	46.5	54.2	2.7

Source: Calculated by the author.

to most of the women within an LGA.

A dispensary is also considered a basic service in the LDCs because it provides basic medical services to the people. The inequality in the spatial distribution of dispensaries is not as high as the ratios of dispensaries to population indicate. This is because of differences in population between the LGAs. The ratio of dispensary to population for the LGAs range from 1:71,800 in Monguno to 1:12,700 in Ngala LGA (Table 5.8). What inequality there is in the distribution of dispensaries, however, is exacerbated by an alleged lack of availability of drugs in the dispensaries, according to leaders of village local governments.

The Agricultural Pattern

This pattern is based on the mean LQ scores (Table 5.9) for the two indexes of agricultural development. Figure 5.2c shows that the LGAs in wetter areas (Figure 4.2) are better served in the distribution of agricultural inputs. However, KK/Shani, Hawul, Damboa and Nangere in the wetter areas also performed poorly. This suggests that other factors, such as territorial principle in which resources are shared between LGAs and the spatial reorganization of administrative areas may contribute to differences in the performance of the LGAs

Table 5.9.--Location Quotient Scores on Indexes of Agricultural Development

LGA	Agric. Tech.	Ext. Serv.	Mean LQ
Gwoza	2.39	2.71	2.55
Biu	1.64	2.59	2.11
Askira/Uba	1.46	2.26	1.86
Gujba	1.67	1.97	1.82
Maiduguri	1.31	1.70	1.50
Made	1.56	1.45	1.50
Fika	2.26	.70	1.48
Bama	1.27	1.40	1.33
KK/Shani	.62	1.38	1.31
Ngala	1.64	.90	1.27
Damasak	1.36	.79	1.07
Damboa	1.22	.92	1.07
Nguru	1.43	.63	1.03
Kukawa	1.01	.81	.91
Damaturu	1.00	.80	.90
Hawul	.59	1.19	.89
Fune	.84	.93	.88
Monguno	.89	.49	.69
Konduga	.85	.37	.61
Kaga	.41	.78	.59
Geidam	.63	.48	.55
Nangere	.31	.70	.50
Gubio	.53	.33	.43

Source: Calculated by the author.

on these indexes of agricultural development. The impact of the physical factor of rainfall is apparent in the poor performance of the LGAs in the north and center, where lack of rainfall poses serious problems for crops and animals.

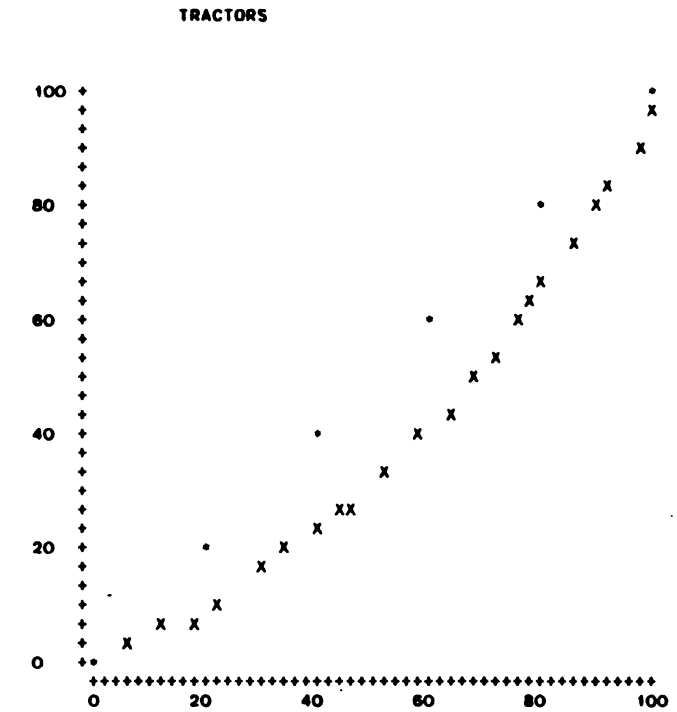
Figure 5.5 shows the Lorenz curves and other distribution measures for two variables--farm tractors and extension workers. The Gini and segregation indexes show that tractor and extension worker distributions do not exhibit gross inequalities between the LGAs. However, the number of disadvantaged people is still high as indicated by fair-share points of 57.635 and 46.758 for tractors and extension workers, respectively.

Table 5.10 shows that the ratio of tractors to population is low for all the LGAs. Gwoza is best served with one tractor for every 4,600 of the population while in Nangere (the least served LGA) there is one tractor for 53,000 people.* The distribution of extension workers follows the same trend. Gwoza has an extension worker for every 5,800 of the population while the ratio is 1:47,500 in Gubio LGA.

---

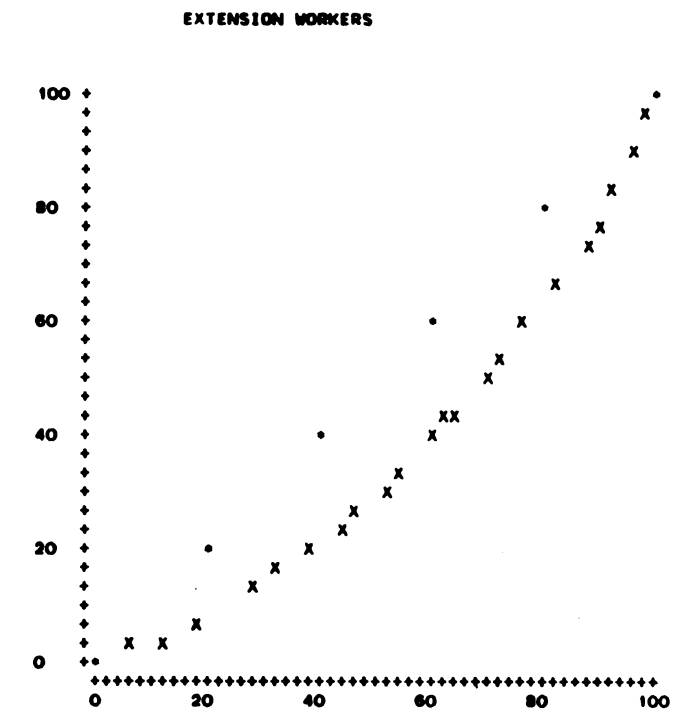
*Because of lack of data on number of farmers the ratio for the whole population is used in the analysis.

Lorenz Curves, Gini, Segregation and Fair-share point Indexes for Tractors and Extension Workers in Borno State, 1981



VARIABLE ON THE ABCISSA = TRCTORS
VARIABLE ON THE ORDINATE = POP

GINI INDEX = 26.517
INDEX OF SEGREGATION = 19.024
FAIR-SHARE POINT = 57.635



VARIABLE ON THE ABCISSA = EXTWKRS
VARIABLE ON THE ORDINATE = POP

GINI INDEX = 28.620
INDEX OF SEGREGATION = 20.783
FAIR-SHARE POINT = 46.758

Fig. 5.5

Table 5.10.--Population per Farm Tractor and Extension Worker in 1981.

LGA	Pop. per Tractor 000	Pop. per Ext. Worker 000
Askira/Uba	9.0	7.0
Bade	8.9	10.9
Bama	10.8	11.3
Biu	6.1	6.1
Damasak	7.0	20.1
Damaturu	11.8	19.8
Damboa	8.6	17.2
Fika	5.0	22.5
Fune	14.0	17.0
Geidam	16.2	32.5
Gubio	19.0	47.5
Gujba	8.0	8.0
Gwoza	4.6	5.8
Hawul	16.2	13.2
Kaga	32.8	20.2
Konduga	14.7	42.2
Kukawa	8.6	19.4
KK/Shani	15.3	11.5
Maiduguri	8.5	9.3
Monguno	13.0	31.9
Ngala	13.4	17.5
Nguru	17.1	25.0

Source: Calculated by the author.

The Accessibility Pattern

Table 5.11 shows the length in kilometers of all-weather roads* in each LGA. Overall, there were only 2,188km** of all-weather roads in the state in 1981. Consequently, many areas were, and are inaccessible by such roads.

Table 5.11 also shows the accessibility index of the LGAs. The best served LGA is the Maiduguri metropolitan area (AI 6.60) where there is no point in the metropolitan area that lies beyond 5km from an all-weather road. Nangere is second with .75 and only about 25 percent of the LGA lies beyond 10km corridor.

The rest of the LGAs have AIs of .36 or less (Figure 5.2d). Many villages in these LGAs are, therefore, too remote for the distant roads to have any impact on their development. In four LGAs (Askira/Uba, Fika, Hawul and Gwoza) 64-68 percent of the area is outside the 10km corriodor. Six other LGAs (Damaturu, Konduga, Monguno, Bade, Biu and Ngala) have 73-80 percent of their area out side this limit. The remaining 11 LGAs have 82-100 percent inaccessible areas.

---

*Only tarred roads which are usable all year around by all ranges of vehicles are considered all-weather roads in this study.

**The figure is based not on actual distance but derived from measurements on a road map with a scale 1:1,600,000. Therefore there is bound to be some margin of error.

Table 5.11.--Road Milage and Accessibility Index (AI) by LGAs 1981.

LGA	Length of Roads (km)*	AI	Rank
Maiduguri	315	6.6	1
Nangere	128	.75	2
Askira/Uba	84	.36	3
Fika	72	.35	4
Hawul	60	.32	5
Gwoza	72	.30	6
Damaturu	276	.27	7
Konduga	193	.26	8.5
Monguno	93	.26	8.5
Bade	115	.25	10
Biu	60	.20	11.5
Ngala	96	.20	11.5
KK/Shani	58	.18	13
Bama	88	.17	14
Kaga	116	.13	15
Kukawa	47	.12	16.5
Fune	57	.12	16.5
Gujba	59	.11	18
Damboa	70	.08	19.5
Nguru	57	.08	19.5
Gubio	26	.06	21
Geidam	44	.05	22
Damasak	0	.00	23

Source: Calculated by the author.

*The lengths of roads are not actual distances but measurements on a road map 1:1,600,000.

Rural roads are important infrastructures of development because they increase the accessibility of the areas they traverse. Because accessibility is essential in generating development impulses through the production and distribution mechanisms, it has a significant relationship with levels of rural development achievement in the LGAs.

Table 5.12 shows that in a one-tailed test, road accessibility was significant in the development of the LGAs at a .05 level. This implies that inaccessibility contributes significantly to the underdevelopment of the LGAs.

Table 5.12.--Spearman Rank Order Correlation Test between All-Weather Road Accessibility and Level of Rural Development in the LGAs.

Calculated r_s	Level of Significance
.415	.025

Summary

The procedures used in measuring scales of development and patterns of rural development derived from such measurements are presented in this chapter. Five indexes were used to derive scaled patterns of rural development

in Borno State. There are limitations in the patterns partly because the variables used do not embrace all aspects of rural development and partly because the variables reflect mainly on development inputs instead of outputs.

There are regional differences in these scaled patterns. Most of the LGAs in the first and second categories stretch east and south from the northwestern corner of the state to its eastern border in a crescent-shaped pattern while the LGAs in the third and fourth categories are in the northern and central parts. The LGAs performed poorly on the indexes of rural development. The poor performance suggests that the level of rural development is low. This problem is exacerbated for most of the LGAs because of the high degree of inequality between the LGAs, especially in health care facilities services. The Gini, segregation and fair-share point indexes used to analyze the distributions show the range of inequalities for the various variables used in deriving the scales of development. The high degree of inequality, especially between LGAs in the first and fourth categories of development point to the underdevelopment of many LGAs because they are disadvantaged.

Another important aspect of the patterns derived is the lack of correspondence between the pattern of

population distribution and the categories of rural development which are based mainly on development inputs. There seems to be an anomaly since the distribution of development investments bear no significant relationship to population density. This implies that other criteria might have been more critical in the determination of how to distribute development investments in the state.

Even though the categories of rural development, to some extent, parallel the ecological zones, the regional concentration of the different scaled patterns suggest that other factors operating at a regional level are equally important. The climatic (mainly rainfall), political, historical, economic and social factors interacting in complex ways are responsible for the present patterns of rural development in the state. These processes of development and underdevelopment, which produce these spatial patterns and are also influenced by the patterns, result from the activities of a complex set of actors in the development arena. The activities of one of such actors in rural development in Borno State are examined in the next chapter.

CHAPTER VI

CONCEPTUALIZATION, MEASUREMENT AND ANALYSIS OF LINKAGE FOR RURAL DEVELOPMENT

The concept of linkage and the influence of culture and government's administrative organization on linkage are briefly examined in this chapter. An attempt is also made to measure linkage and to use the results to determine linkages between local organizations and state level authorities that facilitate rural development.

Local Organizations' Linkage for Rural Development

Linkage for rural development is "considered to mean the extent and effectiveness of communication between levels of organizations...." (Uphoff and Esman, 1974, p. 111) Such communication includes the exchange of ideas, goods, services, demands and support for development between the center (which controls most of the resources necessary for development) and localities in the periphery. Most of these attributes of linkage (for rural development) can be discerned from the contents of communications between officials of the center and the periphery.

Culture and governmental administrative organization tend to reinforce structural linkage for rural development. Traditional political organizations are known to be resilient in the face of political reforms which have the capacity for stimulating new linkages. Such resilience has been demonstrated in the history of the colonial Native Authority (NA) administrative system which remains the basic structure of local government in Borno State. The NA system has been accused of stifling local participation in matters affecting the well-being of citizens and localities (Yahaya, 1976, p. 33).

Decades of experience with NA administration in Borno State (1902-1976) and centuries of exposure to Islamic culture (which demands absolute obedience to authority) have combined to produce a unique political culture described by Charlick (1974, pp. 20-21) as a "culture of repression." Political culture conditions linkage because it determines who links with whom and how such linkage takes place. Therefore Borno's political culture influences the variety and number of local organizations that link with the center to realize development.

Linkage Structure in Borno State

Nigerian administrative structure consists of three levels of government: federal, state and local government area (LGA). Since most functions impinging on people's

lives are reserved to the states, linkage for rural development typically involves communications and influence between localities and state level authorities.

All the political actors involved in rural development linkage in the state can be viewed as parts of a social system which coordinate to accomplish that goal. Thus interrelationships between these actors in organizations and institutions provided the focus for the systems analysis of linkage in political processes of rural development.

