

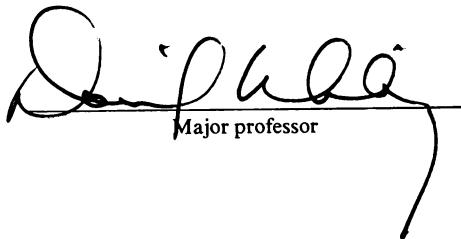


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THE STRUCTURAL AND HISTORICAL CONDITIONS OF FOOD SECURITY IN
MALAWI: A SURVEY OF THE SALIMA AGRICULTURAL DEVELOPMENT
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STANLEY W. KHAILA

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THE STRUCTURAL AND HISTORICAL CONDITIONS OF FOOD SECURITY IN MALAWI:
A SURVEY OF THE SALIMA AGRICULTURAL DEVELOPMENT DIVISION.

by

Stanley W. Khaila

A DISSERTATION

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

DOCTOR OF PHILOSOPHY

Department of Sociology

1992

698-05-21

ABSTRACT

THE STRUCTURAL AND HISTORICAL CONDITIONS OF FOOD SECURITY IN MALAWI:
A SURVEY OF THE SALIMA AGRICULTURAL DEVELOPMENT DIVISION.

by

Stanley W. Khaila

In the early 1980s, Malawi was one of a few countries in Africa which was producing sufficient food to supply its population's nutritional requirements, if distribution was equitable. However, recent studies indicate that 70% of the households deplete their food stocks two months before harvest. Of all Malawian babies born, 33% die before the age of five, another 33% survive but chronically malnourished, and the remaining 33% survive only moderately well-nourished. For the period 1975-1982, the Infant Mortality Rate was 179, one of the highest in the world. In 1980, the child death rate was 39 per 1,000, surpassed only by Sierra Leone (50) and Upper Volta (51) in Africa.

This research was conducted in the Salima Agricultural Development Division (SLADD) in the 1989/90 cropping season. The aim of the study was to assess the impact of integrated rural development projects (IRDPS) on poverty reduction as measured by food insecurity, income, morbidity, and nutritional status. Three surveys were conducted: 1) a baseline survey of 139 households to document demographic characteristics; 2) fortnightly interviews, and 3) two anthropometry and morbidity surveys on a sub-sample of 80 under-five children.

Statistical analyses included proportions and percentages, correlations, and ANOVA. The results revealed that many households still cannot produce enough food for their requirements. Eighty-five

percent did not harvest enough food to last them until the next season. The mean cash income, over the survey period, was only K241.71 (or about US\$96). Fifty-two percent of the children were malnourished, and morbidity was high.

It is concluded that SLADD's efforts to increase agricultural production, raise living standards, and improve family incomes have made limited success. Many households with small holdings and, especially, female-headed households still earn cash incomes through means not affected by the extension and credit services. Systematic biases in credit and extension services against women and smaller farmers; inattention to traditional farming systems and informal industry; and inappropriate credit packages and extension messages, along with low wages and low crop prices are responsible for SLADD's limited success.

ACKNOWLEDGEMENTS

My first thanks go to the Salima ADD farmers who devoted their precious time to answer the survey questions, many of which may have invaded their privacy. Thanks also go to the Rockefeller Foundation, without whose financial support this project could not have taken place. Special thanks to Professor David Wiley, my graduate advisor, for his guidance in the art of grant proposal writing and for his comments and suggestions during the arduous process of composing a dissertation from the research data.

I am very grateful to my guidance committee, Professors Jay Artis, Daniel Clay, Anne Ferguson, and Michael Weber. In particular, I would like to thank Professor Weber for sharing with me current literature on food security in Malawi, Professor Ferguson for her valuable constructive criticisms and suggestions, and Professor Clay for his advice on interview schedule design for the SPSS statistical package. I regret the loss of Professor Artis, whose insights on Farming Systems Research methods were very valuable in my research endeavor.

I am indebted to Professors Craig Harris and Chris Vanderpool, who, despite their busy schedules, came to my rescue when I needed additional members for my oral examination. Thanks to Professor Beatrice Mtimuni, my local advisor during my field research, Mrs. Kalengamaliro, and Sister Chirwa for their assistance in the training of enumerators and provision of equipment. I also would like to thank my research assistants, Messrs. Kennedy Fatsani, D. Z. Kaliyapa, John Majamanda, Peter Mandala, and Wilson Mkandawire, for their dedication, bravery, and commitment to the project. They made a tremendous contribution.

I wish to express my indebtedness to Mr. Willie Chimombo for doing so many things for me without recompense. I want to thank all the staff at Salima ADD, especially Messrs Mnyenyembe, Neil Orchardson, Frank

Chirambo, Bruce Munthali, the Project Officers, Dos, the guest house keeper, the club stewards, and all those who lent a helping hand when I was in Salima. At the African Studies Center, Joanne Peterson, deserves special thanks for her expert handling of the research finances.

Special thanks to Professor Patricia W. Barnes-McConnell for coming to my rescue when I was in financial crisis. Thanks also to the Sociology Graduate Office for financial assistance. To all those who helped me in one way or another, I offer special thanks.

Finally, but not least, my joy and hope is in my family who, for over five years, persevered and put up with loneliness, negligence, inconvenience, and bewilderment because of my academic work. Their support, encouragement, cooperation, love, and understanding is greatly appreciated. This degree is for all of you.

PREFACE

This dissertation is the culmination of my long experience with poverty and desire to do something about it. From primary school through college, I had always thought that agricultural development was the solution to the problem of poverty and hunger: the twin evils that were constant companions of my childhood. Thus in the final year of my secondary education, when we were required to declare our first, second, and third preferences of colleges and field of study at the University of Malawi, I did not hesitate to indicate my first and second choices as B.Sc. and Dip. Agric., respectively, at Bunda College of Agriculture, University of Malawi.

During my three years' experience at Bunda College of Agriculture, 1974-1977, I came to appreciate that much knowledge in the agricultural sciences existed. What I could not understand, however, is why the farmers in the vicinity of the college appeared not to take advantage of this knowledge to improve their agricultural production. It was clear though that they needed increased production and additional income. It was not a matter of ignorance, because the college annually held field days and members of the surrounding communities always attended in large numbers. It was at this time that I decided to join the Rural Development Department (RDD) at Bunda College. At that time I was attracted to the concept of rural development, which had a special meaning for me. I saw it as the approach to economic and socio-political development suited for predominantly agricultural economies. As a development strategy it laid specific emphasis on the development of agriculture both for reducing poverty in the rural areas and initiating general economic development in the country. As an academic endeavor, it raised questions about agrarian change, questions that had shaped my childhood and around which the future of the rural farming population revolved. Thus, rural development was a natural career

choice. With the passage of time, I came to appreciate the intricate inter-relationships between the smallholder agricultural sub-sector and the other sectors of the economy. I came to see, in a new light, the inter-relationships of the farmers and the land they cultivated (including the broader environment), and their relationships with other people in the process of agricultural production.

Like all members of the agrarian community, the farmers are but a single element in the complex process of social change. They act on the environment and interact with fellow members of the community and the occasional stranger on the basis of their previous experience. They take into account the consequences of their actions and interactions, not only with their life, but also with the lives of other people, the environment, and future relationships and interactions.

Hence, they not only act but also react to actions or stimuli (past, present, and future) from their community. They are simultaneously a subject and an object of change. As they act, they are a subject of change, but when they are acted upon they are objects of change. But the *environment* to which they react stretches beyond the community boundaries. Hence, the community is subject to pressure from actions and reactions outside its boundaries. Thus the community actions and reactions, by their very nature, are more compelling than the individual actions and reactions. Consequently, the actions of the farmers are more a result of the environment and the community at large than they are of their free will.

Similarly, agrarian change is influenced by processes spanning the community, the nation, and the world at large. This is in contrast to the argument that the logic of peasant production (and therefore peasant society) is inherently resistant to change and therefore requires external pressure to change. Just as the individual peasant acts and reacts and becomes simultaneously both an agent and object of change (i.e the material to be changed), so does peasant society. Therefore,

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the apparent failure (or inability) of the peasantry to be transformed into capitalists must be seen not so much as a result of a static social structure and cultural factors inherent in agrarian societies, but rather as a result of the extensive and centralizing forces of the socio-political and economic structure of society at large.

Consequently, the study of agrarian change must entail not only the understanding of the individual peasant or the understanding of the logic of the structure and culture of the peasantry, but it must simultaneously study the agrarian question vis-a-vis the national and the larger global system. The study must investigate the question of ownership and control of resources with the aim of discovering their form and how and what shapes that form. Simultaneously, the study must analyze the structure of social relations and their relationship to ownership and control of resources, as well as the cultural environment in which these structures operate with a view to discovering points of conflict within them. Furthermore, the study must identify how the structure of social relations operates in the control of production as well as exchange relations that govern the forms and types of production and the marketing of inputs and produce. And finally, the researcher must not forget to contextualize these issues by tracing their historical evolution within the general framework of the global economic system.

This dissertation, therefore, must be seen as my entry point into this difficult question of the dialectic of the agrarian society, in particular, the Malawian agrarian question. While I carefully sketch out what I believe to be the important issues, from a rural sociologist point of view, no claim is made that these are the only issues. Even more important, the discussion of these issues, while quite detailed, does not in any way represent the full development of my intellectual

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capacity on the peasantry. The issues raised here need further conceptual refinement and analysis. Such will be my occupation in Malawi. I believe this dissertation is only the birth of that process. It is a difficult task, and I need more than wishes of good luck.

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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

An increasing number of low-income countries are facing strategic decisions on how to cope with long- and short-term food security problems (Braun and Kennedy, 1986). Berry (1984) noted that during the last ten years, a rapidly growing number of Africans had an increasingly difficult time producing or finding enough food to eat. He added that chronic hunger and malnutrition were spreading and escalating quickly into famine at times of environmental or financial crisis. Malawi is no exception to this problem.

From the 1980/81 to 1986/87 season, estimated maize production averaged 174 kg per person per year. At the same time Malawi began to sell maize internationally in 1981, and by 1984 approximately 180,000 tones of maize were sold to other African countries (Quinn et al., 1988). Assuming that 80% of the national calorie requirement comes from maize, the population needs to consume an average of 190 kg of maize per person per year in order to meet the World Health Organization's (WHO) estimate of 2,219 kilocalories per head per day (Carr, 1988). The estimated maize production figures suggest that there are substantial food deficits at the national level. In the rural areas where 90% of Malawi's population is located, more than 50% of the households have land holdings of less than a hectare. Half of these households meet only 30% of their calorie requirements from their farms. The other half meets about 68% of their calorie requirement. The 1980/81 Malawi National Sample Survey of Agriculture (NSSA) indicated that 70% of the households depleted their food stocks by the month of February, two months before harvest (Center for Social Research (CSR), 1988). Furthermore, other studies indicated that malnutrition among children

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under five years of age was a serious problem. Of all Malawian babies born, 33% die before the age of five, another 33% survive but chronically malnourished, and the remaining 33% survive only moderately well-nourished (Quinn et al., 1988; Msukwa, 1985).

From the results of the NSSA 1980/81 survey, it is clear that child malnutrition in Malawi is serious and endemic and that it stems from the widespread problem of household-level food insecurity which the vast majority of the rural population faces.

The severity of the problem of nutritional deficiency is also reflected in the high Infant Mortality Rate (IMR) for Malawi. It is well established that nutrition and infection are synergistic (Millard, et al., 1990; von Braun & Kennedy, 1986), i.e. poorly nourished individuals are more susceptible to disease and, conversely, infections adversely affect nutritional status.

For the period 1975-1982, the average IMR for low income countries was 130 per 1,000 population and 89 for the world as a whole (UNICEF, 1982). In Malawi the IMR for the same period was 179, only surpassed in Africa by Gambia (204), Sierra Leone (215), and Burkina Faso (219) and, worldwide, by Afghanistan (205), Kampuchea (263), and Laos (263). The child death rate in 1980 of 39 per 1,000 was surpassed only by Sierra Leone (50) and Upper Volta (51) in Africa.

The most intriguing aspect about Malawi's poverty is that, since independence, Malawi has put a great deal of emphasis on rural development through agricultural development. Much development aid money and effort have been invested in the development of smallholder¹ agriculture, and Malawi has, in some quarters, been cited as an example of good management of IRDPs. In light of the evidence of the prevalence

. In this dissertation, the terms "smallholder farmer" and "peasant" refer to the same group of farmers and are used interchangeably. In the chapters dealing with issues prior to Nyasaland's independence, the term peasant is used. Whereas, in the post-independence period, the term smallholder farmer is used more frequently. For a full definition of these terms refer to the glossary in Appendix A.

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of food insecure households and the toll that this has had and is still having on maternal and child health, the government of Malawi, together with the donor community, recently identified the problem of malnutrition as a key development priority needing a broad spectrum of short- and long- term interventions (Malawi Government, 1988b).

In consequence, Malawi started a serious process of reviewing and revising its long- and short- term strategic plans for the elimination of food insecurity and malnutrition nationwide. Witness to this are the creation of the Nutrition Unit in the Ministry of Agriculture, the establishment of the Nutrition Surveillance Unit in the Office of the President and Cabinet (OPC), the launching of the quarterly Food Security Bulletin by the Economic Planning and Development Department of OPC, and the building of the 180,000 ton strategic food reserve in Lilongwe. Other experimental projects include fertilizer-for-work and food-for-work programs in selected areas.

It is important to note that most of the government discussions and strategic planning are based on what the international community currently believes to be the major factors affecting food security in Sub-Saharan African countries (both from an empirical as well as theoretical point of view) and on the information on the current state of affairs in Malawi as seen through the various studies that have been carried out in the country in the past decade. As such, the plans will be limited by the validity of these theoretical perspectives and the accuracy with which the studies identify and analyze the problems of food security and nutrition in Malawi.

The current studies on food security and nutrition in Malawi have so far focused on the understanding of the nature of food insecurity and malnutrition, in particular, on analyzing the micro-and macro-economic issues related to food security and nutrition (Lele, 1990; and Kydd and Hewitt, 1986b). Considerable effort has also been devoted to situating the problem within the sociocultural and political context of Malawi

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(see for example Peters, 1989; Center for Social Research, 1988; and Msukwa, 1990; 1985). Other studies have focused on agronomic technological issues such as the impact of modern farming practices and the response of smallholders to them and to the "Green Revolution" technology (Carr, 1988). Msukwa (1990) has reviewed nutrition research in Malawi from the 1938-39 study by Platt to the recent series of studies by the Center for Social Research of the University of Malawi. He concludes that:

the underlying causes of malnutrition could be traced to one cause --poverty. Small landholdings, low cash incomes, poor access to improved water and sanitary facilities, lack of access to extension services, low educational levels, inadequate labor, low meal frequency, morbidity, etc., are all associated with malnutrition.

Consequently, a large number of rural households in Malawi can neither produce enough food to meet their family requirements nor earn sufficient income to supplement household production through purchases. Female-headed households, which comprise approximately 40% of families in some areas of the country, are over-represented in the poor, malnourished households.

These studies have produced important information concerning who are the food insecure in rural in Malawi. Indeed, through these studies, we know the scale of malnutrition, what the causes of malnutrition are, who are the worst affected, the strengths and weaknesses of the extension and research systems in dealing with the food security challenge, and the effects of micro- and macro-economic policies on food security. The findings from these studies suggest that food insecurity is a result of poverty. But we still do not fully understand the causes of poverty in the rural Malawi. Yet it is clear that unless poverty is eliminated, household food problems will persist. We must therefore look for ways to reduce poverty. But before we seek means to reduce poverty, we must first find what causes poverty.

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1.2 Objectives of the Study

A major issue raised in the theoretical debate about agrarian societies is the question of persistence of poverty among the smallholders. On the one hand, the "modernization" theorists explain the persistence of poverty among peasants by pointing at the lack of technological change in the forces of production. The root of poverty among smallholders is the an unproductive subsistence-oriented traditional agriculture that remained unchanged for many generations (Vandergeest, 1988). Poverty can be eliminated through the development of the forces of production or modernization (see for example Mosher, 1966; Schultz, 1964; Foster, 1962; and Rogers, 1962; 1969). On the other hand, there are the Marxian models. The literature from this perspective argues that persistent poverty among the smallholders is a result of the development of capitalism.

There is no agreement on the mechanisms through which capitalism causes poverty in the Third World. But a good portion of the literature argues that the development of capitalism through colonialism, neo-colonial imperialism, multinational corporations, and the world socio-economic order, has shaped the development of the smallholders in the Third World. The barriers to the development of the forces of production lie in the systematic distortion in resource allocation in the Third World influenced by the development of world capitalism and not in the static traditional agriculture as is suggested by the modernization theorists (see for example De Janvry, 1981; Prebisch, 1981; Amin, 1976; Shivji, 1976; Emmanuel, 1972; Galtung, 1971; and Saran, 1956).

In practice, the modernization model has dominated development planning and practice in the Third World. This is because modernization models incorporate theory with practice. In addition, modernization theorists have performed better at identifying themselves with the state and its development efforts. The Marxian literature, on the other hand,

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has not been able to provide guidelines on how to formulate an applied program for the development worker. On the contrary, the Marxian theorists have tended to view the state as part of the problem of persistent poverty.

The modernization model is founded on a set of assumptions which include the following: that smallholder agriculture is static, in equilibrium, subsistence-oriented, and at the traditional end of a traditional-modern continuum. The models also assume that smallholder agriculture needs to be modernized through the use of modern factors of production and they predict that such a change would increase farmer income and improve the well-being of society as a whole, leading eventually to modernity. Commercialization is also usually taken to be part of the modernization process. Commercialization is defined as the undermining of non-market ties whereby factors of production and subsistence are increasingly obtained through the market. In practice, commercialization involves introduction of cash crops for domestic and/or export markets (Binswanger and von Braun, 1991). Hence, the variables comprising the operational definition of modernization include technology adoption (fertilizer, insecticides, hybrid seed, and husbandry practices), cash crop production, and market involvement (credit use, product sold, etc).

The objective of this study is to investigate the extent to which the IRDPs in Malawi have succeeded in modernizing the rural economy, and to evaluate the effects of the modernization process on poverty, food security, and nutrition among the smallholder farmers in Malawi.

In this study, of particular interest the structural/historical development of the agricultural sector and how the modernization, through various types of state-initiated agricultural development programs and policies, affected food security and, in turn, nutrition of children under five years of age. It is argued that state intervention through IRDPs and land and labor policies shaped poverty in Malawi.

