INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Bank Staff Working Paper No. 195

January 1975

AFRICAN EXPERIENCES WITH RURAL DEVELOPMENT: A DIGEST REPORT
ON THE AFRICA RURAL DEVELOPMENT STUDY

This digest report on the ARDS has been prepared by Ms. Rachel Weaving drawing from the substantially longer and more extensive main report by Ms. Uma Lele which is to be published by the Bank as a book in late 1975. Condensation of a study concerned with programs and projects of great diversity and complexity inevitably requires a high degree of selectivity. This digest report, therefore, is not intended to and cannot serve as a substitute for the full report. Its purpose is simply to give wider distribution to certain salient aspects and results of the ARDS pending the publication of Ms. Lele's monograph.

Employment and Rural Development Division
Development Economics Department
Development Policy Staff
RPO-218
AFRICAN EXPERIENCES WITH RURAL DEVELOPMENT: A DIGEST REPORT ON THE AFRICA RURAL DEVELOPMENT STUDY

TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Background Papers on Projects Reviewed in Africa</th>
<th>Rural Development Study</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Abbreviations and Acronyms Used in the ARDS</td>
<td></td>
<td>ii - iv</td>
</tr>
</tbody>
</table>

I. THE SCOPE OF THE STUDY

Rural Poverty in Africa and the Constraints on Intervention
The Projects Reviewed
(a) Commodity, or "Export Crop" Projects
(b) Integrated Development Projects
(c) Functional Projects
(d) Subsectoral Projects

II. DEVELOPMENT OF THE FARMING SYSTEMS

The Need for Balanced Farming Systems
Increasing Production in Multiple Cropping Systems
The Role of Adaptive Research
Intra-Regional Income Disparities

III. AGRICULTURAL EXTENSION

Intensive Coverage and the Constraints on Agricultural Innovation
Alternative Approaches to Extension

IV. AGRICULTURAL CREDIT

Saving in the Traditional Rural Sector
Access to Institutional Credit
Repayment of Institutional Credit
Institutional Credit and the Promotion of Innovations
Future Approaches to Agricultural Credit

V. MARKETING OF AGRICULTURAL OUTPUT

Output Price Supports in the Integrated Projects
Marketing Cooperatives
Alternative Approaches to Marketing
## VI. SOCIAL SERVICES

- Economic and Social Costs of Sophisticated Social Services ........................................... 28
- Alternative Approaches to Social Service Delivery ............................................................. 30

## VII. RURAL DEVELOPMENT ADMINISTRATION AND INSTITUTIONAL DEVELOPMENT

- Administrative Autonomy in the Integrated Regional Projects ........................................... 32
- Administrative Decentralization:
  - (a) The Kenya SRDP .................................................. 35
  - (b) The Ujamaa Movement in Tanzania .............................................. 37

## VIII. TRAINING FOR RURAL DEVELOPMENT

- Non-formal Education in Rural Communities ................................................................. 41
- Training of Staff for Rural Development ........................................................................... 42

## IX. IMPLICATIONS OF THE FINDINGS OF THE ARDS FOR DESIGNING RURAL DEVELOPMENT PROGRAMS

### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Some Aggregate Statistics for the Countries in which the Projects Reviewed are Located</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Projected and Actual Yields of Maize and Groundnut, Lilongwe Land Development Program, Malawi</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Estimated Capital/Recurrent Expenditure Ratios for Education and Health, Tanzania</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>Planned Development/Recurrent Expenditure Ratios, Kenya 1966–70</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>Tanzania: Share of Major Sectors in Regional Budget (Excluding Parastatals)</td>
<td>30</td>
</tr>
</tbody>
</table>
- 1 -

BACKGROUND PAPERS ON PROJECTS REVIEWED IN
AFRICA RURAL DEVELOPMENT STUDY


### Abbreviations and Acronyms Used in the ARDS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMARC</td>
<td>Agriculture Marketing and Development Corporation (Malawi)</td>
</tr>
<tr>
<td>AFC</td>
<td>Agricultural Finance Corporation (Kenya)</td>
</tr>
<tr>
<td>AID</td>
<td>Agency for International Development</td>
</tr>
<tr>
<td>AIDB</td>
<td>Agricultural and Industrial Development Bank (Ethiopia)</td>
</tr>
<tr>
<td>ARDS</td>
<td>African Rural Development Study</td>
</tr>
<tr>
<td>BAT</td>
<td>British American Tobacco Company</td>
</tr>
<tr>
<td>BDPA</td>
<td>Bureau pour le Developpement de Production Agricole (France)</td>
</tr>
<tr>
<td>CADU</td>
<td>Chilalo Agricultural Development Unit (Ethiopia)</td>
</tr>
<tr>
<td>CDC</td>
<td>Commonwealth Development Corporation (United Kingdom)</td>
</tr>
<tr>
<td>CFDT</td>
<td>Compagnie Francaise pour le Developpement des Fibres Textiles (France)</td>
</tr>
<tr>
<td>CINAM</td>
<td>Compagnie d'Etudes Industrielles et d'Amenagement du Territoire (France)</td>
</tr>
<tr>
<td>CPA</td>
<td>Central Personnel Agency (Ethiopia)</td>
</tr>
<tr>
<td>CTS</td>
<td>Cooperative Thrift Scheme (Kenya)</td>
</tr>
<tr>
<td>CUT</td>
<td>Cooperative Union of Tanganyika, Ltd. (Tanzania)</td>
</tr>
<tr>
<td>DDC</td>
<td>District Development Committee (Kenya)</td>
</tr>
<tr>
<td>DDPC</td>
<td>District Development and Planning Committee (Tanzania)</td>
</tr>
<tr>
<td>EPID</td>
<td>Extension and Project Implementation Department (Ethiopia)</td>
</tr>
<tr>
<td>EPL</td>
<td>Local Progress Enterprise (Cameroon)</td>
</tr>
<tr>
<td>ERB</td>
<td>Economic Research Bureau (Dar es Salaam)</td>
</tr>
<tr>
<td>FAC</td>
<td>Le Fonds d'Aid et de Cooperation (France)</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>IBRD</td>
<td>International Bank for Reconstruction and Development (the World Bank)</td>
</tr>
</tbody>
</table>
IDA International Development Association

IDC Industrial Development Center (Nigeria)

IDS Institute for Development Studies (Nairobi)

IRAM Institut des Recherches et d'Applications des Methodes de Developpement (France)

IRAT Institut de Recherches pour Agronomique Tropicale (France)

KLDP Kenya Livestock Development Project

KTDA Kenya Tea Development Authority

LLDP Lilongwe Land Development Program (Malawi)

LSSB Lint Seed and Marketing Board (Tanzania)

MCC Marketing, Credit, et Cooperative Division (WADU, Ethiopia)

MFP Ministry of Finance and Economic Planning (Kenya)

MIA Modified Input Area (LLDP, Malawi)

MPP Minimum Package Program (Ethiopia)

MORAID Norwegian Agency for International Development (Norway)

NRDC National Rural Development Committee (Kenya)

OPAM Office des Produits Agricoles du Mali

PDC Provincial Development Committee (Kenya)

PIM Programming and Implementation Management System (SRDP, Kenya)

PPO Provincial Planning Officer (Kenya)

PSC Public Service Commission (Malawi)

RDC Regional Development Committee (Tanzania)

RDF Regional Development Fund (Tanzania)

RMEA Resident Mission in East Africa (Nairobi)

ACAER Service du Credit et d'Equipement Rural (Mali)
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCDA</td>
<td>Special Crops Development Authority (Kenya)</td>
</tr>
<tr>
<td>SCET</td>
<td>Société Centrale pour les Études du Territoire-Coopération (France)</td>
</tr>
<tr>
<td>SEDES</td>
<td>Société d'Études du Développement Économique et Sociale (France)</td>
</tr>
<tr>
<td>SIDA</td>
<td>Swedish International Development Authority</td>
</tr>
<tr>
<td>SIP</td>
<td>Sequential Implementation Program (SRDP, Kenya)</td>
</tr>
<tr>
<td>SODFIKAM</td>
<td>Société pour le Développement du Kam (Cameroon)</td>
</tr>
<tr>
<td>SRDP</td>
<td>Special Rural Development Program (Kenya)</td>
</tr>
<tr>
<td>TAC</td>
<td>Tanganyika Agricultural Corporation (Tanzania)</td>
</tr>
<tr>
<td>TANU</td>
<td>Tanzania Africa National Union</td>
</tr>
<tr>
<td>TTA</td>
<td>Tanzania Tobacco Authority</td>
</tr>
<tr>
<td>TTB</td>
<td>Tanzania Tobacco Board</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VSC</td>
<td>Village Settlement Commission (Tanzania)</td>
</tr>
<tr>
<td>VSD</td>
<td>Village Settlement Division (Tanzania)</td>
</tr>
<tr>
<td>WADU</td>
<td>Woliso Agricultural Development Unit (Ethiopia)</td>
</tr>
<tr>
<td>WGM0</td>
<td>WADU Group Marketing Organization (Ethiopia)</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>ZAPI</td>
<td>Zones d’Action Prioritaires Intégrées (Cameroon)</td>
</tr>
</tbody>
</table>
AFRICAN EXPERIENCES WITH RURAL DEVELOPMENT: A DIGEST REPORT ON THE AFRICA RURAL DEVELOPMENT STUDY

I. THE SCOPE OF THE STUDY

Rural Poverty in Africa and the Constraints on Intervention

1. Recent years have seen a growing awareness in development literature and in the programs of national governments and aid agencies of the need to focus attention on the raising of living standards in the rural areas of less developed countries. Despite these advances in theory and the accumulation of practical experience, the mass of the world's rural population remains in poverty, the proximate causes of their poverty remain diverse and, which is barely surprising, no blueprints for success have been made available to planners of rural development strategy. Where, as in most sub-Saharan African countries, 1/ the proportion of the population living in rural poverty and dependent on agriculture is very large, development of rural sector is particularly urgent. Neither can it be approached merely as a "holding operation" until industrial and urban growth can absorb large numbers of marginal rural people; rather, it has to be adopted as the most efficient means of stimulating overall development.

2. Of the 310 million or so people of sub-Saharan Africa, it is estimated that approximately nine out of ten live in rural areas, with average per capita annual incomes of under US$100, derived largely from low productivity agriculture and livestock. Although the statistics in Table 1 are for a small group of countries they help illustrate some broadly typical characteristics. Agricultural production is mainly subsistence oriented and the proportion of the rural population engaged in commercial farming is extremely small. Moreover, such increases in productivity as have occurred in the commercial sub-sector have not had a significant effect on rural incomes at large, and within the rural sector even incomes from commercial crops tend to be low. In general, the distribution of income in most of these countries is in fact relatively equitable. 2/ Per capita cultivable land is higher in most

---

1/ South Africa, Rhodesia, Mozambique and Angola do not come within the province of this paper.

## Table 1: Some aggregate statistics for the countries in which the projects reviewed are located

<table>
<thead>
<tr>
<th>Country</th>
<th>Total pop. (millions)</th>
<th>Rural pop. as % of total</th>
<th>Annual pop. growth rate 1965-71</th>
<th>Per capita agricultural land (acres)</th>
<th>Per capita GNP (1971) US $</th>
<th>% of GDP orig. in agriculture, forestry, and fishing</th>
<th>Index of per capita food production in 1972 Base 1961-1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cameroon</td>
<td>5.78</td>
<td>80%</td>
<td>2.1%</td>
<td>6.5</td>
<td>200</td>
<td>40%</td>
<td>114</td>
</tr>
<tr>
<td>2. Ethiopia</td>
<td>25.25</td>
<td>91%</td>
<td>2.4%</td>
<td>7.0</td>
<td>80</td>
<td>34%</td>
<td>109</td>
</tr>
<tr>
<td>3. Kenya</td>
<td>11.67</td>
<td>89%</td>
<td>3.3%</td>
<td>1.1</td>
<td>160</td>
<td>34%</td>
<td>105</td>
</tr>
<tr>
<td>4. Malawi</td>
<td>4.35</td>
<td>94%</td>
<td>2.3%</td>
<td>N/A</td>
<td>90</td>
<td>32%</td>
<td>122</td>
</tr>
<tr>
<td>5. Mali</td>
<td>5.12</td>
<td>88%</td>
<td>2.1%</td>
<td>19.0</td>
<td>70</td>
<td>43%</td>
<td>85</td>
</tr>
<tr>
<td>6. Nigeria</td>
<td>56.51</td>
<td>76%</td>
<td>2.5%</td>
<td>2.0</td>
<td>140</td>
<td>50%</td>
<td>86</td>
</tr>
<tr>
<td>7. Tanzania</td>
<td>13.21</td>
<td>92%</td>
<td>2.8</td>
<td>10.8</td>
<td>110</td>
<td>40%</td>
<td>140</td>
</tr>
</tbody>
</table>


/ Data estimates made by the Agricultural and Rural Development Sector Study of Tanzania, based on production statistics provided by the Government of Tanzania, indicate a much smaller growth rate of agricultural production than implied in FAO data. According to the survey's estimates, increases in agricultural production from 1968-1972 have barely kept pace with the rate of growth of the rural population. The annual growth of agricultural production measured in constant prices slowed from 3.9 percent over the period 1964-1968, to an annual rate of 2.4 percent from 1968-1972. At the same time the annual rate of growth of total GDP decreased from 6.3 percent to 4.3 percent over comparable periods. These figures indicate that virtually no gains in agricultural productivity were achieved.
of Africa than in the more densely populated parts of Asia (for example, an average of 7.0 acres in Ethiopia compared with 0.7 in India) and there are of course far greater areas as yet unadapted to cultivation, but soils are in general poorer and average yields of principal crops lower than in Asia. 1/ With population growing at rates of 2-3.5 percent per year, pressure on land has been rising rapidly. Nor has there been much relief from efforts to industrialize; urban employment opportunities in sectors of high labor productivity have not been increasing as fast as might be hoped. Industrial production in these countries has traditionally been capital intensive and reliant on imported inputs; there have been relatively few indigenous entrepreneurs and manufacturing industry has had few linkages to domestic resources or to rural demand. In fact, without a significant rise in incomes in the rural sector there can be little scope for demand-led growth in industry.