The political processes of linkage for rural development in the real world are complex. Therefore the systems model in Figure 6.1 was used to simplify the structure of linkage between the seats of power responsible for the decisions and actions which resulted in development and underdevelopment in Borno State. Actors whose interrelationships were examined were heads of local organizations and officials in the Ministries and parastatals as well as members of parliament and those of the Borno State assembly.

Data on written communications (correspondence) and visits, collected in the field, were used to estimate the extent of linkage for rural development in 1981. Thus communications among local organizations and between local organizations and state authorities were used for analyzing

Channels of Linkage in Rural Development in Borno State

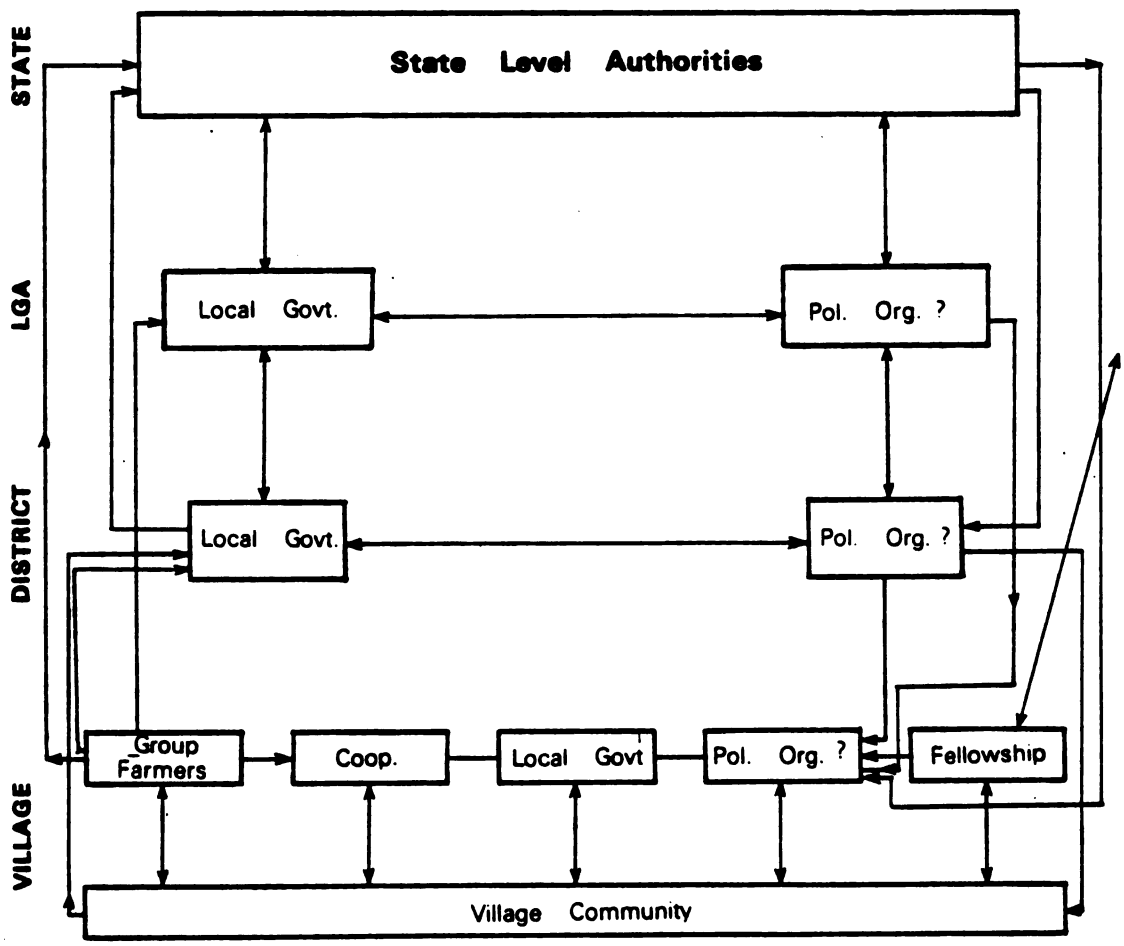


Fig. 6.1

linkage and determining which local organizations are linked for rural development.

Variety and Number of Local Organizations

Village Level Organizations

There were found to be four varieties of organizations operating at the village level: local government, cooperatives, political parties and religious organizations (Figure 6.1). There is a local government in every village, that is centered around the person of village head who holds office for life. Sixteen (30.2 percent) of the village heads in the study were in office before 1960 when Nigeria became independent, 25 (47.2 percent) came to office between 1960 and 1976 and only 12 (22.6 percent) were appointed after 1976.

Since conservatism and resistance to change are generally associated with advanced age, the age of these village heads was considered likely to have had effects on linkage. Of the village heads 32 (60.4 percent) were over 50 years old, 16 (30.2 percent) were 40-50 years and only 5 (9.4 percent) were under forty years old. Data on visits to higher level authorities, in this study, show that the older village heads visited the LGAs and their districts less frequently.

A village head represents his village to succeeding levels of government (district, LGA and state) and vice versa. He can be removed only by the state government. The village head is assisted by bulamas (ward heads) who represent various sections or settlements of the village. The village head meets on an ad hoc basis with his bulamas as a village council. As he contacts people, in some wards, only through his bulamas, the linkages between village local governments and people in the villages are frequently tenuous.

Farmers cooperatives and group farmers' association make up the cooperatives in the state. The cooperatives exist in 46 of the sample villages but only 28 were operational at the time of the field research. Since many members of the cooperatives also belong to political parties, intra-party and inter-party intrigues are alleged to be responsible for the disfunction or lack of operation of some cooperatives.

Chapters of political organizations were said to exist in every village, but it was only in constituencies where competition between the two main parties is fierce that the political parties were well organized. However, party organizations in the villages were said to be gathering force now that the presidential, senate, parliament and state assembly elections in August 1983 are on the horizon.

Because of the rise in Islamic fundamentalism in Borno State, the conflict this generates, and government efforts to exert control over such movements, it was not possible to investigate the prevalence of Moslem religious groups. However, it is an open secret that the Mallams (scholars and teachers of the Koran) are opposed to Western education. Their campaign against the enrollment of children in non-Koranic schools has been successful especially in predominantly Moslem villages where emphasis continues to be on Koranic education.

Christian Fellowship groups have been active in combating illiteracy through adult education and bible reading in Sunday schools. The groups are found in only four villages in the south--Chibok in Damboa LGA and Billa, Gusi and Yimirdallang in KK/Shani LGA. The Christian Fellowships are said to be active in all the southern LGAs with large Christian populations.

There is lack of cooperation between these village organizations. This stems from the fact that the village local government and cooperatives are in competition for state resources. Responses from heads of these local organizations indicate that they are less concerned with productive aspects of development which require complementary efforts than with consumptive services which do not require cooperation. For example, the existence of a

farmers' cooperative and a group farmers' association in a village indicate that there was competition for loans by local organizations.

District and LGA Level Organizations

Local governments and political organizations are the only local organizations functioning at the district and LGA levels. District local government is composed of a district head who meets on an ad hoc basis, with the village heads in his district. The number of village heads in a district ranges between 13 and 26. Of the 8 district heads in the study only three (37.5 percent) were appointed after 1976; three (37.5 percent) were appointed between 1960 and 1976; and two (25 percent) were in office before 1960 when Nigeria became independent.

Four members, appointed by Borno State Government, make up an LGA Management Committee that is in charge of each LGA council. All 32 Management Committee members for the 8 LGAs studied were active members of the party in power in Borno State at the time of the study. It can be fairly confidently concluded, therefore, that appointment to the council is political patronage to reward faithful party members and encourage support for the party in the LGAs.

Limitations of Borno Organizational Structure

Village and district heads and the Management Committee members make up a small group of actors interacting down to and up from the districts and LGAs to realize rural development. The lack of intervening hierachical structure (Figure 6.1) for the other village organizations (cooperatives and Christian Fellowships) weakens their bargaining power. For example, leaders of each village's farmers' cooperative and group farmers' association have to bargain directly with state level authorities. If there were an intervening structure representing several villages between the village and the state levels (district or LGA) the combined political weight of the communities would likely be more effective in realizing their objectives.

Overlapping Membership of Local Organizations

An important characteristic observed in the field was the overlap in the membership of some of the organizations. Twenty-nine (54.7 percent) of the village heads were members of the cooperatives (farmers' cooperatives and group farmers' associations). All the chairmen of the cooperatives (except six who were also village heads) openly identified their political affiliations. The village heads also spoke of political pressures on them to

use their positions to promote the parties in their villages. The members of the LGA Management Committees, as stated earlier, are active members of the party in control of government in the state. Such overlapping memberships are credited with facilitating horizontal and vertical linkages which make for complementary efforts in rural development through instant feedback mechanism (Jedlicka, 1977, p. 89; Bryant and White, 1982, pp. 172-173).

These overlapping memberships have also had negative effects, especially in the functioning of local governments and cooperatives in the state. Intra-party and inter-party intrigues as well as factionalism (mainly along ethnic and religious lines) in local politics were identified by village heads as the main obstacles in mobilizing people for rural development efforts. The inactivity of some cooperatives was also attributed to these factors.

Analysis of Linkage

Data on written communication (correspondence) and visits used in estimating vertical linkage show that only local governments are linked with higher level authorities on an intensive and regular basis. Mean annual correspondence between the cooperatives and higher level authorities was found to be three while the mean for visits is much less (1.3). The Christian Fellowships were not linked with

any higher level authority in the state. Their headquarters, with which they maintain communication, is in another state with a larger Christian population. It was not possible to collect data on the political organizations because of a tense situation resulting from frequent conflicts between the two main parties which made members inordinately suspicious and hostile to any requests for data for any purpose. Thus data on local organizations for the purposes of analysis of linkage, was limited to local governments.

The data on written communication and visits for local governments showed that there was little or no horizontal linkage at village, district and LGA levels. The only occasion for such a linkage at LGA level was during agricultural shows (once a year). Furthermore, such shows (as observed by the author) are more for social reasons than for promoting agricultural production. Accordingly, analysis of linkage between local governments and higher level authorities refers only to vertical linkages among local governments and between LGA local government and the state government.

Top-down and Bottom-up Linkage

A prevalent criticism in center-locality relations is the imbalance (to the advantage of the periphery)

between top-down and bottom-up linkage in areas of development. Since some rural development functions produce better results when undertaken by higher level authorities while others are better handled at local levels, the determination of such a balance is difficult to estimate quantitatively. But all things being equal, there should not be much difference between the "quantity" of top-down and bottom-up linkages among local governments and between LGA local government and state level authorities. Therefore, the results of any imbalance in this analysis are to be treated with caution.

Top-down linkage in this study refers to written communication (correspondence) and visits that were initiated at the top while bottom-up linkage refers to correspondence and visits initiated from below. Percentages were used to analyze imbalances in top-down and bottom-up linkages. The two parameters--correspondence and visits--were analyzed separately. Common assumption in Nigeria is that more is accomplished through visits than by correspondence but it was not possible to equate correspondence and visits to facilitate the computation of a single measure of linkage. Thus, each aspect of linkage was used separately in analyzing any imbalance.

LGA-State Linkage

Table 6.1 indicates in number and percentages the intensity of linkage found between the sample LGAs and state level authorities. The percentages refer to the proportions of correspondence or visits that are top-down or bottom-up in each LGA. Imbalances were found in all aspects of linkage. Topdown linkage through correspon-ence dominated in all the LGAs. The same was true for top-down linkage by visits except in one LGA (KK/Shani). The predominance of top-down linkage at the LGA level suggested that the initiatives for rural development in the LGAs came mostly from state level authorities.

The number and percentages of correspondence and visits in Table 6.1 showed that there were differences between the LGAs. However, the differences were not extensive since three of the distributions (top-down correspondence, bottom-up correspondence and top-down visits) fell within two standard deviations. The differences between the LGAs in bottom-up visits were much higher since the distribution fell within three standard devivations.

District-LGA Linkage

Traditionally, the district head has linked the district vertically with the Emir. In the present system he also functions as a link between the district and the LGA.

Table 6.1.--The Direction and Intensity of LGA-State Linkage for the Sample LGAs in 1981.

	Correspondence				Visits			
	Top-down		Bottom-up		Top-down		Bottom-up	
LGA	No.	%	No.	%	No.	%	No.	%
Bade	281	59.5	191	40.5	25	73.5	9	26.5
Damboa	318	63.3	184	36.7	14	60.9	9	39.1
Fika	233	61.2	148	38.8	22	68.8	10	31.2
Gujba	248	59.5	169	40.5	19	61.3	12	38.7
Gubio	320	61.1	204	38.9	23	65.7	12	34.3
Kukawa	253	60.8	163	39.2	22	75.9	7	24.1
KK/Shani	189	59.2	130	40.8	9	34.6	17	65.4
Monguno	298	60.2	197	39.8	18	72.0	7	28.0
Mean	267.5		173.3		19		10.3	
Std. dev.	42.3		24.4		4.9		3.1	

Source: Calculated by the author.

Table 6.2 shows the extent of imbalance in vertical linkage between the districts and the LGAs. In correspondence the percentage of top-down linkage is higher than that of bottom-up, in all the districts except Jakusko. The pattern of vertical linkage by visits differs from that of LGA-state linkage (Table 6.1) because the district-LGA bottom-up linkage (by visits) is higher than that of top-down, except in KK/Shani and Fika districts. The reason for this difference may be that the two districts have district heads who are over seventy years old. Therefore, the age of a district head is likely to influence the extent of linkage between the district and the LGA since driving on rough roads is more likely to affect the health of an old district head.

There were also variations in the intensity of linkage as shown by the volume of correspondence and visits for the eight districts (Table 6.2). The variation was more pronounced in bottom-up correspondence from the districts. All the distributions (top-down and bottom-up correspondence and visits) fell within two standard deviations. However, bottom-up correspondence had only three distributions within one standard deviation as against six for top-down correspondence and top-down visits and five for bottom-up visits. Therefore the difference was more in bottom-up correspondence than in other aspects of linkage.

Table 6 2.--The Direction and Intensity of District-LGA Linkage in 1981.