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This study, therefore, focuses on the ultimate causes of persistent poverty. The issue I want to address is what are the foundations for persistent poverty in Malawi? More specifically, what was the nature of the pre-capitalist social formations in Malawi? How has capitalist modernization, through colonialism and neo-colonial imperialism, shaped the development of smallholder agricultural production? Currently, what are the specific ways through which socio-economic factors affect the ability of rural households to secure enough food for themselves?

For instance, to what extent are resource poor households affected by the modernization efforts? What are the effects of being or not being reached by the modernization efforts? Or what is the nature of the modernization process and how does it translate into deprivation for some and benefits for others? How is smallholder surplus production appropriated? These types of questions are crucial if we are to accurately understand and document the processes that manifest themselves into persistent poverty and in the differential access by rural households to food entitlement opportunities.

In Malawi these issues are closely related to the structure and form that rural development has taken over the past century. The structure and form of rural development in Malawi is best expressed in the IRDPs concept. This concept may be traced as far back as 1909 when the first Department of Agriculture was established and charged with the responsibility of African commodity production. Although the words *rural development* may not have been used, the Department of Agriculture sought to stimulate agricultural production among the natives through agricultural research, extension, and marketing services; clearly reflecting the modernizing philosophy of the modernization model. The same strategies were used in the current National Rural Development Programme (NRDP) by the Malawian government. The rural development concept, with its modernization ideology, has shaped Malawi's agricultural research, extension services, agricultural marketing

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systems, and the existing government policies and regulations. This study attempts to shed light on the nature of the rural development concept as it relates to Salima ADD. Emphasis is on how this concept has affected the socio-economic situation of the rural household.

The general objective of the study is to investigate the extent and nature of modernization of smallholder agriculture and its effect among the smallholder farm households in the Salima ADD in Malawi. This study proposes to contribute to rural development theory, broaden the knowledge on food security and human nutrition by examining the assumptions of the modernization models, and comparing them with practice. Both micro- and macro-level factors (extension contact, credit participation, resource endowment, gender, land tenure, wage, and producer price policies) and their impact on household food security and the nutritional status of children in the households will be examined. Specifically the study aims to:

1. investigate and document the structural and historical processes that shaped the course of smallholder agricultural development in Salima ADD.
2. analyze the assumptions made and the approach taken in the Salima ADD integrated rural development projects in order to assess their theoretical soundness and to evaluate the pros and cons of the modernization model.
3. study the smallholders in Salima ADD and determine the extent of benefits accruing to them through the modernizing effects of the rural development efforts.
4. evaluate alternative options for the design of policies and programs for coping with potential negative developmental effects that may be associated with the modernization model of rural development.

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1.3 Theoretical Framework

Social science orientations to the agrarian question have reflected the major paradigms of social science research in general. It is possible to distinguish, very broadly, two approaches to the study of agrarian societies, namely, the modernization model and what I term the "structural/historical perspective." The modernization model is closely associated with Western capitalism whereas the structural/historical perspective draws on Marxian literature.

Three major paradigms influenced the modernization model: the systems approach, the decision-making, and the diffusion models. The major feature of the systems approach is that its proponents contend that agrarian communities are self-regulating systems with their own qualities and, therefore, their own equilibria. This suggests the existence of static societies where change originates externally. Examples of this approach are Ester Boserup's model of agrarian change under population pressure and George Foster's "image of limited good", (Boserup, 1970; and Foster, 1962).

In contrast, the decision-making models, in explaining farmers' responses to market incentives and agricultural innovations (modern farming techniques), emphasize individual responses. T.W. Schultz' "Transforming Traditional Agriculture" is a good example of this perspective.

In the sub-discipline of rural sociology, Everett M. Rogers developed the diffusion model of agricultural technology. In his book "Diffusion of Innovations," he specified the likely adopters of new technology, characterized the rate of adoption, and, drawing on research from other studies, identified the specific cultural barriers to innovation, and suggested ways for circumventing these barriers.

These three paradigms of agrarian change came to dominate the theorizing of the modernization model of development in the Third World. Agricultural development policy, and thus the design and implementation

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of agricultural projects in Malawi, have been shaped largely by modernizationist assumptions concerning the effect of technological change and market forces on smallholder agriculture, rural poverty, and food security. Hence, because it remains a dominant model in Malawi's development strategy, the modernization model merits fuller discussion.

The modernization theorists conceptualize the development process as mostly involving processes internal to the society or nation state. Therefore, the transfer of advanced technology, modern rational organizational forms, labor habits supportive of industrial production, and "modern" attitudes toward work, the self, the family and the society, all of which facilitate development, are considered the only course for development in the Third World.

The post World War II approach of Western agricultural economists working on problems of Third World agriculture reflected this view. Research findings from the diffusion model gave assurance to the agricultural economists. The diffusion model, developed in the sub-discipline of rural sociology, showed how new agricultural technologies diffuse and the rates at which different categories of farmers adopted the new ideas. Hence, modernization theorists in economics were assured that it was possible to transfer agricultural technology through the promotion of Western-style agricultural extension services in the Third World. The development process, thus, became a question of simple resource flows and the diffusion of modernity from advanced to backward countries. The development of high-yielding varieties in the early 1970s, the so-called Green Revolution, encouraged by the work of T.W. Schultz, was greeted with a kind of euphoria and renewed hope that poverty in the LDCs would soon be a thing of the past.

However, in the 1960s serious questions began to be raised about the benevolence and the validity of the Western modernization model of development (see for example Behrman, 1968; Krishna, 1967; and Jones, 1960). This led to the re-evaluation of the modernization model and the

development of the structural/historical perspective. The "structural/historical" perspective comprises literature in radical political economy and dependency models of development. The "structural/historical" perspective is not a single theoretical model. It comprises a number of theoretical orientations. An important feature of the structural/historical perspective is that it developed out of the recognition of the fundamental role played by structural contradictions in the historical evolution of human society. These models, having their origin in the writings of Lenin on imperialism and Marx on the labor theory of value, emphasized the structural/historical contradictions as the basis of social change. But this is the only point of agreement in this paradigm. There are heated debates within this perspective regarding questions of the nature of the smallholder farming societies. Major disagreements are on the question of whether smallholders are a homogeneous group or are differentiated within themselves. Second, is the question of whether smallholders comprise social formations with their own modes of production, or whether they are specific economies, set apart from the capitalist mode of production.

These debates are not mere rumblings of intellectuals. On the contrary, they reflect experiences of frustrations resulting from many failures in the practice of rural development theory. Such debates are genuine attempts to better understand social phenomena in order to inform political practice so that a better future may be created. As such, these debates represent activities of critique whose goal is to expose the systematic limitations of the existing knowledge so that we can transcend those limitations and transform social reality (Bernstein and Campbell, 1985:8).

Consequently, within the structural/historical perspective, on the one hand, there are the dependency theorists who believe that Third World poverty can be reduced only by changing the world's economic and

socio-political order. These theorists insist that exploitation of the peripheral nations by the center nations, resulting from international inequality, is the major cause of poverty in the Third World (see for example De Janvry, 1981; Prebisch, 1981; Amin, 1976; Shivji, 1976; Emmanuel, 1972; Galtung, 1971; and Baran, 1956).

On the other hand, there are those who, while generally in agreement with some of the issues raised by dependency theorists, maintain that, insofar as poverty in the Third World is concerned, intra-national inequality is more important than international inequality. These theorists emphasize the state versus the masses contradictions within the Third World countries themselves. Notions of the "ruling class" or "bureaucratic bourgeoisie" or Lipton's "urban bias" refer to the existence in Third World countries of powerful class interests enriching themselves at the expense of the masses (Harrison, 1982; and Lipton, 1982).

Throughout these debates one finds that the arguments frequently shift from one level to another. Gibbon and Neocosmos (1985) for example argue against treating the smallholders as a "specific economy" with its own logic of production. They are also opposed to the world systems approach or dependency theory. Yet in their discussion of socialist regimes in Africa, they show how collective appropriation of state revenue in these regimes has benefitted a few within the bureaucratic bourgeoisie. They reach the conclusion that capital, by its very nature, reproduces the smallholders, the same conclusion reached by dependency theory.

Dependency theorists argue that colonialism, imperialism, and multinational capital promoted the exploitation of the periphery by the core, the structural distortion of the periphery economy, and the suppression of autonomous policies in the periphery. The net effect of these phenomena is to create obstacles to development. Exploitation occurs by means of decapitalization, unequal exchange and subordination

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to external controls in a competitive system. Decapitalization takes place through the surplus extraction by foreign investors. It also occurs due to terms of trade that tend to be against the periphery nations. Unequal exchange is the process whereby the periphery exchanges primary goods produced with labor at below subsistence cost for manufactures produced with non-competitive expensive labor. This transaction is unequal because the exchange value of the primary goods is below the true value. Hence it results in transfer of value to the core nation.

Structural distortion occurs because dependence distorts the economic structure of the periphery by requiring the periphery to specialize in the production of raw materials, making it necessary for infrastructure in the periphery to be oriented towards the center, and creating resource use patterns which retard development. Specialization in raw material production implies that there is low differentiation. Malawi, for example, relies on tobacco and tea production, Zambia relies on copper production, Ghana relies on cocoa, Senegal on groundnuts, Liberia on rubber, and so forth. In addition to the extractive nature of this production, it makes the economy vulnerable to market fluctuations. This also implies that the countries have to rely on imported manufactures, and the result is difficulties in the balance of payments which then reduce the domestic marginal propensity to save. This results in declining economic growth.

Outward oriented infrastructures imply low internal integration. This makes internal communications and transportation systems extremely expensive. Lele (1984) noted that road mileage per square mile of land area is only 0.02 in Sudan, 0.1 in Zambia, 0.15 in Zaire, 0.23 in Kenya and 0.31 in Malawi. This discourages investors from investing in the rural areas thereby inducing an urban bias in investment. But above all, this suffocates any efforts of domestic entrepreneurship by making importation of goods more profitable.

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The creation of unfavorable resource use patterns means that the allocation of resources is such that the overall effect is dependence. This is reflected in the distorted consumption habits of the town dwellers which compel African governments to spend their much needed foreign exchange on "non-essentials" e.g. stereos, music records, television and video systems, private cars (with their high fuel bills), expensive airports, hotels and resort areas furnished with exotic paraphernalia and stocked with expensive imported foods and beverages.

In the chapters that follow, I investigate and document the structural and historical processes that shaped the course of smallholder agricultural development in Salima ADD; analyze the assumptions made and the approach taken in the Salima ADD integrated rural development projects in order to assess their theoretical soundness and to evaluate the pros and cons of the modernization model; study the smallholders in Salima ADD and determine the extent of benefits accruing to them from the modernization of rural development efforts; evaluate alternative options for the design of policies and programs for coping with potential negative developmental effects that may be associated with the modernization model of rural development.

I begin my analysis in Chapter 1 with the setting up of British colonial rule in Malawi in the second half of the nineteenth century. In this chapter, I briefly describe the pre-capitalist economic formations and proceed to study the entry of British missionaries and settlers and the impact that this had on the pre-capitalist formations. The discussion concludes with a critical look at the process of colonization, how colonial rule was imposed and a market for capital was set up.

In Chapter 3, I assess colonialism and its imperialist tendencies to demonstrate how this tendency shaped the rate of capital accumulation and the development of smallholder agriculture and other industries in the country. This discussion includes the question of labor and land

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and how they were expropriated and the impact that the South African gold mines had on the separation of labor from its means of production, especially land. Production and exchange relations are also discussed to show how these were unfavorable to domestic capital accumulation, especially among the smallholder farmers. In this chapter, I also show how the colonial administration favored the development of the estate sub-sector at the expense of the smallholder sub-sector and how smallholder produce were bought at low price to supply cheap raw materials for British industries thereby reducing Nyasaland's capacity for capital accumulation. I also show how the imperial government opposed development of domestic industry for fear of competition and how the Mozambique Company's financial interests distorted the development of the railway road system and siphoned much needed capital out of Nyasaland. This discussion naturally leads to the study of the contradictions that were apparent in colonialism and resulted in its fall in the middle of the twentieth century.

The processes set in motion during the post-independence period are discussed in Chapter 4. The questions raised in Chapter 3 are also discussed here. The aim is to find out how the nationalist government maintained or changed the forces set up during the colonial era. In this chapter, I show how, in the post-independence era, the same forces that operated during the colonial era, are operative but with different actors. The government is africanized, the estates are also largely africanized, and the financial interests are part local and part international. The major difference is the absence of the imperial administration. Some emphasis is given to the development of the smallholder sub-sector but the estates are still favored. Agriculture is still based on production of raw materials even though not for foreign industry. Resource use patterns are still unfavorable to smallholder development (research emphasis is on cash crops and traditional crops are largely ignored, extension and credit services

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Chapter 5 is a survey of smallholder farmers in Salima ADD. Salima ADD is one of the first four major IRDPs in Malawi. It is also one of the areas where high rates of malnutrition prevail. Salima ADD also includes the area where the first nutrition survey was conducted in 1939. This chapter includes the description of the research site, population and sample, research design, instrumentation and data collection, data validity and reliability, and methods of analysis. The operationalization and measurement of the research variables is also discussed here.

Chapter 6 contains the analysis and summary of the survey results. Discussion and further analysis of the data is in Chapter 7. The major variables analyzed are: commercialization (or commoditization), and physical, ecological, and sociological ecological factors.

Chapter 8 recaps the main assumptions of the modernization and dependency models of development. An attempt is made to tie these models to the historical processes and the structural context of the rural development process in Salima Agricultural Development Division. The contradictions between the modernization efforts and the smallholders are discussed. The chapter concludes with a summary of what has been learned from this study. The summary has two sides. On the one hand are the concrete empirical facts representing social reality as it was encountered during the research experience. On the other hand, there is the political aspect. While based on the concrete evidence, the policy implications and suggestions for further research are value judgements. They represent what I believe, based on my values and those of many others like me, constitutes a better social reality. This is not to say that these suggestions are unimportant, but rather to assert their crucial importance.

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CHAPTER 2

PRE-CAPITALIST FORMATIONS AND COLONIZATION

2.1 Introduction

Malawi was officially declared a British Central Africa Protectorate¹ in May 1891 (Cole-King, 1971:20). Harry Johnston, the first Commissioner of the Protectorate, was appointed to the position of Commissioner prior to its declaration, sometime between January and February 1891.² However, the demarcation of the territory now known as Malawi had not been completed until June 1891 (Pike, 1968:87) and Johnston did not arrive in Nyasaland until July 16, 1891 (Baker, 1972:328).

Nonetheless, long before the official declaration of the Protectorate, Europeans, Britons, and Scots in particular had developed colonial, missionary, and commercial interests in Nyasaland. Since 1858, when David Livingstone was appointed Consul to the Eastern Coast of Africa, a series of British Consuls were appointed to this region whose jurisdiction included the territory now known as Malawi.³ I begin this chapter with a critical study of the dominant socio-political and economic conditions before the entry of the British and the Scottish missionaries and settler colonizers. Secondly, I examine and analyze

1. This was the name given to Malawi in 1891. This name was maintained until July of 1907 when the territory was gazetted as the Nyasaland Protectorate. From then on Malawi was known as Nyasaland until July 6, 1964 when the Protectorate became the independent country now known as Malawi (Pike, 1968: 90, 94, 159).

2. Historians differ on the exact date of Johnston's appointment as Commissioner of the Protectorate. Pike records the date of appointment to be January 1891, Pachai dates it at February 1, 1891, and Baker notes the date of appointment as February 14, 1891 (Pachai, 1967:57; Pike, 1968:89; and Baker, 1972:328).

3. Prior to the appointment of Harry Johnston as the first Commissioner of the British Central Africa Protectorate in 1891, there were, in all, six Consuls, over a period of 33 years, namely, David Livingstone, 1858-1863; James F. Elton, 1875-1879; Henry E. O'Neil, 1879-1884; Charles E. Foot, 1884-1885; A. G. S. Hawes, 1885-1887; and John Buchanan (Acting Consul), 1887-1891. (Baker, 1972:324-325).

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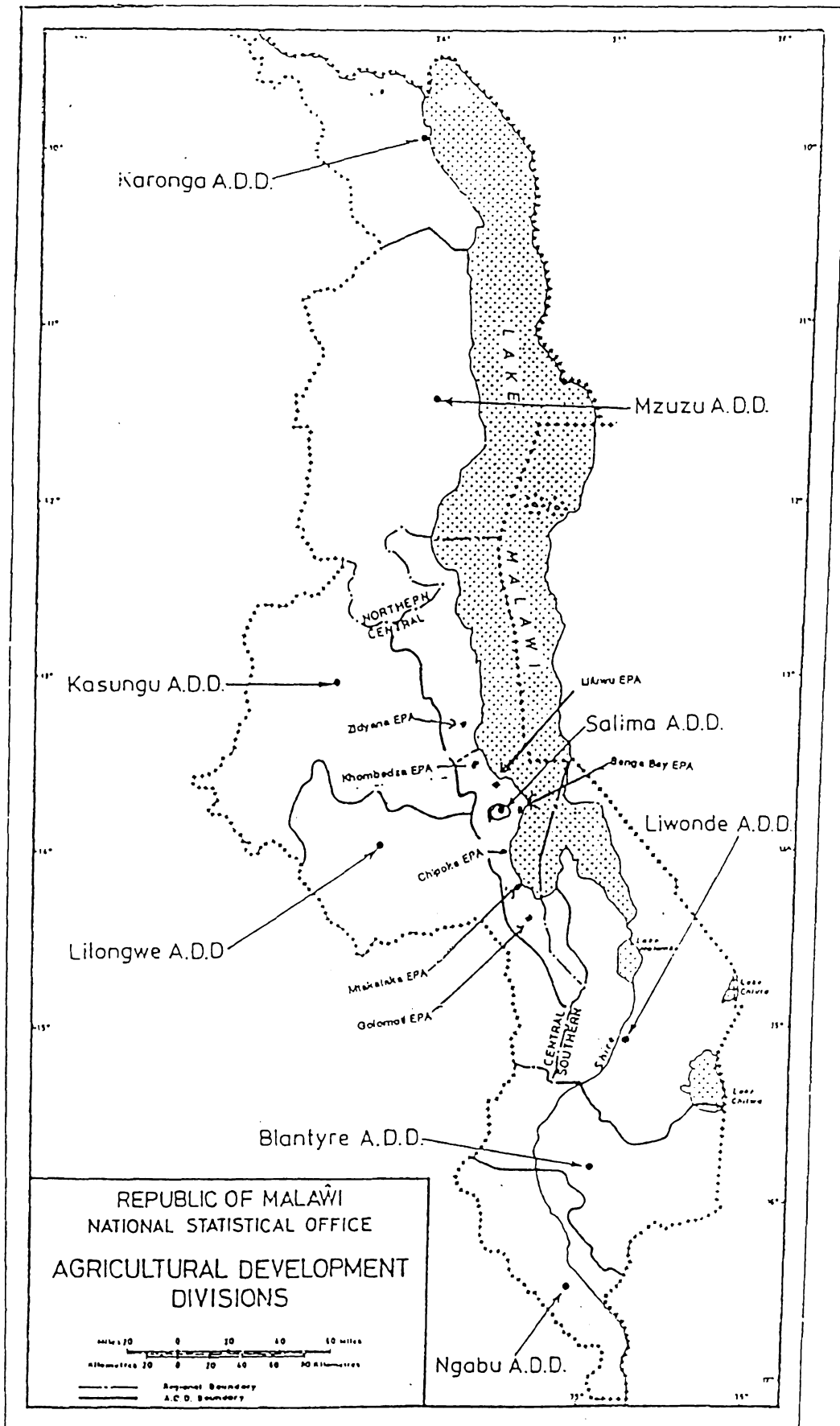
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the prevailing social formations with the aim of identifying the dominant mode of production and determining the forces of social change. It is concluded that the contact and the establishment of British rule set Nyasaland on a trajectory of social change that, even today, shapes the attitudes of the average Malawian towards Europeans and modernization in general.