3. The immediate objectives of rural development projects of course vary, as do approaches to strategy, but the basic goal which underlies the argument of this paper embraces both long-term economic growth and the equitable distribution of benefits accruing from growth. Such an ideal implies that interventions should not aim only to raise income levels, but also to ensure that the poorest sections of the community have access to services which will enhance their productivity and their social welfare.

4. Interventions which seek to break the cycle of low productivity-poverty-low productivity in rural areas need if they are to be guaranteed any measure of success to be based on an identification of its contributory causes and an understanding of the processes of interaction between them. The sources of constraints on agricultural productivity are in essence familiar. But planning for rural development in Africa has been, and continues to be, hampered by lack of data and the lack of a framework of analysis which provides for the clear-cut identification of those constraints on productivity which pertain in specific areas, or for the prediction of responses to intervention. In the belief that an examination of past experience could be helpful, the Africa Rural Development Study undertook a series of reviews of rural development projects in African countries, with a view to evaluating the potential of different types of strategy under different conditions, describing the typical operating problems they may face, and providing some tentative guidelines for future planning.

5. Lack of data and of a framework of analysis are not of course the only constraints on the success of interventions; planning for rural development has very often to be reconciled to the existence of government policies and social institutions which have, on balance, an adverse effect

---

on rural welfare. In addition to shortages of fiscal resources, there are two other binding and more peculiarly African constraints on the scope of interventions: the scarcity of trained manpower available to rural areas, and the weakness in most of these countries of local government administration. By examining the administrative forms adopted for the implementation of different types of projects some conclusions can be drawn as to how to tackle such latter obstacles in future.

6. Twelve reviews of rural development projects in sub-Saharan Africa and a review of spontaneous squatter settlement in Kenya were undertaken for analysis by the ARDS, which drew in addition on the rural sector surveys of Kenya and Tanzania carried out by IBRD, in Fall 1972 and Fall 1973, respectively. All the project reviews were based largely on data collected previously by project authorities and other agencies. In some cases, the information available was very limited: even responses normally considered quantifiable, such as increases in agricultural production, could not (as for the Ujamaa program in Tanzania or the French Technical Assistance Programs in Mali) always be assessed with any accuracy.

7. The projects are most easily introduced if classified into four broad types, according to their immediate objectives:

The Projects Reviewed

(a) Commodity, or "export crop" projects. The earliest interventions in the low income agricultural sector aimed to increase the production of export crops by smallholders, and were financed by European commercial companies, development corporations or national governments. Four sets of such projects were reviewed. The Kenya Tea Development Authority (KTDA) was established in 1960 by the Kenya Government, assisted by foreign loans. By 1972, KTDA had brought 61,500 acres in ten districts of the country under tea cultivation by approximately 66,500 smallholders, giving an average tea holding of 0.93 acres. Smallholders presently account for approximately 21 percent of the country's total tea production. The development of smallholder tobacco production was undertaken in Urambo, Tanzania, by the Tanzanian Agricultural Corporation in 1951, and in Tumbi, nearby, by the British and American Tobacco Company, in 1954. Both

---

1/ For ease of exposition the term project will be used to define the rather diverse group of rural development ventures under consideration. While it will be clear that many of them do constitute "projects" in the accepted sense, others such as the Kenya SRDP and the Ujamaa movement in Tanzania are much broader in scope.

2/ Reviews were produced between Fall 1972 and December 1973.
these schemes are now managed by cooperative societies. By 1970 the Urambo scheme involved over 2,400 farmers with an average of 2.9 acres under tobacco, and the Tumbi scheme 4,600 farmers with an average tobacco acreage of 1.7. In Mali, development of cotton production was undertaken in 1952 by the government with assistance from the Compagnie Française pour le Développement des Fibres et Textiles (CFDT), and a rather similar scheme for groundnut production, Operation Arachide, was started in 1967 by the Bureau pour le Développement de Production Agricole (BDPA). Both received assistance from the Fonds d'Aide et de Coopération. By 1972, the CFDT scheme involved a population of one million, who accounted for virtually all Mali's cotton production, and that of the BDPA, covering about 750,000 people, accounted for about half of the country's total groundnut production. The expansion of cotton production in Sukumaland (population 2.5 million) in North West Tanzania, was initially stimulated by the government in the late 1940s. The number of farmers producing cotton increased from 203,000 in 1948 to 315,000 in 1967, and while the average size of operational household holding remained constant at 6.6 acres, acreage under cotton per farm increased from 0.67 acres in 1948 to 3.36 acres in 1967. Total cotton production in the area increased from 40,000 bales in 1950 to 405,000 bales in 1970. In all of the commodity projects, except that in Sukumaland, agricultural services have been provided by parastatal bodies or project authorities which are to a large extent autonomous, even though ministries of agriculture may nominally have jurisdiction over them. Such externally assisted projects are generally characterized by higher resource costs, better administrative coordination and higher density of field staff than those, like the Sukumaland scheme, which have not been so assisted.

(b) **Integrated Development Projects.** Projects which aim to raise living standards through the introduction of diverse services fall into two types: regional projects financed principally by donor agencies and planned and implemented to a large extent by expatriates; and those undertaken by national governments and implemented largely through their existing administrative structures. The first type is represented in the study by the Chilalo Agricultural Development Unit (CADU), and the Wolamo Agricultural Development Unit (WADU) in Ethiopia, the Lilongwe Land Development Program (LLDP) in Malawi, and the seven Zones d'Action Prioritaires Intégrées (ZAPI) and Société de Développement de Nkam (SODENKAM) settlement scheme, both in Cameroon. Kenya's Special Rural Development Program and the Tanzania Ujamaa movement represent the second. The donor-aided integrated projects have introduced productive and social services simultaneously in the belief that a critical minimum effort is
needed to make a noticeable impact on the welfare of the target population in a relatively short period, and are dependent on a high concentration of trained manpower and of fiscal resources within their limited areas of operation. The LLDP was begun in 1967, financed by IDA, and covers an area of 1.15 million acres and a population of about 550,000. Total project cost for its first two phases (1967-1973) was estimated at US$10.5 million. CADDU was established in the same year, financed by the Swedish International Development Agency (SIDA), and covers a population of 400,000. Total project cost up to 1975 was estimated at US$17.7 million. LLDP and CADDU each employed over 30 expatriates during their first years of operation. WADU was established in 1970, financed by IDA, and is relatively more modest, covering a population of about 240,000. Total project cost for WADU's first four and one-half years has been about US$4.7 million. Development in the seven ZAPIs, four in South Central and three in Eastern Province of Cameroon, began in 1967 and was planned by a private French company. Each ZAPI has a population of between 2,500 and 4,000 and is managed by a Local Progress Enterprise (LPE) company. The LPEs were originally subsidized by the Cameroonian Government but are now financially independent. Total combined operating costs of the four ZAPIs in South Central Province, up to 1972, were about US$750,000. The SODENAM settlement in Western Cameroon was designed as an experimental integrated low-cost scheme potentially transferable to other areas. It began operations in 1966, and by 1972 had settled 1,180 pioneers. Its annual budget for 1972-73 was approximately US$467,000, of which US$130,000 was for personnel. None of these projects has relied on the existing government administration for its implementation.

By contrast, the Kenyan SRDP and the Ujamaa movement in Tanzania are designed to improve the capacity of the existing rural administration and have to a large extent relied on government agencies for the planning and implementation of their component projects. Phase I of the SRDP began in 1971, involving a large number of projects in six districts of Kenya, covering about eight percent of the country's population. For this phase, Kenya has received financial and technical assistance from a large number of donor agencies. Its second phase was initiated in 1972 and involves the countrywide devolution of responsibility for planning and implementation of development projects on to the district administrations. Tanzania's Ujamaa strategy, as announced in the Arusha Declaration of 1967, seeks to bring about a transformation of rural areas through the creation of communally organized self-help villages throughout the country. Between 1967 and 1973, the number of Ujamaa villages increased from 48 to
5,631, covering over two million people, or about 15 percent of the country's rural population. The strategy seeks also to decentralize the administration of rural areas and explicitly to foster the participation of locally elected representatives in the planning and implementation of projects which will affect them. Since 1972, the ultimate authority for development projects and for the allocation of fiscal resources in rural areas has been vested in regional administrations, rather than in the central ministries.

(c) Functional Projects. While the regional projects are multi-faceted, functional projects aim to remove single, critical obstacles to development. Such projects have clear and limited objectives and they do not generally require complex administrative forms for their implementation. The smallholder credit projects of the Kenyan Agricultural Finance Corporation (AFC) exemplify such a "functional" approach to development. The AFC was established in 1963 with donor assistance and has financed a large number of rural sector activities throughout the country, benefiting both large and small-scale farmers. As of March 1971, its assets totalled US$33 million, of which US$28 million were financed by the government. Through 1972, the Corporation defined "small" farmers as those earning under US$1,400 per annum, but several of its smallholder credit projects have been directed at groups earning substantially less than this. During FY70/71, it loaned a total of US$4.3 million, of which about 30 percent went to smallholders. It is generally believed that its interest rates of 7.5-8.0 percent per annum on smallholder credit are substantially lower than those charged by traditional sources.

(d) Subsectoral Projects. Such projects as the Kenya Livestock Development Project (KLDP), the Industrial Development Centers in Nigeria and the Ethiopian Minimum Package Program (MPP) aim to stimulate the development of specific subsectors, usually over wide geographical areas, by the delivery of basic services. The KLDP began operations in 1970 assisted by IDA and SIDA, which together have loaned it US$11.4 million for the period 1970-74, and, through its lending scheme, it has developed company, individual and group owned ranches in the Central, Eastern and Rift Valley provinces. Its development of grazing blocks in Northeast province involves direct grants and is assisted by USAID. Total cost for the grazing block scheme is expected to be US$1.5 million. Industrial development centers were established with USAID assistance in Zaria in 1962 and in Overri the following year, working in conjunction with the Nigerian Government's Small Industry Credit Schemes.
Between 1969 and 1972, loans worth US$2.7 million were granted under the centers' auspices to 194 small-scale businessmen in such industries as baking, sawmilling, printing and vehicle repair, 64 percent of whom were resident in rural areas. The MPP was undertaken by the Ethiopian Government to deliver critical services to agriculture on a wider geographical basis than the operations of the two integrated regional projects CADU and WADU. Assisted by SIDA and IDA, it provides for agricultural extension, the issue of inputs on credit, cooperative development and the construction of feeder roads. Total project cost to 1976 is estimated as US$28 million, and by 1981 coverage will extend to the country's entire agricultural population, excluding the nomadic tribes.

8. In the absence of intervention, considerable improvements in living standards can be brought about through community-initiated "self-help" schemes. As a result of landlessness and lack of employment opportunities, about 300,000 Kenyans of various tribal origins from the Central, Western and Eastern Provinces have established squatter settlements in the Coast and Rift Valley Provinces. While they receive few, if any, government services, they have nevertheless established schools and health clinics. Data on three such sites were collected for the ARDS.

9. The group of projects reviewed represents a diversity of immediate objectives and of methods for achieving them, though with the exception of the commodity projects, all were designed with the underlying objective of improving rural welfare. Their immediate aims notwithstanding, all have brought about increases in productivity and have raised aggregate income levels within their target areas, though with varying degrees of success and with varying degrees of equity. The ensuing sections of this paper focus on the choice of services to be delivered to rural communities and the choice of methods for their delivery under given conditions. The principle underlying the argument is a concept of rural development which involves both growth and the equitable distribution of the benefits of growth.

II. DEVELOPMENT OF THE FARMING SYSTEMS

10. The low income rural sector in African countries is commonly characterized by fragmented markets and low and fluctuating agricultural yields which together make for a high degree of uncertainty as to incomes, agricultural prices and the availability of food in the off-season. Where people are near the margin of subsistence and where markets are fragmented, the promotion of crop specialization in the early years of development may
under certain conditions be harmful, even though regional specialization may evolve as a longer term consequence of development. But successful efforts to raise food production through the introduction of technical innovations are by no means a simple matter either; they must be accompanied by the organization of integrated markets so that marketable surpluses can be disposed of and deficits in bad years supplied.

11. The development of new farming systems for poor cultivators and the organization of integrated markets will not necessarily reduce income disparities, to which insufficient attention has been paid in past projects. Raising aggregate levels of production and income in project areas can in fact exacerbate income inequalities if the new farming system favors one ecological zone over another, or is particularly suited to certain size classes of farms.