	Correspondence				Visits			
	Top-down		Bottom-up		Top-down		Bottom-up	
Districts	No.	%	No.	%	No.	%	No.	%
Damboa	51	62.2	31	37.8	12	18.8	52	81.2
Fika	120	58.8	84	42.7	20	62.5	12	37.5
Gujba	120	70.6	50	29.4	24	33.3	48	66.7
Gubio	84	87.5	12	12.5	15	26.3	42	73.7
Jakusko	36	43.9	46	56.1	18	33.3	36	66.7
Kukawa	72	85.7	12	14.3	12	18.8	52	81.2
K. Kusar	54	81.8	12	18.2	16	51.6	15	48.4
Marte	185	68.8	84	31.2	15	22.4	52	87.6
Mean	90.3		41.4		16.5		38	
Standard deviation	46.0		28.3		3.8		15.5	

Source: Calculated by the author.

Village Local Government-LGA Linkage

This linkage was based on the median score of the sample village local government (in each LGA) on these disaggregations of linkage: top-down correspondence, bottom-up correspondence, top-down visits and bottom-up visits. Table 6.3 shows that the imbalance of correspondence was more pronounced in the village local government-LGA linkage than that in the LGA-state and district-LGA relationships. Furthermore, linkage by visits was not in balance because bottom-up linkage (visits) was higher than top-down linkage (visits) in all the LGAs.

The two disaggregations of linkage could not be equated. However, since seeing is believing, visits to the periphery by officials from the center were considered more likely to produce results than correspondence. Therefore, it was inappropriate without qualification, to state that the relationship between the LGAs and the village local governments was found to be either predominantly top-down or bottom-up or that the linkage was in a balance.

To partially resolve this problem, reference was made to the literacy criterion. Only two (3.8 percent) of the village heads had had enough schooling to be able to read and understand what was transmitted to them in correspondence from the LGA. With the high level of illiteracy among the village heads and among the population,

Table 6.3.--The Direction and Intensity of Village-LGA Linkage in 1981.

	Correspondence				Visits			
	Top-down		Bottom-up		Top-down		Bottom-up	
LGA	No.	%	No.	%	No.	%	No.	%
Bade	33	100	0	0	9	37.5	15	62.5
Damboa	33	100	0	0	5	35.7	9	64.3
Fika	36	100	0	0	6	21.8	21.5	78.2
Gujba	34.5	94.5	2	5.5	5	19.2	21	80.8
Gubio	15	100	0	0	2	33.3	4	66.7
KK/Shani	39	100	0	0	8.5	28.8	21	71.2
Kukawa	17	100	0	0	3	35.5	5.5	64.7
Mean	28.6				5.5		13	
Std. dev.	8.8				2.4		7.1	

Source: Calculated by the author.

it could not be assumed that the percentage of correspondence reflected the actual "quantity" of top-down linkage. Secondly, since about 90 percent of the visits by the village heads were initiated by the LGA, the seemingly high number of bottom-up visits was misleading. Because of these considerations it was inferred that village local government-LGA linkage was also primarily top-down or, at best in balance.

Village Local Government-District Linkage

Little correspondence was reported between the village heads and the district heads as might be expected since it has already been noted that most village heads were illiterate. Linkage between these levels was accomplished only by visits. Thus the median scores on visits by district and village heads were used to determine the "quantity" of linkage between the villages and their district.

Table 6.4 shows that linkage between the villages and the districts was a one-way affair. The imbalance was more pronounced here than in the village-LGA linkage (Table 6.3) but even the imbalance shown by the data is misleading because the majority of the visits result from requests by the district heads. Only on rare occasions (according to the responses) did village heads approach

district heads on their own initiative. It is, therefore, inappropriate to conclude that village local government-district linkage is primarily bottom-up.

Table 6.4.--Village Local Government-District Linkage in 1981.

	Visits			
	Top-down		Bottom-up	
District	No.	%	No.	%
Damboa	0	0	19	100
Fika	0	0	13.5	100
Gujba	0.5	2.6	18.5	97.4
Gubio	0	0	24	100
Jakusko	0.5	1.8	28	98.2
Kukawa	0	0	28	100
KK/Shani	0	0	15	100
Marte	1	4.3	22	95.7

Source: Calculated by the author.

There are spatial variations in the intensity of village-district linkage as the numbers of visits have shown (Table 6.4). In comparing Table 6.4 with the pattern in Table 6.3, it is evident that the areas where the intensity of village-district visits is low (KK/Shani and Gujba) tend to record higher quantities of village-LGA

visits and vice versa. Thus Gubio, Kukawa and Monguno LGAs record low village-LGA visits but high village-district visits. Bade, is an anomaly because it records high in both.

Village Local Government-Community Linkage

Village local government-community linkage was the final link in examination of the systems structure of interactions (Figure 6.1) between different actors at different levels. Since the village local government and the community operate at the village level, the interactions resembled horizontal linkages more than vertical ones. To determine the degree of horizontal linkage among members of the village local government on one hand and between the local government and community members on the other, the village heads were asked how often they met with (a) the bulamas (ward heads) and (b) interest groups in the community.

Responses showed that the bulamas were only de facto members of the village council and that the council met only on ad hoc basis. Two factors were mentioned as influencing the frequency of such meetings: the need for settlement of disputes and discussion of directives from the LGA and the district. Consequently, which bulamas and community members are to sit with the village head on any specific occasion is up to the village head's discretion. Because the existence of a village local

government revolves around the person of a village head, a strong village head dominates his local government while a weak one often finds himself incapacitated by other local forces.

The village head-community linkage was found to be limited by several important factors. Some wards were found to operate as fiefdoms and village heads could only see interest groups on the invitation of their bulamas. Two other factors undermine village head-community linkage. These were settlement pattern and partisan politics. A village in the study area, in many instances consisted of several settlements, often separated by long distances (18km was recorded in one case by the author), and linked together by pedestrian paths. Such settlements made up the wards in the village and since many villages in the study area consisted of such scattered settlements, interaction was found to be greatly handicapped. This partly explained the tendency of village heads to receive complaints and suggestions from the people through the bulamas and also send directives to the people through the bulamas.

Another factor was the disruptive influence of partisan politics, which were found to permeate all facets of village life. Because of political threats, some village heads indicated they were reluctant to call meetings

or meet with some sections of their communities. Although the village heads were appointed for life, they could be removed by the state government and thus had to "toe the state government line" if they were to keep their positions. Consequently, they were perceived as agents of the party in power by some sections of their communities. Under such circumstances the village head-community linkage was weak. For example, seventy-five percent of the village heads in the Bade and Monguno LGAs, where political conflict was fiercest, told the researcher that they did not convene any meetings in 1981.

Even though the village head-community linkage is considered to be horizontal in a democratic system, four factors give clues to its actual direction. First the village heads are not elected by the community and therefore they are not responsible to the members of the community; secondly, the hierachical origin of the traditional village council assumes a master-servant relationship; thirdly, the Islamic religion conditions people to readily accept directives from those in authority; and fourthly, the local government system recognizes the village head as the sole representative of village government. These factors reinforce the power of the village head over the people in a village and linkage relationships at the village level tend to be top-down.

Summary

A major phenomenon in the spatial system of rural development is the linkage between local organizations and higher level authorities. Linkage for rural development in this study was considered to be correspondence (written communication) and visits among local organizations on the one hand and between local organizations and state level authorities on the other. Among four varieties of local organizations studied (local governments, cooperatives, political organizations and religious groups) only the local governments were found to possess a hierachical structure and communicate intensively on a regular basis to facilitate rural development.

Horizontal linkage among various local governments was found to be insignificant, so the emphasis here was only on vertical linkage. The structure of vertical linkage as shown by interactions between the three tiers of local government formed the basis for political processes of rural development in Borno State. The various inputs and outputs in the linkage were considered to be responsible for a significant part of rural development impulses in the state. The lack of horizontal linkage in the process of rural development and the heavy preponderance of top-down linkage suggest that coordination of efforts between areas was dictated by the top.

Imbalance in vertical linkage as idicated by numbers and proportions of correspondence and visits was considered by the researcher to be an insufficient criterion in determining the imbalance in directions of relationships among local governments and between the LGA and state level authorities. Better insight was gained by taking into account the source from which the initiative for the correspondence and visits came.

Because the initiatives, at various levels, generally comes from the top, the seeming predominance of bottom-up linkage in visits was considered misleading. Accordingly, almost all linkage for rural development in Borno State was determined to be top-down.

A balance between top-down and bottom-up linkage is considered to be essential for realizing effective rural development by most experts in the field. Since this had not been the case in Borno State and there is primarily top-down linkage, any development realized is not likely to adequately address the needs of the people in the villages. In any consideration of the relevance of linkage, it is necessary to emphasize that the contents of linkage are as important as its direction and quantity. The content of linkage gives some clue as to its effectiveness and this will be discussed in the next chapter.

CHAPTER VII

LINKAGE EFFECTIVENESS AND LINKAGE RELATIONSHIP WITH CATEGORIES OF RURAL DEVELOPMENT

The chapter begins with a determination of the effectiveness of linkage for rural development. An attempt was also made to determine the relationship between the disaggregations of vertical linkage and the categories of rural development put forward in Chapter 5 (Table 5.3).

Linkage Effectiveness

Linkage in the political context involves interactions and transactions between points of political power. Its effectiveness depends on the content of such communication. For analysis of the effectiveness of vertical linkage, in this study, it was assumed that the contents of the correspondence and visits determined the type of results they would likely produce. Provision was not made for the fact that some linkages might not result in short term or long term benefits that could enhance rural development. Furthermore, it was felt that the results might also be intangible. Because of the difficulties in inferring effectiveness the term 'effort' was used as a surrogate thereby ignoring whether or not the efforts

produced results. Thus effectiveness of linkage, in this study, was based on efforts made in rural development. These efforts were computed from the contents of correspondence and visits between the various levels of a territorial hierachy.

Components of Rural Development

Effort should spread through the whole gamut of rural development if real development is to be achieved. Therefore, ten areas of activity were devised for the purpose of categorizing rural development efforts:

1. administration/law and order
2. agriculture
3. water
4. roads/markets/motor parks
5. planning and mobilization of resources
6. personnel
7. health
8. education
9. information
10. cooperation between organizations on the same level.

Because development is a multifaceted phenomenon, with little concensus as to its scope, the components put forward are the facets most frequently mentioned in the literature. These are assumed to embrace significant aspects of rural development in the state.

Effort by local governments is an independent variable which affected levels of development. If such effort embraced all the aspects of rural development put

forward, the local government within a spatial unit was considered to have functioned in such a way as to promote rural development. But, if there was over concentration of effort on one or more aspects of rural development, at the expense of other aspects, then the local government was considered to be less than effective or even an ineffective instrument for promoting rural development.

The notion of evenly spread efforts is considered tenable only in ideal situations. Circumstances are likely to dictate an uneven distribution of efforts in the real world. Thus, the normative model put forward served only as a guide to analysis of local government efforts in rural development. The distribution of efforts was examined for only the LGA and village levels.

LGA Level Effort

Effort was measured on the basis of the number of written communications (correspondence) and visits that linked the LGA and state level authorities. The numbers of such communications and visits regarding each component of rural development was considered to constitute the quantity of effort for that component. Following tabulation and analysis, the patterns and quantities of efforts in the eight LGAs were found to be similar. Therefore, only the comparisons between two extreme cases, Bade and Gubio, are presented.

Figure 7.1 shows the intensity of efforts, as well as their distribution in two LGAs: Bade, in the first category of development, and Gubio, in the last category of development (Table 5.3). Both LGAs exhibit severely skewed and unequal distributions of effort. Both distributions emphasize administration/law and order concerns; the number of written communications and visits on this subject were 149 for Bade and 223 for Gubio. Gubio has put less effort into agriculture (even though the area performed poorly on the agricultural indexes) and more effort was expended on personnel. Basically there were no major differences noted in the distribution of efforts between Bade in the first category of development and Gubio in the fourth (last) category of development as both appear to have expended identical "quantities" of effort on all the components of rural development. Based on the data there should be, perhaps, no significant differences in rural development level changes between the two LGAs over the period concerned by the correspondence and visits; but that is questionable also, partly because the rate of development changes may not be based only on linkage and partly because these developments are products of decades of development efforts.

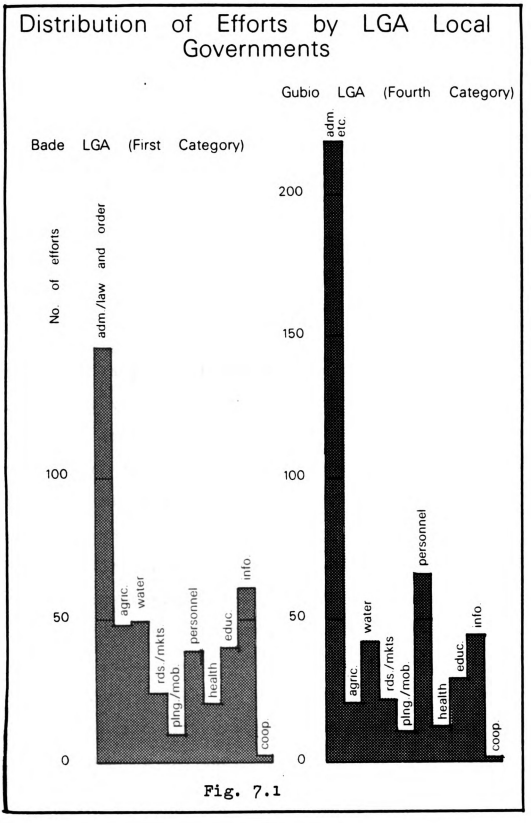

Distribution of Efforts by LGA Local Governments
Bade LGA (First Category)
No of efforts
0
50
100
adm./law and order
agric.
water
rds./mkts
plng./mob.
personnel
health
educ.
info
coop.
Gubio LGA (Fourth Category)
0
50
100
150
200
adm etc.
agric.
water
rds./mkts
plng./mob.
personnel
health
educ.
info
coop.