2.2 The Colonization

By way of introduction, this study was conducted in the Salima Agricultural Development Division (SLADD), originally known as the Central Lakeshore Rural Development Project. Salima ADD includes the central lakeshore of Lake Malawi and comprises of three Rural Development Projects (RDPs): the Bwanje Valley RDP in the south, Salima RDP in the center, and Nkhotakota RDP in the north. Each of these RDPs is divided into Extension Planning Areas (EPAs) (see Figure 2.1).

SLADD is situated in an area where the original Kalonga king of the Maravi Empire established his capital, in the Golomoti-Ntakataka-Chipoka area. By the beginning of the nineteenth century, the Maravi Empire had fallen. Figure 2.2 shows the extent of the Maravi Empire at this time. It was a confederation of at least seven important chieftaincies: Chulu and Kanyenda in the north, Mkanda and Undi in the west, and Kamphwiti and Lundu in the south. Undi seceded from Kalonga and established his capital between Kapoche and Liuye Rivers in present day Mozambique just south of the Zambian boundary (Langworthy, 1975), and Yao migrants occupied the former headquarters of the Karonga. In the present Salima ADD area, the important Yao chiefs were Mponda, Makanjila, Pemba, Tambala, and Kazembe. Mponda established himself on the banks of Shire River in present day Mangochi. Tambala preferred the hill country in Dedza District and established his headquarters near Kaphuka at the invitation of the later. Kazembe, a nephew of Makanjila, with his aunt Bibi Kuluunda, established themselves at Lifuwu on the



Source: Malawi Government. 1984.

Figure 2.1 Map of Malawi Showing Agricultural Development Divisions.

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western shore directly opposite Makanjila's capital at Ngombo on the eastern shore of Lake Nyasa. Pemba settled on the western shore of Lake Nyasa at the mouth of Linthipe River.

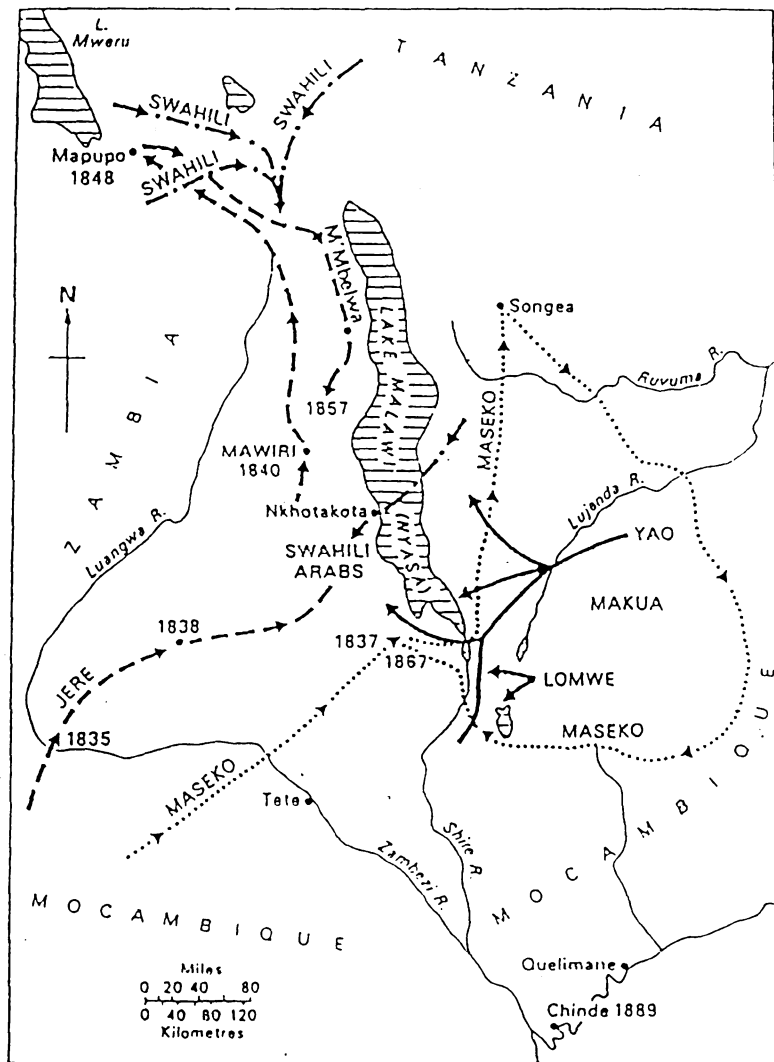
Pemba is believed to have been responsible for the extinction of the Kalongaship. However, it appears that besides the Yao, the immigrations of the Arab Swahili and the Ngoni groups into central Nyasaland during the early nineteenth century, also played an important role in the decline of the Kalonga authority (see Figure 2.3).

In Nkhotakota RDP, Jumbe, the Arab Swahili slave and ivory trader from Zanzibar established himself among the lakeshore Chewa (Lewis, 1966). Although the Ngoni groups who were active in central Nyasaland destroyed many villages and killed many people, the Yao centers and the area controlled by Jumbe survived the Ngoni destruction. Salima ADD therefore did not suffer much from Ngoni invasion except indirectly. Nonetheless, these lakeshore areas were under strong foreign influences.

The Bwanje Valley RDP which includes Golomoti Extension Planning Area (EPA), one of my study areas, was under the influence of Mponda and the Ngoni chief Gomani Chikuse. The four EPAs that were sampled for study in Salima RDP, namely, Lifidzi, Senga Bay, Lifuwu, and Khombedza were under the influence of the Yao chiefs Pemba and Kazembe/Bibi Kuluunda. Jumbe controlled the areas in Nkhotakota RDP which included Zidyana EPA, one of my study areas.

This was the situation of the central lakeshore area when the Britons arrived around the middle of the nineteenth century. Many commentators on the establishment of colonial rule in Africa often show a sense of immense surprise at how the African chiefs surrendered millions of acres of land to the merest handful of British settlers (White, 1987). The whole process is depicted as if the Africans gave away their power and rights to colonizing missionaries, the commercial and government agents without contest. To comprehend the process of colonization, several facts concerning its circumstances must be borne

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Source: Pachai, Bridglal. 1973.

Figure 2.3 Nineteenth century Immigrations into Central Nyasaland.

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in mind, viz: i) the nature of the Chewa political authority, ii) the prevailing socio-political situation, iii) the nature of treaties and their interpretation, and iv) the Chewa and Yao relation to nature.

The political structure of the Chewa was a pyramid of authority delegated by the king to hereditary subordinate tributary kings and chiefs who ruled over areas where strong kin relations encouraged conflict and decentralization (Langworthy, 1975:3). Underneath this political structure was the separation of religion from state where religious leaders had their own power quite independent of the political leadership, even though they were expected to carry out religious duties on behalf of the leadership and in the interest of the community at large. Furthermore, there was a division of the objective reality into that about which *munthu* the human being could do something and that about which only *Chisumphu* or *Mphambe* god could change. This was the fundamental basis of authority of the religious leaders. Thus religious leaders, the only ones with the privilege to communicate with *Chisumphu* god and the spirits, provided both the strength of the unity of the Maravi empire and the source of disunity (Mandala, 1990). In times of crises, like war, drought, disease epidemics, etc., the leaders' failure to intervene could result in loss of power and community disintegration.

This failure to intervene was one of the reasons why the missionaries, arriving in Maravi with their superior gunpower, were immediately obeyed as the new leaders. However, the missionaries' authority to lead the people to war, to allocate land, to levy tribute to the people, etc., still had to be tested in times of crises.⁴ They had to demonstrate that they could indeed control *Chisumphu* and the spirits of the land.

Secondly, we need to understand the socio-political situation in this period. In the middle of the nineteenth century, when the

4. White's report of Kankhomba's invitation to the missionaries to make rain when a spell of drought was in the land is a good example of such tests (White, 1987:60).

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Universities Mission of Central Africa (UMCA) sent David Livingstone to Nyasaland with the aim of ending slave trade by way of rendering it economically unsound through the introduction of legitimate commerce and the spread of Christianity,⁵ the society in which they planned to bring civilization had long been exposed to international trade in iron, ivory, gold, slaves, and crafts. The people had among them jewelers, cloth-makers, iron-workers, salt-makers, miners, agriculturalists, herders, hunters, and beauticians. Hence, they were accustomed to making peaceful deals. They had also developed a taste for foreign goods e.g. porcelain, brocade, silk, cloth, and spices. Furthermore, the missionaries and colonialists came at a time when the country was in turmoil due to the wars which were partly the effects of Arab and Portuguese traders and slavers. This was the time when both the Zwangendaba and Maseko groups of the Ngoni who were escaping from Shaka, the various Yao groups, and the Swahili Arab slave and ivory traders were migrating into Nyasaland. The combination of these events had undermined most of the leadership's control over the lower levels of authority, so that the Maravi empire was in a state of anarchy.

Thirdly, there was the possibility of cheating on the part of the missionaries and settler colonists, or incorrect interpretation of the treaties by the chiefs or both. Consider a typical treaty signed between Alfred Sharpe and Chief Tambala (Cole-King, 1971:18-19):

Treaty made between Tambala, paramount Chief of Tambala country, west Nyasaland, of the one part and Alfred Sharpe in his capacity as representative of the African Lakes and the British South African Companies of the other part.

On the seventh day of March 1891 at Tambala's in the presence of the headmen and people of Tambala Country, the chief here agrees for himself, his heirs and successors and on behalf of his people

5. The UMCA was not very successful and, to some extent, helped to further boost the slave trading business among the remaining Portuguese traders at Tete and Sena towns. Livingstone himself is quoted to have said, "we are guilty of keeping up slavery by giving increased prices for slave grown cotton and sugar. We are the greatest supporters of slavery in the world--unwittingly--often, but truly" (Pike, 1968:61).

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- (1) To accept the British Flag, and to place himself irrevocably under the Protectorate of Great Britain.
- (2) To grant to the said Companys (sic) the sole right to search for, prospect, exploit dig for (sic) and keep all minerals and metals within the said country of Tambala.
- (3) To grant the sole rights to construct, repair, equip, work, manage and control all kinds of public works and conveniences of general and public utility and to give to the said Companys (sic) absolutely and exclusively all commercial privilege of whatsoever kind.
- (4) Tambala further concedes to the said Companys (sic) the right to do all such things as are incidental or conducive to the exercise attainment or protection of all or any of the rights, powers and concessions hereby granted.
- (5) Tambala further agrees not to enter into any treaty or alliance with any other person company or state or to grant any concession of land or commercial or other concession without the consent in writing of the said companys it being understood that this covenant (sic) shall be considered in the light of a treaty between the said Chief and people and the Government of Her Brittanic Majesty Queen Victoria.
- (6) The grants and concessions are to apply to the whole of Tambala country.

In consideration for these grants and concessions the said Companys agree to pay to the said Tambala on the signing of this treaty goods to the value of Five pounds, (the receipt whereof is hereby acknowledged), and the annual sum of twenty five pounds on practical advantage being taken of the commercial clauses of this treaty.

The chiefs may have been aware of the possibility of losing the country to invaders, but such loss did not take on the meaning expressed in the treaties. Furthermore, it is difficult to imagine that Chief Tambala understood the contents of this treaty or attached to it the same meaning that the Englishmen had in mind. More likely, Chief Tambala interpreted this treaty in light of his understanding of the relationship of human beings to nature. Consequently, we need to understand how the indigenous peoples regarded the relation of human beings to nature, in particular, on matters of land ownership. Inherent in the human-nature relation was the belief that land is a gift of nature that could not be alienated as individual property. The first group to settle in an area claimed ownership to the land and all that grew on it, walked on it, and flew over it. The only way another group could possess such land was through warfare.

However, peaceful settlers were permitted with the usual restrictions and tribute requirements. The treaty expedition led by

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Alfred Sharpe, like the rest of the treaty expeditions, was really not appreciated as an invasion, in the sense of a warring tribal group. Such treaty expeditions were seen and understood to be peaceful settlers who by definition were *obwera* or *opempha dziko* land beggars (even though superior). As such, the chiefs may have understood the transactions as conferring only usufructuary rights. Like all other rights conferred to *obwera*, these could be revoked if the chiefs saw fit. The fees received may have been seen as the usual tributes received for services offered. And yes, the newcomers gave new hope for stability and, besides, the land was plentiful.

On the other hand, if the British had been invaders as the Ngoni warring group (the only and most recent foreign power preceding the British whose memories were still fresh among the Yao), Chief Tambala would have done whatever was necessary to protect the territory, because he would have known that the Ngoni were invading his land with the intention of occupying it. But, even more important is the fact that, if the Ngoni defeated Tambala, there would be no making deals such as the treaty. Tambala's defeat would have been understood that he and his people had lost their ownership of the land. However, if they wished, they could still remain in the territory and maintain their privileges to cultivate the land, settle on it, and otherwise use it without much restriction so long as the Ngoni chiefs were duly informed. Tambala was a refugee immigrant in the area and may not have had the same interests in the land as Chief Kaphuka, his host, might have had.

It is also possible that treaties had little meaning to the chiefs who may have believed that the settlers did not have the means to develop all that land anyway. This may partly explain the cheerfulness always associated with the signing of the treaties (Cole-King, 1971).

Nonetheless, both the missionaries and colonists were resisted fiercely. Although they were few in number, their superior gunpower gained them respect among the *indigenes*. According to White (1987:70),

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Mbalu, an enthusiast of Dr. David Livingstone who claimed to have fought side by side with him against the Yao, commented: "Dottori [read Doctor] Livingstone was a very good man. He killed lots of people." It was this impressive gunpower that subdued and finally persuaded many chiefs to accept colonialism.

That the chiefs misinterpreted the meanings of the various treaties became clear when the British Government finally decided to send Mr. Harry Johnston to Nyasaland to officially set up the colonial regime. He brought not only officials, but also Indian troops, mostly Sikhs, and built up his army with local enlistment. However, attempts at enforcing British rule were fiercely resisted and British forces suffered defeat at the hands of some chiefs.⁶ It was not until 1893, when some 200 Sikh reinforcements were sent in that the colonial administration was able, in 1894-95, to defeat Makanjila and Chief Bibi Kuluunda in the lakeshore area.

In 1896, when the administration turned to the Central Region again, Chief Bibi Kuluunda had been defeated already and lived in exile in Port Herald (Nsanje). However, Chiefs Tambala, Pemba, Ndindi, Gomani Chikuse, and Kachindamoto, all of whom had signed treaties in 1891, resisted colonial administration. Tambala, Gomani Chikuse, Pemba, and Ndindi were brought under control by force, the results of which were Pemba's exile to Port Herald, where Chief Kuluunda already lived in exile. Gomani Chikuse was captured, summarily tried, and executed. These were the realities of the processes that were the foundations for establishing colonialism. Many chiefs who accepted colonial rule did so under the threat of the gun.

At the time of colonization, tribal wars were being fought among the Chewa, the Yao, and the Ngoni, slave raiding was still going on, and the Maravi empire had virtually disintegrated. Trade in various goods,

6. In 1891 Captain Maguire was killed by Chief Makanjila's men and afterwards the British forces suffered defeat at the hands of chief Jalasi (Pike, 1968, p.90)

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with the Arabs, the Portuguese, the Yao, the Ngoni, and the Bisa was already established. However, colonization changed the socio-political structures in the communities by creating what they termed Native Authorities (NAs) to replace the traditional chiefs. The NAs were responsible to the territorial Governor through his representatives, the District Commissioners. This arrangement further undermined the already weak authority of the traditional chiefs. Through this structure, the colonial office administered the natives, introduced and levied taxes, and established rules for the formalization of trade. It was during this time that the peasants began to use the market regularly to meet needs previously met by their own production and simple exchange of use-values. But beyond that, there was cultural erosion and much knowledge and many production skills were lost.⁷

2.3 The Destruction of Pre-Capitalist Social Formations

2.3.1 Theoretical Framework

The term "natural economy" was used by Lenin to contrast it with commodity economy. The development of commodity economy (or commoditization) refers to the increase in the number of separate and independent branches of industry whereby the making of each separate product, each separate part of the product, and each separate operation of preparing the product for consumption is transformed into a special branch of industry.

This contrasts with the natural economy in which society consists of a mass of homogeneous economic units, and each unit engages in all forms of economic activity, from the extraction of various kinds of raw materials to their final preparation for consumption (Lenin, 1956:12-13). Natural economy, therefore, refers to the social formations that

7. Marx noted long ago that, "the act of reproduction itself changes not only the objective conditions [e.g. transforming village into town, the wilderness in agricultural clearings, etc.] but the producers change with it, by the emergence of new qualities, by transforming and developing themselves in production, forming new powers and conceptions, new modes of intercourse, new needs, and new speech (Marx, 1964).

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Commoditization, as progressive growth in the division of labor, is the antithesis of the natural economy and the chief factor in the process of creating a home market for capitalism.

The question of what types of social formations existed in pre-colonial Africa has captured the attention of scholars who are interested in finding the types of contradictions that marked the evolution of African societies (e.g. Mandala, 1990; Gakou, 1987; Amin, 1976; and Coquery-Vidrovitch, 1977; 1976).

Social and economic formations are concepts variably used to describe the socio-cultural and structural features of a society. The former emphasizes social organization while the latter refers to economic organization. The term socio-economic formations is sometimes used to refer to both social and economic aspects of social organization and to emphasize the fact that the two are only two sides of the same phenomenon. According to Amin (1976:16),

Social formations are...concrete, organized structures that are marked by a dominant mode of production and the articulation around this of a complex group of modes of production that are subordinate to it.