The Need for Balanced Farming Systems

12. While the export oriented commodity projects studied raised the cash incomes of the smallholders they affected, they were characterized by a general reluctance to provide services for the production of food crops or livestock; and although they introduced efficient marketing systems for the export crops they promoted, they gave little or no attention to developing trade in food crops. The exclusive production of export crops may not be optimal in terms of long-term economic growth. Furthermore, where food markets are fragmented, such monocultural systems may also have an adverse effect on welfare. An examination of trends in agricultural production in the cotton growing area of Sukumaland in Tanzania will help illustrate the complex interrelationships which exist between production of food and non-food crops, and will give weight to the argument that, optimally, services should be provided to facilitate both. Agricultural policy in Sukumaland since the late 1940s has been oriented towards cotton production and, from 1950 to the mid-1960s, annual income from cotton on an average sized family farm of 6.6 acres increased from US$6 to US$100. During this period, foodgrain production shifted from sorghum to high yielding maize, and more recently, from maize to rice. Meanwhile, the volume of total foodgrain production dropped and purchases of food increased. Much of the acreage previously under foodgrains was shifted to cotton: during the period 1948 to 1967, the area per farm allotted to cotton increased from 0.67 acres to 3.36 acres. However, farmers still wanted to maintain minimum levels of food production for domestic use; in such cases labor and other on-farm resources may be diverted away from production of the export crop to food crops, to satisfy the household's consumption needs, resulting in lower levels of productivity of the export crop than might be expected from a given technical package. Evidence suggests that in Sukumaland, labor is a crucial constraint on the adoption of innovative practices in cash crop production. For example, although weeding cotton in January could substantially increase their cash returns, farmers continued to
allocate their scarce labor to the planting of maize. 1/ Such may be the case either because the innovations themselves appear relatively unprofitable in the context of local resource endowments, or because farmers are averse to risking shortages of food in the market during the off-season. Where farmers wish to maintain minimum levels of subsistence production, productivity in the cash crop has to be high for increases in cash crop output to occur at the intensive rather than the extensive margin.

13. Farmers' concern to maintain food supplies may affect factor productivity in cash crops adversely even if they do not attempt to be self-sufficient in food production. For example, as was observed in the early years of the Urambo tobacco scheme, food shortages in the off-season may force them to sell inputs purchased for cash crop production to buy food, thus affecting yields and also the repayment rate of credit.

14. If farmers with bigger holdings are more able to assume the risks of specialization, the promotion of the cash crop alone may lead to greater inequality.

**Increasing Production in Multiple Cropping Systems**

15. In contrast to the commodity projects, which as originally conceived were characteristic of the colonial phase of rural development, the more recent integrated rural development projects have been designed to increase overall production while maintaining a diverse pattern of agriculture. Their experience shows that similar rates of success for different crops or in areas with differing resource endowments may be difficult to achieve. CADU's major impact on levels of production has been on wheat, 2/ despite efforts to the contrary and despite the fact that the acreage under barley has remained greater: there appears to have been a decline in recent years in the production of milk, attributed to the substitution for wheat cultivation of former grazing land. Large surpluses of wheat have built up over a period of only three to four years, and have led to problems in marketing and the fixing of prices. To take another example, while the LLDP in Malawi aimed to increase yields of all the principal crops grown in the project area, it intended to obtain its major economic return from high value groundnuts. However, its efforts to stimulate groundnut production have been conspicuously unsuccessful: yields declined consistently over the Project's first four years (to 1972/73) to a level substantially below those outside the project area. LLDP's main success has been in the production of improved maize:

---


2/ Output of wheat in the project area increased from 32,000 tons in 1966 to about 102,000 tons in 1971.
Table 2: PROJECTED AND ACTUAL YIELDS OF MAIZE AND GROUNDNUT
LILONGWE LAND DEVELOPMENT PROGRAM, MALAWI
1969/70 - 1972/73

<table>
<thead>
<tr>
<th>Season</th>
<th>Maize Yield (lb/ac)</th>
<th>Groundnut Yield (lb/ac)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Projected Actual</td>
<td>Projected Actual</td>
</tr>
<tr>
<td>1969/70</td>
<td>1,263 1,028</td>
<td>531 553</td>
</tr>
<tr>
<td>1970/71</td>
<td>1,322 1,210</td>
<td>552 494</td>
</tr>
<tr>
<td>1971/72</td>
<td>1,384 1,714</td>
<td>563 N.A. /a</td>
</tr>
<tr>
<td>1972/73</td>
<td>1,449 1,455</td>
<td></td>
</tr>
</tbody>
</table>

Source: Based on the Phase I Appraisal of the LLDP and the data collected by LLDP’s evaluation unit.

/a Preliminary results indicate that average yield is below that of the preceding season.

average yields for the same four years conformed to projections despite their annual variability which was due mainly to weather conditions, and the acreage under maize more than doubled during this period.

16. WADU’s projected targets for virtually all the principal crops grown in the project area have been rapidly surpassed. Interestingly, its research component has been far more limited than that of either CADU or the LLDP and has been largely confined to fertilizer trials. Observers attribute the project’s success in this sphere to the area’s very fertile soils and to the Wosamo farmers’ willingness to adopt innovations, combined with an efficient extension service.

The Role of Adaptive Research

17. Although it is unlikely that research can ever guarantee the success of interventions in rural areas, such divergences between projected production targets and the actual results of intervention as those experienced in CADU and the LLDP might possibly be reduced if project authorities could achieve a greater understanding of the interactions of social, economic and ecological variables in existing farming systems, or of the changes in these relationships that are generated by the introduction of innovations. Many of the projects reviewed by the ARDS have not been well equipped to develop such an understanding during the course of implementation, or to adapt their activities in the light
of new information. Project-linked research often needs to encompass more than agronomic trials, and should attach importance to the adaptation of technology for the particular conditions in which it is to be used, taking into account social and economic as well as ecological factors. Adaptive research in multiple cropping systems is undoubtedly complex and demanding as is the establishment of an effective link between research workers and extension staff, who can prove invaluable in feeding back their observations. Nevertheless it can help to indicate appropriate remedies where adverse responses have been unanticipated. For example, the decline in groundnut yields in the LLDP area has not yet been satisfactorily explained. Possibly the application of sulphur, introduced in small amounts as part of the credit package in the 1970/71 season and thereafter used in drastically increased quantities, has adversely affected the soil pH value. However, groundnut production has a very high labor requirement and it may be that, as in other central African countries also experiencing declines in groundnut yields, an increasing proportion of scarce farm labor is being allocated away from groundnuts to the production of high yielding maize. Until research can reveal whether changes in the soil pH, the pattern of labor allocation, relative prices or some other factor is at work, it will be impossible to select an intelligent course of action in the light of this trend.

Intra-Regional Income Disparities

18. Growth need not make for a more even distribution of income, and it may be relatively easy to raise aggregate incomes or levels of production within a given region through concentrating services on one well endowed geographical area or class of farmer, or by promoting one particularly profitable crop, while bypassing a substantial section of the population.

19. Planning for the reduction of intra-regional income disparities is demanding. Given the limitations imposed by the scarcity of trained manpower, the limited choice of available technologies and the paucity of information, future rural development projects in Africa may be forced to concentrate their initial activities around the introduction of simple agricultural innovations which, with only slight local modification, can be effective throughout the target area. The alternative of designing different farming systems appropriate to different districts within the target area, while a better recipe for intra-regional equity, may prove so costly that other parts of the country may be commensurately deprived of attention.
III. AGRICULTURAL EXTENSION

20. Agricultural extension services in the developing world have traditionally suffered from shortages of field staff, and such staff as they employ are often ill-paid, ill-trained and ill-equipped to identify and solve problems at the small-farm level. The extension services of many of the projects reviewed have been designed to provide intensive coverage (i.e., a high ratio of extension agents to farmers) in the belief that high staff density is likely to produce high rates of adoption of agricultural innovations. 1/

Intensive Coverage and the Constraints on Agricultural Innovation

21. The financial costs of different extension systems vary according to what is spent on training, facilities and staff salaries, in addition to the size of the population served; highly intensive extension systems involving large recurrent budgetary expenditures have to justify themselves against other alternative investments. In LLDP the cost of extension is relatively low. The original project plans called for a staff/farmer ratio of 1:200, to be reduced after the first 2-1/2 years to 1:400 and subsequently stabilized at 1:600 or 1:800. Over the project's 13 years of operation its planned expenditure per family on extension, excluding the cost of training, is US$90 cents per annum. Indications that the spread of innovations in the project area has been rather slow suggest that such a low investment per farmer in extension may have been insufficient; the replication of such investment on a nationwide scale would involve an annual expenditure of nearly US$0.9 million, or over 1.5 percent of the Malawi Government's total outlay of $58.2 million for 1972. The KITA's investment in extension has been much higher: if the costs of executive and field staff plus that of the input package are included, the total cost per farmer since the project's inception has been US$200, or US$18 per annum. In this case the recurrent costs of a countrywide service on this scale would be crippling.

1/ The following estimates of extension agent to farmer ratios are drawn from the project reviews:

(1968) Tanzania 1:1,500 . Sukumaland 1:1,020
(1968) Kenya 1:500 . KTDA 1:120
(1968) Malawi 1:1,200 or 1,300 . LLDP (projected) /a 1:200

/a Not realized until Phase II.

In 1968, Ethiopia, with a rural population of 22 million, employed only 124 extension agents. 1972/73 ratios in CADU and WADU were 1:470 and 1:335, respectively.
22. Measuring the effectiveness of agricultural extension is fraught with methodological problems, some of which arise from the interactions of extension activities with those of other services, while others may be introduced by the physical variations (for instance in soil and rainfall patterns) between farms receiving the same treatment. The degree of social cohesion within the target community has also to be taken into account since it of course influences the communication of new ideas. In agro-industrial enterprises including cash crops it is often relatively easy to measure adoption rates, since farmers' acceptance of new inputs and innovative practices can usually be gauged by their use of other services, such as institutional credit and marketing facilities, for which statistics may be easier to obtain. In the case of food crops, however, farmers may actually adopt innovative practices promoted by the extension service, such as row planting, or close weeding, without necessarily using a project's services. Suppositions about the effectiveness of intensive coverage may be modified further if agents' levels of training are considered. In Kenya, for example, most of the Junior Agricultural Assistants in the government's extension service have undergone only a one-week course at a farmer training center, whereas junior staff in the LLDP in Malawi have been given a period of pre-training and practical experience in addition to an intensive course in practical agriculture. Transportation may be another limitation on effectiveness where farms are scattered or country difficult to travel, even if staff/farmer ratios are high.

23. Intensification in itself will of course be futile if the innovations to be promoted are not inherently profitable; its payoff may be substantially reduced if the extension staff are unable to identify and solve problems at the farm level. It may, however, often be the case that regardless of the density of coverage, the profitability of new techniques and inputs, the level of project investment in training of extension agents, or the type of staff incentive schemes adopted, the success of an extension service in promoting innovations will remain quite dependent on the attitudes of the target population to project activities at large and by their ability to bear risk.

24. Data from a survey taken in the LLDP in 1970/71 suggest that where a profitable technical package is being promoted, yields will be positively correlated with the number of extension visits, but that if the technical package is not inherently profitable this need not be the case. While maize yields were positively correlated with extension visits, the data exhibit a curious relationship between numbers of visits and yields of groundnuts. The groundnut package promoted by the project was made widely available before it had been sufficiently tested, and as has already been observed, the use of sulphur as part of the package may directly account for the declining groundnut yields in the area. Farmers receiving no extension visits during the year had mean yields of 440 lbs/acre, while those receiving five visits averaged 365 lbs/acre, and those visited between 11 and 20 times averaged only 312 lbs/acre. Only where over 20 visits were made was there a positive correlation between intensity of extension and groundnut yield.
The following two examples suggest that an extension service, however densely it covers the population, may be unable to induce increases in productivity if its agents are insufficiently aware of technical problems and practical difficulties at the farm level. Tobacco yields in the Urambo scheme in Tanzania in the late 1960s were lower than those in Tumbi, and this has frequently been attributed to a shortage of extension staff in the former area. The review undertaken for ARDS points out that agent/farmer ratios actually declined in both schemes 1/ during this period, but productivity in Tumbi nevertheless increased. Urambo farmers tended to overcultivate and thus to exhaust the soil, and the existing extension staff could very possibly have averted this had they devised suitable crop rotations. The extension services of both ZAPI and SODENKAM in Cameroon work on the assumption that the primary causes of resistance to innovation are psychological, and that only through personal contact with the agent, or vulgarisateur, can the farmer be convinced of the usefulness of new techniques. Meanwhile, many practical difficulties which hinder their use remain largely unsolved. A survey undertaken in the ZAPI revealed that although large numbers of farmers were convinced of the value of copper spraying to combat brown rot in cacao buds, one in four did not have treatment equipment, two in four who had the equipment had difficulty in using it, one in three had difficulty in obtaining the necessary water, one in three could not command sufficient labor, and one in two had received the equipment only later than the date they wished to begin the treatment.

Alternative Approaches to Extension

Several projects have sought to promote agricultural innovations using members of their target communities, rather than by relying entirely on farm visits by extension staff. Under certain conditions it is possible that popular interest in innovation may be generated on a large scale, if the profitability of new techniques and inputs can be readily observed. WADU has achieved higher rates of adoption than were projected, and its extension service has used "demonstrator fields" to popularize innovations, generally borrowing the fields of different farmers, or "demonstrators," for different crops simultaneously. The cohesiveness of Wolamo society and the traditionally equitable distribution of land are said to have contributed in large part to the wide success of WADU's extension service.