Fig. 7.1

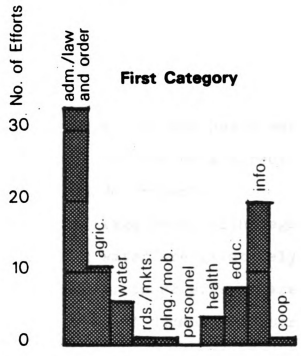
Village Level Effort

Effort at this level was measured according to total written communications and visits between a village local government and its respective district/LGA local governments. Since there were many sample villages in the LGAs in each category of development, village level effort was based on the median score of the villages (in each category) on the components of rural development. For example, the level of effort for villages in the fourth category of development was based on the median score of 15 sample villages in Monguno, Kukawa and Gubio LGAs, on the ten components of rural development.

The patterns of effort were similar for the four categories of development. Therefore, only a comparison between the first and fourth categories of development is presented here.

Figure 7.2 shows the distribution of village local government effort in the first and fourth categories of sample villages. The two patterns are identical to the patterns of effort seen at the LGA level. The concentration on administration/law and order persists at the village level and differences in the distributions of effort in the two categories are minimal. The scores of 33 and 27 for the first and fourth categories, respectively, on administration/law and order (Figure 7.2)

Distribution of Effort by Village Local Governments



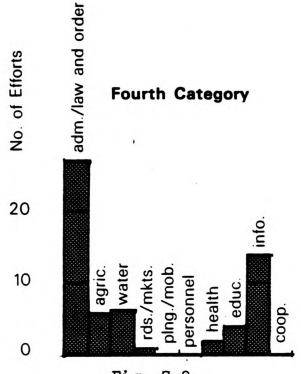


Fig. 7.2

reverses the pattern seen in Figure 7.1, where Gubio, in the fourth category records higher figure than Bade on the same component. There is also heavy traffic in information at the village level in both categories. An example of such information linkage was observed by the researcher, when several village heads were summoned to an LGA headquarters and lectured on a directive from the Commissioner of Local Government.

Efforts by village heads with regard to the provision of drinking water are relatively high at the village level. However, these efforts are generally bottom-up and comprised of demands for boreholes in the villages. Frequent village and LGA efforts in regards to water are seldom reciprocated with matching top-dwon effort from the Borno State Water Board, with the result that linkage in this component of rural development is predominantly bottom-up. The imbalance partially accounts for the problems many villages have encountered in trying to modernize access to a safe water supply.

Root of the Emphasis on Administration/ Law and Order

Even though 1981 emphasis on administration/law and order at all levels of government may have been justified, to some extent, by subsequent events in 1982

(religious riots in which about four hundred people were killed) overemphasis in this area has roots in the Native Authority (NA) system of local administration. The NA system was fashioned in the colonial period, primarily for the maintenance of law and order. The present local government is a modification of the NA system and many officials in these local governments are holdovers from the NA system. Consequently, efforts at the village, district and LGA levels continue to promote administration/law and order concerns first, and other aspects of rural development, second.[1]

Linkage and Categories of Development Relationships

Choice of Statistical Test

It is not possible to equate correspondence and visits to estimate a totality of vertical linkage, in this study. Therefore, the relationship between linkage and rural development outcomes in the LGAs is examined separately under correspondence and visits. Furthermore, the effects of top-down or bottom-up linkage in these two disaggregations may not be the same. Therefore, relationships between vertical linkage and categories of development were examined under four disaggregations of linkage: top-down correspondence (TDC), bottom-up correspondence (BUC), top-down visits (TDV) and bottom-up

visits (BUV). There were also two components of BUV: bottom-up visits to the LGA (BUVL) and bottom-up visits to the district (BUVD).

The relationship between vertical linkage and rural development scales was tested only at the village level. Therefore, the data on vertical linkages between the village local government and higher level authorities (district and LGA local governments) were used. Because of the uneven clustering of villages within the four categories of development, the data were not amenable to chi-square analysis to determine relationships between linkage and the four categories of development. To facilitate statistical analysis of the data to show such relationships, therefore, the four categories (Figure 5.3) were regrouped and the t-test is used. Sample villages in Bade, Fika, Gujba and KK/Shani in the first and second categories of LGAs were subsumed as the more developed areas, while sample villages in Damboa, Monguno, Kukawa and Gubio in third and fourth categories were subsumed as less developed areas.

The T-test Analysis

Table 7.1 shows the results of the t-test for all six disaggregations of linkage. The analysis employed a one-tailed test with the rejection level set at .05.

The test showed that only TDC, TDV, BUV and BUVL were significant. The TDC was significant at the .001 level which implied that top-down linkage by correspondence was definitely lower for less developed areas. The TDV was also found to be significant at the .001 level. The TDC and TDV linkages suggest spatial bias in favor of areas which are more developed than others. It is probable that these areas are more accessible to officials from the districts and LGAs, since accessibility was also significant in the performances of the LGAs on the rural development scale.

BUV which have two components (BUVL and BUVD) were found to be significant at the .05 level. However, only one of the BUV components contributes positively to development. The BUVL were significant at the .001 level, which implied that village local governments in more developed areas contacted their LGA local governments more often than villages in the less developed areas.

Table 7.1.--T-Test Analysis of Disaggregations of Linkage Relationships with Development.

Linkage	Mean More Dev. Areas	Mean Less Dev. Areas	t Falue	1-Tail Prob.
TDC	34.41	25.13	3.97**	.000
BUC	1.19	.59	1.11	.117
TDV	7.93	3.86	3.38**	.000
BUV	41.09	34.09	1.73*	.045
BUVL	20.03	8.50	4.48**	.000
BUVD	21.03	25.59	-1.51	.069

*Significant at .05
**Significant at .001

The BUVD which were not significant at .05 level (their level of significance was .069) tend to be counter-productive. The reason could be traced to the kinds of leaders and resources available at the district level. Since many of the district heads were from the "old guard," with 20-30 years services, they tended to concentrate on law and order issues in their relations with the village heads, rather than on issues more relevant to rural development. Furthermore, the district local government has no budget, effectively eliminating any ability of this level of government to address problems raised by village local governments within its jurisdication. Thus, where village leaders visit, as well as the intensity of the visits, was found to contribute significantly to variations in levels of development

between more developed and less developed areas in the study.

Summary

The effectiveness of linkage was examined from the contents of correspondence and visits among local governments and between LGA local government and state level authorities. Because of the inadequacies of the assumption the term effort was substituted, thereby disregarding whether or not the effort yielded fruit.

The distribution of efforts by local governments indicated an uneven spread, but little difference between the local governments in respect to the various categories of rural development. There was consistent over-emphasis on administration/law and order and information, at the expense of other components of rural development. It was concluded, therefore, that the distribution of efforts by local governments in 1981 was insufficient to explain the differing performances of the LGAs on the development scale.

T-test analysis showed significant relationships between major disaggregations of linkage and the scores on scales of development for various areas of the state. These relationships confirmed Uphoff and Esman's (1974) contention that linkage of the center with the periphery is critical for realizing rural development. The analysis

of linkage in this study also brought out the fact that points of power, where the localities are linked, are also important if linkage is to be effective in promoting rural development. Other factors which contribute to spatial inequalities in rural development in Borno State are examined in the next chapter.

CHAPTER VIII

OTHER FACTORS IMPINGING ON RURAL DEVELOPMENT

Rural development, as a multi-faceted phenomenon is dependent on other variables, independent of linkage. These independent variables are diverse but those considered here relate directly or indirectly to the activities of local government organizations in rural development. Their consideration is important for an understanding of the political processes and spatial patterns of development. Therefore, in this chapter mobilization of local resources by local governments, the efficacy of leaders of local governments, identification of development problems and priorities, political patronage and factionalism, and the history of administrative structures are examined.

Mobilization of Local Financial and Human Resources by Local Governments

LGA Council

The low score of LGA local governments in the planning and mobilization components of linkage (Figure 7.1) suggested little effort in the mobilization of resources. There were over thirty items, such as licences and rates,

which the LGAs could use to derive local revenue (Damboa, 1982; Gubio, 1982). However, these sources of revenue were not tapped. For example, in Damboa LGA the expected revenue from licences and fees in 1981 was N262,340.00* but the amount actually collected was only N14,298.00 or 5.5 percent of what had been expected (Damboa, 1982).

This poor performance could not be attributed entirely to unwillingness and inefficiency on the part of the council. Many of the items listed, such as licences for eating houses, had either insignificant tax base or were difficult and expensive to collect (Damboa, 1982; Gubio, 1982). Because of these factors the LGA local governments performed poorly in mobilizing local financial resources. The net result of this poor performance was increased dependence, by the LGAs, on State and Federal grants.

Table 8.1 which shows internal and external revenues in 1981, illustrates the LGAs high degree of dependency. For some (like Mongonu) it was almost total dependence. Such situations created conditions conducive to top-down relationships, because he who pays the piper

---

*N1.00 is approximately $1.67 at 1982 exchange rate.

Table 8.1.--Internal and External Revenues for the Sample LGAs in 1981.

LGA	External Revenue ₦	K	Internal Revenue ₦	K	Percentages External	Internal
Bade	1,805,193.	13	104,723.	83	94.2	5.8
Gujba	1,908,193.	15	87,246.	50	95.4	4.6
Fika	1,866,088.	70	80,410.	00	95.7	4.3
Kukawa	2,796,104.	17	110,460.	75	96.0	4.0
KK/Shani	1,319,689.	85	65,018.	40	95.1	4.9
Damboa	2,303,256.	77	31,930.	00	98.6	1.4
Mongonu	3,647,040.	86	24,850.	90	99.3	0.7
Gubio	1,816,217.	04	76,954.	30	95.8	4.2

Source: Calculated by the author.

calls the tune. By extension, this implied that priorities and means of achieving them were set for the LGAs at the state level.

Village Local Government

The performance of village local governments in mobilizing abundant human and financial resources for rural development was not encouraging. All the village heads' responses show that they had power to mobilize local labor for development projects. However, this power was not fully utilized in most of the villages.

Responses from 53 village heads indicated that time spent on different projects by villagers in 1981 ranged from 0 to 27 working days. Table 8.2 indicates that most villagers worked only a few days. Only three villages (all in LGAs in the first and second categories of development) with fourteen, twenty-two and twenty-seven works days directed to rural development projects could be considered to have mobilized substantial human resources, in 1981, toward rural development. Seven of the villages whose residents did not undertake any communual work were from the LGAs in the fourth category of development. Thus people in villages in the more developed areas undertook communual work more frequently than villages in the less developed areas.

Table 8.2.--Work Days Spent on Rural Development Projects in 1981 as Reported by the Village Heads.

Number of Villages	Number of Days
1	27
1	22
1	14
1	6
2	5
6	4
14	3
13	2
4	1
10	0

Source: Survey data.

Table 8.3 shows that communual work was concentrated on improving water supply and accessibility to the villages. Little interest was shown in other projects, as the number of villages that worked on those projects indicated. Communual work on improving wells was widespread and suggests that lack of water was a major concern in the development of the state.

Table 8.3.--Projects Worked on by the Villages.

Projects	No. of Villages involved
Local Wells	38
Roads	14
Dispensary	2
School	2
Others	5

Source: Survey data.

Even though village local governments were not granted taxing powers, money contributions towards solving local problems were countenanced if not encouraged. However, only four village heads reported undertaking local financial campaigns in 1981. Even then, only in two cases did the villages have definite goals and collected substantial amounts--N1,600.00 ($2,400.00) and N1,938.50 ($2,907.30). The LGAs complemented the efforts of these villages by providing them with technical supports to realize the projects on which they embarked.

Local Governments' Efficacy

An important dimension of decision-making which was of interest in this study was efficacy on the part of heads of local organizations. Political efficacy relates to the

degree to which one is able to influence political decisions and actions. This study, was concerned with the perceived efficacy of village heads, district heads and chairmen of LGA councils, their ability to effect rural development decisions and actions. This concept of efficacy was also used to infer an important decision-making variable--participation.

In order to analyze this sense of efficacy it was hypothesized that heads of local governments held positive attitudes toward the ability of their organizations to solve the rural development problems identified in their areas. Responses by village heads, district heads and chairmen of LGAs, to the solution of rural development problems they identified, indicated that their attitudes toward the ability of the three tiers of local government to solve those problems were negative.

Table 8.4 shows that only 3 (5.7 percent) of the village heads intended to initiate action before taking the problem to higher level authorities. Furthermore, a majority (60.4 percent) intended taking this problem to the district. These responses indicated not only low efficacy ratings for village local governments, but also confirmed that many village heads approached district heads for solutions to their rural development problems.

Table 8.4.--Reactions of the Village Heads to Rural Development Problems.

Action Taken	No. of Responses	%
Did nothing but took the problem to the LGA	18	33.9
Did nothing but took the problem to the District Head	32	60.4
Initiated action and took the problem to the LGA/ District Head	3	5.7
Total	53	100

Source: Calculated by the author.

District local governments served mainly as conduits for top-down and bottom-up communications. Performing this function undermined its efficacy as analysis of the responses of the district heads shows. Table 8.5 indicates that only one (12.5 percent) of the district heads had confidence in his ability to solve problems brought to him. The low rating may be partially attributed to the fact that the districts had no taxing powers and no budgets they could use for such functions.

Table 8.5.--Reactions of District Heads to Rural Development Problems.

Action Taken	No. of Response	%
Did nothing but took the problem to the LGA	7	87.5
Did something and took the problem to the LGA	1	12.5
Total	8	100

Source: Calculated by the author.

The LGA had a working budget and power to collect revenues, but their responses also reflected this dependency syndrome. Table 8.6 shows that only one chairman had a high efficacy rating on "ability of the LGAs to solve rural development problems." The rest (7), expected the financial problems of the LGAs to be solved by state level authorities.

Responses at all three tiers exhibited a hierachical dependency phenomenon. The functionaries held low estimations of the local governments' abilities to solve rural development problems, and thus perceived, a need to depend on the next higher level of authority for solutions. Consequently, the local governments, in all tiers, exerted little or no influence in the decision-making process in matters related to development in their areas. It was inferred therefore, that

Table 8.6.--Reactions of Chairmen of LGA Management Committees to Rural Development Problems.

Action Taken	No. of Responses	%
Did nothing but took problems to state level authorities	4	50
Did nothing because of financial constraints but took problem to state level authorities	3	37.5
Did something to raise money and also took the problem to state level authorities	1	12.5
Total	8	100

Source: Calculated by the author.

inferiority and dependency syndromes had conditioned them not to be active participants in rural development-related decisions affecting their areas.