A careful study of the concept shows that it refers to a particular manner in which the activities, interactions, and relationships in a society are organized. It is a kind of socio-political and economic organization of a society that determines, and is determined by, the structure and the institutions of that society. It defines and, in turn, is defined by the organization of roles and statuses (social class structure) and the general patterns of norms that legitimate social behavior. It is the basis for the particular property relations, the specialization of production (division of labor), and the dominant modes of production and circulation of goods and services in a society.

The concept of social formations has its origin in Marx's writings. Marx believed in the dialectical nature of society whereby

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contradictions were the preconditions for social change or evolution. Marx and Engels spent considerable time trying to identify the social formations that characterized world societies with the aim of discovering some universal rules governing social change (Marx, 1964).

Similarly, African scholars have taken interest in the social formations of the pre-capitalist African societies with a view to better understand problems of social change. An understanding of the past social formations in Africa is useful in the identification of the causes of setbacks to development processes there because, to a large extent, such social formations still persist and interact with development efforts today. Such an understanding enables development strategists and change agents to comprehend the sources of resistance to change, in particular, to the penetration of the capitalist system into the traditional sectors and enable them to identify the causes of the setbacks to current attempts at modernization in these sectors.

In the Marxian literature, the essential elements of the concept of social formation are differentiation, property ownership, and organization of production. Insofar as the evolution to the feudal system is concerned, population density and primitive accumulation from earlier epochs also played important roles. Differentiation, in particular, the separation of industry and commerce from agriculture (i.e. the specialization of production) led to the separation between city and countryside. Depending on the form of property ownership, whether private or communal ownership, specialization led to the contradictions between city and town and to class formation. The contradictions between town and country and property owners and non-property owners defined organization of production and the form of appropriation. These formed the bases for social evolution.

2.3.2 Trade, Industry, and Agriculture

I now turn to analyze the pre-colonial social formations Malawi in order to identify its salient features and comprehend its potential

sources of social evolution. The available historical sources provide information from which useful sketches can be drawn of the social formations in pre-capitalist Nyasaland. Before entering into the actual analysis of the pre-colonial social formations in the lakeshore area, I offer an historical overview of the socio-political conditions in the pre-colonial period.

As noted already, the processes of colonialism in Nyasaland began in the last half of the nineteenth century. However, prior to the 1850s, the lakeshore area, including the present Salima ADD, had long been in contact with the outside world, mainly through the Yao and Arab traders and slavers. By the end of the fifteenth century, Portuguese hegemony had destroyed the trade network built by the Arabs.⁸ The Portuguese, unlike the Arabs, who wisely allowed the African traders to act as their main agents in the interior and avoided political meddling altogether, lacked mercantile democracy and were bent solely on ecclesiastical conquest and looting. Not only did the Portuguese endeavor to monopolize the ocean-borne trade, but they wished to dominate the in-land trade as well (Pike, 1968:65). Their intervention in the politics of the interior was partly responsible for the internal wars and tribal rivalries that finally wrecked the sources of gold, ivory, iron, and other trade commodities.

Nonetheless, by the early seventeen hundreds, Portuguese hegemony had crumbled, and Arab trade with the regions of Lake Nyasa flourished once again. By 1880, Arab traders and slavers were once again the dominant group in the study area. The dominant socio-economic formations at this time may be studied from three aspects: trade, industry, and agriculture. Trade was an important aspect of lakeshore's pre-colonial period. It appears that the system of trade that developed in the Salima ADD area (i.e. Dedza-Salima-Nkhotakota area) involved

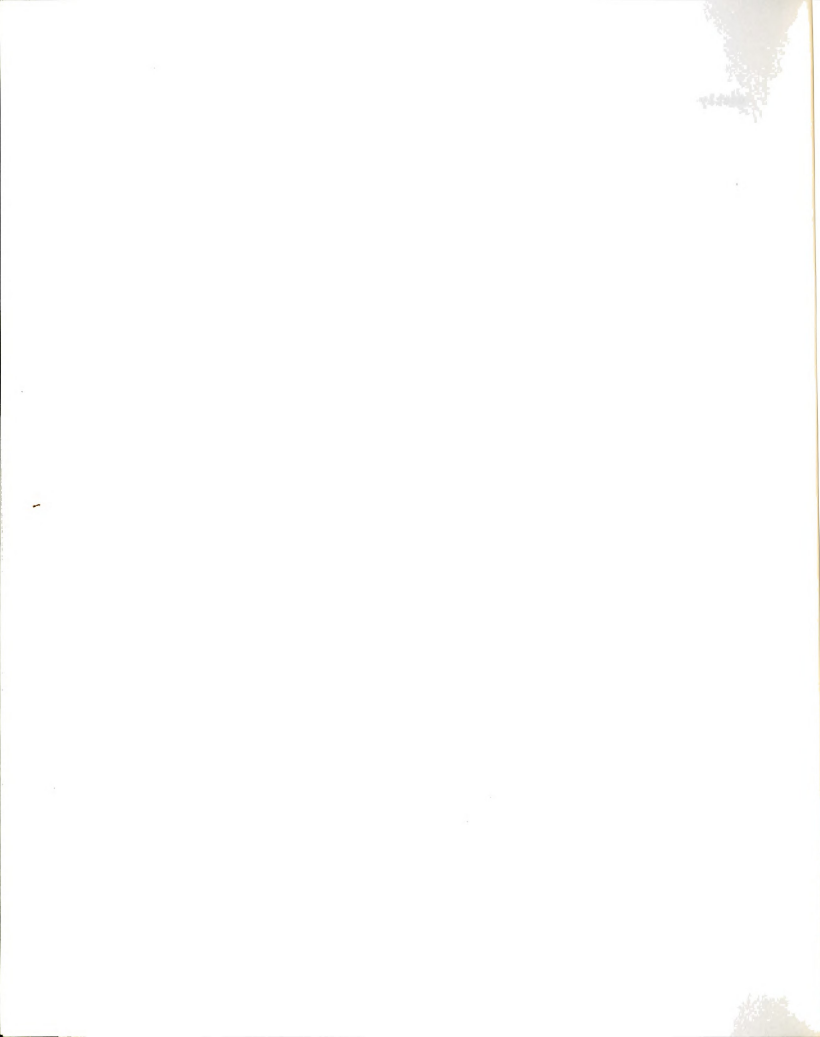
8. Portuguese domination followed the discovery of the Cape of Good Hope (Cape Town) by Bartolomew Dias in 1487 and the rounding of the Cape by Vasco da Gama in 1497 to discover the Sea Route to India.

mostly fish and salt, which were exchanged for foodstuffs from what are now Lilongwe and Dowa districts. These foodstuffs were, in turn, ferried in boats to Ngombo in Chief Makanjila's area and exchanged for a variety of goods including hoes, beads, and salt from the coast on the Indian Ocean (Phiri, 1976). This area was also an important slave market and ivory trading center.

The development of trade in Nyasaland is said to have made scarce materials more readily available but, at the same time, "accentuated economic inequities and the exploitation of man by man." (Phiri, 1985:19). Trade was elitist in the sense that the chiefs and their immediate subordinates controlled the transactions and exercised a monopoly over it. However, it is important to note that a great deal of local trade, involving both domestic and imported products, went on with little or no control at all from the chiefs.

Industry, on the other hand, had not developed even though a wide range of minerals, including coal, lime, iron, copper, and gold, existed and could be developed. However, because of its importance to other branches of production, iron was worked extensively. Phiri also identifies salt-making and cotton cloth-weaving as important industries in pre-colonial Nyasaland (Phiri, 1985). Apparently, salt-making industry was dominated by women even though male political authorities controlled and taxed salt production, especially in Kasungu where the industry had developed to an immense scale.

The cloth-weaving industry was not confined to cotton cloth. Other materials were used to make cloth, for instance, *nkhwende* or *nyanda* was made of materials from tree bark, and *dewe* made of a fibrous material called *bwazi* from a *m'bwazi* (*Securidaca longipedunculata*) plant, and *nguwo* of animal skin (Gwengwe, 1965). Cloth-making, however, was time consuming and laborious due to the elemental nature of the technology. Like iron-making, the textile industry was a monopoly of men. Iron, cloth-making, and salt-making



industries, the first two monopolies of adult men, developed in many parts of the country (Mandala, 1990; White, 1987; Phiri, 1985; Cole-King, 1971) but do not seem to have been important in the study area. The author believes that all three types of industry existed in the study area only that they were not as developed as they were in the other regions of the country.

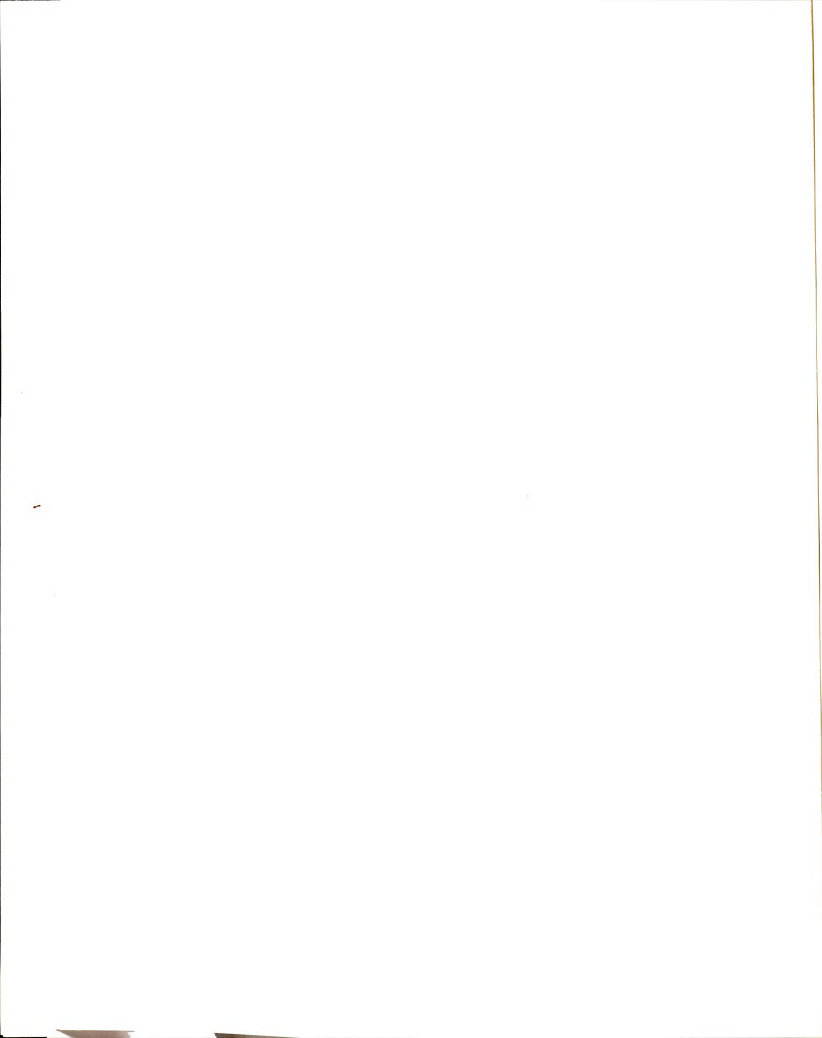
On agriculture, historians have noted that, by the nineteenth century, abundant crops of millet, sorghum, cucumbers, peas, pumpkins, sweet potatoes, maize, yams, bananas, groundnuts, cotton, tobacco, and rice were grown in Nyasaland and that the system of agriculture employed was capable of meeting the subsistence requirements of the cultivators and was not as uncontrolled in its shifting nature as was once assumed. (Phiri, 1985:6-9; Cole-King, 1971). Improvement in agricultural production was, however, limited due to technological constraints, especially agricultural tools and implements. Evidently, the metal-working industries had not kept pace with the technological needs of the agricultural sector.

In animal husbandry, cattle apparently were not an important aspect of the agricultural sector in many parts of the country because of *tsetse* fly infestations. Cattle were found only among the Ngonde and Ngoni in the northern and central parts of Nyasaland. Goats and sheep, on the other hand, were an important aspect of agriculture among the Chewa (Phiri, 1985).

Insofar as the study area is concerned, Langworthy (1975), Linden and Linden (1974), and Chanock (1973) describe the lakeshore area as agriculturally prosperous. Farming was the dominant feature of the social, economic, and political life on the lakeshore, and the people were producers of agricultural surplus.

2.3.3 The *Banja* Householding Economy

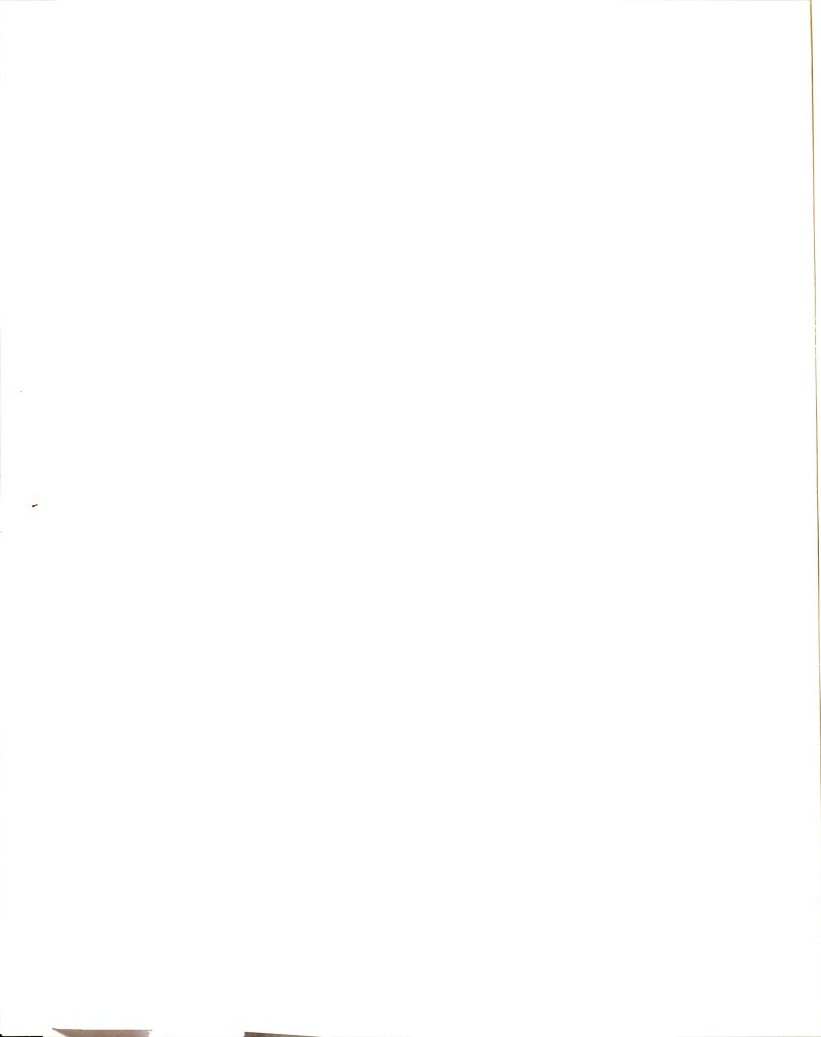
The economy of pre-capitalist Nyasaland was centered around the *banja* or family unit. The *mabanja* families are the building blocks of a



mudzi or village. An important concept among the Chewa and the Yao is the *mbumba* or matrilineage. The *mbumba*, even today, refers to the entire matrilineage or patrilineage of the *banja* family extending to the children, grand-children, and great grand-children. The *nkhoswe* or custodian of the *mbumba* in the matrilineal system is the elder brother to the maternal stem of the *mbumba*. The *nkhoswe* custodian is responsible for the entire *mbumba's* well-being, hence the *mbumba* is part and parcel of his economic unit.

Thus, among the matrilineal Chewa and Yao, the *nkhoswe* custodian is the legitimate owner of children and not their biological or marital father (Gwengwe, 1965:17). It is this point that has been identified as the weak link in the Chewa matrilineal *ukwati* marriage and, therefore, the Chewa *banja* itself. Among the matrilineal groups, the matrilineage *mbumba* is more important, insofar as the *mudzi* village is concerned, than the patrilineage *mbumba*. The *nkhoswe* regards his own off-spring as not his *mbumba* and hence not belonging to his *mudzi* village. Gwengwe indicates that the *nkhoswe* has the responsibility to instruct his *amphake* nephew-princes and *mfumakazi* niece-princesses that all his wealth (that is land, cattle and other livestock, agricultural tools, food grains, and his chiefly *chidzingwiri* and *khoza* brass and ivory bracelets) is for them to inherit. They are not to permit his children to claim any of his wealth because his children have their own *atsibweni* or uncles who are their *ankhoswe* or custodians and from whom they must inherit their wealth.