CADU and ZAPI both use a rather different technique, that of on-farm demonstrations of innovative practices by "model farmers" or "farmer leaders" who are members of the target communities chosen by the extension service. However, there are more constraints on innovation than

1/ Between 1965 and 1970, the agent/farmer ratio in Urambo declined from 1:323 to 1:802, and in Tumbi from 1:116 to 1:575.
the lack of information, and a danger exists where this approach is relied on heavily that the non-innovatory attitudes of the poorer sections of the community may remain unchanged; such farmer leaders may often be relatively well favored both socially and economically, and in their ability and willingness to innovate may be atypical of the population as a whole. Most of the ZAPIs' farmer leaders were found to be young, all were literate (Cameroon's male literacy rate is about 57%) and 47 percent of them could be classified as "large scale planters" whereas only 17 percent of other farmers in the ZAPI areas fell in the same size class. It is important to recognize too that those selected as farmer leaders by extension agents may not necessarily have respected status within the community, but may instead have been chosen for such other attributes as an ability to speak the language used by the extension service. Their usefulness in popularizing innovations within the community may thus be limited.

28. Leonard's data 1/ show that in Kenya's Western Province the average extension agent makes 57 percent of his visits to progressive farmers, who constitute only 10 percent of the region's total farming population. That extension agents are apt to focus attention on those farmers (usually the richer ones) who show most aptitude for progress is noted in several of the project reviews and has been widely observed in the literature on extension. Such a tendency might have less serious long-term consequences for equity if rural society were perfectly cohesive. Unfortunately, class and other social barriers may limit the spread of new knowledge. Moreover, it is unrealistic to assume that all sections of a farming community will be able to bear risk equally easily or that all (including tenants under sharecropping agreements) will have comparable incentives to increase production. The behavior of farmers who do not adopt innovations, even after seeing the results obtainable under particular conditions, has in the past been too often dismissed by extension agents as curmudgeonly and unprogressive. If income disparities between the educated and the uneducated in rural areas or between different classes of farmers are not to be exacerbated, it will be mandatory in future for extension services to devise operating methods which ensure that the poorest and the least able to bear risk are given the chance to raise their productivity.

29. The type of incentives or sanctions that should be built into extension systems to bring about this ideal state of affairs has of course long been a vexed question. While it seems reasonably clear that extension agents' conditions of service should provide for promotion on grounds of

ability rather than on length of tenure, it is by no means so certain that paying them high salaries is always desirable. Good rates of pay for extension staff in a given area will no doubt attract larger numbers of staff to work there (with potential adverse consequences for inter-regional equity), but a large income gap between them and the small farmers they are to serve may not be conducive to good working relationships. Whether staff who are resident within their areas of work will give more of their time to small farmers than those who are not housed locally is another open question: the literature reviewed appears to be divided here. The setting of quantity targets is not always a good method for guaranteeing the poor a fair share of agents' attention. For instance, the use of acreage targets can be counterproductive where land distribution is skewed: the transaction cost to the extension agent of one interview with a farmer owning fifty acres is far smaller than that of fifty interviews with individuals each holding one acre, who may in any case be far less receptive to his recommendations. An extension system that requires agents to maintain "husbandry ratings," or records of progress, for individual farmers does have a better potential for success, but may (as LLDP's experience suggests) fail where each agent has a large target population and is pressed for time, or if supervisory staff are less than conscientious or again have a large work load. Finally, it is important to recognize that the performance of an extension service often reflects that of the project or local government administration at large. Where the latter does not withstand pressures from local vested interest, the extension service can hardly be expected to operate on a radically different basis. Planning for effective agricultural extension to reach the poor over wide areas can thus only be undertaken in the context of wider administrative reform.

IV. AGRICULTURAL CREDIT

30. Most of the institutional credit available to the agricultural sector in African countries has been directed at the development of large scale commercial farms, and subsistence farmers have had until recently to rely on non-institutional credit generated within the rural areas. There is normally assumed to be a positive correlation between access to institutional credit and the adoption of agricultural innovations, although that this is so cannot be established with certainty. Since incomes in the traditional rural sector are low and thus, intuitively, saving potential appears to be small, most projects aiming to stimulate agricultural production have made the delivery of seasonal credit (usually
in the form of material inputs) a central focus of their activities. 1/ The credit delivery systems of the integrated projects reviewed are cumbersome, expensive and highly demanding of trained manpower, and although they have sought to change existing patterns of credit distribution in favor of the small farmer, many have been unable to ensure equality of access or satisfactory repayment rates.

Saving in the Traditional Rural Sector

The rural poor may have a far greater capacity to generate savings than has been commonly assumed. The review of smallholder credit in Kenya undertaken for the ARDS points out, for instance, that deposits by small farmers under the Cooperative Thrift Scheme reached the quite unanticipated figure of US$2 million by 1973, the scheme's third year of operation. Small mutual savings societies, whereby each member contributes a fixed amount of cash at regular group meetings and the totals thus accumulated are distributed to each member on a rotation basis, have been observed by reviewers in Kenya and in Cameroon. A survey taken by CADU in two districts of Chilalo, prior to the intensification of the project's credit scheme, gives some insight into traditional rural credit patterns. Its findings are corroborated by observers in other parts of Chilalo, but insufficient data are available from elsewhere in Africa to establish how widely typical they are. Of the 109 farmers interviewed, 41.3 percent were owner-cultivators and 58.7 percent tenants. Fifty-one percent had some debt. It is significant to note that of the loans, 54 percent were used for on-farm investment, for instance the purchase of a new plow, or the hiring of extra labor for weeding. The other 46 percent were used to finance consumption which included feast expenses, tax payments and court case expenses. The major sources of credit were not traders or moneylenders but relatives and friends (only six percent of the loans were from the former), and as many as 27 percent of the total number of loans were granted without collateral or security. Where interest was charged (on 46 percent of the loans from relatives and friends, and on 95 percent of those from traders and moneylenders) the average annual rate ranged from 34 percent to about 110 percent. For loans of cash the most common interest rate was 10 percent per month.

1/ The following figures give a rough indication of the scope of the integrated projects' seasonal lending:

<table>
<thead>
<tr>
<th>Year</th>
<th>Project</th>
<th>No. of loans</th>
<th>Total value (US$)</th>
<th>Population of project area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971/72</td>
<td>CADU</td>
<td>14,000</td>
<td>560,000</td>
<td>400,000</td>
</tr>
<tr>
<td>1972</td>
<td>ZAPI</td>
<td>—</td>
<td>373,500</td>
<td>23,000</td>
</tr>
<tr>
<td>1972/73</td>
<td>WADU</td>
<td>7,400</td>
<td>121,000</td>
<td>240,000</td>
</tr>
<tr>
<td>1972/73</td>
<td>LLDP</td>
<td>23,000</td>
<td>469,000</td>
<td>550,000</td>
</tr>
</tbody>
</table>
32. A survey taken by WADU of 33,000 households in areas of Wolamo Awraja not covered by the project again shows other farmers as the major source of credit; 66 percent of the households borrowed from other farmers, and only ten percent borrowed from traders. Almost 40 percent of the households were paying interest as high as 100 percent per annum. Borrowing in these areas was largely to finance pre-harvest costs, and 95 percent of loans were of cash.

33. Such potential for mobilizing cash savings has also been observed in Malawi, where group purchases of fertilizer for cash have quite frequently been observed in areas bordering that of the LLDP and not covered by its credit scheme. The planners of LLDP in fact envisaged that the cash purchase of agricultural inputs promoted by the project would assume increasing importance over the distribution of inputs on credit, but this was not to be so. In 1970-71 project farmers were expected to purchase about 3,000 tons of fertilizer, 1,756 of which would be paid for in cash, the remainder being purchased with credit advanced by the LLDP, but the amount actually issued was found to be 4,000 tons, of which only 58 tons had been purchased with cash. It appears that where farmers have relatively easy access to institutional credit they will prefer to take advantage of it, and may meanwhile hoard quite large cash savings in tin cans and under mattresses. It is worth noting here that the interest rates on seasonal credit charged by the projects under discussion are very much lower than those traditionally charged in Chilalo and Wolamo: Kenya's Agricultural Finance Corporation charges smallholders an annual rate of 7.5 to 8 percent, LLDP's annual rate is 10 percent and that charged by CADU and WADU is 12 percent. None of the projects have devised satisfactory methods of ensuring the repayment of the loans they issue. It is not clear, given our current understanding, whether the delivery of institutional credit in the early stages of rural development is profitable use of scarce resources or not.

Access to Institutional Credit

34. It is axiomatic that those who receive credit are often not those who most need it. In the attempt to ensure high rates of repayment, the credit schemes of the integrated projects reviewed have adopted stringent criteria of eligibility and elaborate procedures for the selection of applicants, which are costly and highly demanding of trained manpower. Clearly, both the criteria used to determine applicants' eligibility and the level of security on loans are crucial determinants of access to credit. In the early years of CADU, it became apparent that large landowners were receiving the bulk of project loans, and that the easy availability of credit, compounded with the absence of taxes on tractors and fuel, was resulting in evictions of tenants on a large scale. In 1970, use of the project's credit scheme was restricted to landowning.
cultivators with up to 62 acres and tenants farming under 100 acres, and two years later further restrictions were imposed, the new upper limits being 50 acres for owner-cultivators and 75 acres for tenants. Use of the MPP’s credit scheme was similarly restricted from its inception, but landowners, who constitute less than 50 percent of the rural population, have received the bulk of the loans. It is estimated that in 1973, tenants accounted for only five percent of the total credit issued under the Program. The follow-up study of LLDP also indicates a skewed distribution of credit: farmers in receipt of project loans had higher than average socio-economic status, cultivated up to one-third more land than average, and had average incomes up to 84 percent higher than those not using the scheme.

Where the security requirements on loans are stringent, the poorest sections of the population may effectively be denied access to credit. It will be remembered that 27 percent of loans from non-institutional sources in Chilalo were granted without security. The credit schemes of both CADU and MPP require downpayments, signed one year lease agreements and two acceptable guarantors, one of whom must be the landlord if the applicant is a tenant. Interviews with field agents and with project staff have suggested that poorer farmers have often been unable to afford the necessary downpayment or to get their landlords to sign a lease agreement. WADU’s requirements are less demanding, and applicants have only to present two guarantors, but interviews have nevertheless indicated that poorer tenants applying for loans often have difficulty in finding guarantors acceptable to the screening committee. These are thus grounds for believing that such credit schemes are not always of net benefit to the poorest parts of the rural community and may even worsen the existing patterns of income distribution in project areas.

Repayment of Institutional Credit

Many hypotheses have been put forward to explain low repayment rates of production credit, all of which may have substantial elements of validity. Poor yields or lower harvest prices than expected may result in low repayment rates regardless of the efficiency of local agencies for the enforcement of law. The use of elaborate procedures for selecting applicants who are sufficiently “credit worthy” has not guaranteed satisfactory repayment rates in many of the projects reviewed. ZAPI achieved a 90 percent repayment of loans issued in 1972, CADU achieved repayment rates of 90 percent, 85 percent and 92 percent during its first three years; that in MPP was 90 percent in the Program’s first year. WADU, however, achieved rates of 98 percent and 95 percent in its first two years.

---

1/ The average size of family holding in the project area is 7.5 acres.

2/ These lease agreements are required as a guarantee against eviction.
Analysis of repayment figures in all three Ethiopian projects raises doubts as to the general contention that smaller farmers are a greater credit risk than large (because they divert production credit or, alternatively, use their increased incomes for consumption rather than repaying their debts). Large farmers in the CADU project area, possibly because they can exert more influence than smaller ones, have felt able to renege on their debts, and because of the inefficiency of the courts, the lack of cooperation from the local government administration and campaigning against the project authorities by local interest groups, it proved impossible to take legal action against them. The refusal of large farmers to honor their debts may well have influenced other borrowers. As use of the project's credit scheme expanded, due date repayment rates declined. Goading defaulter is an unpleasant task, demanding of time and money and may be by no means conducive to good relations between project authorities and the communities they serve. LLDP has consistently faced low rates of repayment, and the inability or unwillingness of the courts to force defaulters to meet their debts has been growing. Without the cooperation of strong local institutions and local government administrations, projects may continue to face such problems of recovery regardless of the selection procedures they employ in the distribution of credit.

37. WADU until recently required no downpayments on the loans it issued, but adopted the strategy of holding all farmers within a given area jointly responsible for the total credit extended: if the repayment rate for the area fell below 95 percent in a given year it would be denied access to credit in future. It is possible that this explains the higher repayment rates achieved by the project, and CADU and WPF have recently resorted to the same strategy. However, Wolamo society is observed to be a good deal more homogeneous than in the areas under CADU. Land distribution is more even and average holdings (1.25 acres) are smaller than in Chilalo (7.5 acres). Whether group responsibility for the repayment of externally injected credit is a viable proposition where the group contains widely varying size classes of farmers remains to be seen.

**Institutional Credit and the Promotion of Innovations**

38. On the basis of available information it cannot be stated whether access to institutional credit does or does not crucially determine the rate of adoption of new agricultural inputs. Experience in the early years of SRDP's Vihiga Maize Credit Scheme suggests at least that if credit is to be used by rural development projects as a major vehicle for enhancing productivity, credit schemes need to be carefully designed with local socio-economic conditions in view, otherwise they may risk being irrelevant. Of the 600 farmers selected at random to participate in the scheme when it started in 1971, only 63 finally used its services, and their rate of repayment was only 80.7 percent. In 1972 the expanded scheme
was only used by 383 farmers. The poor repayment rate may be attributed to the low profitability of maize production in the area. Bedi's review of the scheme indicates that the net income to repayment ratio was around 3:1. It appears that advances of cash for the hiring of labor would have been far more productive than the material inputs which the scheme did provide. Because there are opportunities in off-farm employment there is substantial outmigration, which, despite the area's high population density, has frequently resulted in shortages of family labor during peak farming periods. Of 22 farmers who did not reapply for credit after the 1972 harvest, 10 indicated that this was mainly because loans under the scheme could not be used for land preparation expenses.