Identification of Rural Development-Related Problems

The ability of heads of local governments to identify rural development-related problems was of interest in this study because such efforts should be related to community problems, for real development to occur. The correct identification of problem(s) will faciltate the formulation of appropriate objectives which, in turn, influence effort. It is this circular relationship of problem identification-development and objectives-efforts, that make problem identification an intrinsic part of the development process. This section of the study is concerned with rural development-related problems identified by heads of the local governments in the study area.

Problems Identified by Village Heads

The problems identified (which reflect patterns of rural development in Chapter V) were related to water, farm tractors, farm loans, health, education and roads. Because the heads of village local governments were identified territorially, it was assumed that the more

frequently a problem was mentioned, the more widespread that problem was in the state.

Table 8.7 shows problems identified and their pervasiveness (how widespread) in the state. For example, 51 (96.2 percent) of the village heads identified access to water as a problem. Only two village heads, whose villages are located near perennial streams, did not mention scarcity of water during the long dry season. Thus lack of water posed and still poses the greatest and most widespread development problem in the state.

Table 8.7.--Problems Identified by Village Heads in 1981.

Problems	No. of times metioned	% of maximun mention
Water	51	96.2
Tractors/fertilizers	34	64.2
Farm loans	27	50.9
Roads	25	47.4
Health Care Facilities	18	34.0
Grazing/new breeds	12	22.6
Education	8	15.1
Law and order	11	20.8
Bush fire	2	3.8

Number of respondents=53.

Source: Calculated by the author.

Agriculture-related problems were also widespread. Demand for tractors and fertilizers was restricted mainly to the LGAs on the wetter southern periphery where an extensive rain-fed crop economy is possible. Even though intensive cropping in the fadamas (alluvial plains) is practised in the drier northern and central LGAs, only four village heads in this area mentioned tractors and fertilizers as being important. Reasons for this were attributed to the high fertility and relative inaccessibility of the fadamas. The number of village heads who mentioned farm loans was almost evenly split between the two ecological zones. The low mention of farm loans by village heads was seen as a reflection of the function of cooperatives to provide such loans, rather than village local governments.

Grazing land was identified as a problem by only 12 village heads. The low rating for this endemic problem was attributed to low representation of the Fulani herders in village local governments. Lack of grazing land was recognized as a problem only in the drier LGAs (Bade and Gubio) that lack perenial streams and lakes. Conflicts over land between crop farmers and herders in the state are not unusual. For example, people of Chana village in Fika LGA resented the existence of a grazing reserve which deprived them of their farmlands. The problem has become

serious in this area since the LGA has high population density (Figure 3.4) and cropping is extensive.

Poor enrollment and damaged school buildings were mentioned as problems by only eight village heads despite poor primary school enrollment (Table 5.6) and the many badly damaged school buildings observed in the area. Six of the village heads who mentioned poor enrollments and damaged buildings as problems came from predominantly non-Moslem LGAs in the southern periphery. Most village heads in the Moslem areas did not see poor enrollment and damaged school buildings as problems for the villages.

Law and order was mentioned by only eleven village heads but garnered first place when actual efforts made at the village level were analyzed. This suggested that law and order did not pose as great and widespread a problem as the distribution of efforts suggests (Figure 7.2).

Problems Identified by District Heads/Chairmen LGAs

Table 8.8 shows problems identified at the district and LGA levels. There were differences and similarities between village and LGA leaders based on the problems they identified (Tables 8.7 and 8.8).

Water and agriculture-related problems were identified as the most widespread at the district/LGA levels. Health and education-related problems were

identified as more widespread by LGA/district leaders. Law/order was rated low in contrast to the great efforts expended on it at the LGA level (Figure 7.1).

Table 8.8.--Development Problems Identified by the Chairmen of LGAs and District Heads in 1981.

Problems	No. of Times Mentioned	% of Max. Mention
Water	15	93.8
Tractors/fertilizers/loans	15	93.8
Roads	14	87.5
Health Care Facilities	11	68.8
Education	10	62.5
Law and order	3	18.8
Finance	1	6.3
Market	1	6.3
Farmland	1	6.3

Number of respondents=16.

Source: Calculated by the author.

The identification of rural development problems by leaders of local governments showed that the circular relationship of "problem identification-objectives-efforts toward development," as put forward earlier, did not relate in such a way as to effect development because the intensity of efforts did not match the intensity of the identified problems. The mismatch between identified

problems and the extent of efforts has been a great handicap to rural development and suggests that distribution of efforts may have been dictated by other factors, such as the priorities of those responsible for development.

Development Priorities

Identification of problems alone, then, was not very useful in determining which problems should be tackled first. Given the limited financial resources available to local governments this had to depend on the setting of priorities by decision-makers if effective and efficient development was to take place. The inferences drawn in this section of analysis include (1) whether local governments' priorities were appropriate, (2) whether perceived priorities matched efforts and (3) whether education influenced the setting of development priorities.

The analysis which follows was based on the ranking of nine development projects by leaders of local governments. Some respondents were handicapped in this exercise because illiteracy prevented viewing all the projects at a glance and they had to depend on oral repetitions of the list. Furthermore, it was probable that the position of projects on the list also influenced how they were ranked. As a result, the rankings must be considered biased to some extent. More confidence was put on the first three ranks than the rest, to help overcome the hazards of this bias by emphasizing the first three recalled.

Development Priorities of Illiterate Heads of Local Governments

Since 51 out of the 56 respondents in this group were functionaries of village local governments, it was assumed that the priorities applied mainly at the village level. Table 8.9 is a summary of the responses from illiterate heads of local governments. This summary is based on the number of respondents that assigned first, second, third (etc.) ranks to each project. For example, 23 respondents ranked water first, 15 ranked it second, 11 ranked it third etc. Three projects: water, roads and government buildings/police/court were given prominence as shown by the number of village heads who ranked them first. Market was given the lowest rank as indicated by the number who ranked it ninth.

Development Priorities of Literate Heads of Local Governments

Because 11 of the 13 respondents were from LGA/ district local governments and since many districts were conterminous with their LGAs, it was assumed that the priorities of these respondents reflected priorities at the LGA level. The responses were summarized according to their assignment of ranks to the projects listed.

Table 8.10 shows that 9 respondents ranked water first, one ranked it second, one ranked it third, etc. The pre-eminence of water projects as the most important was evidenced by the fact that 9 out of 13 respondents ranked

Table 8.9.--Development Priorities of Illiterate Heads of Local Governments--1981.

Dev. Projects	Ranks								
	1	2	3	4	5	6	7	8	9
Water	23	15	11	3	1	1	1	1	0
Roads	10	10	5	8	11	1	4	3	4
Agric./Vet. Services	2	11	11	10	7	5	8	1	1
Dispensary/Maternity Home	5	6	8	13	8	5	5	3	3
Govt. buildings/Police/ Court	10	3	8	3	6	11	6	5	4
Primary/Secondary Schs.	5	5	8	9	6	7	6	7	3
Electricity	1	5	1	4	8	8	6	11	12
Industry	0	1	2	4	5	7	7	16	14
Market	0	0	2	2	4	11	13	9	15

Number of respondents=56

Source: Calculated by the author.

Table 8.10.--Development Priorities of Literate Heads of Local Governments--1981.

Dev. Projects	Ranks								
	1	2	3	4	5	6	7	8	9
Water	9	1	1	1	1	0	0	0	0
Roads	1	3	0	3	5	1	0	0	0
Agric./Vet. Services	2	4	4	3	0	0	0	0	0
Dispensary/Maternity Home	0	2	1	2	3	4	1	0	0
Govt. buildings/Police/ Court	0	0	1	0	1	0	4	2	5
Primary/Secondary Schools	1	3	4	3	2	0	0	0	0
Electicity	0	0	0	0	1	2	4	2	4
Industry	0	0	1	0	0	0	1	7	4
Market	0	0	1	1	0	6	3	2	0

Number of respondents 13

Source: Calculated by the author.

water projects first. The low priority given to electricity, industry and market was evident in the fact that no one at the LGA level ranked them first or second. This pattern differed in some aspects from that of the village heads (Table 8.9) in which one respondent ranked electricity first, five ranked it second and one ranked industry second.

Tables 8.9 and 8.10 were useful only for comparison within ranks. In order to facilitate comparison between ranks and also between literate and illiterate respondents, the percentage of weights for the projects based only on first, second and third rankings were used. For example in Table 8.9 23 respondents ranked water first, 15 ranked it second and 11 ranked it third. Thus 49 (87 percent) of the 56 illiterate respondents put water in the first three ranks.

Table 8.11 shows the percentage weight for each group on the projects ranked. The illiterate respondents ranked water first, roads second, agriculture/veterinary services third, etc. The literate respondents ranked water first, agriculture/veterinary services second, secondary/primary schools third, etc. The differences in their rankings of education, government buildings/Police/Court and electricity are apparent by examining only the index of weights. But these differences were slight when the final rankings based on the index of weights were used. Thus basically there were no major differences between the

Table 8.11.--Percentage weights based on the first three ranks for each project as indicated by illiterate and literate respondents.

Dev. Projects	% Weight Illiterate	Final Rank	% Weight Literate	Final Rank
Water	87.5	1	83.8	1
Roads	44.7	2	30.7	4
Agric/Vet. Services	42.8	3	76.9	2
Dispensary/Maternity Home	33.9	4	23.0	5
Govt. Buildings/Police/Court	37.6	5	7.8	7
Secondary/Primary Schools	32.1	6	61.5	3
Electricity	12.5	7	0.0	9
Industry	5.4	8	7.8	7
Market	3.6	9	7.8	7

Source: Calculated by the author.

development priorities of literate and illiterate leaders of local governments. Their priorities are in line with basic needs concept of development rather than with modernization/ Westernization concept of development. However, the mismatch between the development priorities of leaders of local governments and the distribution of efforts persits and raised the question why local governments did not concentrate their efforts on the development problems their leaders identified and the priorities they perceived.

Variables already considered in this chapter (mobilization of local resources, efficacy, identification of problems and priorities) were endogenous to local governments in their activities to realize development. There were also exogenous variables which have had considerable impact on the manner in which local governments functioned to achieve rural development. These have included political patronage, political factionalism and the historical administrative structure.

Political Patronage and Factionalism in Rural Development

Political Patronage

It is argued that the political patronage, which has been inherent in African societies, is now rampant within the formal political and administrative organizations of present day African countries (Bratton 1980, p. 19). Political patronage aims at building up support to give the

political machine some legitimacy. Forms of this political patronage in Borno State have included material rewards such as infrastructure development for particular communities, as well as political and high level administrative appointments. The latter are intrinsically bound up with politics, even though this may have to be denied publicly. Since it was not possible, in this study, to investigate the whole spectrum of political patronage and its influence, only that which appeared to be related to local governments was examined.

The suspension of elections to the LGA councils in Borno State in 1979 and the establishment of management committees paved a way for political patronage to enter the formal local administration. The members appointed to the LGA councils were all active members of the Great Nigerian Peoples Party (GNPP) which controlled and still controls Borno State government. In this way party members were personally compensated, as well as building a framework for distributing rewards to the grass-roots.

Political appointments (at any level) favored one area at the expense of others because local office holders could use their positions to influence the location of services. Locations for health centers, secondary schools, LGA headquarters and political appointments generated conflict among local patrons which militated against development. Even though no tangible, independent

evidence could be produced in this study to confirm the relationship between political patronage and resource allocation, it was apparent that members of the management committee used their positions to influence the location of development projects, such as wells and local roads, in favor of their own areas.

Political influence was not limited to patronage appointments to the LGA councils. Political affiliation and influence were also important in the appointments of Emirs, district heads and village heads. The controversy and legal battle over the 1981 appointment of a new Emir of Bade demonstrated this point. The state government's alleged refusal to install the traditional nominee, because he supported the opposition, and its recognition of another aspirant sympthetic to the party, supported the contention that these appointments were forms of political patronage. Thus appointments to village and district headships were all forms of political patronage.

The patronage system was instrumental in the mobilization and integration of various local leaders and their people into a "spoils system" and thus served some useful purpose--making it possible for some development benefits to trickle down to the masses. The questionable element was the spatial and social inequalities that such a system generated, but in the absence of other

mobilizing forces it did serve as a potent means of linking the locality with the state's political machine which controlled and allocated the resources needed for rural development.

Political Factionalism

Appointments and activities of these local patrons resulted in intra-party as well as inter-party conflicts. Political factions which resulted from them were alleged to be responsible for political tensions, with territorial dimensions, especially in Bade and Monguno LGAs. The activities of the factions were alleged to militate against the functioning of local governments and cooperatives in the state.

Village heads asserted that partisan politics which infiltrated all facets of village life disrupted the linkage between the village councils and the communities. Fear of complaints of victimization to the patrons of different factions and possible negative consequences for the village heads were said to be the main reasons why village heads, especially in Monguno and Bade, were reluctant to call town meetings or meet with their bulamas. Many village heads argued that politics undermined village local governments, encouraged disobedience and that propaganda was used to distort development motives. Other leaders of local governments were seen as agents of the

party in power, which alienated them from some sections of the community.

Low effort in the mobilization of local financial resources also stemmed from political factionalism. Relying on a bouyant Nigerian economy (dependent on petroleum exports) which made possible large federal grants to the states and LGAs, the Borno State government abolished local direct taxes and the jangali (cattle) tax in 1979. Before the abolition these had been the main sources of dependable revenue with which local governments carried on local administration and provided social services, such as maintenance of local roads, dispensaries, and primary education.

Abolition of these taxes endeared the government to the masses but greatly increased the dependence of local governments on grants. With shrinking oil revenues since 1981, federal and state grants have been drastically reduced. Borno State government has found it politically unacceptable to reinstate the taxes with a net result of deteriorating services; local governments have been unable to function effectively to improve the welfare of the people. Some of the local political factions (which are territorially based) have tended to see the problems differently. Wanting to be in control of their own affairs, they have agitated for more political appointments

and the creation of more LGAs.* Spatial reorganizations of local administration had had considerable impact on the processes and patterns of development in the state.

The Historical Administrative Structure and Rural Development

Spatial variation in rural development outcomes in Borno State has been the product of successive spatial structures of administration in the area (Table 8.12). The roots of many LGAs' poor performance on the indexes of development were traced by the researcher to these spatial reorganizations of local administration. These spatial arrangements were found to have influenced functional (economic and political) linkages responsible for development.