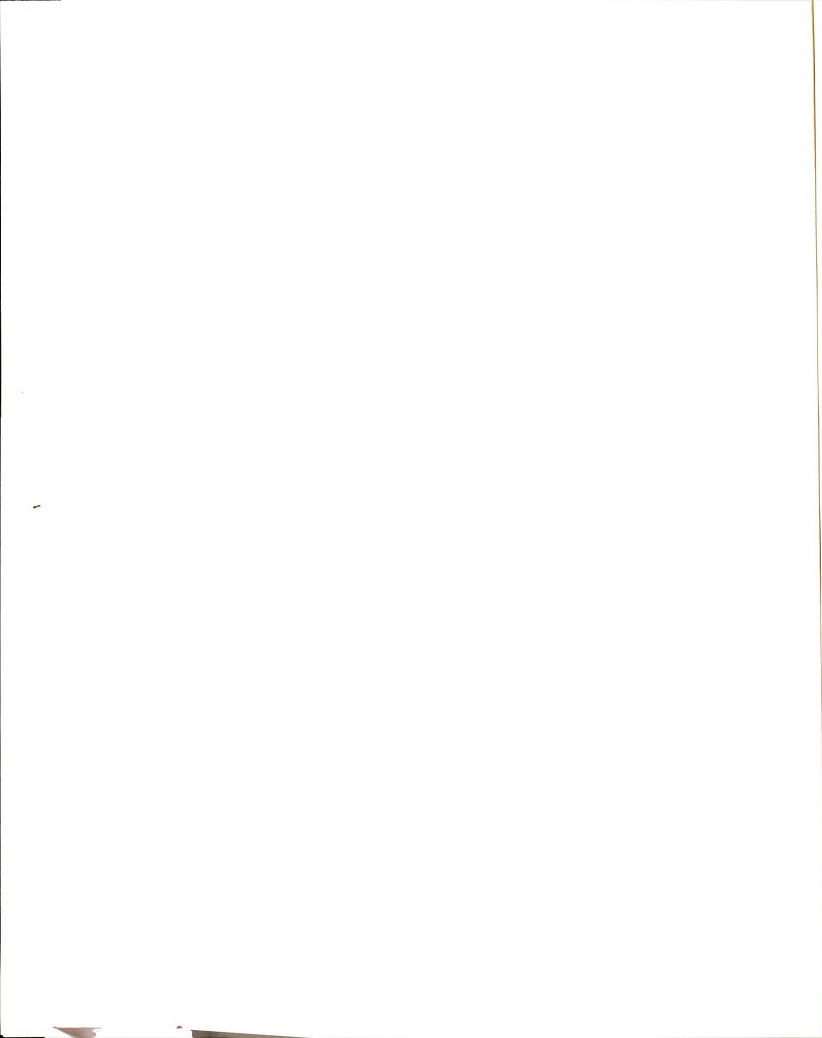
A second feature distinguishing the matrilineal groups from their patrilineal cousins was the practice of the institution of *chikamwini*. Only the matrilineal groups practiced *chikamwini*, although there were variations from place to place. Mandala describes *chikamwini* in the Tchiri Valley in southern Nyasaland as simply a bride-service performed by a *mkamwini* (plural *akamwini*) or prospecting son-in-law for the prospective mother-in-law for an agreed period of time (Mandala,



1990:30-31). In the Central Region, however, *chikamwini*, in addition to the temporary bride-service, was also an institution of obligatory matrilineal residence for an unspecified length of time, often based both on the status of *chiwongo* bridal payment (a system not observed by Mandala among the southern Mang'anja) and on the character and reputation the *mkamwini* son-in-law established during his stay in the village.

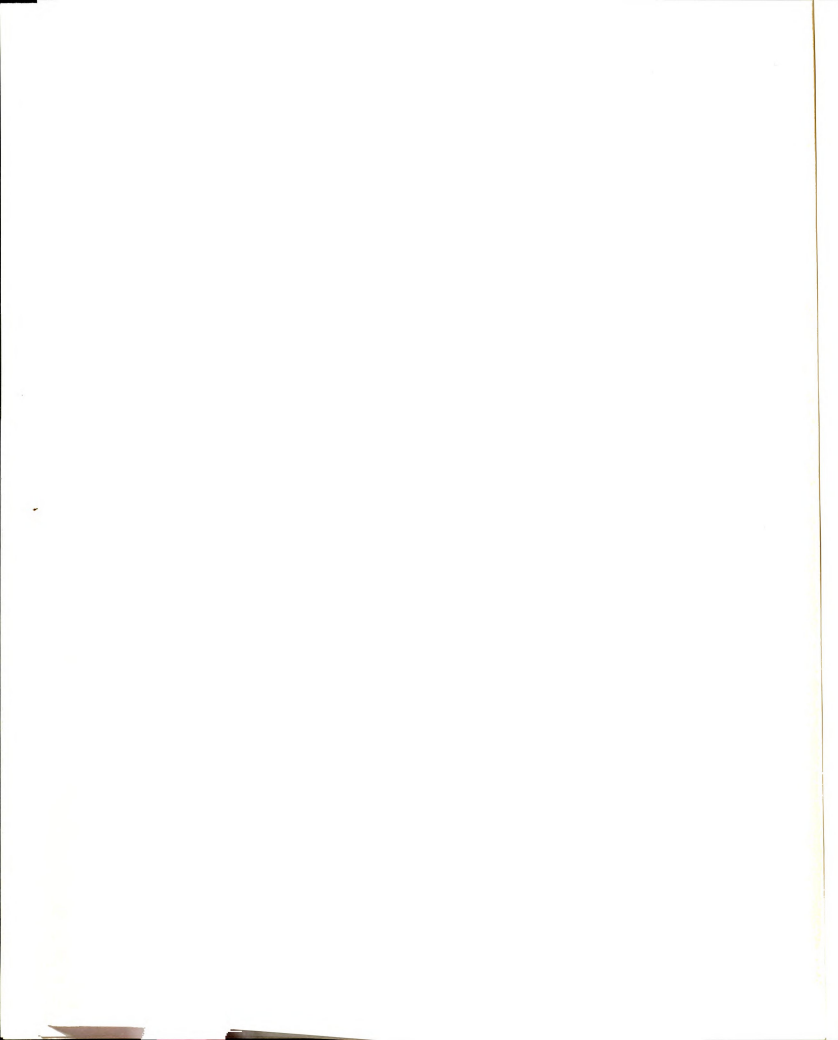
Due to a combination of complex factors, some *akamwini* never obtained permission to take *chitengwa*, the feminine corollary of *chikamwini*. Hence, they remained perpetual *akamwini* and never established permanent residences in their village. The treatment of *mkamwini* son-in-law was highly dependent on the personality and the relationship he cultivated with the in-laws, especially the father and mother. His initial character, reputation, and performance as husband (i.e. virility) mattered. Some *akamwini* son-in-laws were very respected and could occupy positions of leadership as councilors in the villages. In the final analysis, however, because of the *mbumba* system described already, among the Chewa *mkamwini* was a second class citizen in the village. Hence, the Chewa *mbumba* matrilineage in combination with the *chikamwini* institution and the matrilineal *nkhoswe* system functioned to weaken the social, political, and economic structure of the matrilineal *mudzi* village.

First, the system trapped many young men and women in *chikamwini* and *chitengwa* for long periods. Because of the transitory nature of the *chikamwini* and *chitengwa* statuses, it may be argued that the system retarded economic development because many young men and women felt insecure. The system was exploitative of the younger generations because it encouraged inequality based on age (Mandala, 1990). Secondly, the *mbumba* system meant that children who remained in their fathers' villages were also insecure and available for exploitation by their fathers whose wealth the children could not inherit.



Lastly, among the Chewa and Yao, political organization was based on inheritance within the *mbumba* matrilineages. There were local variations in the inheritance patterns with some tending towards unilinear and others cyclical inheritance patterns or a combination of both. Political leaders were selected on this basis, and elections were a local affair involving superior leaders only marginally, depending on the authority associated with the name. In general, superior leaders had no control over their subordinates except in matters of the land. There was decentralized authority and interests and loyalties were centered around lineages and local area members. Because villages were basically composed of *akamwini* and *atengwa*, it may be argued that their alien residential status in the villages reduced their political commitment to these villages. Essentially, this implies that the whole village was based on a weak conflicting structure that could not hold in times of crises.

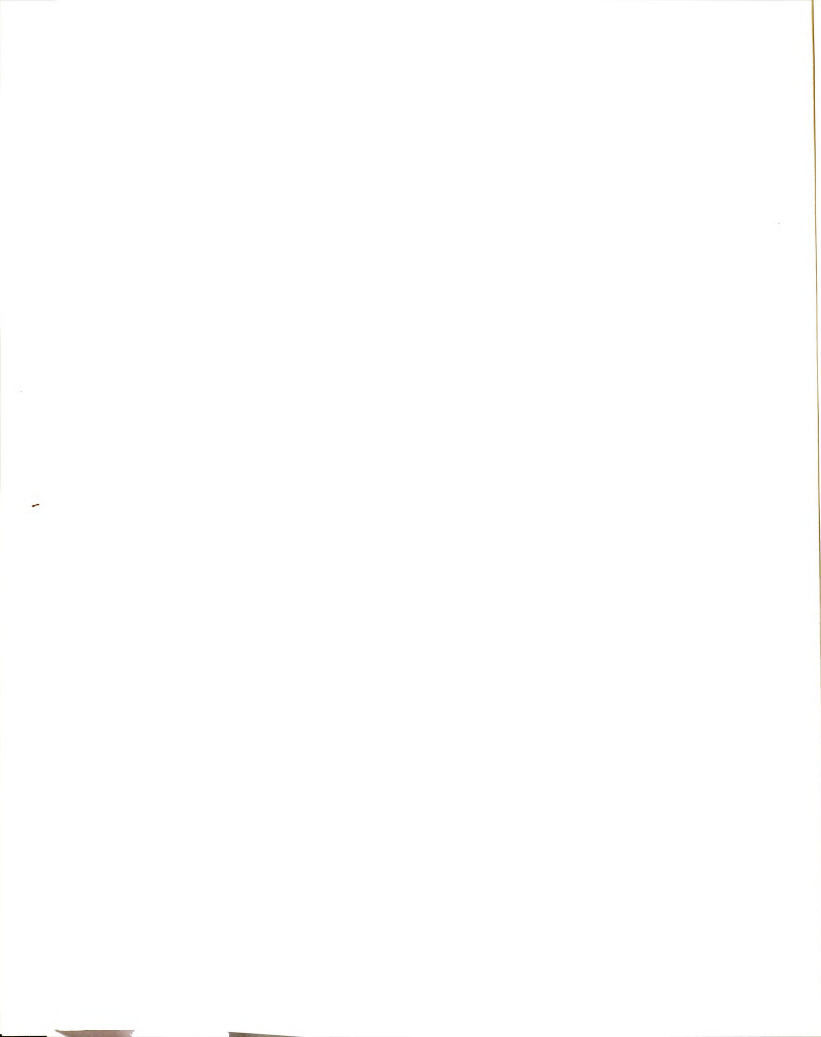
In conclusion, I can say that, although there was a marked process of differentiation in the separation of industry and commerce from agriculture (i.e. the specialization of production), this did not lead to the separation between city and countryside. The dominant mode of production was still the natural economy in which each *mudzi* village, to a great extent, was a self-sustaining unity of manufacture and agriculture, obtaining all the conditions for reproduction and surplus production within itself. Furthermore, in both agriculture and industry, primitive technology still predominated. Thus the plentifulness of land and the dominance of subsistence production meant that industry could not develop into a separate economic sector resident in the city. The country still remained predominantly rural. Private property ownership, on the other hand, was a dominant feature. Although land was owned communally, all other property was owned privately. Communal ownership of land meant that contradictions between property owners and non-property owners were effectively reduced.



Insofar as production relations were concerned, the system was exploitative of the slaves (even though prior to the arrival of slave traders enjoyed considerable security and were treated as members of the families to which they were attached), the young adults, and the *akamwini* and *atengwa*. However, the social changes resulting from such conflict could only be expressed at the *banja* and *mudzi* levels and could therefore have limited impact on the larger society.

The same is true concerning the land ownership system. This, too, tended to be conservative in that it encouraged individuals to be loyal and obedient to the leadership that controlled the land. Individuals, whose usufructuary rights to land depended on membership in a village, were eager to do what was necessary to maintain their membership in that village. At a different level, conflicts over land issues between superior and subordinate, or even between chiefs of the same hierarchical ranking, could lead to disintegration of society. This may explain the multiplication of the Chewa Maravi empire into so many small kingdoms in the late eighteenth century.

Long-distance trade, on the other hand, encouraged accumulation of wealth among the aristocracy. However, it is unlikely that this could have led to class consciousness because of the nature of exchange relations prevailing at the time. Coquery-Vidrovitch identified three spheres of exchange relations: the reciprocal, the distributive, and the market economy exchange relations (Coquery-Vidrovitch, 1976). Reciprocal exchange was limited to relatives and was a result of social obligations. The *mbumba* matrilineage was the most relevant unit of this sphere of exchange. Distributive exchange relations refer to the obligatory payments to a superior authority that members of a society made. Such payments were redistributed by the latter among the community members during festivals, ceremonies, wars, etc. This was most applicable at village or chieftaincy level.



In this way, the distributive sphere of exchange was effective enough to prevent the adverse exploitative potential of the *mbumba* system (at the *banja* family level) and the monopoly of the aristocracy of the long-distance trade from resulting in class consciousness and conflict. Hence, even though there were inequalities in the pre-colonial Nyasaland, the nature of the social formation attenuated its characteristics. State may be defined as an institution of society authorized and equipped to use law, traditions, and other political instruments⁹ to control the members of society. If the state is defined in this way then it is clear that the state had only rudimentally developed in this region.

To summarize, in this chapter, I have described the political set in the study area at the time colonial rule was established and context within which political subjugation was achieved. The study area was the capital of the Maravi empire of the Chewa speaking peoples. At the time of the entry of the European missionaries and the subsequent establishment of colonial rule, the Maravi empire had disintegrated due to various forces and it was in a state of anarchy. Yao chiefs had established themselves among the Chewa in the area. I have also analyzed the salient social, political, and economic features of the society in order to understand the social formations on which the society was based. The area was an important trade center, had developed some industry in salt-making, cloth-making, and iron-working, and was agriculturally prosperous. The *banja* family structures, in particular, the *mbumba*, the *chikamwini*, and the *chitengwa* have been identified as the basis of the Chewa social, political, and economic system. It has been concluded that such a system was conservative and exploitative but, in general, not conducive to social change.

9. These instruments include constitutions, charters, and the whole set of institutions and conventions that have to do with the application of force.

CHAPTER 3

COLONIAL RULE AND IMPERIALISM

3.1 Introduction

Colonialism and imperialism so deeply affected the course of development in Malawi that it is impossible to discuss Malawi's history of development without reference to the colonial past. This is not to suggest that colonialism and imperialism are the only processes responsible for Malawi's impoverishment or that the post-colonial processes are not important. On the contrary, Malawi is so much a residual creation of the colonial forces that its constitution can be regarded as a purely colonial product. That this historical fact contributes a great deal to Malawi's agricultural and economic development, and hence to Malawi's food security issues, cannot be disputed.

Much has been written on the development of wage labor, the settler plantation system in the south, the colonial agricultural policy, the imperial interests in Nyasaland, and the role of merchant and finance capital in the economy (see for example: Mandala, 1990; Vaughan, 1985a; Chanock, 1977; Vail, 1977; Nthenda, 1972; and Kettlewell, 1965).

The discussion in this section focuses only on those issues that seem most relevant to Malawi's impoverishment. These include the question of the development of wage labor and its expropriation and the impact of the South African gold mines on this process; the agricultural policies of the colonial administration, especially with respect to peasant versus settler plantation agriculture and the organization and structuring of peasant production and exchange relations; and the role of the railway companies and the imperial authorities in the exploitation of Nyasaland. These questions are discussed in the context

of their impact on domestic capital accumulation, especially among the peasants. This discussion is interpretive and aims at relating these issues more directly to the current state of affairs in the rural communities in Nyasaland.

3.2 Imperialism and the Pre-Capitalist Society

In Chapter 2 we observed that prior to the establishment of colonial rule, only a rudimentally state had developed in Nyasaland. The major change brought about by colonial rule was the establishment of the state. Furthermore, the imposition of colonial rule marked the end of the *banja* or the pre-capitalist economy.

Colonialism brought capital but the question was how to organize the conditions of exploitation of the African labor and land. This necessitated the breaking of the reproduction cycle of the various systems of the pre-capitalist economy. The colonial administration played a crucial role in this process through various means not the least important were the imposition of taxes, use of forced labor, and the imposition of cash crop production onto the peasantry.¹ Capital shaped colonial policy and played an important part in trade, commoditization, and the proletarianization processes. It is well known that the communities into which the colonial rulers and settlers intruded engaged in trading extensively. However, this does not invalidate the basic fact that these societies were still largely geared towards the production of use-values. The European colonizers and settlers arrived bringing with them the capitalist system, which pushed itself slowly and firmly into the pre-capitalist communities.

It has been observed that 1850-1900 was a period in which the direct and indirect effects of the region's involvement in international

1. Taxes which were to be paid in cash made cash income necessary and forced the peasants to seek wage employment among the white settlers who became responsible for paying the laborers' taxes. Use of forced labor in public works enabled the colonial administration to create the infrastructure which was necessary for the movement of commodities, the establishment of the colonial administration, and the enforcement of law and order.

trading systems became most acutely felt (Vaughan 1987:51). After the Coast Arabs, who were the main slave traders, came the Scots led by Dr. David Livingstone's mission of the mid 1950s. It was during Livingstone's mission that the first ideas for the development of Nyasaland were born. The plan was to develop the country by trading in order to offer a substitute for the slave trade (Dequin, 1969:74). The western lakeshore area of Nyasaland must have been directly affected by this trading because of its easy access. By the 1880s a group of Scottish missionaries, traders, and planters had settled to the south and west of Lake Nyasaland (Vail, 1983b). Hence, the period prior to colonial rule was one in which merchant capital entered Nyasaland in an unprecedented magnitude. The African Lakes Company and some Indian traders opened trading posts all over the country where they kept different kinds of cloth, beads, matches, sugar, salt, soap, etc. (Pachai, 1967).

As we observed in Chapter 2, in the pre-capitalist period, not everything could be produced within the household. Some items had to be obtained from outside the household. However, as White (1987:33) observes of the Magomero Village in Zomba, "into this economy the missionaries burst like a supermarket". The entrance of missionaries, settler planters, and traders meant that more and more factory-produced commodities were to replace locally-manufactured articles as the normal expected way of satisfying certain use-values. For instance, metal water containers (*ndowa*) and saucepans (*safuliya*) replaced gourd calabashes and clay pots; factory-made cotton or synthetic material cloth replaced the locally-made cotton and bark cloth; corrugated iron roofing did not replace the grass thatched roofs but became the desired type of house (Crehan, 1981). Many previously unknown articles became necessities e.g. soap, sugar, and paraffin (kerosene) lamps.