Future Approaches to Agricultural Credit

39. The reviews indicate with remarkable consistency that the credit delivery systems used by rural development projects are elaborate and highly demanding of the very limited trained manpower available. Even so, as the numbers of applicants for loans increase, the repayment rates slide, and accordingly the cost of distribution and recovery rise. A genuine doubt already exists as to whether and how poorer farmers can be benefited by current institutional credit schemes.

40. If credit delivery is to form part of future rural development project activities, new approaches based on community participation may be an economic necessity. Wherever the existing structure of society permits them to do so, projects might fruitfully try to organize credit delivery through community groups, so as to reduce operating costs and to assure repayments. Whatever the future status of externally injected credit in rural development projects, ways must certainly be found to mobilize rural savings. (The traveling savings banks tried out by the LLDP have not yet been very successful since people do not trust vans which "go away" with their money.) One approach worth trying may be the introduction of credit grants in proportion to the volume of savings mobilized by local groups. Adoption of such a strategy would entail the use of trained manpower initially for the development of local community groups, and where they exist, for institutionalizing self-help savings groups, rather than for the rapid expansion of a distribution system imposed from above. This approach differs in principle from that presently used (in different forms) in CADU, WADU and LLDP, of using local committees to distribute externally injected credit and to bring pressure on borrowers to repay. Involving rural communities in saving as well as in receiving credit should lead to a more direct interest in ensuring repayment. Building local institutions which are both efficient and genuinely representative of the communities they are to serve is a task neither easy nor without risks of failure, but it seems clear that in the long run only a participatory as distinct from a paternalistic approach to credit distribution in rural areas will be economically viable or assured of benefiting the poor.
V. MARKETING OF AGRICULTURAL OUTPUT

41. Fragmented markets, limited marketing infrastructure, inadequate communications and transport facilities, and crop prices which are low and unpredictable are all characteristic obstacles to rural development in Africa.

42. Although the barriers to the development of integrated markets can be identified with some degree of accuracy, evidence from the project reviews gives rise to doubts as to the efficacy of existing attempts to remove them. The marketing services introduced by the integrated projects have faced a number of complicated operating problems, do not ensure that food crops grown in their target areas will continue to be marketed beyond the stage of donor involvement, have high recurrent costs, and of course serve relatively small numbers of people.

Output Price Supports in the Integrated Projects

43. Several of the integrated projects have introduced output price supports as a method of maintaining production incentives. (The problem of price decline is of course apt to be particularly severe where rapid increases in output are induced in small geographical areas before countrywide marketing networks are sufficiently developed to handle them.) CADU and LLDP have introduced guaranteed minimum prices for certain crops grown by project farmers, to reduce seasonal and year to year price fluctuations. It is thereby intended to stabilize income levels and to give farmers an incentive to accept innovations. It has not, however, been established whether such a price support system actually does provide incentives to increased production: gross returns to the farmer depend on a combination of factors, and input costs and the physical returns to inputs are as significant for him in deciding whether to innovate as the output price he expects. It has already been argued that although rural development programs cannot influence the weather they would do well to pay more attention, in promoting the use of new inputs, to the on-farm factors (such as the availability of the most suitable inputs at the right time) which affect yields, for as long as yields vary substantially from year to year, stabilization of harvest prices will aggravate income fluctuations. The extent to which farmers respond to fluctuations in income rather than fluctuations in output prices is so far only a matter for conjecture. However, evidence from LLDP and the Ethiopian projects suggests that the primary cause of small farmers' and tenants' aversion to innovations is the unpredictability of yields, rather than considerations of harvest prices, which makes them afraid of incurring debts for new inputs. A survey taken in 1972 in the LLDP area, though the validity of its terms of reference has been questioned by the program management, suggests that farmers' awareness even of current crop purchase prices may be very low.
44. Whatever the grounds for supporting output prices in project areas, such a policy may in practice be extremely difficult to implement: it is unlikely that project authorities will be the sole marketers of output in their target areas and they may find themselves in conflict with existing marketing boards and with the private trading sector. Marketing boards have traditionally handled only export crops, produced largely by commercial farmers, and lack the administrative capacity and the staff to handle food crops for domestic consumption. Commercial crops are relatively easy to procure: such marketing infrastructure as exists in rural areas is usually geared to them. By contrast, surpluses of food are usually extremely scattered and difficult of access. Where rapid increases in the production of food crops are being induced, projects may see no alternative but the development of their own autonomous marketing services in the interests of immediate welfare or short term efficiency. An example from the LLDP illustrates the type of pricing problems that can occur in such a situation. The National Agricultural Marketing and Development Corporation has overall jurisdiction over input and output marketing in the LLDP area. However, it has so far been reluctant to purchase maize from project farmers, believing that levels of production are not yet sufficient to make its involvement commercially viable, and the project authorities accordingly undertook to purchase maize in the villages for resale in bulk to the Corporation. LLDP's maize purchase price is higher than that offered by the Corporation in other areas, which has had bad consequences for regional equity and has understandably led to trouble: maize growers in these latter areas tried (unsuccessfully) to make the Corporation raise its price. LLDP staff did not feel able to reduce the project's purchase price, fearing the consequences for project farmers' welfare, unless a substantial volume of production were to be shifted away from maize.

45. There is too little data available to estimate with any accuracy what proportion of the marketed surplus of food crops in project areas is handled by traditional traders, but evidence from LLDP and from CADU suggests that it remains very large. In 1972 LLDP's marketing service found itself in difficulties. Since the export price of maize was high, private traders were offering farmers much higher prices than those fixed by the project and by ADMARC, and when farmers realized this, stones began to be thrown at some of the LLDP marketing centers. The fixing of guaranteed minimum prices for grain can indeed be fraught with difficulties, given the fragmented nature of domestic food markets and the unpredictability with which national grain boards may export, import and distribute grain. CADU incurred heavy financial losses in 1970/71 and 1971/72 as the result of grain purchases from project farmers at prices (often substantially above those of private traders) based on forecasts which turned out to be unrealistic. For the 1972/73 harvest a two-payment system was proposed, whereby farmers would initially be paid 90 percent of the prevailing local market price. Since the local traders were prepared to pay farmers the full market price the latter of course refused to sell to CADU, which was thus forced into buying at the market price after all.
CAMU's management has observed that the subsequent drop in applications for credit may have reflected farmers' dissatisfaction, since they had accused the project of trying to make a profit at their cost. Experience in WADU also lends weight to the suggestion that where private traders are operating projects' attempts to stabilize output prices may be counterproductive in that they generate farmers' mistrust.

46. The operating costs of the marketing services in the integrated projects are extremely high. CADU's unit costs (excluding overheads) of marketing wheat between Asella in Chilalo and Addis Ababa are double those of private traders. Such high costs raise questions as to how these marketing services are to continue to function in the long run: so far the marketing charges levied on farmers have not included any allotment for the staff salaries or such other costs as the depreciation of equipment.

Marketing Cooperatives

47. A number of the projects reviewed have established marketing cooperatives, as an alternative or a complement to more centrally administered systems. Marketing of food crops is not an easy sphere in which to encourage successful community participation in the early stages of development. Developing the local organizational and entrepreneurial abilities necessary for the success of cooperatives in this sphere is a lengthy task, and training for cooperative development has often, as in CADU, failed to take sufficient account of its trading and speculative aspects. Cooperative marketing of export crops has traditionally been less demanding of entrepreneurial skills, its function being primarily to procure standard graded crops at prices already fixed by marketing boards, for further processing or direct export. Cooperatives set up to deal with foodgrains have to be able to compete successfully with private traders in their ability to speculate and to operate at relatively low cost in domestic markets which are as yet highly fragmented, and trading can be particularly difficult for inexperienced people when confronted by illiteracy, poor transport and communication facilities and the virtual absence of financial institutions. There is evidence too that fraud, as well as inexperience and lack of competence, can be an extensive problem, even in Tanzania, which has one of the most highly developed cooperative networks in Africa. Despite such operating difficulties, a paternalistic attitude on the part of project authorities can be counterproductive. The reviews indicate consistently how such attitudes have effectively discouraged rural people from giving their energies to make project-initiated institutions work. To some extent the measure of such paternalism is the degree of dependency of the cooperatives being fostered on fiscal resources and skills not generated locally. Since marketing can be costly and is so demanding of skills, it might be argued that cooperatives to handle food crops should not be set up until the communities they are to serve can provide people with sufficient skills to take genuine responsibility. Furthermore, in the
early stages of development, marketing cooperatives may be more susceptible to pressure from interest groups. Membership of cooperatives in five districts under CADU was found to be over representative of landlords: although the membership requirements do not discriminate against tenants, many of the latter class have not joined because they fear losing their tenure.

Alternative Approaches to Marketing

48. The experience of marketing intervention in the integrated projects thus raises some disturbing questions. It is clear that if serious bottlenecks in the disposal of marketable surpluses are to be avoided in the future and if deficit areas are to be efficiently supplied, increases in food production need to be induced gradually and over wide geographical areas. Increases in output need to be commensurate with the development of institutions capable of handling them. There is no guarantee that once such projects as these cease to exist in their original form, marketing boards will spontaneously develop the capacity and the willingness to handle food crops produced by small farmers. There is surely a need for projects to devote their prior attention to removing the most basic constraints on long run development, by encouraging the growth of viable local institutions and by the provision of communications and transport facilities. Only then can the more immediately apparent constraints such as low levels of productivity and lack of fertilizer be effectively tackled. Purposive action to encourage the growth of traditional trading networks has not figured among the marketing interventions of the projects under discussion, which have to a large extent aimed to replace them within the target areas (as we have seen with not unmitigated success). Arguably this is their most significant shortcoming. The existing documentation, 1/ though mostly on West African countries,


(continued)
indicates that in many areas traditional traders are highly skilled and their systems are efficient. Where means of communication and transportation are well developed, regional price movements are observed to be well coordinated. Rural development projects could, if they elect to encourage the activities of traditional traders, introduce a number of relatively low cost and simple measures to increase producers' bargaining power and range of choice. Studies conducted by CADU's evaluation unit and by Manig and Thoday (see footnote 1, below) note that most of the price exploitation observed in Ethiopian markets is covert, through the use of false weights and measures, rather than overt. If true weights and measures are made available for use, no matter who the partners in transaction (as has been done in CADU), the welfare gains can be substantial. Information on current prices obtainable from different sources usually travels fast where communications are relatively well developed, but especially where this is not the case, the dissemination of such information by extension agents may be a venture well worth undertaking. The introduction of group storage facilities, possibly combined with seasonal advances of cash from project authorities, can allow farmers the choice of selling in the immediate post-harvest period or gambling for higher prices later.

49. Initially at least, where most farmers do not have trading and accounting skills, it may be wisest to leave the marketing of their output to "experts." Since experts in the shape of traditional traders are likely of their own accord to move into areas which are accessible, there does not appear to be an overwhelming justification for high cost marketing services which by their very nature benefit relatively limited numbers of rural people.

VI. SOCIAL SERVICES

50. That very many rural communities in Africa suffer the debilitating effects of local food shortages, staple diets with low nutritional content, contaminated drinking water and low resistance to disease is an understatement. The casual relationships between physical welfare and productivity are not well documented, and the extent to which

(continued)


rural development projects can expect to raise agricultural output and hence incomes where the majority of the population have traditionally been in bad health remains an open question. Health may nevertheless be seen as a good in its own right and it is obvious that living conditions in many rural areas can be significantly improved even by such relatively simple measures as the introduction of facilities for clean drinking water, or the provision of quinine to reduce the incidence of malaria, to say nothing of the control of disease vectors or the introduction of health education and clinics.

Economic and Social Costs of Sophisticated Social Services

51. Although both the need and the demand for social services, in particular for health and education, are substantial in most rural areas of Africa, the planning of delivery needs to take account of several complex questions. LLDP's experience illustrates a typical difficulty: the project management was forced by popular demand into providing health clinics, contrary to its original plans, and although villagers did contribute their labor enthusiastically for the construction of the new clinic buildings, it has been necessary to make ad hoc and temporary arrangements, through missionary and other voluntary bodies, to provide staff. So far the Malawi Government has not committed itself to supplying either fiscal resources or trained manpower to ensure the clinics' continued operation. The recurrent costs of social services are often very high. Tables 3 and 4 help illustrate their magnitude relative to capital investment.

Table 3: ESTIMATED CAPITAL/RECURRENT EXPENDITURE RATIOS FOR EDUCATION AND HEALTH, TANZANIA /a

<table>
<thead>
<tr>
<th>Year</th>
<th>Education</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>1:10</td>
<td>1:5</td>
</tr>
<tr>
<td>1974</td>
<td>1:8</td>
<td>1:5</td>
</tr>
<tr>
<td>1975</td>
<td>1:7</td>
<td>1:5</td>
</tr>
<tr>
<td>1976</td>
<td>1:8</td>
<td>1:6</td>
</tr>
<tr>
<td>1977</td>
<td>1:8</td>
<td>1:6</td>
</tr>
<tr>
<td>1978</td>
<td>1:7</td>
<td>1:6</td>
</tr>
<tr>
<td>1979</td>
<td>1:7</td>
<td>1:5</td>
</tr>
<tr>
<td>1980</td>
<td>1:7</td>
<td>1:5</td>
</tr>
</tbody>
</table>

Source: Annual Manpower Report to the President, 1971, and working figures of the Ministry of Health.