The Native Authorities (NAs)

Colonization of the area by the British brought new socioeconomic and political order which laid the foundations for the patterns of development found in Borno State during this study. Colonial spatial organization of local administration (in the area which now constitutes Borno State) in the first two decades of this century led to the creation of five Native Authorities (NAs) and the designation of Maiduguri, Potiskum, Biu,

*Most political appointments in the state were based on LGA units irrespective of size (area and population).

Table 8.12.--Spatial Structure of Local Governments 1902-1981.

1902-1976	1976-1980	1981	1982
Bornu NA	Maiduguri	Maiduguri	Legislation for 53 LGAs.
	Damboa	Damboa	
	Damaturu	Damaturu	
	Fune	Fune	
	Geidam	Geidam	
	Gujba	Gujba	
	Nguru	Nguru	
	Kaga	Kaga	
	Konduga	Konduga	
	Monguno	Monguno	
	Kukawa	Kukawa	
		Gubio	
		Damask	
Dikwa NA	Ngala	Ngala	
	Bama	Bama	
Biu NA	Biu	Biu	
		Hawul	
		KK/Shani	
Fika NA	Fika	Fika	
		Nangere	
Bedde NA	Bade	Bade	
Part of Trust Terr./ Sarduana Prov.	Askira/Uba	Askira/Uba	
	Gwoza	Gwoza	

Source: Compiled by the author.

Dikwa and Gashua as NA headquarters (See Figure 3.4 p. 47). Roads to connect the latter four centers with Maiduguri (which was also the provincial headquarters) and other infrastructure followed. Consequently post-primary schools, health facilities and other services came to be located in these centers.

The status of Maiduguri was enhanced in 1969 when it became the capital of the former Northeastern State. It retained this status as the capital of Borno State after Northeastern State was split in 1976. Its capital status explains why the Maiduguri metropolitan LGA had high scores on the health, education and road accessibility indexes of development in 1981. This applied also to development outcomes in the LGAs that now encompass other old NA headquarters, such as Bade LGA with Gashua and Biu LGA with Biu.

The Local Government Areas (LGAs)

Spatial reorganization of administration, following 1976 local government reforms, led to the creation of 23 LGAs between 1977 and 1980 (Table 8.12) and the designation of 23 centers as LGA headquarters (See Figure 3.5, p. 50). These actions were intended to increase functional (economic and political) linkages between the state capital and the periphery, to increase local participation in the development of the LGAs.

This decentralization of rural development administration set in motion new patterns of relationships. Demands and supports as well as policies and actions began to reflect the spirit of reorganization. For example, prior to decentralization, post-primary schools were sited only at NA headquarters. Since the reforms, there has been definite policy to decentralize some development-generating services to LGA headquarters. Thus, the existence of at least one post-primary institution in each LGA, road construction (in progress) to link the state capital with all LGA headquarters, and plans to build a health center in each LGA, can be attributed to this decentralization of local administration. Benefits which have accrued from the reorganization have led to increased demand for the creation of more and smaller (area and population) LGAs.

This may be partially attributed to the fact that grants and some facilities, such as hospitals and agricultural service personnel have been allocated on the territorial principle of administrative areas rather than on their relative size (population and area). For example, a decision to build a health center in each LGA may satisfy the territorial principle but exacerbates social and spatial inequalities.

> "...geographic size may secondarily influence the the degree of regional inequality; given the level of national development, the larger the size...the greater will be the degree of regional inequality (Williamson, 1965).

Therefore, it was hypothesized in this study that there was a negative relationship between the size (area) of the LGAs (Appendix F) and their ranks on the mean LQ (See Table 5.2, p. 68) used to determine their performance on the development scale.

Table 8.13 shows the results of Spearman rank correlation for a one-tailed test done to test this hypothesis. The rejection level was set at .05. The size of the LGA was found to correlate significantly with development outcomes in the LGAs at the .05 level. Thus the smaller the size of the LGA, the higher the LGA on the development scale. Therefore the size of an LGA was shown to have a positive relationship with regional inequalities in development. This suggests that further reorganization of the LGAs to achieve symmetry would be a positive step toward a reduction in regional inequalities.

Table 8.13.--Spearman Rank Correlation Test between the Area of the LGAs and their Ranks on the Development Scale.

Calculated r_s	Level of Significance
.314	.073

The anomalies found between spatial patterns of rural development investment and patterns of population distribution, discussed earlier, are also related to the size of the LGAs since the larger (area) LGAs tended to be disadvantaged in the distribution of development investments. The implications of these two findings point directly to the inappropriateness of depending solely on the territorial principle as a basis for allocating development resources. Continued adherence to this criterion is considered to be an invitation to political unrest and incessant demands for spatial reorganization to achieve spatial and social equality.

Spatial variations in categories of rural development in Figure 5.1, page 72 may also be explained, at least in part by examining the history of administrative structure in the state. Table 8.12 has shown that the Native Authority (NA) system of administration was in operation for seven decades and Bornu NA was the largest and most populous with 66.4 percent of the population and 65.9 percent of the state's area (See Appendices B and F). Bornu NA now comprises 13 LGAs in the new local government structure (Table 8.12).

All things being equal, the probability of development spreading from the headquarters of a small (area) NA to all its corners was higher than was the case in a

larger NA, because of distance decay effect. Thus, the periphery of Bornu NA was at a greater disadvantage vis-a-vis the periphery of smaller (area) NAs. This partly explained why all the LGAs in the fourth category of development were in former Bornu NA (See Table 5.3, p. 69 and Table 8.12). Conversely, Bade, in the same geographic area as these LGAs ranked much higher in development, partly because it had, for decades, been part of a smaller area administrative unit. Therefore, while the spatial reorganization of rural development administration has contributed to reduction of spatial and social inequalities in rural development, it has not, as seen earlier, entirely alleviated either the residual inequities that arose under old spatial structure or brought about an entirely equitable current distribution of development resources.

A key concept in the spatial reorganization of local government was the designation of 23 centers as LGA headquarters. They were envisaged as centers for development-generating facilities or what Omuta (1981), who adhered to the urban thesis of development, called "third order cities," with potential for realizing rural-urban integration for development. The 23 headquarters could, by virtue of their larger numbers and more equitable spread (than the old NA headquarters) facilitate

closer functional (political and economic) linkages between the state headquarters and its periphery. However, for this to materialize there has to be increased accessibility between LGA headquarters and their hinterlands.

The non-centrality of most LGA headquarters has exacerbated the problems of very poor accessibility, especially in 21 (91.3 percent) of the LGAs that have accessibility indexes of .36 or less, where 60 percent or more of the areas were remote from all-weather roads (See Figure 3.5, p. 50; Table 5.11, p. 95). These problems were especially acute in development-generating services that were territorially delimited. For example, extension services were territorially defined to correspond with the boundaries of the LGAs. A key concept in the administration of agricultural development is the linkage between a rural community and an extension staff which supplies inputs to farmers. Since most of the extension services in Borno were located at the LGA headquarters, their non-centrality exacerbated problems of transport and communication between farmers and extension workers.

The spatial reorganization of local government between 1976 and 1981 illustrated in Table 8.12 contributes significantly to the reduction of regional inequalities because of policies to decentralize functions to the LGAs. Spatial reorganization was an attractive slogan, promising

the spread of benefits to all corners of the state. Pressures for the creation of more and smaller LGAs and legislation passed at the state government level attested to the popularity of this device. However, earlier reorganization resulted in a more than four-fold increase in personnel and related expenditures. With dwindling federal and state grants, the LGAs had been hard pressed to maintain services. Because of lack of resources there had been at the time of the study, progressive deterioration in some services, such as roads, bridges, dispensaries and school buildings. The poor financial situation had also postponed indefinitely the creation of 30 additional LGAs in 1982, aimed at reducing spatial and social inequalities in the state.

Summary

Endogenous and exogenous factors which impinge on local governments in achieving rural development have been examined in this chapter and reveal that low mobilization of local financial and human resources, by the two tiers of local government: village and LGA, have resulted in hierachical dependency syndrome. The reasons adduced for this were diverse. The low efficacy rating of leaders of local governments in their ability to solve rural development problems cast doubts on the suitability of such leaders and their administration to realize development.

The efforts of local governments in rural development were not related to how heads of local governments identified rural development problems and set priorities. Even though the problems they identified reflected the development needs of the people, the mismatch between these their priorities and the direction of their efforts raised questions as to the outcome of these triangular relationships. Partial answers to the question were found by analysis of the exogenous factors impinging on local governments. Political patronage and factionalism were found to have resulted in undue interference by higher level authorities, which seemed to be the main obstacle in the poor mobilization of local financial and human resources by local governments.

In addtion, there were found to be historical reasons, since spatial organization of local governments into Native Authorities from 1902 to 1976, laid the foundation for the concentration of benefits of development in a few centers as well as paving the way for top-down relationships, since the NA system did not encourage grass-roots involvement in rural development. The reorganization of Native Authorities into 23 LGA units in 1976 paved the way for greater decentralization. This created conditions for increased center-locality linkage for development as well as forming the basis for increased

spatial equality in the distribution of development investments in the state.

Perception by the grassroots of the positive effects of reorganization had led to increased demands for more LGAs. However, the increase in the number of LGAs had led to greater increase in administrative and related costs. This in turn had the effect of stifling rural development since pursuit of rural development in the state has not been geared toward self-reliant development.

CHAPTER IX

CONCLUSIONS AND RECOMENDATIONS

This study constituted a geographic appraisal of local organizations' inputs into the processes and patterns of rural development in Borno State. An attempt has been made to develop two main themes concerning rural development: that rural development achievement in the Local Government Areas (LGAs) is partly a function of local organizations' political behavior in their relations among themselves and between themselves and state level authorities; and that the patterns of rural development are the result of complex processes that have operated over time in the area.

Conclusions

Conclusions drawn from this study are based on a detailed analysis of documentary data, responses to an interview questionnaire given to heads of local organizations in the sample areas, as well as situational observations in Borno State from January through March, 1982.

1. Regionalization of the state, on the five indexes of development, exhibits (a) regional differences

in scaled patterns of rural development that show a lack of correspondence between patterns of population distribution and patterns of development investments; and (b) a generally low level of rural development in most of the LGAs.

2. Given the regional concentration of categories of rural development, especially the first and fourth categories, the roots for the spatial inequalities in development are traced to ecological, historical, political and socioeconomic factors interacting in complex ways.

3. Participatory organizational approach envisages a hierachical structure for local organizations. Based on the structure of local organizations in Borno State (a) only local government and political organizations possess a hierachical structure which is a prerequisite for any organization's effectiveness in realizing rural development; and (b) the paucity of local organizations, especially at district and LGA levels, leads to the existence of only two channels as against multiple channels suggested for success in a participatory organizational approach to rural development.

4. The participatory organizational approach also envisages continuous linkage among local organizations and between local organizations and higher level

authorities in relevant aspects of rural development. Linkage in this study was viewed in terms of transaction flows over space and time. The patterns of these flows indicate nodes (villages, district headquarters, LGA headquarters and the state capital) and hierachies (village, district, LGA and state levels) of central places based on administrative principle. Given the linkage in Borno State, the local governments did not relate in ways that could realize rural development because of (a) heavy preponderance of top-down linkage; (b) lack of horizontal linkage; (c) over-concentration on administration and law and order at the expense of other aspects; and (d) the limitation of participants to a few.

5. The problems and priorities in rural development, as perceived by heads of local governments, are in tune with the basic needs concept of development rather than the modernization and industrialization concepts of development. But the lack of symmetry between the problems identified and priorities perceived on one hand and the distribution of efforts on the other suggests that the actions of local governments are being dictated by higher level authorities than local government heads.

6. No attempt was made to assess the relationship between local governments' 1981 linkage and rural development outcomes in 1981. However, the significant

relationships found between three of the five disaggregations of linkage (top-down correspondence, top-down visits and bottom-up visits to the LGA) tentatively support Uphoff and Esman's contention that intensity of linkage is significantly related to rural development outcomes in developing countries.

7. Lack of mobilization of local resources by local governments has led to a hierachical dependency syndrome in which each level of local government looks to the next higher authority to solve its development problems.

8. Political patronage and political factionalism, which are generally consistent with ethnic and religious ties, are potent forces which (a) militate against the mobilization of resources (b) serve as avenues for participation in a "spoils system" and (c) militate against spatial and social equality in the distribution of development inputs.

9. The Native Authority (NA) spatial structure in place from 1902 to 1976, laid a foundation for spatial inequalities in development while the present spatial organization of local governments tends to reduce spatial inequalities in rural development but has not been carried to a point, yet, where such inequities are abolished or rendered minor concerns.

Considering all the above it is clear that local organizations in Borno State have not functioned in such

a way as to realize self-sustaining and self-reliant rural development. Adoption of a participatory organizational approach as a supplement or a corrective measure to present approaches to realize real development in Borno State has policy implications.

Policy Implications and Recommendations

Implementation of the 1976 local government reform in Borno State gives local governments the legal responsibility for initiating rapid rural development. This relegates cooperatives and other local organizations to the background in areas of rural development. For successful development, these local organizations (cooperatives, religious groups, ethnic unions and self-help organizations) should be officially encouraged to organize at district and LGA levels to cooperate with and complement the efforts of local governments.

The present local government system lacks institutional arrangements that can broaden participation in rural development. The retention of the village and district heads as sole representatives of their people and the current ways of appointing members to the LGA local government restricts participation.

A successful participatory organizational approach in Borno State requires institutional reforms to make local governments responsive to the local constituency as well as

to state government. To this end, the functions of village and district heads should be redefined and the appointment of members to the LGA council eliminated in favor of elections.

Because of the potential for opposition to radical change by local forces, any institutional change has to come about as a product of a learning process. A village head should only chair a village council while other members are selected by the people to represent the wards. A district head's function should be to coordinate the activities of the village councils in the district thereby bringing about horizontal linkages that can promote cooperation between areas in tackling common problems. The above recommendations over time may bring about spatially and hierachically structured local organizations which can operate at various territorial levels in solving rural development-related problems of different intensity.