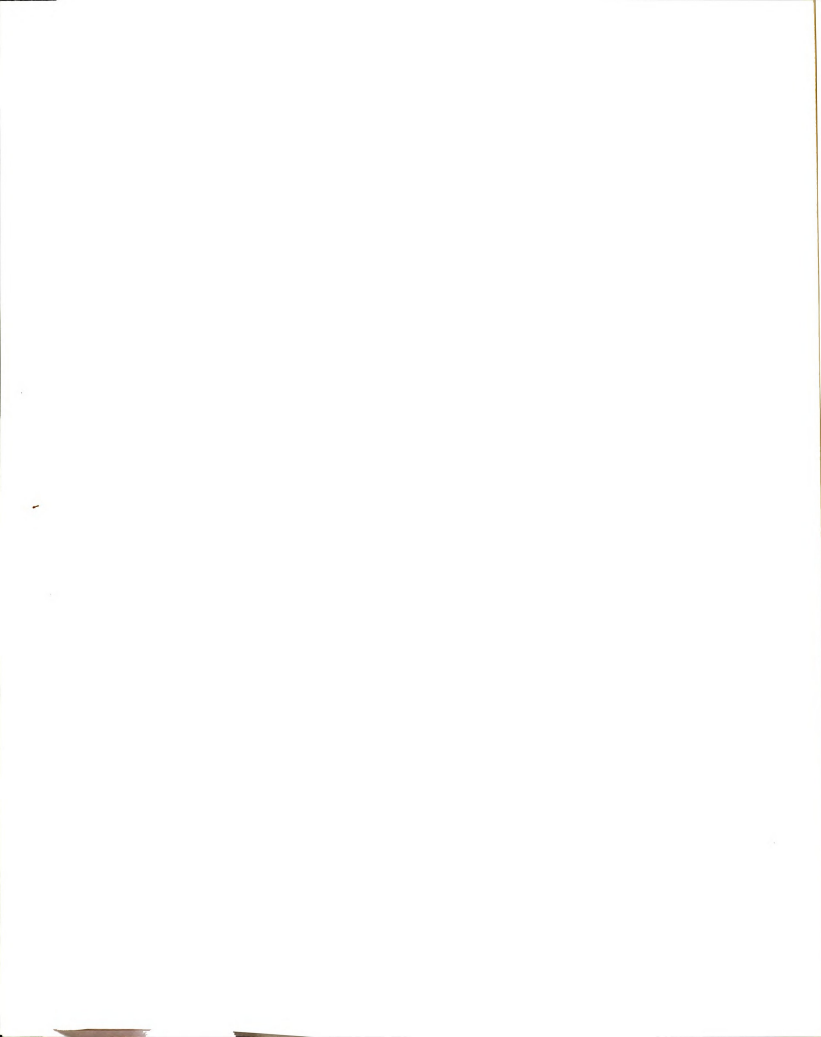
Specialization in production started soon after the establishment of the Scottish traders, missionaries, and settlers. Villagers no

longer relied entirely on their own production for their own reproduction. Many households came to rely on the market for commodities previously supplied by the household, including food supplies. This made the communities vulnerable to market vacillations in supplies and prices of goods and services (Vaughan, 1985b).

Hence, the most important socio-economic changes of colonialism and imperialism in the pre-capitalist forms of production were the change in the material reproduction of the *banja* or pre-capitalist economic formations by making the market supply a substantial portion of materials needed for subsistence. The laws and regulations that were later introduced to implement the scheme (e.g. the tax laws and the institution of *thangata*² labor) resulted in the withdrawal of labor from use-value production in many fields, e.g. agriculture, animal husbandry, hunting, fishing, crafts, and manufacturing. This undermined the material reproduction of the pre-capitalist system forcing the monetization of some of the material elements of reproduction thereby clearing the way for the establishment of commodity production, either through production of cash crops or the exchange of labor power or both.

This process resulted in the incorporation of the *banja* subsistence economies into the capitalist economy. The peasant subsistence producers started to rely on the market for some consumption goods, began production of specialized commodities, and became sellers of their labor power. Whereas previously they met consumption needs by own production and simple exchange of use-values, now a large portion of

2. *Thangata* is a term applied to the labor arrangements instituted on the tea and tobacco estates, especially in the Southern Region of Nyasaland. In the *thangata* system landless peasants or migrants from Portuguese East Africa (Mozambique) were permitted, by plantation owners, to settle on the tea or tobacco plantations. Once settled, the peasants were required to pay rent in the form of work on the landlord's plantation. The amount of work varied from two to six months' labor. The system much like slavery and quite inhumane. The term is derived from the Chimang'anja or Chichewa language and literally means "help". The term was used in this context to highlight the fact that peasants worked on the landlord's farm without pay. Because these peasants were not slaves it was more fitting to consider their free labor as mutual helping or assistance.



their consumption needs were supplied by the market. Beyond that, as a result of cultural erosion, new needs also developed, and much knowledge and many production skills were lost.

3.3 Proletarianization of the Peasantry

In colonial Nyasaland, the rise of wage labor was multidimensional and reflected competition among various domestic and international forces. There were many reasons why wage proletarianization developed. Mandala argues that in the early colonial days, the need to finance the colonial administrative structure forced the governor to introduce taxation as a way of raising revenue and freeing labor from the peasant sector for the capitalist sector (Mandala, 1990:111). But other important ways through which proletarianization was effected were the introduction of discretionary consumption that necessitated cash and the changes introduced in the balance of power between men and women (White, 1987). Where previously, women exercised control over land issues through the *nkhoswe* and *mbumba* institutions, the settlers and colonialists imposed an essentially patrilineal system by recognizing men as the sole controllers of land issues. The introduction of cash crops and wage labor, on the other hand, freed many young men from the obligation of *chikamwini* as money became increasingly substituted for *chikamwini* obligations (Mandala, 1990). At the same time, many women became *atengwa* thereby further alienating them from control of production factors and subordinating them under male authority. In addition, men were the only ones allowed to grow cash crops and engage in wage labor. Hence, a new configuration of the social structure, where men became economically and politically more powerful than the women, was created.

On the domestic scene, the estate/plantation, the peasantry, and the transporters were the major competitors for labor. The planters wanted a cheap and reliable supply of labor for their plantations. The transporting interests wanted labor for portage, the only form of

transportation. The peasants also wanted labor for subsistence as well as cash-crop production. To a limited extent, the colonial administration also wanted labor for public works. On the international scene, the most important interest groups were the South African (SA) and Rhodesian (Zimbabwean and Zambian) mines and European commercial farms.

The domestic estates' labor requirements benefitted from the colonial hut tax and other tax regulations which required that all adult native males demonstrate that they worked for a European for a given period. It is clear that the tax regulations were not sufficient for the estates labor requirements (Kydd and Christiansen, 1982). The real solution to the labor shortage problem was the development of *thangata*, the *visiting-tenant* and *wage-labor* systems.

Thangata developed in the Southern Region where land pressure was and still is highest. It was a quasi-feudal form of land tenancy in which peasants, mostly Lomwes from Portuguese East Africa where conditions were worse than those in Nyasaland, were offered land by an estate landlord. The peasant then agreed to supply labor to the estate in exchange for the use of the plot of land. *Thangata* was very unpopular and was mostly responsible for the 1915 "Chilembwe Uprising." It was abolished when the Malawi Congress Party (MCP) gained control of Parliament in 1961.

In the Central Region, a different kind of tenancy evolved. The system has been dubbed the *visiting-tenant* by academicians but in Lilongwe it is popularly known as "compound" or "kampaundi."³ Developed by A. F. Barron and Roy Wallace in the 1920s, the *visiting-tenancy* is essentially a share-cropping arrangement under which peasant families near the estates were invited by Barron to enter into tobacco

3. The *visiting-tenancy* or *kampaundi* system got its name from its major features. Peasants from villages in the surrounding area of the estate seasonally migrate to the estate and live in temporary huts called "compounds". At the end of the crop season they go back to their villages. Thus the names *visiting-tenant* and *kampaundi*.

production on a plot allocated to them. Barron provided the land, seed, equipment, and other inputs on the condition that the peasant agreed to sell the crop to him at prices determined at his discretion (McCracken, 1983; CSR, 1989). Barron and Wallace made huge profits and are still very rich families in Malawi.

A parallel development to *thangata* and the *visiting-tenancy* was the development of wage-labor proper. Although not the most common labor arrangement, there was a sizable population of landless laborers who were neither engaged in *thangata* nor *visiting-tenancy*. Such laborers worked for wages on the estates or the other sectors of the economy. A great number of them migrated to South Africa and the Rhodesias for wage employment. *Thangata* was never practiced in the Salima area. For the Salima area, the South African mining companies and the Southern Rhodesian plantations had more direct impact than had the Nyasaland plantations.

Official records of Nyasalanders moving to South Africa and the Rhodesias date back to 1898. The migrants were from the western bank of Lake Nyasa (most probably Nkhata Bay, Nkhotakota, Salima, Dedza, and Mangochi). These people preferred to work in the mines and on the European plantations in South Africa and Southern Rhodesia because average wages on the Nyasaland settler plantations were one-tenth of what they were paid in these countries. By 1900, the levels of migration to South Africa and the Rhodesias were sufficient to prompt planters and missionaries to sign a petition in protest (Coleman, 1973:36). The major impetus for the mining companies recruiting in Nyasaland were to secure regular dependable sources of labor completely under the control of the Chamber of Mines recruiting organizations (Jeeves, 1985).

Recruiting from Nyasaland, on an official basis, started in 1902. But by 1906, recruiting was banned due to pressure from the planters. The ban was lifted several years later but re-instated in 1913. The

attempts at curtailment of international labor migration were in effect again in the early 1920s to 1936 and again during the Second World War. Government policy on international labor migration vacillated under the contrary pressures of, on the one hand, estate and missionary influences and, on the other, the benefits to government revenue from migrants' remittances (Kydd and Christiansen, 1982). However, these bans had little impact on the actual migration to labor markets in South Africa, the Rhodesias, and Tanzania. Coleman estimates that by about 1910 approximately 10% of the Nyasaland indigenous male population was working abroad, and from 1921 to 1973, this proportion did not fall below 20%, and may even have been as high as 25% at times (see Table 3.1). In 1935, 120,000 Nyasalanders were working abroad, in Zimbabwe, (75,000), South Africa (20,000), Tanzania (20,000), Zambia (2,000), and other countries (3,000). In 1964, 280,000 persons were working abroad.

These figures reflect a change from a purely subsistence economy to one of subsistence with supplementation from the money economy. It also reflects that the development of the wage sector in Nyasaland had been too slow and unattractive to absorb the increasing numbers of men offering themselves for work. These two factors are probably the most important issues in the rural economy of Nyasaland.

3.4 Peasant Versus Estate Agriculture

As noted already, Dequin (1969) observed that, initially, Nyasaland's development was planned to be based on a trading and not on an agricultural economy. Agricultural development, in its modern sense, began much later and is attributed to John Buchanan. Before analyzing the colonial policies for agricultural development, let us briefly recapitulate the role of agriculture in economic development.

Eicher and Staats (1984) noted that the role of agriculture in a country's development is to provide labor, capital, foreign exchange, and food to a growing industrial sector, and a market for domestically produced industrial goods. For instance, increased productivity in

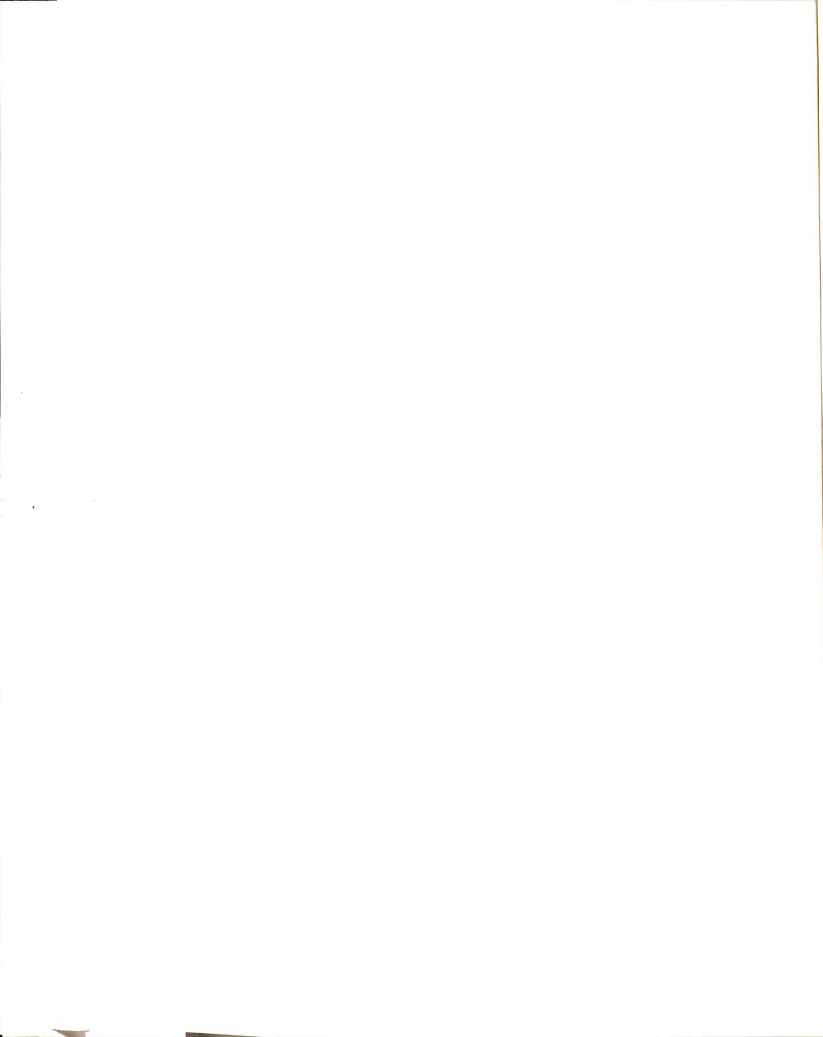
Table 3.1 Estimated Numbers of Malawians Abroad, 1945-1975.

Year	Number ^a	Labor Force ^b	% Labor Force ^b
1903-4	923	n.a.	n.a.
1904-5	1,725	n.a.	n.a.
1905-6	2,531	n.a.	n.a.
1906-7	1,607	n.a.	n.a.
1907-8	730	n.a.	n.a.
1908-9	541	n.a.	n.a.
1909-10	2,394	n.a.	n.a.
1910	3,735	n.a.	n.a.
1915	565	n.a.	n.a.
1920	469	n.a.	n.a.
1925	n.a.	n.a.	n.a.
1935	120,000	n.a.	n.a.
1945	98,559	848,000	11.6
1950	143,000	988,000	14.5
1955	185,000	1,152,000	16.0
1960	220,000	1,344,000	16.4
1965	280,000	1,568,000	17.9
1970	98,200	1,798,000	5.5
1975	15,500	2,054,000	0.8
1980	39,441	2,109,000	1.9
1985	28,299	2,166,000	1.3

- (a) Figures from 1903-1920 and 1970-1975 are from Clarke, D.G. 1977. Foreign African Labour Supply in South Africa, Petermaritzburg: Development Studies Research Group (DSRG), Working Paper No.1, Table 17, and refer to actual numbers of Malawians employed in the the South African Mines and Works only. No records are available of Nyasalanders in the Rhodesias, Tanganyika, and other countries for these years. The data for 1935-1965 are from Coleman, G. 1973. "International Labour Migration From Malawi", Journal of Social Science, Vol. II, pp.31-46, and, except where shown, are estimates of the total number of Malawians abroad. Finally, the figures for 1980-1985 are from National Statistical Office, Malawi Statistical Yearbook, and refer only to Malawians employed in the South African mines under contract with the Employment Bureau of Africa Limited.
- (b) The percentages in this column are based on estimates of the labor from Pryor, Frederic L. 1988. Income Distribution and Economic Development in Malawi: Some Historical Statistics, World Bank Discussion Paper No. 36, Washington, D.C.: The World Bank.

agriculture will lead to surplus. Agricultural surplus is supposed to stimulate non-farm employment due to its effects on the expansion of agriculturally related industries which results from investments of the surpluses.

It should be pointed out that although these are important possible contributions for agricultural development to make to the economic development of a country, there was a strong belief at that time that without the financial power of plantation companies and



import-export traders, the development of an agricultural economy in Nyasaland was not possible (Dequin, 1969). Hence from the very beginning, Nyasaland's agricultural development policy was biased against the peasantry. The settler estates were supposed to be the engine of development for the colony. It may be said that the colonists, much like Marx's analysis of the feudal system, believed that the settler estates were necessary to accumulate capital for industrial development. Unfortunately, to climate, diseases, and pests, high export costs, under-capitalization, and lack of skilled management, settler agriculture was inefficient and generally unproductive, despite the government's favorable treatment.

The local administrators were responsible for policies of taxation that were calculated to encourage the Africans either to seek employment with the European planters or seek their fortunes abroad (Vail, 1973). Wages were kept very low deliberately. The government pursued a strategy which discriminated against Africans and frustrated any attempts by Africans to participate in cash crop production. Mandala (1990:21) argues that one of the reasons the colonial rulers ignored peasant agriculture was that wage labor and the *thangata* tenancy system could be undermined by its vitality and the increased labor requirements of the food economy. As long as the food economy boomed, peasants could pay tax through the sale of their crops and had no need to work for a European. Alienation of the means of reproduction hence came to be seen as the only way of freeing labor.

It was Marx who remarked that where land is very cheap and all men (and presumably women) are free, where every one who pleases can easily obtain a piece of land for themselves, not only is labor very dear, but it is difficulty to obtain it at any price (Marx, 1967:719). Free labor, in Marx's famous double sense, that is free of property and personally free to hire oneself for work, was important for the functioning of the estate sub-sector. Agricultural policies concerning

land, agricultural production, marketing and pricing all were biased against an African-based agricultural economy (Mandala, 1990; Ng'ong'ola, 1986; Vaughan, 1985b; McCracken, 1983; and Vail, 1973). Despite the insistent urging by the missionaries to shift policy toward the development of an African-based agriculture, the colonial administration did all it could for the European planters and neglected the Africans.

During the colonial period there is total disregard, on the part of the imperial authorities, for the development of Nyasaland, a bias in favor of European settler agriculture, and a strategy aimed at systematic exploitation of the local resources by foreign capital when it was clear that settler farmers were unreliable. The instruments used to achieve this goal of foreign capital exploitation of the peasants were the legislations governing the production and marketing of economic crops, both cash and food crops for the domestic as well as the international market. These regulations included registration of growers; the determination and control of producer prices; registration and licencing of intermediate buyers (middlemen), exporters, and trading premises; and the establishment of commodity boards with exclusive or primary responsibilities for various crop production and marketing processes including the supply of inputs to farmers, and collection, transportation, storage, processing, and resale of the commodity (Ng'ong'ola, 1986). Thus, ceilings were imposed on producer prices of African-grown crops; crop trading was restricted; monopoly marketing boards were established for African-grown crops; and peasant growers were prohibited from growing certain crops e.g. burley tobacco and required to register to grow other crops, e.g. dark-fired tobacco. Furthermore, Africans were prohibited from establishing plantations.