/a Based on proposed capital and recurrent expenditures.
Table 4: PLANNED DEVELOPMENT/RECURRENT EXPENDITURE RATIOS, KENYA 1966-70

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td>10:2</td>
</tr>
<tr>
<td>Waterways</td>
<td>10:2</td>
</tr>
<tr>
<td>Agriculture</td>
<td>8:4</td>
</tr>
<tr>
<td>Education</td>
<td>1:3</td>
</tr>
<tr>
<td>Health</td>
<td>1:3</td>
</tr>
</tbody>
</table>


52. The low tax base in most African countries, the size of the rural sector and the scarcity of trained manpower all give grounds for believing that in view of their high recurrent costs, the delivery of sophisticated social services in the early stages of development may for two reasons be misguided: firstly in its consequences for equity and secondly in that resources may be thereby diverted away from productive investment. The government of Tanzania has put a heavy emphasis in recent years on the provision of social services in rural areas, partly to answer popular demand for them and thus elicit more support for its Ujamaa policy. Care must be taken that this course of action not have a net detrimental effect on the overall development of backward rural areas by channelling the fiscal resources needed to meet the recurrent costs of social services away from directly productive investment.

53. Approximately 60 percent of the country's regional development budget for 1974/75 has been allocated to health, education and water supply schemes. Well intentioned donors who offer to introduce sophisticated social services need to bear in mind that the recurrent costs have eventually to be borne by national governments. Tanzania's expenditure on non-externally aided schemes has fallen, both absolutely and in relation to total development expenditure.

54. That the provision of sophisticated social services may have adverse consequences for regional equity can be illustrated by an example from the SODENKAM settlement project. Medical facilities for the 3,500 settlers were provided in the shape of six dispensaries, a hospital, an "advanced health center," a testing laboratory, 14 medical attendants and mobile clinics. The imbalance thus created between conditions in the project area and the bordering arrondissement Nkondjok, with a population of 16,000, were striking: the latter is served only by one state medical attendant and three dispensary attendants. In addition, the settlement area had 26 primary school teachers and Nkondjok
Table 5: TANZANIA: SHARE OF MAJOR SECTORS IN REGIONAL BUDGET (EXCLUDING PARASTATALS) 1972/73-1973/74

<table>
<thead>
<tr>
<th>Broad sectors</th>
<th>Regional Development budget</th>
<th>Regional recurrent budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture as % of total development budget</td>
<td>6.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Education and health and water as % of total development budget</td>
<td>63.2</td>
<td>57.3</td>
</tr>
<tr>
<td>Other as % of total development budget</td>
<td>30.0</td>
<td>38.3</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Figures compiled by the Tanzanian Agriculture and Rural Development Sector Survey, based on regional budgets of Tanzania.

only nine. Such obvious disparities made for much unrest in Mkindjok, and provided in the words of an early observer, "an ideal opportunity for what might well develop into serious friction."

Alternative Approaches to Social Service Delivery

55. Both inter-regional equity and the long-term viability of social services suggest that rural communities be involved in planning and delivery from the outset and that wherever possible local savings be mobilized. Since in many communities popular interest is initially much greater in visibly beneficial activities, such as the provision of convenient and unpolluted supplies of drinking water or the building of schools, than in the adoption of "strange" new farming techniques, the development of social services can provide an ideal focus for the stimulation of local groups and a participatory approach to development. It has been argued that a "grass root" approach to social service delivery where this involves the use of local savings can reinforce regional disparities, since more advanced areas are able to generate more resources. While sometimes this may indeed be the case, and a
Critical minimum input of productive investments may be essential to the development of social services by local people, evidence from the squatter settlements in Kenya gives grounds for optimism. In the Ntwata area in 1973, local community groups were attempting to raise KSh 180,000 from residents to fund both a medical center and a secondary school. In Ngoliba, primary schools have been built with voluntary labor and at one school built in 1970 local residents were combining to pay teachers' salaries. Mbithi and Barnes in their review attribute such spontaneous initiatives to the very lack of government intervention in these areas, which has forced the squatters to collaborate to improve their living standards.

56. Evidence from elsewhere in Kenya and from ZAPI and SODENKAM emphasizes that using a participatory approach calls for a great deal of sensitivity. Where self-help projects already exist, clumsy intervention may be self-defeating. In Tetu district, which has a long tradition of local initiative, the number of registered self-help projects declined drastically following the introduction of SRDP activities in 1970. Mbithi comments: "Field workers report that there are in fact a number of new self-help groups forming in (Tetu), but they are avoiding registration so that their project is not expanded by politicians and administrators beyond what they can afford."

57. Evidence suggests that intervention in the field of social services should be directed towards assisting community organizations to identify their needs and to delineate the major constraints on their fulfillment, and on this basis providing limited technical and other forms of assistance. A number of broad questions will need to be borne in mind in deciding what commitments to social service development is necessary in given areas:

(a) the likely effects of the introduction of social services on labor productivity;

(b) existing social structures and patterns of leadership, and local propensity for 'self-help' schemes; and

(c) the technical skills and financial investment necessary for the delivery of social services of different degrees of sophistication, and hence the degree to which local resources can be relied upon.
VII. RURAL DEVELOPMENT ADMINISTRATION AND INSTITUTIONAL DEVELOPMENT

58. This section will discuss aspects of rural development administration, drawing on the experience of the integrated regional projects, highly dependent on foreign resources, and of Kenya's Special Rural Development Program and the Ujamaa movement in Tanzania. Different immediate objectives indicate the use of different administrative forms, but too often the activities of the integrated projects and the forms they have adopted for the delivery of services are so highly demanding of skilled manpower as to limit their replicability elsewhere in African countries, even were there to be no shortage of fiscal resources. It will be argued that if the processes of growth stimulated by rural development projects are to be sustained over the long run, more emphasis will need to be given in future planning to the training of indigenous administrative staff, and to the development of strong permanent institutions. Furthermore, equity will demand the adoption of administrative systems which incorporate a high degree of voluntary participation by rural communities, both in local planning and in project implementation.

Administrative Autonomy in the Integrated Regional Projects

59. The integrated regional development projects, CADU, 4ADU and LLDP, share the same broad objective of accelerating economic growth within a limited geographical area and within a limited time frame, and need to ensure that their interventions in different spheres of activity are well coordinated. In Ethiopia and Malawi, the government administration in rural areas was ill-equipped to handle the operations that such an objective implies. In the interests of efficiency, therefore, all three projects have been administered by authorities independent of the regular governmental structure. This emphasis on maximising efficiency in the short term, involving a concentration of high cost resources for a limited time, has engendered an approach to development administration quite different from those adopted by the Kenyan government for the SRDP and by the Tanzanian Ujamaa movement. Both of these latter approaches to rural development are designed to provide wide geographical coverage over a longer time period and have, though to different degrees, a more specific ideological content than does the regional projects' goal of providing access to services for the rural poor. That these regional projects have put relatively little emphasis in the course of implementation on improving the administrative capacity of local government is partly due to the low level of Africanization of the public services in Ethiopia and Malawi.

60. Clearly though, administrative responsibility for such regional donor-aided projects has eventually to be assumed by governments. In this context, it is unfortunate that the "success" of investment in
such projects is generally judged according to their financial rates of return: since there are no obvious criteria on which to judge, in the short term, the profitability of investment in manpower development or the improvement of local administrative capacity, there is a risk that they will emphasize the achievement of ambitious targets of agricultural production, to the detriment of efforts to encourage community participation or to acquire and train indigenous managerial staff. Similarly, project staff may neglect the design of procedures that will be lastingly efficient, regardless of particular personalities, and the fostering of good relations with the existing government administration. The short term advantages of the integrated regional projects' administrative autonomy, over implementation through the structures of government, are manifest: the management has clearly defined overall responsibility for project activities, and has the necessary authority to supervise and coordinate the work of the component departments. Moreover, the objectives of such projects are in general more narrowly defined than those of local government, and the financial and technical resources to realize them are far less limited. Given such advantages, if efficiency is not to be seriously compromised in the long run, there is a need to address from the outset of project planning the problems attendant on the transfer of responsibility. If regional development is to be initiated in this way in the future, greater attention is called for than was given in the design of these three projects to the likely availability of qualified indigenous manpower, willing to work in rural areas, to the degree of local level coordination between government departments that can be expected in the foreseeable future, and to the steps that can be taken to improve the performance of the local administration. There will be an equal need for strong commitment on the part of national governments to the development of effective rural administrations and to investment in training indigenous manpower.

61. In that the autonomous projects cover a range of different activities, their continued operation beyond the stage of donor involvement will necessarily involve the devolution of responsibility in different spheres onto separate government or commercial agencies. The logistics of such a transfer of responsibility have obviously to be considered at an early stage, with regard both to the future overall coordination of activities and to the question of which agency can most aptly assume which function. The LLDP is entering a transitional phase, and difficult problems are arising in the transfer of responsibility since the relevant units of local government, namely the regional and district level administrations, and the much larger agricultural divisions administered by the Ministry of Agriculture, do not correspond to the "units" and "sectors" of the project. There is no obvious choice as to which levels should be strengthened to take over responsibility for coordinating activities: the regional and district level administrations have traditionally coordinated the work at the local level of a number of technical and social service ministries, and may by virtue of this be most suitably equipped for ensuring coordination in Lilongwe in future. By contrast, however, since services to agriculture have
been the central focus of LLDP activities, it may instead be more appropriate to strengthen the agricultural divisions to perform the main coordinating role. More problems arise in the transfer of responsibility for specific elements of the project, especially where more than one ministry should logically be involved. For instance, continuing the road construction in the area begun by the LLDP will jointly involve the Ministry of Agriculture and the Ministry of Public Works, while responsibility for upkeep of major roads will rest with the Ministry of Public Works, but of minor roads with the district and village councils. In such cases, questions arise as to which ministry or department should be assigned responsibility for the coordination of joint activities, which should pay staff salaries and which supervise field staff. The transfer of responsibility for LLDP's commercial services is even more problematic: there exists as yet no obviously suitable agency to take over the delivery of agricultural credit, and ADMARC is unlikely to wish to assume the complete burden of input delivery or marketing of output in the area. The role of the various committees created under the project and their future relationship with the district councils raises another set of questions, and whether they will survive as genuinely participatory bodies in the long run remains to be seen.

52. Further to this last point, doubts can well be raised as to the continuing status of such community participation as has been engendered by these projects, once the presence of donors is phased out. Fostering the participation in decision-making of the lowest income groups in the community can be a means of ensuring that the benefits of growth do not accrue only to the relatively rich, although local interest groups are normally observed to try to influence community bodies and to exert pressure on development authorities. Paradoxically, regional development projects with a large proportion of expatriates in their administrative staff may be more successful in distributing benefits evenly and ensuring fair access to services than those administered by indigenous staff, in that they are less susceptible to such pressures. CADU's management was able successfully to restrict very large farmers' access to its credit scheme and to introduce standard weights and measures despite the vociferous complaints of landowners and traders. The existing government administration in rural areas will often be far more aware of local vested interests and more susceptible to their influence. WADU's difficulty in establishing rapport with the government administration in Wolamo might be attributed not only to the fact that the project's management was "foreign" but that its objectives conflicted with those of local landowners and traders, who had exerted influence on the administration. A member of an INRD supervision mission to a locally managed Tanzanian project relates an amusing but sad incident: a road reported to have been constructed within the specified project area was found by the mission not to exist. After further enquiries, it was revealed to have been built after all, but outside the project area. Local staff explained that there must have been a "misunderstanding" as to the project area's boundaries.
63. In the long run, given their familiarity with local needs and local characteristics, nationals can be far more effective than expatriates in the planning and administration of projects for rural development. A much greater commitment is necessary in future on the part of government and donor-aided rural development projects to the training and encouragement of indigenous manpower to take on these roles, and as much in the interests of the fair distribution of resources as of efficiency it will be necessary to build up the administrative and technical capacity at the regional and lower levels of government as well as at the top. Local government administrators and rural communities can play a vital role in identifying needs and helping to meet them, and should be given more encouragement to do so than was possible in the integrated projects reviewed here. We turn now to a brief examination of the problems faced by Kenya’s SRDP, which was originally designed by the government with such needs centrally in view.

Administrative Decentralization:

(a) The Kenya SRDP

64. Until quite recently rural administration in Kenya has been highly centralised, and as a result development plans have often been based on inadequate knowledge of the conditions under which they were to be implemented. Further, as a result of poor inter-ministerial coordination, some services have been duplicated in certain areas and the provision of others totally omitted.

65. The SRDP was conceived in 1967, as a means of bringing the oft-articulated goal of "participation of all people in the task of nation-building as well as the enjoyment of the fruits of progress" nearer realization. It aimed to devolve responsibility for the planning and implementation of rural development onto lower levels of government, while coordinating the component projects from the top. All the projects in Phase I, beginning in 1971, were to be undertaken with a view to their future replicability elsewhere in Kenya, and thus the assistance of donors was to be kept to a minimum and the allocation of all resources controlled by the government. The original design of the Program tried to combine two aims, that of experimentation in project design and in methods of implementation with a view to their transferability, and that of achieving rapid and visible increases in rural welfare. Needless to say, these may not always be compatible, and in the compromises that had to be made in the course of the Program’s history, the former has perhaps suffered more than the latter.

66. The Program’s departure from its original objectives stemmed to a large extent from its initial difficulties over finance. To coordinate its activities at the top, the National Rural Development Committee was set up in 1969, comprising the secretaries of the Ministry of Finance and Economic Planning, which held overall operational
responsibility for the Program, of the Treasury and of the other ministries involved in rural development. The NRDC initially lacked adequate staff, and its recommendations carried insufficient weight with the Treasury, which was unconvinced either of the novelty of the Program's content or the validity of its purpose, and accordingly in June 1970 blocked the release of funds to set it under way. The Committee was now forced to accept the offers of different foreign donors to finance the development of different geographical units, rather than itself retaining control of all disbursements. As a precondition of their support, many of the donors demanded alterations of the regional plans that had already been drawn up, and several also offered to provide staff under technical assistance, thus effectively compromising the aim of experimentation and the possibility of replicating the projects in future. After the Treasury had been amalgamated with the Ministry of Economic Planning, six months later, government funds for the Program were released, by which time the foreign donors were heavily involved.