Even with these changes, however, good performance would not be assured because of inherent weakness shown by similar local organizations vis-a-vis forces of the center. As Bratton (1980, p. 282) asserts, "Autonomous institutions for rural development have not yet emerged that would permit peasants to revive and control productive economies." Consequently, an intermediate organization to protect local organizations from being overwhelmed by the forces of the center is needed.

It is the opinion of this writer that such an intermediate organization has to act as a buffer. A type of relationship similar to the ones between land grant colleges and their catchment areas in the United States may serve such a purpose. However, for developing areas like Borno State where problems are diverse, such relationships should be integrated to involve agriculturists, rural sociologists, historians, geographers, political scientists and others whose expertise can contribute to rural people's leadership of their own development. Such an arrangement is prone to sabotage since universities are not independent of the government. Because realizing rural development is a product of a learning experience (Korten, 1980) involving such institutions is a step in the right direction.

Finally, spatial reorganization of administration to achieve symmetry is necessary if local organizations are to perform their linkage roles effectively. In addition, administrative headquarters and other facilities should be located as close as possible to the mean centers.

Future Research

In the conduct of this research it was apparent that improvements in method could be made. The study could have been more successful by limiting investigation to fewer villages and LGAs. Better results in deriving

scaled patterns of development could be obtained by using more indicators which reflect outputs.

There should also be further research on the roles of religious organizations in rural development. The educational patterns found suggest the possible influence of religion and ethnicity and this needs further investigation. Linkage for rural development between political organizations and state level authorities also needs to be investigated. This should be pursued in the first or early in the second year of an administration when gubernatorial and state assembly elections, which create political tension, are not on the horizon.

There should also be more investigation of the linkage between village local governments and their communities. Interviews should include other members of local organizations rather than limiting such interviews to heads of local organizations. This will lead to a more accurate analysis of all portions of linkage which are useful for any determination of relevance in development efforts.

The research deals with political processes and patterns of rural development in 1981. There is also the need to explore temporal changes in the political processes and spatial patterns of rural development. Knowledge gained from the direction and trend of such changes will be useful in future practical and policy decisions.

APPENDICES

APPENDIX A

The Interview Questionnaire

1. Respondent _____
2. Age _____
3. Organization _____
4. Local Government Area _____
5. (a) Official status of respondent _____
   (b) How long have you held this office? _____
6. Highest educational qualification of the respondent.
   _____ Did not go to school.
   _____ Attended Koranic school.
   _____ Had some primary education.
   _____ Passed primary 7.
   _____ WASC/Teachers' Grade II.
   _____ Diploma.
   _____ Degree.
7. (a) How many other officials are there in your organization? _____
   (b) How many are women? _____
   (c) Give the qualifications of other officials of the organization. _____

8. (a) By what method did you get this office?

_____ Elected.

_____ Appointed.

(b) Whom are you responsible to? _____

_____

(c) Will you have to be re-elected or re-appointed to continue to hold office?

_____ Yes.

_____ No.

(d) Who can remove you from this office? _____

9. (a) How many times, in a month, do you meet with others to carry on official business? _____

(b) Indicate three things that you discuss most frequently in these meetings.

(i) _____

(ii) _____

(iii) _____

(c) How often do you receive complaints or suggestions from the people either as individuals or as delegations? _____

10. (a) What contributions do women make in matters, such as deciding what the community needs? _____

_____

(b) Are you bound to consult the women before taking important decisions for the community? _____

_____

11. (a) What do you see as the most important problems confronting the people in your area?

_____

_____

_____

(b) What do you do to solve these problems?

_____

_____

_____

12. (a) Give these details on the financial statement for your organization in 1981.

₦ _____Government grants.

₦ _____Revenue from local sources (taxes, rates, licences and specific charges).

₦ _____ Salaries and wages.

(b) To what extent are you involved in preparing estimates? _____

_____

(c) Do you have authority to mobilize local labor for carrying out development projects?

_____ Yes.

_____ No.

(d) If yes give these information for 1981.

_____ Number of days people worked.

_____ Number of people involved.

_____

_____ Projects involed.

_____

_____

13. How many times, on the average, did officials from these institutions visit your organization monthly in 1981?

_____ Ministries.
_____ Honourable members and senators.
_____ Emir/Chief.
_____ LGA council.
_____ District head.
_____ Village head.
_____ Cooperative.
_____ Group Farmers' Associations.
_____ Clubs.
_____ Christian Fellowhip.
_____ Others.

14. How many times, on the average, did you or any other official of your organization visit these institutions monthly in 1981.

_____ Ministries.
_____ Honourable members and senators.
_____ Emir/Chief.
_____ LGA council.
_____ District head.
_____ Village head.
_____ Cooperative.
_____ Group Farmers' Associations
_____ Clubs.
_____ Christian Fellowhip.
_____ Others.

15. The organization received and sent out correspondence to these authorities between January 1, 1981 and December 31, 1981.

	Jan-Mar		Apr-Jun		Jul-Sep		Oct-Dec	
	In	Out	In	Out	In	Out	In	Out
Ministries	—	—	—	—	—	—	—	—
Hon. Members & Senators	—	—	—	—	—	—	—	—
Emir/Chief	—	—	—	—	—	—	—	—
LGA Council	—	—	—	—	—	—	—	—
District Heads	—	—	—	—	—	—	—	—
Village Heads	—	—	—	—	—	—	—	—
Cooperatives	—	—	—	—	—	—	—	—
Group Farmers' Associations	—	—	—	—	—	—	—	—
Christian Fellowship	—	—	—	—	—	—	—	—
Clubs	—	—	—	—	—	—	—	—
Others	—	—	—	—	—	—	—	—

16. The correspondence and visits (Qs. 13-15) deal with many things that affect your area. How many of them, for each of these activities, come from higher and lower level authorities?

	Correspondence		Visits	
Subjects	Higher	Lower	Higher	Lower
Infomation/Planning	_____	_____	_____	_____
Agriculture/Veterinary Forestry	_____	_____	_____	_____
Water	_____	_____	_____	_____
Cooperatives/Group Farmers Association	_____	_____	_____	_____
Roads/Markets/Motor parks	_____	_____	_____	_____
Other LGAs	_____	_____	_____	_____
Personnel	_____	_____	_____	_____
Health	_____	_____	_____	_____
Education	_____	_____	_____	_____
Law and Order	_____	_____	_____	_____

17. (a) What are the things you would want for the development of your area?

_____

_____

_____

_____

_____

(b) What are the things going on in your area that you think contribute to the development of your area?

_____

_____

_____

_____

18. How would you rate these development projects for your area in order of importance?

_____ Primay and secondary schools.

_____ Agriculture and veterinary services.

_____ Roads.

_____ Markets.

_____ Dispensaries and maternity homes.

_____ Water for all purposes.

_____ Government buildings, police and court.

_____ Electricity.

_____ Industry.

Appendix B

Projected Population of Borno State by LGAs 1980/81.

LGA	1963 Census	Projected 1981
Askira/Uba	83,219	126,599
Bade	93,865	142,795
Bama	142,153	216,253
Biu	67,502	104,295
Damasak	92,534	140,771
Damaturu	195,276	297,071
Damboa	113,185	172,187
Fika	96,968	147,516
Fune	156,663	238,331
Geidam	213,938	325,464
Gubio	122,974	190,043
Gujba	84,997	129,304
Gwoza	63,580	105,850
Hawul	96,114	146,216
Kaga	98,137	263,066
Konduga	194,310	295,569
Kukawa	102,434	155,832
KK/Shani	90,122	138,012
Maiduguri	139,965	280,892
Monguno	188,818	287,372
Nangere	124,288	212,935
Ngala	150,121	228,372
Nguru	213,805	325,258

Source: Borno State Ministry of Local Government and Borno State Statistical Year Book 1978/79

Appendix C

Primary School Enrollment, Post Primary School Enrollment and Number of Primary Schools in Borno State 1980/81.

LGA	Pr. Sch. Enr.	Post Pr. Sch. Enr.	No. of Pr. Schs.
Askira/Uba	24,822	807	64
Bade	41,872	768	127
Bama	57,725	1,014	89
Biu	82,076	2,563	287
Damaturu	46,924	842	90
Damboa	30,336	820	120
Fika	78,167	1,799	160
Fune	26,434	652	68
Geidam	29,738	790	78
Gujba	27,482	648	63
Gwoza	40,255	894	65
Kaga	41,216	720	59
Konduga	43,891	697	122
Kukawa	40,989	697	76
Maiduguri	59,437	2,314	134
Monguno	43,700	864	84
Ngala	38,830	720	96
Nguru	55,839	852	109

Source: Borno State Ministry of Education Maiduguri.

Appendix D

Health Establishments and Personnel in Borno State 1980/81

LGA	Doctors	Midwives	Disp.	Hosp. Beds
Askira/Uba	2	7	7	69
Bade	2	7	11	93
Bama	4	8	6	104
Biu	6	12	16	124
Damaturu	1	3	5	6
Damboa	0	0	4	0
Fika	6	9	17	100
Fune	0	0	6	0
Geidam	3	5	7	77
Gujba	0	0	6	0
Gwoza	3	7	6	146
Kaga	0	0	4	0
Konduga	0	1	8	0
Kukawa	0	2	9	0
Maiduguri	59	71	10	674
Monguno	0	0	4	0
Ngala	0	0	18	0
Nguru	6	7	6	124

Source: Borno State Ministry of Health Maiduguri.

Appendix E

Extension Workers, Tractors, Equipment available and their Distribution by LGAs in 1981.

LGA	Extension Workers	Tractors	Other Equipment
Askira/Uba	18	14	38
Bade	13	16	48
Bama	19	20	58
Biu	17	17	27
Damasak	7	20	27
Damaturu	15	25	59
Damboa	10	20	35
Fika	16*	29	58
Fune	14	17	38
Geidam	10	20	34
Gubio	4	10	16
Gujba	16	16	45
Gwoza	18	23	44
Hawul	11	9	13
Kaga	13	8	36
Konduga	7	20	50
Kukawa	8	18	20
KK/Shani	12	9	13
Maiduguri	30	33	65
Monguno	9	22	47
Nangere	-	4	4
Ngala	13	17	13
Nguru	13	19	45

*Includes Nangere LGA.

Source: Borno State Ministries of Agriculture and Animal Health Maiduguri.

Appendix F

Areas of Local Government Areas*

LGA	Area in Km^2
Askira/Uba	2,336
Bade	4,576
Bama	5,280
Biu	3,024
Damasak	4,880
Damaturu	10,064
Damboa	7,552
Fika	2,048
Fune	4,856
Geidam	7,984
Gubio	4,320
Gujba	5,520
Gwoza	2,416
Hawul	1,856
Kaga	9,248
Konduga	7,360
Kukawa	3,872
KK/Shani	3,200
Maiduguri	480
Monguno	3,600
Nangere	1,712
Ngala	4,768
Nguru	6,720
Chad Water	4,896
Total	112,568

Source: Calculated by the author using a planimeter

*The area of the state is 116,080.8 sq. km (Nigeria 1975). Thus the calculated area is short 3512.8 sq. km or 3% of the state area.

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

Adeleye, R. A. Power and Diplomacy in Northern Nigeria, 1804-1906; The Sokoto Caliphate and Its Enemies. London: Longman, 1971.

Axinn, George H. New Strategies for Rural Development. East Lansing: Rural Life Associates, 1978.

Aziz, Sartaj. Rural Development: Learning from China. New York: Holmes and Meier, 1978.

Benton, P. A. The Sultanate of Bornu. London: Frank Cass, 1968.

Bergman, Edward F. Modern Political Geography. Dubuque, Iowa: WM. C. Brown, 1975.

Blackton, John S. Local Government and Rural Development in Sri Lanka. Ithaca: Rural Development Committee, Cornell University, 1974.

Blau, Peter M. and Scott, W. R. Formal Organizations. San Francisco: Chandler, 1962.

Bratton, Micheal. The Local Politics of Rural Development: Peasant and Party-State in Zambia. Hanover, N. H.: University Press of New England, 1980.

Brenner, Louis. The Shehus of Bornu: A History of the El-Kanemi Dynasty of Bornu: Oxford: Claredon Press, 1973.

Brunn, Stanley D. Geography and Politics in America. New York: Harper and Row, 1974.

Bryant, Coralie and White, Louise G. Managing Development in the Third World. Boulder: Westview Press, 1982.

Cohen, Ronald. The Kanuri of Bornu. New York: Holt Rinehart and Winston, 1967.

Crocker, W. R. Nigeria: A Critique of British Colonial Administration. London: George Allen and Unwin, 1936.

De Souza, Anthony R. and Porter, Philip W. The Underdevelopment and Modernization of the Third World. Commission on College Geography Resource Paper No. 29. Washington, D.C.: Association of American Geographers, 1974.

Eicher, Carl K. and Baker, Doyle C. Research on Agricultural Development in Sub-Saharan Africa. East Lansing: Michigan State University International Development, 1982.

Freyhold, Michaela von. Ujamaa Villages in Tanzania: Analysis of a Social Experiment. New York: Monthly Review Press, 1979.

Friedmann, John and Weaver, Clyde. Territory and Function: The Evolution of Regional Planning. London: Edward Arnold, 1979.

Gellar, Sheldon; Charlick, Robert B.; and Jones, Yvonne. Animation Rurale and Rural Development: The Experience of Senegal. Ithaca: Rural Development Committee, Cornell University, 1980.

Gregory, Stanley. Statistical Methods and the Geographer. London: Longmans, 1963.

Haggett, Peter. Geography: A Modern Synthesis. New York: Harper and Row, 1979.

Hallam, W. K. R. The Life of Rabih Fadl Allah. Elms Court: Authur H. Stockwell, 1977.

Harvey, David. Explanation in Geography. London: Edward Arnold, 1979.

Hunter, Guy. The Administration of Agricultural Development: Lessons from India. London: Oxford University Press, 1970.

Hyden, Goran. Beyond Ujamaa in Tanzania: Underdevelopment and an Uncaptured Peasantry. Berkeley: University of California Press, 1980.

Igbozurike, Martin. Problem-Generating Structures in Nigeria's Rural Development. Uppsala: Scandinavian Institute of African Studies, 1976.

Isard, Walter. Methods of Regional Analysis: An Introduction to Regional Science. Cambridge, Mass.: The M. I. T. Press, 1963.