These regulations, apart from the fact that they were means for organizing the peasants for easy exploitation, also stimulated and promoted differentiation of the peasantry into a yeoman cash crop-

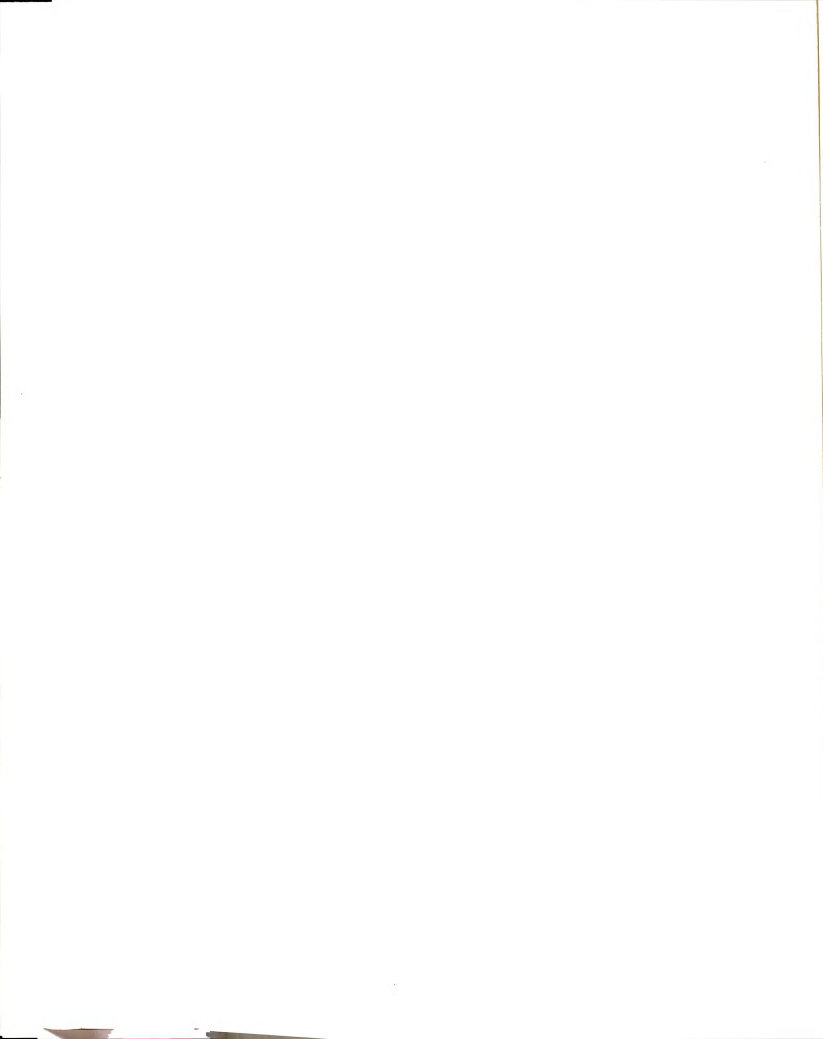
producing group and subsistence peasants. All government expenditure on agriculture, which amounted only to 2.7% of the total government budget in 1945 and 8.7% in 1960, went to benefit the small group of yeomen. Even then, the agricultural productivity resulting from this investment did not all accrue to the yeoman farmer. A large portion of it was retained by the boards and was drawn in salaries by the all European managers of the boards.

The *thangata* system, the wage policy, and state control of peasant agriculture led to the failure of the development of a fully capitalist agricultural economy. Yet the majority of the peasants sold part of what they grew/produced because they did not produce all they consumed and hence needed cash to supplement their consumption. The result of this in the colonial period was that agriculture developed neither as a viable, dynamic, capitalist farming sector nor as an extensive peasant farming community such as may have taken place in other British colonies such as Ghana or Uganda (Mkandawire, 1983).

3.5 Capital and Imperialist Development Policy

As already alluded to, Nyasaland's general development policy, in particular agricultural development policy, was shaped by external forces and was not in the interest of Nyasaland. From the establishment of the colonial government in 1891, several forces affected Nyasaland's development policy and the course of development itself.

To this day Malawi is still a victim of an uneconomic railway system linked to the Indian Ocean port of Beira. In 1898, the imperial authorities prevented the Portuguese from supporting Nyasaland to develop a more direct, shorter, and economical railway link to the Indian Ocean through Quelimane because of Britain's selfish political and economic interests. Barely seven years after the establishment of the British Central African Protectorate, Britain and Germany concluded a secret agreement to partition Portuguese East Africa (Mozambique) between themselves should the opportunity arise, with the territory

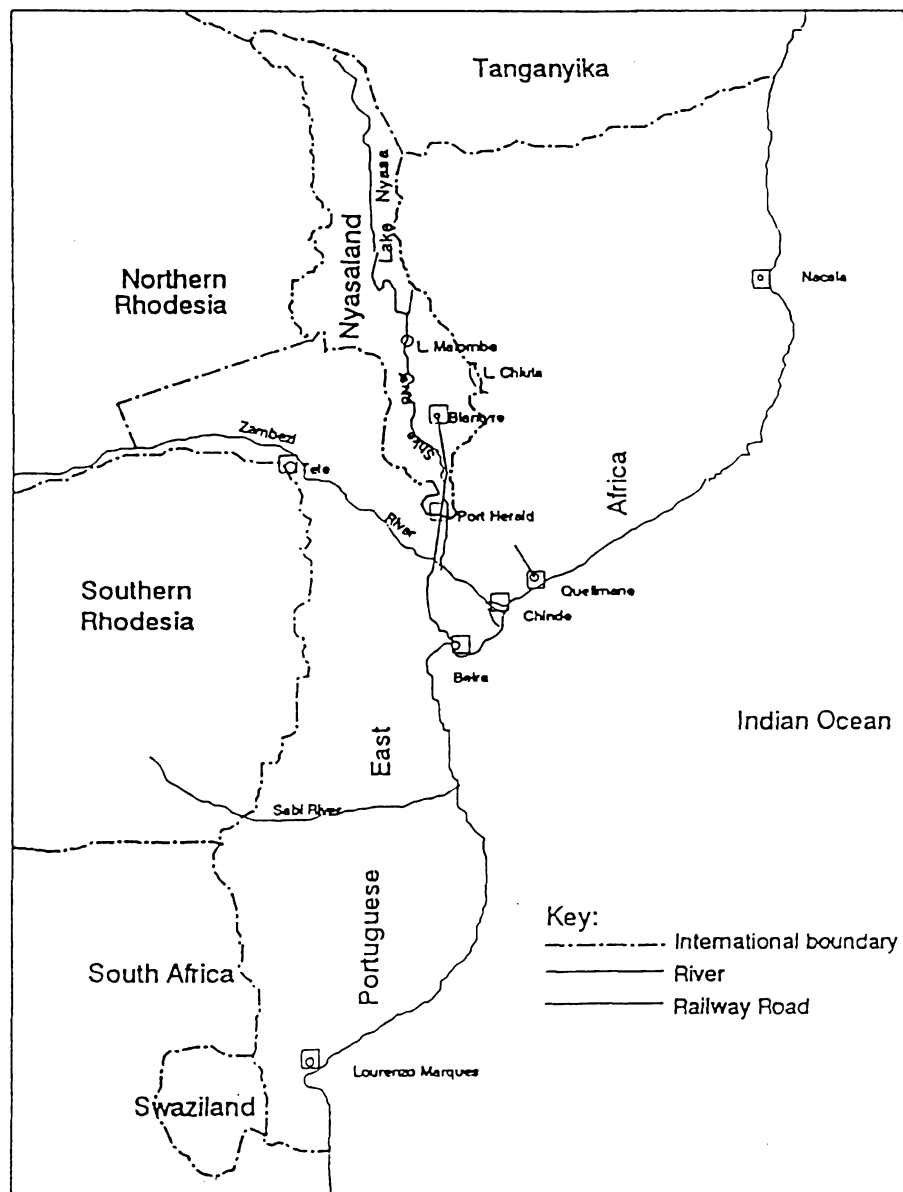


north of the Zambezi River (including Quelimane) falling under German control and that south of the river scheduled to pass into British hands (Vail, 1973). This secret agreement affected the course of Nyasaland's development policy in two important ways. British interests were bent on strengthening their grip on southern Portuguese East Africa, the territory that Cecil Rhodes attempted to purchase from the Portuguese in 1892, and which, in 1898, the Germans had agreed to pass to them when the opportunity arose.

European financial interests in southern Portuguese East Africa manipulated the British imperial authorities to support development policies that were clearly detrimental to Nyasaland. Britain did not support economic interests in Nyasaland, and embraced a policy of exploitation, thereby preventing capital accumulation of any substance from taking place in Nyasaland.

When agreement was reached to link the Shire Highland Railway with the railway of the *Campanhia dos Caminhos de fer Zambesia* at Quelimane, the Colonial Office in London, having in mind the secret agreement with Germany regarding the future of the territory in which Quelimane was located, and naturally wishing the railway to be located in territory under British financial control, was persuaded to favor the British owned Mozambique Company's proposal for a Central African Railway (CAR). This alternative proposal was a much longer and more expensive route to Beira. For similar reasons, the Colonial Office insisted that the proposed CAR route from Port Herald (Nsanje) to the Zambezi run on the west bank of the Shire River (the proposed British sphere) and obliged Nyasaland to guarantee the interest and debentures of the CAR, a railway which was in Portuguese East African territory (see Figure 3.1).

In the interest of strengthening the British position in Portuguese East Africa south of the Zambezi River, under the imagined threat of American capital, and fearing to arouse Portugal's suspicion, the British Imperial authorities decided to plunder Nyasaland further by



Hand-drawn map. Not drawn to scale.

Shire Highlands Railway (1900) from Blantyre to Port Herald
 Central Africa Railway (1913) from Port Herald to the Zambezi River
 Trans-Zambezi Railway (1922) from the Zambezi River to Beira

Figure 3.1 The Development of the Railway Road System in Nyasaland.

compelling her to guarantee the interest at 6% of 1,200,000 Sterling Pounds worth of debentures for 25 years for the Trans-Zambezi Railway (TZR). Again, this railway lay wholly outside Nyasaland. Nyasaland devoted half of all revenue, annually over 275,000 Sterling Pounds, to the pay the TZR guarantee (Vail, 1973).

Finally, Britain's high level of unemployment, the ruling Party's fear of losing elections in 1929, and the possibility that the construction of a bridge over the Zambezi River could boost orders for British construction materials, thereby creating jobs and reducing the rate of unemployment, resulted in the British government's agreement to support the building of a bridge over the Zambezi. Nyasaland was given a loan to cover the debentures necessary to build the bridge and asked to be liable for payment of the loan as well as the interest on the debentures.

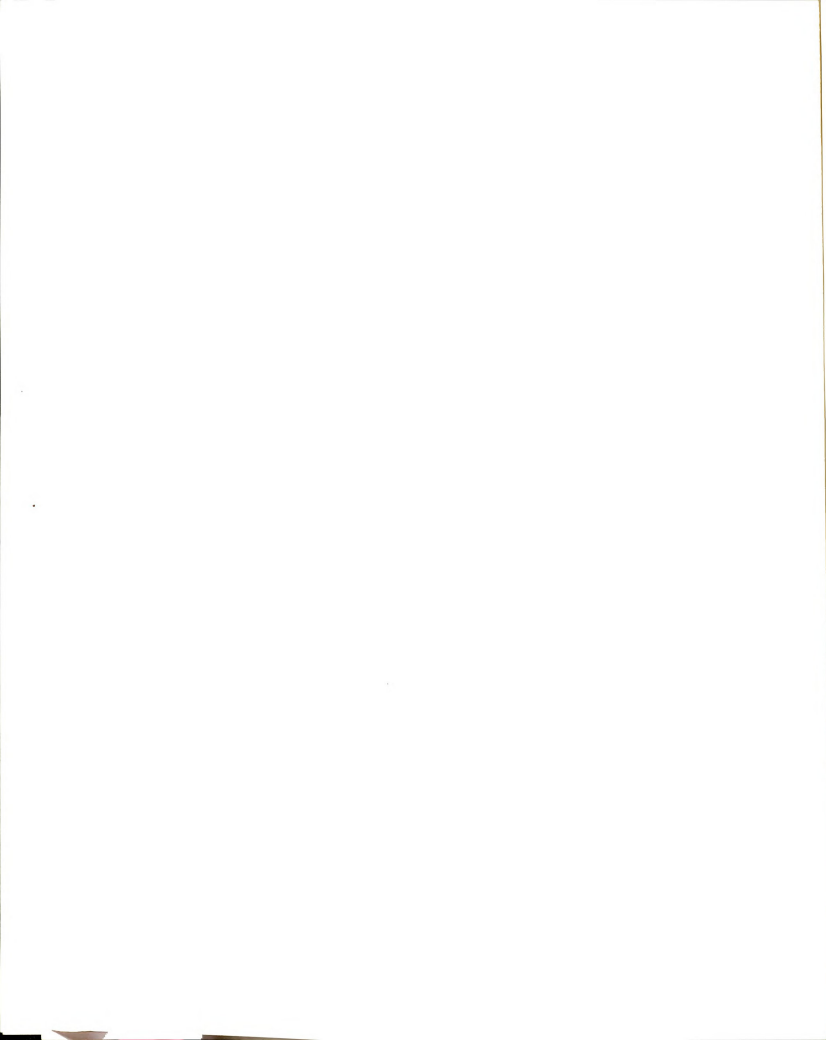
Clearly, Britain was not interested in the development of Nyasaland. She opposed the development of the textile industry on grounds that such industries would compete with the Lancashire cotton industrialists. She opposed the promotion of maize production because it was feared it would compete with Kenyan or Rhodesian European grown maize. The Imperial Office required Nyasaland to sell the peasant grown agricultural produce at substantially reduced prices, even when South Africa and other buyers offered much higher prices for the produce. Tariffs intended to protect local infant industries were opposed for fear that such actions would lead to losses by British manufacturers of their traditional markets (Nthenda, 1972:97). There was also fear that such protected industries would use up the raw materials needed by Britain's own industries and out compete the empire's industries by producing cheaply.

With a very thin tax base from a stagnating and inefficient settler estate sub-sector and neglected peasant agriculture, underdeveloped infrastructure, no known exploitable minerals, and no

industry, the colonial administration in Nyasaland was handicapped. The effects of the imperial policies with regard to the railway system, development of local industry, and agriculture were staggering. The combination of the neglect and exploitative imperial policies and practices; the colonial administration's bias against African-based agriculture; the alienation of land (in the south in particular); the inhumane labor tenancies of *thangata* and the *visiting-tenant* system; the discriminatory production and marketing legislation; and the burden of the railway debt and high freight charges were the basis for the observed agricultural systems in Malawi today. The decisions and actions of the Imperial Office, which were carried out with no consultation with or support from the local colonial administrative authorities, let alone the Nyasaland peoples, resulted in 1) entrapping Nyasaland as the role of protector of the railway companies, 2) frustrating and stagnating the development of successful and profitable European settler agriculture, 3) hamstringing of the local colonial administrators from making decisions based on economic good sense or humanitarian grounds, 4) preventing the accumulation of capital for the development of the local resources, 5) creating local government support for the infamous labor export policy and neglect of African-based agriculture, and 6) impoverishing the country, leaving little hope to recover even long after independence. The failure of the estate sector and the neglect of the African-based agriculture meant that agriculture could not act as a catalyst for industrial development because it could not provide labor, capital, foreign exchange, or food to an industrial sector or a market for domestically produced industrial goods.

3.6 Conclusion

In conclusion, I must address some important substantive as well as theoretical issues concerning the effects of colonialism and imperialism on the colony's social and economic structure. The first issue concerns differentiation of the peasantry. The classical rural



differentiation process suggests that the peasantry typically becomes internally differentiated into three classes: 1) the rich peasants, 2) the middle peasants, and 3) the poor peasants (Raikes, 1982:350-380). The rich peasants (or *kulaks*) later become capitalist farmers, accumulating sufficiently to invest in production through the purchase of superior means of production and/or labor power.

The middle peasants are more or less self-sufficient household producers. They use mainly their own labor, are little involved in selling their labor power, and have sufficient resources to provide for their own livelihood requirements (Harriss, 1982:24). These peasants are also in specific relations with other strata of the peasantry and with other forms of production. These forms determine the relative stability or instability of the middle peasants (Bernstein, 1979:170). The poor peasants are those who own too little land to reproduce themselves, and are thus forced to sell their labor.

Did there develop a *kulak* class of farmers in colonial Nyasaland? The Master Farmer Scheme represented one attempt by the colonial authorities to develop a *kulak* class of farmers. This scheme had limited success, and only a small number of peasants graduated into this class. Even so, this group of farmers cannot truly qualify as *kulaks* because their production and exchange relations were completely under state control. Thus, they were objects of state exploitation rather than capitalists per se. Hence, there was negligible *kulak* capital accumulation. The majority of the peasants were in the middle strata, but many increasingly fell into the category of the poorer peasants.

All three groups reveal household production systems whose logic, to use Bernstein's terminology, is determined by the needs of simple reproduction and not the logic of accumulation (Bernstein, 1979)). Hence commodities are produced and exchanged on the market to obtain money, not to be invested, but rather to buy reproductive commodities. I believe this results from the natural principles of the well-known

Maslow's "Needs Hierarchy." It does not necessarily mean that the peasant is predetermined to be a non-economic person. Once the needs of simple reproduction are satisfied, peasants' logic is determined by the same economic rules of accumulation.

This brings me to the second issue of how capitalism appropriated peasant surplus? The peculiar situation of the peasant provides the opportunity for capital to increasingly subordinate peasant production requirements, thereby increasingly separating the peasantry from control of the means of production and proletarianizing them even while they continue to own the land on which they cultivate. This is the ultimate capture of the peasantry. It has already been documented that regulations governing peasant production created unfavorable terms of trade for the peasants, and prices paid by peasants for the means of production (e.g. fertilizer, insecticides, and equipment) were much higher compared to the prices they received for their agricultural produce. This was a method of expropriation of surplus used by the owners of capital in colonial Nyasaland. The colonial state controlled participation in business by private Nyasalanders and generally favored foreign capital.

The failure of capital to re-invest in the domestic economy, to develop the social and economic infrastructure, to educate and develop the human resources, and to induce and encourage the development of forward and backward economic linkages demonstrates that, contrary to common sense thinking that peasants are resistant to capital penetration, state capitalism systematically denies the peasant gainful participation in the capitalist economy. This is the essence of exploitation: with minimum input you obtain maximum benefits. While controlling capital and letting the peasants toil, sweat, and feel that they are in control of their little pieces of land, those in control are the owners of capital. The only condition that would indicate that the

peasant was not captured by capital would be if we frequently found peasants that reproduced themselves through household production alone without involvement in the capitalist economy.

In this chapter the colonial legacy that was inherited by a politically independent Malawi in 1964 was reviewed. We highlighted how the the decisions and actions of the Imperial Office, which were carried out without consultation with or support from the local colonial administrative authorities, let alone the Nyasaland people, harmed the economic as well as social development of colonial Nyasaland.