67. Delays had already arisen in preliminary planning through a failure to delineate specific responsibilities for the gathering of necessary data and the actual design of strategy. The IDS Nairobi carried out baseline surveys of the six original target distincts, but aroused the indignation of Program staff in Nairobi in that the surveys did not set priorities or lay down the content of individual plans. The process would have been more efficient had the objectives of the surveys been more clearly specified from the outset, and had the time necessary for conducting them been more realistically assessed. The planning of projects also suffered from the fact that insufficient attention was given to improving the planning capacity of administrators at the local level. Each Provincial Planning Officer was supposed, in consultation with the department heads of technical ministries in his area, to draw up an area project strategy, to be evaluated by the NRDC. This would then be forwarded for their comments to the Provincial and District Development Committees, on which latter the rural community was ostensibly represented. Once the general strategy had been approved, detailed project plans were to be drawn up for the approval of the NRDC and the central staff of the ministries to be involved in their implementation. However, the efficiency of the system suffered badly from the shortage of qualified personnel in the regional administration, and also from the lack of a precise division of responsibility between the PPOs and the district departmental heads of technical ministries.

68. The participation of local people was to have been of major importance in planning, and the District Development Committees were set up to ensure this. However, in practice the DDCs have been relegated to a subordinate position, and merely "approve" project strategy rather than influencing it. Local communities in some areas under the SRDP have neither been consulted during planning nor even informed in advance of project implementation. Neither has their participation in
implementation always been skillfully fostered. The SRDP Cotton Block scheme in Mbera district ran into labor difficulties over the laying of an 88 km water pipe: planning had assumed the use of voluntary labor, which was not forthcoming, and so work had to be begun with contract labor, but could not be continued because of its cost. In Kwale district the Sequential Implementation Procedure attempted to avoid such problems, by concentrating attention initially on projects with visible and immediately beneficial results, to overcome popular resistance to intervention. The SIP approach has apparently worked well, and in the Kikomeni Water Project, public support was such that voluntary labor could be relied on entirely.

67. It has frequently been observed that had there been less non-Kenyan involvement in the SRDP many of its operating problems could have been avoided. Apart from the additional delays in planning that occurred as a result of the donor agencies' demands, their presence has led to the design of plans too ambitious for local administrators to handle efficiently. Allied to this problem are the discontinuities that arise where projects rely on expatriate staff in the initial stages of implementation, as in the donor-aided integrated programs. In addition, while the initial conception of the SRDP laid stress on the overall coordination of strategy, the "adoption" of different districts as discrete units by different donors has made for considerable fragmentation and regional imbalances.

70. Phase II of the SRDP, begun in 1972, involves extending administrative decentralization to all districts of Kenya, providing for integrated planning by the lower levels of government. The center of administrative authority for rural development has been shifted from Nairobi to the technical staff in the regions, working through the Provincial Development Committees, on which the provincial heads of all ministerial departments are represented. How far the experience of the first phase of SRDP has provided lessons and guidelines for the countrywide decentralization of development planning and administration is an open question, but observers express disappointment that there has not been more specific attention to remedying the deficiencies it brought to light.

(b) The Ujamaa Movement in Tanzania

71. Tanzania's Ujamaa movement is unique among strategies for the development of rural areas in Africa in that it focuses centrally on community participation. Ujamaa entails enabling the rural population to participate in and eventually be responsible for planning and decision making in production, marketing and the distribution of services, and for defining the quality of their own social and political lives. Social equality and self-reliance are among its informing principles. As we have seen, the pursuit of rapid and spectacular economic growth in rural
areas may imply the neglect of efforts to foster genuine participation
and may also do little to remedy income disparities within the rural
community. TANU's policy statement of 1971 1 advocates the sacrific-
ing of rapid growth in favor of guaranteeing a minimum standard of
living to the poorer sections of the population and rendering rural
society more homogeneous. However, the budgetary resources available
for rural sector development are limited and concentration on the
rehabilitation of the lowest income groups has led to cuts in the
delivery of services to small commercial farmers, who are themselves
often only just above the margin of subsistence. The recent emphasis
of the Ujamaa movement on the delivery of welfare rather than of
productive services could have an adverse effect not only on wide
support for the movement but on the long-term growth of the rural
sector.

72. TANU is of course the motivating force of Ujamaa and its
policies have not been unopposed by the civil service, in particular
by the technical ministries, and by the commercial farmer lobby. In
1971 TANU moved to decentralize the administration of rural areas both
to rationalize its structure and increase its efficiency, and to
reinforce the party's own influence within it. Previously the structure
was highly centralized and its procedures cumbersome: projects for
Ujamaa village development were prepared, budgets for rural areas
allocated and personnel deployed by the central ministries in
Dar es Salaam. Field staff, responsible to their separate agencies,
rarely regarded themselves as members of a local development team,
and in the absence of a framework for the horizontal coordination of
activities, local initiatives were stifled. Under the new system the
lowest level administrative units are the Ujamaa Village Development
Committees on which villagers are represented, which replace the old
Ward Development Committees. Above these, the District Development
Councils, now chaired by the local party representatives, replace the
District Councils, and although the District Development and Planning
Committees linked to them remain, these have a reduced proportion of
elected farmers in their membership. The Regional Development
Committees, to which the regional heads of technical ministries are
now responsible, coordinate plans and have direct control over ministry
expenditures in their areas. TANU's influence on the planning process
is assured not only by its representation on the committees at all
three levels, but also through the vetting of all plans made at each
level by the corresponding party council. The new administrative
structure affords a far greater autonomy to the lower levels of
government than does the Kenyan system; and is ostensibly in line with
TANU's aims of shifting the balance of political power in favor of the
poorest classes in rural areas and of raising their political
consciousness.

There is some evidence to suggest that the heavy emphasis of the Ujamaa movement on collectivization may in practice run counter to TANU's avowed objective, that "the leaders and the experts (should) implement the plans that have been agreed upon by the people themselves." Ujamaa villages have usually been formed either through transforming existing traditional villages, or by moving scattered people voluntarily from within a five to ten kilometer range into a central area, creating a new community. Some at least of their land is farmed communally, as a step towards full communal ownership and production. The movement has had most impact in the least productive areas of Tanzania, where living conditions were traditionally worst: Robinson and Abraham in their review note that of the total Ujamaa village population, 70 percent resides in five less developed regions (which together contributed less than 25 percent of the 1967 GDP) and 10 percent in six more productive regions (together accounting for over 55 percent of the 1967 GDP). Small scale commercial farmers have resisted collectivization. Lionel Cliffe 1/ points out an increasing tendency on the part of government authority to use coercion in the development of collectivized farming, which if smallholders are to be seen as members of the low income rural community, clearly runs counter to the objective of community participation in planning for development. Coercion may also have an adverse effect on agricultural productivity: sources within government report that in the Ismani area, where force was used to collectivize maize growing, the volume of production fell by 70 percent in two years. Whether justified or not, popular resistance to Ujamaa from those living just above subsistence levels could lead to prolonged civil unrest, with adverse social and economic consequences. The Ismani episode ended in the murder by a farmer of the District Commissioner responsible for the enforcement of collectivization. Recently it has been observed that collectivization is being stressed rather less in areas where agriculture is more developed, and in some new villages only the change to community living rather than to communal working is being promoted.

The Ujamaa strategy thus raises questions as to the value for the long-term overall development of the rural sector, and for self-reliance, of an exclusive concentration on the lowest stratum of society in the provision of services and the fostering of community participation in government, since the dictates of such an approach may restrict the potential for growth of those who, while marginally better off, are still in conditions of rural poverty.

A consideration of the decentralized administrative system adopted for its implementation gives rise to more immediate questions of efficiency, as to its own performance and to the deployment of available resources. Not all of the problems the movement faces are engendered by class conflict. As yet it is too early to judge whether the new committee structure facilitates rapid action or whether its elaborateness makes for delays in planning and in implementing decisions. However, since all communication between the central offices of the technical ministries and their staff in the regions now takes place through the regional administration, and not directly, it is feared that, although the technical staff in the regions are highly competent, their effective use may not be guaranteed. Ujama'a has also encountered opposition from the civil service, which may be attributed partly to the class background of many government officers, which encourages them to ally with the interests of the commercial sector, and partly to institutional biases in favor of allocating resources to productive services rather than investing in the welfare of the subsistence population. Ministry staff are deployed equitably throughout the country, but while this may have nominal political advantages and helps to counteract regional imbalances, the shortage of manpower has in fact resulted in lower expenditure on rural development than was projected. Another effect of the shortage of skilled manpower at lower levels of government is that a high proportion of expenditure has been on relatively large infrastructural projects rather than on less elaborate and cheaper ones of benefit to small communities. Thus although the new system was designed to enable development planning to take account of local variability, both ecological and social, the shortage of trained staff has significantly hampered its chances of success. Development of Ujama'a villages has often taken place in the absence of adequate information, and people have on occasion been persuaded or forced to move into new areas of which the authorities had no knowledge of soil characteristics, average rainfall, or the incidence of disease vectors, and sometimes there was no provision made for food in the initial period. Village development has also been hampered by the inability of the local administration to give new communities advice on the types of committees they should establish, or on the optimum numbers for work groups or the relative sizes of communal and private plots. The drive towards "villagization" has also, in the absence of adequate local information, tended to disrupt relatively more developed areas before production increases have occurred in those least developed, causing shortages of food. Although regional crop specialization is one of the movement's avowed aims, there has been little achieved in this direction, mainly because the requisite technical knowledge has been lacking. There has been little significant improvement of the agricultural extension service or related training, neither have there been systematic attempts to assess the performance of the delivery system. Very little is known so far of the effects of collectivization on production incentives, although as noted earlier, evidence exists to suggest that in certain conditions these may be adverse. In the absence
of impressive economic achievements in the rural sector, the social
gains of the poorest section of society from their adoption by the
movement are clearly substantial, and their level of awareness of
TANU’s aims is generally very high.

76. It is not the province of outsiders to advise that the Ujamaa
strategy be reshaped in view of its long term economic or political
implications. In conclusion of this section it need only be said that
the evidence from the projects reviewed suggests that a competent,
adequately staffed administration familiar with local conditions, and
meaningful community participation in the planning and implementation
of local projects, are no substitute for each other, and that both are
necessary for the effective development of rural areas. We now turn to
a brief examination of the issues faced in the training and orientation
of both staff and rural communities.

VIII. TRAINING FOR RURAL DEVELOPMENT

77. The experience of most of the projects reviewed highlights
the need not only for the development of indigenous administrative
manpower for the future development of rural areas, but also emphasizes
that greater government investment is called for than has so far been
possible in the development of technical manpower and in vocational
training for field staff, with closer attention to the relevance of
training to the field conditions in which such staff are to operate.
The issues of access to formal education and the relevance of its
content to its recipients are not discussed in this paper, but it is
clear that rural development projects can significantly augment both
economic growth and welfare by providing training facilities for their
target communities in a range of fields in addition to agriculture.

Non-formal Education in Rural Communities

78. The main educational emphasis of most rural development
projects has indeed traditionally been on the development of skills
directly related to agricultural production, although the training
schemes run by the integrated regional projects reviewed are much wider
in scope. Apart from on-farm advice from extension agents, several
provide farmer-training courses, but there is a danger here that the
disutilities of the selective "model farmer" approach will be reinforced,
in that those who participate in them are selected not by village
committees but by the extension service and are very often observed
to come mainly from "progressive" villages. The format of such courses
is also less than satisfactory in many cases: use of the formal "school"
approach, complete with printed handouts which many recipients may be
unable to read, is scarcely calculated to achieve maximum impact on the farming habits of the population at large. Evidence from several projects also supports the view that short intensive courses for farmers can be much more effective than longer ones, since they will only emphasize a small number of points at a time, and more farmers are likely to have time to attend them. Local one-day courses like those offered to farmers at LLDP's unit centers also have the advantage of being able to disseminate very specific advice, since the farming conditions of those attending them will be similar.

79. Adult literacy rates in most rural areas of Africa are very low, and it is observed in several of the project reviews that members of the target communities who are illiterate are frequently exploited by the literate, but none of the projects reviewed has included a functional literacy scheme of any significance among its activities. Nevertheless, the provision of such schemes may be of critical importance for the viability of development projects in future: literacy is a major determinant of the extent to which groups or individuals representative of the rural community can contribute to the planning and delivery of services.

80. Small scale vocational training schemes undertaken by rural development projects can be a valuable means of diversifying sources of income and of stimulating the production of non-agricultural goods within the target area, quite apart from helping to raise the incomes of those trained. Where population pressure on land is high such schemes can be especially valuable to marginal people. CFDT in Mali undertook a training scheme for blacksmiths, in response to difficulties in obtaining spare parts for agricultural implements. After the 23 smiths had completed the course they were each granted an interest-free loan for the purchase of equipment and assigned a village from which to draw business. In addition to solving supply difficulties, the scheme seems to have raised the blacksmiths' incomes and their productivity. LLDP has recently undertaken a training scheme for the manufacture of bullock carts since demand for them is rising rapidly, and CADU aims in its next phase to promote training in a variety of small scale industries. With this in mind, it has undertaken a consumption survey of households in the target area to identify manufactured goods for which there is heavy demand.