Jedlicka, Allen D. Organization for Rural Development: Risk Taking and Appropriate Technology. New York: Praeger, 1977.

Johl, S. S. and Mudahar, Mohinder S. The Dynamics of Institutional Change and Rural Development in Punjab, India. Ithaca: Rural Development Committee, Cornell University, 1974.

Johnston, H. A. S. and Muffett, D. J. M. Denham in Bornu. Pittsburgh: Duquesne University Press, 1973.

Johnston, Ronald J. Political, Electoral and Spatial Systems: An Essay in Political Geography. Oxford: Claredon Press, 1979.

Lele, Uma. The Design of Rural Development: Lessons from Africa. The John Hopkins University, 1975.

Mabogunje, Akin, L. The Development Process: A Spatial Perspective. New York: Holmes and Meier, 1981.

McHenry, Dean J. Jr. Tanzania's Ujamaa Villages: The Implementation of a Rural Development Strategy. Berkeley: Institute of International Studies, University of California, 1979.

Meister, Albert. La Participation pour le Développment Paris: Les Editions Ouvrieres, 1977.

Mlinar, Zdravko. Local Government and Rural Development in Yugoslavia. Ithaca: Rural Development committee, Cornell University, 1974.

Moris, Jon R. Managing Induced Rural Development. Bloomington: International Development Institute, Indiana University, 1981.

Muir, Richard and Paddison, Ronan. Politics, Geography and Behavior. London: Methuen, 1981.

Murray, Albert V. The School in the Bush: A Critical Study of the Theory and Practice of Native Education in Africa. Longmans Green, 1929.

Perham, Margery. Native Administration in Nigeria. London: Oxford University Press, 1937.

Prescott, John R. V. The Geography of State Policies. Chicago: Aldine, 1968.

Reddy, G. Ram. Panchayati Raj and Rural Development in Andhra Pradesh, India. Ithaca: Rural Development Committee, Cornell University, 1974.

Rostow, Walt W. The Stages of Economic Growth: A Non-Communist Manifesto. Cambridge, The Cambridge University Press, 1960.

Salsalammu, Tarihi da. Our History and Origin. Zaria: Gaskiya Corporation, 1965.

Samuleson, Paul A. Economics: Introductory Analysis. 9th ed. New York: McGraw-Hill, 1973.

Smith, David M. Human Geography: A Welfare Approach. New York: St. Martin's Press, 1977.

Smock, Audrey C. Ibo Politics: The Role of Ethnic Unions in Eastern Nigeria. Cambridge, Mass.: Harvard University Press, 1971.

Stavis, Benedict. People's Communes and Rural Development in China. Ithaca: Rural Development Committee, Cornell University, 1974.

Uphoff, Norman T. and Esman, Milton J. Local Organization for Rural Development: Analysis of Asian Experience. Ithaca: Rural Development Committee, Cornell University, 1974.

Williams, S. K. T. Rural Development in Nigeria. Ile-Ife, Nigeria: University of Ife Press, 1975.

World Bank. Accelerated Development in Sub-Saharan Africa: An Agenda for Action. Washington D.C., 1981.

Articles

Abubakar, Imam. "The Nigerian Constitutional Proposals." African Affairs (Journal of the Royal African Society) 45 (1946): 22-27.

Amucheazi, Elochukwu. "Local Government and Traditional Legitimacy: Divisional Administration in the East Central State." The Quarterly Journal of Administration 7 (1973): 439-450.

Berry, Brian J. L. "An Inductive Approach to the Regionalization of Economic Development." In Ginsburg, Norton, ed., Essays on Geography and Economic Development 62 (1960): 78-107.

_____. "Basic Patterns of Economic Development." In Ginsburg, Norton, ed., Atlas of Economic Development 68 (1961): 110-119.

Berry, Leonard; Campbell, David J.; and Emker Ingemar. "Trends in Man-Land Interaction in the West African Sahel." In Dadly, David; Harrison-Church, R. J.; and Bezzaz, Fatima, eds., Drought in Africa 2, pp. 83-91. London: International African Institute, 1977.

Board, C.; Davis, R. J.; and Fair, T. J. D. "The Structure of the South African Space Economy: An Integrated Approach." Regional Studies 4 (1970): 367-392.

Bunting, Turdi E. and Gulke, Leonard. "Behavioral and Perception Geography: A Critical Appraisal." Annals of the Association of American Geographers 69 (1979): 448-462.

Burnett, Alan D. and Taylor, Peter J. "Introductions." In Burnett, Alan D. and Taylor, Peter J. eds., Political Studies from a Spatial Perspective, pp. 3-9 and 45-52. Chichester: John Wiley, 1981.

Campbell, D. J. and Katz, C. "The Least Developed and the Rest." In Berry, Leonard and Kates, Robert W. eds., Making the Most of the Least: Alternative Ways to Development, pp. 47-73. New York: Holmes and Meier, 1980.

Chambers, Robert. "Rural Poverty Unperceived: Problems and Remedies." World Development 9 (1981): 1-19.

_____. "Cheating and Expanding Organizations for Rural Development." In Cliffe, L. and Doornbos, M. R. eds., Government and Rural Development in East Africa, pp. 119-138. The Hague: Martinus Nijhoff, 1977.

Chilcote, Ronald H. "Theories of Dependency: The View from the Periphery." In Ingolf, Vogeler and de Souza, Anthony, Dialectics of Third World Development, pp. 299-309. Montclair: Allanheld, Osun and Co., 1980.

Cliffe, Lionel. "The Policy of Ujamaa Vijijini and Class Struggle in Tanzania." In Cliffe, Lionel and Saul, S. eds., Socialism in Tanzania: An Interdisplinary Reader, pp. 195-211. Dar es Salam: East African Publishing Co., 1973.

Cohen, John M. and Uphoff, Norman T. "Participation's Place in Rural Development: Seeking Clarity through Specificity." World Development 8 (1980): 213-235.

Cohen, Saul B. and Rosenthal, Lewis D. "A Geographical Model for Political Systems Analysis." Geographical Review 61 (1971): 5-31.

Colburn, Forest D. "Current Studies of Peasants and Rural Development: Applications of Political Economy Approach." World Politics 34 (1982): 437-449.

Darden, J. T. and Tabachneck, A. S. "Algorithm 8: Graphic and Mathematical Descriptions of Inequality, Dissimilarity, Segregation, or Concentration." Environment and Planning A 12 (1980): 227-234.

Darkoh, M. B. K. "Growth Poles and Growth Centers with Special Reference to Developing Countries-A Critique." Journal of Tropical Geography 44 (1977): 12-22.

Downs, Roger M. "Geographic Space Perception: Past Approaches and Future Prospects." Progress in Geography 2 (1970): 66-108.

Esman, Milton J. "Development Administration and Constituency Organization." Public Administration Review 38 (1978): 166-172.

Fitzpatrick, J. F. J. "Nigeria's Curse-Indirect Rule." In Collins, R. O. ed., Problems in the History of Colonial Africa 1860-1960, pp. 118-141. Englewood Cliffs: Prentice-Hall, 1970.

Friedmann, John and Douglass, Mike. "Agropolitan Development: Towards a New Strategy for Regional Planning in Asia." In Fu-Chen Lo and Salih, K. eds., Growth Pole Strategy and Regional Development Policy, pp. 163-192. Oxford: Pergamon Press, 1978.

Gboyega, A. "Prospects for the New Cabinet System for Local Government." In Adamolekun, L. and Rowland, L. eds., The New Local Government System in Nigeria: Problems and Prospects for Implementation, pp. 35-41. Ibadan: Heinemann, 1979.

Kazimoto, A. A. "Propects for Building Ujamaa Villages." In Cliffe, Lionel and Saul, S. eds., Socialism in Tanzania: An Interdisplinary Reader, pp. 186-194. Dar es Salam: East African Publishing Co., 1973.

Korten, David C. "Community Organization and Rural Development: A Learning Process Approach." Public Administration Review 40 (1980): 480-511.

Lakshmanan, T. R. "A Systems Model of Rural Development." World Development 10 (1982): 885-898.

Logan, M. I. "The Process of Regional Development and Its Implications for Planning." The Nigerian Geographical Journal 13 (1970): 109-120.

_____. "The Development Process in Less Developed Countries." Australian Geographer 12 (1972): 146-153.

Mabogunje, Akin L. "Growth Poles and Growth Centers in the Regional Development of Nigeria." In Kuklinski, Antoni R. ed., Regional Policies in Nigeria, India and Brazil, pp. 3-93. The Hague: Mouton, 1978.

Mehden, Fred R. "Religion and Development in South-east Asia: A Comparative Study." World Development 8 (1980): 545-553.

Montgomery, John D. "The Populist Front in Rural Development: Or Shall We Eliminate the Bureaucrats and Get on with the Job." Public Administration Review 39 (1979): 59-63.

Okpala, D. C. I. "Towards a Better Conceptualization of Rural Community Development: Empirical Findings from Nigeria." Human Organization 39 (1980): 161-169.

Ola, R. "The Recent Local Government Reforms: Advent of a New Federal-State-Local Government Relations." In Adamolekun, L. and Rowland, L. eds., The New Local Government System in Nigeria: Problems and Prospects for Implementation, pp. 15-23. Ibadan: Heinemann, 1979.

Omuta, G. E. D. "Administrative Reform and Rural-Urban Integration in Nigeria." African Environment, Occasional Paper Series, February 1981.

Oyewole, A. "Local Government in the Nigerian Federation." Planning and Administration 5 (1978): 43-52.

Ragab, Ibrahim A. "Islam and Development." World Development 8 (1980): 513-521.

Seers, Dudley. "The Meaning of Development." International Development Review 19 (1977/2): 2-7.

_____. "The New Meaning of Development." International Development Review 19 (1977/3): 2-7.

_____. "What are We Trying to Measure?" The Journal of Developing Studies 8 (1972): 21-36.

Soja, Edward W. "Communication and Territorial Integration in East Africa: An Introduction to Transaction Flow Analysis." The East Lakes Geographer 4 (1968): 39-57.

Stohr, Walter and Todtling, Franz. "Spatial Equity-Some Anti-theses to Current Regional Development Doctrine." Regional Science Association Papers 38 (1977): 33-53.

Streeten, Paul. "The Distinctive Features of a Basic Needs Approach to Development." International Development Review 19 (1977): 8-16.

Sutcliffe, Claud R. "Is Islam an Obstacle to Development? Ideal Pattern of Beliefs Versus Actual Patterns of Behavior." The Journal of Developing Areas 10 (1975): 77-82.

Svendsen, K. E. "General Problems of Rural Development Policy in Tanzania." In Cliffe, Lionel and Saul, S. eds., Socialism in Tanzania, pp. 180-185. Dar es Salam: East African Publishing Co., 1973.

Walter, M. W. "Length of the Rainy Season in Nigeria." The Nigerian Geographical Journal 10 (1967): 123-136.

Weinand, Herbert C. "Some Spatial Aspects of Economic Development in Nigeria." Journal of Developing Areas 7 (1973): 247-263.

Wilber, Charles K. and Jameson, Kenneth P. "Religious Values and Social Limits to Development." World Development 8 (1980): 467-479.

Williamson, J. G. "Regional Inequality and the Process of National Development." Economic Development and Cultural Change 13 Part II, 1965.

Yahaya, Aliyu D. "Representation in Local Government-The Emirate Case." The Nigerian Journal of Public Affairs 6 (1976): 25-36.

Reports, Papers, Documents, and Unpublished Materials

Barkan, J. D.; Gachuki, D., Helmquist, F.; and Migot-Adholla, S. "Is Small Beautiful? The Organizational Conditions for Effective Small-scale Self-help Development Projects in Rural Kenya." Nairobi: Institute for Development Studies, University of Nairobi, 1980.

Borno State. "Tractor Equipment and their Distribution-1981." Maiduguri: Ministry of Agriculture and Natural Resources.

_____. "Extension Personnel by LGAs-1981." Maiduguri: Ministry of Agriculture and Natural Resources.

_____. "Primary and Secondary School Enrollments, 1980/81." Maiduguri: Ministry of Education.

_____. "Number of Primary Schools by LGAs in 1980/81." Maiduguri: Ministry of Education.

_____. "Health Establishments and Personnel by LGAs, 1980/81." Maiduguri: Ministry of Health.

_____. "Cooperatives in Borno State by LGAs, 1978/79." Maiduguri: Ministry of Economic Development, Statistical Year Book 1978/79.

_____. "Rural Boreholes." Maiduguri: Water Board.

Chad Basin Development Authority. "Third Annual Report-1st April, 1976-31st March 1977. Maiduguri, October 1977.

_____. "Baga Polder Project Inauguration." Maiduguri: Planning and Designing Department, 1982.

Damboa Local Government. "Treasury Financial Statement, 1982.

Gran, G. "From the Official Future to a Participatory Future: Rethinking Development Policy and Practice in Zambia." Paper presented at the 25th Annual Meeting of the African Studies Association, Washington D.C., November 4-7, 1982.

Gubio Local Government. Treasury Estimates, 1982.

Nigeria, Federal Republic of. "Annual Abstract of Statistics." Lagos: Federal Office of Statistics, 1975.

Thomas, Barbara. "Rural Development through Local Initiatives: An Assessment of Kenya's Experience with Harambee Projects in Selected Rural Communities." Nairobi: Institute for Development Studies, University of Nairobi, 1979.

Dissertations and Theses

Charlick, Robert. "Power and Participation in the Modernization of Rural Hausa Communities." Ph.D. dissertation, University of California, Los Angeles, 1974.

Isiogugu, M. E. "Analysis of Cooperative Group Farming in Borno State." M. Sc. Thesis, University of Ife, 1981.

McIntosh, T. L. "Local Government and Development in Guatemala." Ph.D. dissertation, Michigan State University, 1974.

Tukur, M. M. "The Imposition of British Domination on the Sokoto Caliphate and Neighbouring States-1897-1914: A Reinterpretation of Colonial Sources." Ph.D. thesis, Ahmadu Bello University, 1979.

Maps

Borno State. Local Government Areas. Maiduguri: Ministry of Land and Survey 1981.

Nigeria, Federal Republic of. Nigeria-Divisions. Lagos: Survey Dept. 4000/413/5/53.