Training of Staff for Rural Development

81. The training of both field and administrative staff is an important feature of many of the projects reviewed. Aggregate expenditure on all training activities (of which staff training represents a high proportion) in LLDP during its first two phases will be of the order of US$542,000, or 3.5 percent of total project expenditure. In 1971-72, 48 LLDP staff training courses, involving 920 participants,
were given. CADU, as well as training administrative staff to take over its managerial positions, trains its own field staff and some of those needed by the MFP.

82. Training in rural communities will only achieve maximum effect if field staff are technically competent and have some familiarity with the environment in which they operate. It is also clearly essential that they be able to communicate effectively with the target community. Unfortunately, the training of field staff by most of the projects reviewed does not guarantee the achievement of such ideals, neither has there been in most of them a sufficient attempt to evaluate staff performance systematically, with a view to modifying future staff training. Belloncle and Gentil's comments on the performance of extension agents in ZAPI highlight some of these problems: staff generally went into the field with inadequate technical knowledge and, in addition, although great efforts were made to give them some basic training in economics, very little was done to develop their understanding of social customs in the communities in which they were to work, or even to understand local languages, let alone cope with the problems of translating into it "alien" technical concepts.

83. The design of training programs for field staff to combine the development of technical competence and adaptability with effective methods of communication is by no means easy. The SRDP's Tetu training scheme is an interesting and relatively successful attempt to do this. Information was gathered on 354 randomly selected farmers in the region, to assess levels of adoption of particular inputs and practices in different locations, and the implications of the findings were built into the curriculum for extension staff in training. The selected farmers were ranked in different categories according to their progressiveness, and then offered intensive three-day courses at the corresponding level, from which they could subsequently progress upwards. Perhaps the most promising achievement of the Tetu scheme is that both the local administrative officers who initiated it, and the extension staff in their design of the farmers' courses, showed such responsiveness to local variations in field conditions. Where it is possible to train members of the local community as extension workers, there is a chance that staff-farmer communication will be easier than where staff are from an alien background, and if they can bring their knowledge of existing local farming conditions to bear it is likely that the innovations they are trained to promote will have a better chance of successful adoption.

84. The training of indigenous managerial and administrative staff has been a central concern in the donor-aided integrated projects reviewed, to ensure their continued operation beyond the stage of expatriate-dominated administration and as a prerequisite for the eventual management of their activities by local government. Many of them have experienced difficulties in Africanising their high-level staff: although CADU has been comparatively successful, WADU and LLDP in particular have
had problems for a variety of reasons in recruiting and in training nationals. It was originally proposed that a qualified Malavian be appointed as Deputy Manager of the LLDP, and that supernumerary training posts be created for some 40 professional and technical positions that were initially to be filled by expatriates. However, the difficulties in engaging qualified nationals were such that even six years after LLDP's inception none of these proposals was operational: only one candidate had proved qualified for a management position, and he had subsequently left the project's staff. WADU has experienced similar difficulties in hiring Ethiopian managerial and technical staff, and by the project's fourth year none of its nine expatriate staff posts had been filled by nationals. Neither was WADU very successful in retaining such Ethiopian staff as it did engage, and by the end of 1972 twelve graduates, including the Deputy Director, had resigned. WADU's management has apparently suffered from a lack of disciplined working conditions, incompetence, and an autocratic approach to managerial decision making. Its rapid turnover of staff may also be attributed to the remoteness of Wolamo, and their ability to find more attractive positions elsewhere which also had better long-term career prospects. It might be suggested here that if the proportion of indigenous staff is small, the achievement of good working relations in project management may be more difficult, especially if expatriate "experts" adopt a working style that is alien to their counterparts in training.

85. It is true that by paying their indigenous staff much higher salaries than those they would command in government administration, autonomous development projects may jeopardize good relations between them and their government counterparts. Nevertheless, salary scales and conditions of service for managerial staff have to provide incentives for qualified nationals which are sufficient to counteract the disadvantages of living in remote rural areas. LLDP has to abide by government salary scales and terms of service in employing indigenous staff, and promotions cannot recognize ability but only the length of time served. The regulations also preclude the payment of salaries to those holding positions in an acting capacity, unless they have worked for the requisite period at the level immediately below. Neither is it possible to pay two people simultaneously for the same job, and hence there can be no overlap between old staff and new, nor can staff in training be paid salaries. CADU and WADU are not bound by the regulations that still apply to regular government service in Ethiopia, since they are administered (as in MPP) under the auspices of the Extension and Project Implementation Department of the Ministry of Agriculture, set up in 1971, which provides for contract employment, and for promotions and salary increases on merit rather than on tenure. CADU has been much more successful than either LLDP or WADU in engaging and retaining Ethiopian managerial staff, and of its 40 expatriate staff posts, 16 had been taken over by nationals within its first 4 years. The project's management
training strategy involved the recruitment of Ethiopians for a wide variety of jobs, not on a specific counterpart basis. Those who did well advanced rapidly, sometimes becoming the superiors of expatriates.

86. If the staff training activities of these donor-aided projects are seen in a wide perspective it is of course apparent that such successes as they have achieved will not go far towards remedying either the nationwide shortages of skilled manpower or the low levels of institutional development which are so characteristic of most African countries. The removal of these crucial constraints on long term rural development over wide areas will require a far greater allocation of fiscal resources, and a far greater commitment on the part of national governments both to expanding their formal education facilities, and to rationalizing the structure of local administrations and to augmenting their capacity. There is also an obvious need for national governments to devise employment incentives for qualified nationals both to remain in their own countries and to work in rural areas. Although donor agencies may be tempted to invest in regional projects which can achieve rapidly visible results and realize a high internal rate of return, their most effective contribution to rural development might in fact be the provision of fiscal resources and technical assistance to education and in particular to the institutions, among them local government administrations, on which the ultimate responsibility for inducing economic growth and for enhancing rural welfare will rest.

IX. IMPLICATIONS OF THE FINDINGS OF THE ARDS FOR DESIGNING RURAL DEVELOPMENT PROGRAMS 1/

87. The past experience reiterates several special features of the African Countries which need to be taken into account in designing future programs, if the objectives of rural development are to be realized.

88. Because the bulk of the rural population is poor and because this poverty is spread over the entire rural sector, "target groups" in Africa are large relative to the financial resources and in particular the trained manpower and the institutional capability frequently available for development. Therefore, if the emphasis in rural development is to be on mass participation and on the viability of the process of rural development, it would seem necessary that rural development programs be viewed as part of a continuous, dynamic process, rather than as an

"extensive" vs. an "intensive," or a "maximum" vs. a "minimum" effort. The emphasis on mass participation also means that a sequential approach may frequently be necessary in planning and implementing a rural development strategy, involving establishment of clear priorities and time phasing of activities.

89. Given the low productivity of the subsistence rural sector, for a variety of reasons discussed earlier, in many cases an initial emphasis on broadbased increase in productivity through a certain minimum level of institutional development, may well be a more effective way of ensuring viability of mass participation than the substantial initial concentration of resources in a few regions.

90. Some constraints to improvement of productivity, such as lack of a profitable technology, ineffective extension and inadequate fertilizer, may be common to all of the subsistence agriculture; whereas others, such as ill-health caused by malaria (in the squatter settlements in Kenya), or the inadequate incentive system and organization (in Ujamaa villages) may well be location specific. A single package is, therefore, not universally applicable. The establishment of priorities needs a combination of a few critical general interventions applicable to several regions along with emphasis on development of capability of the regional administrations to identify and ameliorate additional constraints specific to individual regions. However, in all cases, including the case of priorities that may be established at the national level, the effectiveness of implementation depends on the efficiency and the coordinating ability of the regional administrations and on the general institutional development at the regional and local level. This is why a regional focus in institutional development is necessary from the outset even when a broad coverage of services is being aimed at. This is particularly so if more complex programs involving a number of sectors are to be planned and implemented by regional administrations over time.

91. The first step may well be to improve regional administrative capability for effective planning and implementing of programs directed at only a few productive activities, including food crops. Attention to food crop production often seems critical since a majority of the low income population derives its livelihood from this activity. The results of the mixed crop approach are already noticeable in the more recent integrated rural development programs. However, these have been confined to a few regions.

92. The sequential approach implies efforts to improve indigenous institutional and technical capability in several regions. If per capita agricultural production is to increase, the first phase of sequential development may involve an objective of achieving an overall annual growth rate of four to five percent. The time required to achieve such
an annual growth rate may of course, vary between regions, depending on their potential and on the effectiveness with which the necessary steps are implemented. However, the first phase of development may be planned for four to seven years. In a few cases, where an effective technical and institutional capability to coordinate and deliver the necessary services already exists, the first phase of development may be skipped.

93. Increased intensity in agricultural services of the type undertaken in integrated programs, including improvement of the overall farming systems through rotational improvement, integration of crop and livestock production, soil conservation and land registration, may constitute the second stage of development. Realistically, the overall growth rate of production may not exceed four to five percent per annum even during the second phase. However, consolidation of the growth rate through a more diversified agricultural productivity may require an intensive effort.

94. In this case, the bridge between the first and the second stages of development is land use planning. The intensive effort needs a considerable technical and administrative input both at the planning and implementing stages.

95. To plan a strategy for intensive agricultural development, data are needed on factors such as agroclimatic zones—including soil conditions, rainfall patterns, present yields, existing farming systems, erosion and fertility problems, density of settlement, sociocultural factors and on opportunities for expansion of cultivated area and grazing land, required investments in road, and water development, soil conservation, and the optimal farming systems, (i.e., crops, management practices, rotations, etc.).

96. The data gathering and planning of this second phase may be combined with the implementation of the first phase. Phased planning has several advantages which were not derived in many of the programs reviewed. It may also allow greater first-hand knowledge of the specific technical, administrative and sociocultural constraints. It may also permit greater indigenous participation in planning. Both these factors are important for improving effectiveness of strategy. The phased approach may also facilitate training of indigenous manpower geared specifically to planning and implementing regional programs. Equally important, it may allow a relatively balanced national coverage of services in the foreseeable future.

97. For a variety of reasons discussed earlier, planning and implementation of services such as community centers, drinking water supply, health clinics, promotion of small scale processing and servicing, women's extension programs, etc., require considerations substantially different from those in agricultural planning. It seems necessary to
allow greater scope for social choice and for local participation in the organization and delivery of these services. In many cases such planning may have to wait until the second phase, i.e., until income and demand for such services increase, local administrative capability for planning and coordinating such programs is developed, mechanisms for raising fiscal resources are instituted, and local institutional capability to plan and implement programs is fostered through an explicit emphasis on the necessary pre-planning in the first phase.

98. Given the substantial shortage of trained manpower and administrative capacity, in each phase only those components which are not likely to be undertaken without planned public intervention may be provided. These, of course, may vary substantially between regions, depending on what is and does not exist in the form of institutional development. Therefore no blueprint for planning is possible. However, in the first phase provision of technology, extension, inputs, manpower training and a feeder roads network may be the most frequently needed components. A facilitative role may be provided in fostering other activities. For example, encouraging cash or group purchases of inputs may be desirable where the savings potential in the traditional society is demonstrated to be significant. Once intensity of cultivation increases and manpower and institutions are developed, credit may become the major thrust of the programs. Marketing services may also fall in the category of a facilitative development at an early stage. The initial emphasis may be on providing intermediate forms of interventions and on improving the bargaining position of the farmer, as for instance through construction of public facilities for seasonal storage, improvement of roads and market information systems, and standardization of weights and measures. Introduction of high cost administrative marketing monopolies or hurried development of farmers' marketing organizations should perhaps be avoided in the early stages. Such organizations are likely to develop more spontaneously once the preconditions for their development are established.

99. Given the extreme constraint of trained manpower, even with the establishment of priorities in provision of services, mass participation rarely seems feasible in the short run through delivery systems oriented towards individual farmers. Therefore, some delegation of responsibility to the rural people is necessary. Many recent programs have already made a beginning in this direction. They have shown a considerable potential for success, provided local involvement is promoted gradually and is accompanied by a genuine delegation of responsibility to the rural people.

100. Considerable emphasis is needed on the training of field and administrative staff so that the intensity of services and the number of services may be increased gradually over time. Manpower training is critical to achieve production targets, as well as to broaden participation.
101. Finally and importantly, the past programs indicate that if the process of rural development is to be viable there is not only the need for expansion of administrative coverage but also for emphasis on improvement in the performance of the indigenous administrative systems. Technical assistance may be needed not mainly to manage projects, but to assist in developing local, regional and national capability to plan and implement rural development programs. To realize this objective it seems necessary that nationals be actively involved from early stages of project formulation and implementation. It also seems desirable that expatriates not be highly rated in project authorities in which effective interaction with local staff and indigenous administrative institutions is frequently inhibited, hampering the development of the latter.

102. Wherever possible, technical assistance needs to be provided to develop administrative systems which incorporate clear definitions of objectives and targets, ways of implementing and evaluating these targets, and incentive systems which will encourage improved administrative performance as measured by the realization of these targets.

103. The sequential approach attempts to reconcile several desirable features from among the programs reviewed. First, it points out the frequent need for broadbased development of the subsistence sector. Second, it underscores the crucial role of indigenous manpower and institutional capability, not only in the effectiveness with which interventions are implemented, but in planning rural development programs to take account of variability. It therefore points out the need for emphasis on manpower and institutional development in the early stages of program implementation so as to evolve programs in scope over time. Third, it views increase in productivity of the subsistence sector as frequently constituting a major, but only the first, step in improvement of the welfare of subsistence rural populations.