Due to imperial forces, Nyasaland was impoverished with little hope of recovering even long after the end of colonial rule. The major failures of the colonial efforts in development were: 1) the encouragement of the development of wage labor in a stagnant economy, unable to attract and absorb the increasing numbers of men and women offering themselves for work, 2) the neglect and deliberate frustration of peasant agriculture, 3) the investment in irrelevant and economically unviable projects, especially the railway companies, which led to the neglect of the development of local infrastructure and dried up funds for development of local human resources, 4) the discouragement of the development of local industry, and 5) the exploitative practices which were detrimental to capital accumulation.

Colonialism commoditized peasant production thereby making it possible for capital to subordinate the peasantry and expropriate peasant surplus production, mainly through unfavorable terms of trade and taxation. We also noted that even though attempts were made to cultivate a *kulak* class of farmers, the overriding motivation was to use this class to underwrite government expenditure and fulfill the colonial mission of providing raw materials for the British Empire's industries. Hence no *kulak* accumulation was anticipated, and none occurred. Britain also discouraged the development of private business by Nyasalanders.

Colonialism brought about the establishment of estate agriculture geared to the production of cash crops for export. But Nyasaland ranked low in the colonial priorities for development, and thus she became a "colonial slum" (Ghai and Radwan, 1983). At independence, Nyasaland found herself with a legacy that left her poor, under-developed, with a backward social and economic infrastructure, and dependent on agricultural exports and remittances from migrant workers from South Africa, Zimbabwe, and Zambia.

In this chapter, I have outlined how the colonial administration helped further the changes in the traditional societies for the establishment of a market economy. Colonialism created a social structure where men became economically and politically more powerful than the women. The administration introduced legislations (tax, crops, marketing, and pricing legislations) and supported labor arrangements (*thangata*) that encouraged proletarianization, discouraged the development of the peasant sub-sector, and exploited the peasants. The imperial tendencies of the colonial administration, especially with regard to the railway companies, impoverished Nyasaland. This chapter has been included to emphasize the point that colonialism has had a great deal to do with the course of development in Malawi and to provide a background for the analysis of the post-independence agricultural development strategies, in particular, the strategies in the Salima Agricultural Development Division.

CHAPTER 4

POST-INDEPENDENCE DEVELOPMENT STRATEGIES

4.1 Introduction

Nyasaland became an independent country of Malawi on July 6, 1964. She was under British rule for 73 years, 1891-1964. On July 6, 1966, Malawi became a republic. The agricultural policies followed by the post-independence leadership were largely determined by the colonial legacy and the country's limited resource endowment. The need to stimulate smallholder production as the backbone of the economy was recognized even during the colonial rule. Plans were in place for the construction of a road system and creation of marketing structures, agricultural extension services, and veterinary services (dip tanks for cattle), etc. A problem has always been financial.

As mentioned in Chapter 3, the construction of the railway line to Beira, including the bridge over the Zambezi River, formed important obstacles to the development of infrastructure for the expansion of smallholder agriculture (Vail, 1973 and 1983b). World War I debts also prevented Nyasaland from developing her agricultural infrastructure. The Depression, the railway debts, and the high freight rates for agricultural exports dashed all hopes for improvement in smallholder agriculture. It was the failure to develop smallholder agricultural infrastructure that led to the failure of the smallholder sub-sector and to further emphasis on European settler estate or plantation agriculture. According to Thomas (1975), the leadership of Malawi inherited a populist philosophy of agricultural development that was designed to improve the performance of the average farmer.

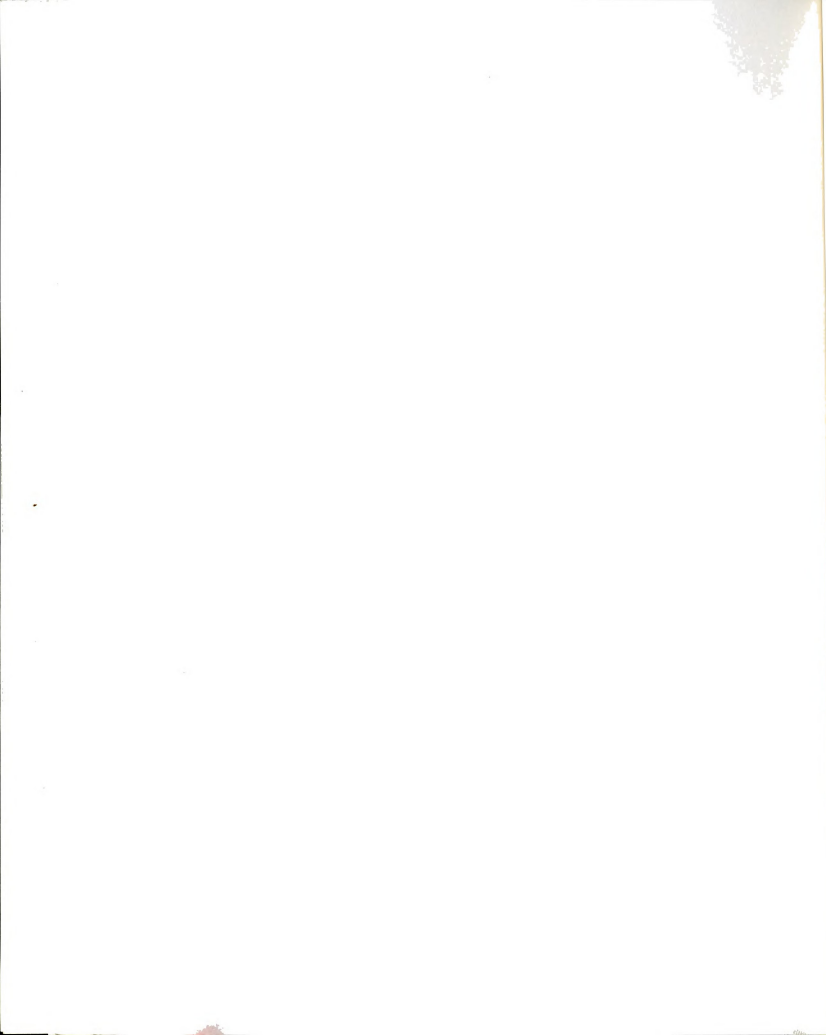
I argue that it was during the independence period that agricultural policy took on a populist philosophy. In 1961, three years prior to independence, the Malawi Congress Party, with Dr H. Kamuzu

Banda as Chairman, won majority seats in the Nyasaland parliament. In August 1961, Dr. Banda became the first African Minister for Natural Resources and Local Government. As noted in the previous chapter, Africans were prohibited from owning and operating private estates (plantations). In his capacity as Minister of Natural Resources, Dr. Banda introduced the Africans on the Private Estates Ordinance and abolished the evil, cruel, and pernicious system of *thangata*. He also abolished the Land Use and Protection Ordinance thereby doing away with *malimidwe* (proper farming) whose coercive clauses (e.g. permission of the use of force for soil conservation works) allowed government agricultural officers to assault, apprehend, and jail innocent smallholders for not following soil conservation regulations (Short, 1974:154).

Malawi gained self-government status from Britain in 1963 and in February Dr. Banda officially became the first Prime Minister of Nyasaland (Crosby, 1980:13-14). It was during the three year period prior to independence that Nyasaland's agricultural philosophy clearly reflected a populist philosophy, as contained in the 1962-65 Development Plan:

...Government cannot begin to be complacent about the growth of production in agriculture. Production in agriculture must increase at a phenomenal rate, so that reliance on it as a source of income has meaningful content not only for the few, but also the masses. It will do so only if there is a sustained and effective campaign to encourage and assist the masses to take up cash crop farming. This is what government sets to do in the present plan. (Nyasaland Government, 1962:46).

Hence, the leadership of independent Malawi started with a populist philosophy of agricultural development. But at the same time, it was felt that smallholder agriculture was unproductive because it remained traditional, subsistence-oriented, and unchanged for many generations. Thus the need for the campaign to encourage adoption of new technologies and the production of cash crops.



4.2 The Importance of Agriculture in Malawi's Development

Agriculture was the dominant feature of Nyasaland's economy. As may be seen from Table 4.1, three years prior to independence, 54% of the GDP came from agriculture, 46% of which was from the smallholder sub-sector. Another important feature of the economy was that for over a century it had slowly but steadily become monetarized. Fifty-two percent of the GDP was monetary output. Even within agriculture, where the smallholders predominated, one-fourth of the output was monetary of which the smallholders' output accounted for 73%. As a matter of fact, smallholder production accounted for 57% of all agricultural exports.

It is not surprising that, at the attainment of self-government, the political leadership attempted to look responsive to smallholder agricultural demands. The leaders of independent Malawi were aware of the short-comings of the colonial legacy and were eager to make changes to correct the imbalances and distortions in the social, political, and economic lives of the free Malawian. As Dr. Banda later commented:

From the practical point of view the country was poor. But it was not essentially poor, not potentially. Essentially and potentially the country was rich, but it was neglected. So, I set out to correct this, to develop the country. (Rafael, 1980:93).

In order to implement this plan, the Government undertook to 1) complete Phase II of Bunda College of Agriculture to enable training to be given to agricultural extension field staff to diploma level; 2) improve Colby School of Agriculture to provide adequate in-service training to junior extension staff; and 3) improve the facilities at the existing farm and fishermen's institutes and complete the construction of two new ones to provide direct training to farmers and fishermen. This strategy was based on the belief that technology was available but that the problem was how to persuade the smallholders to adopt it. Thus in the 1965-69 Development Plan, greater emphasis was given to agricultural training and extension services, thus:

The essential expansion of agricultural production must depend upon the united efforts of the rural population. Their efforts, to be fully successful, must be informed and thus it is essential to extend and improve the dissemination of agricultural information and knowledge among farmers both through the efforts of the better trained extension staff and by direct training at farm institutes (Malawi Government, 1964).

Table 4.1 Composition of Gross Domestic Product in 1961-1964.

Sector	Total GDP at Factor Cost (Million Kwacha)			
	1961	1962	1963	1964
	103.94	109.04	109.44	110.40
	Sectoral Distribution of GDP (Percentages)			
Agriculture	54%	55%	54%	54%
Smallholder Subsistence	40	39	40	41
Smallholder Monetary	6	8	7	7
Commercial Estates	8	7	7	7
Industry ^a	10	10	9	8
Transport & Communication	5	5	5	4
Commerce (distribution)	16	15	16	16
Public Administration ^b	7	8	8	9
Subsistence Services	7	7	7	8
Total	99%	100%	99%	99%

a/ Manufacturing, mining, electricity, water, building, and construction.

b/ Public administration, defense, education, health, and public services.

Source: Dequin, H. 1969. Agricultural Development in Malawi.

The Government adopted a broad-based strategy of rural development and the agricultural extension services were oriented to the majority of the smallholders. The approach included projects aimed at direct promotion of production increases in "the more important crops", i.e

tea, cotton, sugar, tobacco, and coffee by smallholder farmers.¹

In addition, an important development project was the road communications project, an aspect of agricultural development which the colonial Government failed to implement. Over the four year period, 1965 to 1969, the Malawi Government proposed to spend K89.274 million in development projects. Approximately 26% of this amount was slated for road construction and/or improvement, including crop extraction roads.

4.3 Smallholder Versus Estate Agriculture

In the colonial era, the Depression effects on smallholder production prompted the colonial rulers to lose faith in the smallholders. Similarly, in the post-independence period, after the very poor crop seasons of 1967 and 1968, and the realization that the meager resources of the Government were being stretched out too thinly, and having very little impact, the populist policy was reversed to the "progressive farmer" policy. Agricultural development spending increased and international donors, notably the World Bank, became involved in "integrated rural developemnt projects" (IDRP). This marked the birth of what, in the Ministry of Agriculture, was commonly known as the "Major Projects" concept. These were dubbed "Major Projects" to reflect the fact that they represented a large-scale project approach to rural transformation. They were integrated rural development projects because they comprised several componemnts. For example, the Salima Agricultural Development Division's (SLADD) rural development projects' (RDPs') objectives included crop production improvement through credit, extension, land settlement, and better marketing, with particular emphasis on rice, groundnuts, maize, and cotton; encouragement of livestock production together with distribution of work oxen;

1. A limited number of smallholder farmers were permitted to grow the high value crops such as burley and flue-cured tobacco, tea, sugar, and coffee under smallholder crop authorities e.g. the Kasungu Flue-cured Tobacco Authority (KFCTA) for flue-cured tobacco. However, such farmers did have access to the international markets like the estates did. They were basically tenants.

investments in rural infrastructure (feeder roads, buildings, and boreholes); and improvement of health services. The "Major Projects" concept represented a form of capital intensive IRDP projects established in selected areas of high potential, and funded almost wholly from international loans (Kydd and Hewitt, 1986b; Chilibvumbo, 1978; Lele, 1975). These IRDP projects were to be located in areas of highest agricultural potential, and they represented a major change in the approach to smallholder agricultural development. Much like the colonial administrators' concept of "Master Farmers Scheme", the new approach was focused on "progressive farmers" or "Achikumbe". Extension efforts were to be concentrated on those progressive farmers who had in the past responded well to extension advice and had adopted modern farming practices (Mkandawire, 1983).

Four IRDP projects were established: one in the Northern Region (the Karonga-Chitipa Rural Development Project), two in the Central Region (the Lilongwe Land Development Programme and the Central Region Lakeshore Development Project), and one in the Southern Region (the Shire Valley Agricultural Development Project). A general characteristic of these projects was that a high proportion of the funds went to infrastructural development, including luxury offices and accommodations, and to salaries of the top bureaucracy (Chilibvumbo, 1978). The "Major Projects" policy of "progressive farmers", was paralleled by emphasis on and active promotion of estate agriculture. Politicians and senior civil servants were encouraged to open estates to contribute to the country's development.

Both the emphasis on progressive farmers and encouragement of the estates reflected a loss of faith on the government's part in the smallholders as the engine of development much like the colonial rulers never believed that the smallholder could be trusted with the colony's development. It is this lack of faith in the smallholders' abilities to drive the development process that resulted in the change in policy

rather than the failure of the smallholders to deliver the goods as some analysts have suggested (Thomas, 1975). The lack of faith in the smallholder sub-sector is deep-rooted and stems from the modernization models' assumptions.

I have already stated that the dismal performance of the smallholder sector owed its origin to colonial neglect and exploitation. Yet both the colonial and the post-colonial regimes blamed the poor performance on the *laggard* smallholder who was unwilling to change. The "modernization model", discussed in Chapter 1, holds that smallholder agriculture is unproductive because it remains traditional, subsistence-oriented, and unchanged for many generations, and, therefore inferior to plantation agriculture. Smallholder agricultural production is associated with inefficiency while capitalist plantation agriculture is taken to be automatically efficient. In the post-independence times, this belief was held very strongly: the estate (plantation) sub-sector was promoted, and a number of regulations were established to protect the estates and make them profitable.

In 1978, almost 10 years after the inception of the "Major Projects" concept, it became apparent that the gap between the rich and the poor was widening. Further, Malawi's resources and stage of development did not permit the implementation, on a national scale, of the integrated and high capital intensive rural development projects such as the ones envisaged in the "Major Projects" concept. These projects had mixed results but generally failed to improve production among the smallholders. According to Kydd and Hewitt (1986b), both donor and independent sources agree that in Malawi's first ten years', 1968-1978, experience with IRDPs, they had a negligible production impact in relation to their cost. There were no discernible differences between comparable IRDP and non-IRDP areas. Gulhati summarized IRDPs' results as follows:

The heavy implicit taxation of cash crops by ADMARC undermined incentives. In addition, smallholders had limited access to short-term credit, which was inexorably tied to government-approved technical packages, and hardly any access to medium-term credit. Access to both types of credit was particularly difficult for smallholders with relatively small holdings.

The technical packages for maize proved to be unsatisfactory and were adopted only by the relatively large smallholders. Less than 5 percent of the farmers cultivated hybrid or improved maize, compared to 60% in Kenya (Lele 1988). Technical packages for export crops were better, but ADMARC pricing policies undermined incentives for growing these crops. Productivity in the smallholder sector rose by only 0.05 percent per annum.

The crop licensing system prohibited the growing of burley tobacco (a very high value crop) on customary, smallholder land. There was no justification for this prohibition (World Bank 1987a, p.5). Yields were somewhat higher on estates, but only because more inputs were used. The domestic resource cost of earning a unit of foreign exchange through smallholder burley tobacco was lower than through estates.

The rural development project areas faced acute land pressure. Land available to the smallholder sector actually declined by 26 percent during 1964-85, while estates expanded their areas of operation more than ten-fold. The Land Bill passed in 1965 allowed transfer if village chiefs certified that land was "surplus". Although arable land per capita averaged only .63 ha in 1977, there were large variations around the average. Land transferred to estates was idle; whereas, it could have been used to resettle smallholders from parts of the country facing intense land pressure.

The rural development projects proved to be very expensive and very demanding of scarce management resources. By 1978, government had abandoned this approach and replaced it with the National Rural Development Program, which aimed at broad geographical coverage (Gulhati, 1989:23-24).

In 1978, the government of Malawi with encouragement from the World Bank conceived a new strategy for smallholder development. A multi-donor program known as the "National Rural Development Programme" (NRDP), was launched (Kydd and Hewitt, 1986a). Its objective was to extend the coverage of the IRDPs to the rest of the country by undertaking projects which were smaller and less intensive than those of the 1960s. In the NRDP concept, the country was divided into eight Agricultural Development Divisions (ADDs), each with a headquarters (see Figure 2.1). Each ADD would consist of five ecologically uniform Rural Development Projects (RDPs). A project comprised a set of objectives to be achieved in one or more development areas e.g. increased crop or

animal production in an ecologically uniform geographical area using a specific package of recommendations and a specific approach. In turn each RDP would have 180 Extension Planning Areas (EPAs). An EPA was expected to comprise no more than 20,000 households. The EPA was the implementation center of the NRDP concept. I am not aware of any evaluation of the performance of the IRDPs under the NRDP. However, the mid-term evaluation of the SLADD showed that the agricultural and income objectives of the project were not achieved. Over the project period, agricultural production declined, and living standard deteriorated, and the family income decreased (Fischer et al., 1988).

In the following sections, I argue that the changes in the structure of the agricultural sector, from the populist philosophy to the "Major Projects" idea and, finally, to the NRDP approach, reflect the philosophy of Malawi's development strategy which lay much emphasis on commercialization of agriculture. This emphasis led to the promotion of estate agriculture at the expense of the smallholder sub-sector. Within the smallholder sub-sector, relatively large farmers were also favored. It is argued that the failure of the IRDPs was a direct consequence of the modernization approach to agricultural development in Malawi.

Such a philosophy was reflected in the agricultural extension approach and credit services, the changes in land tenure structure, the evolution of wage employment and migration, the wage policy in the formal sector, the marketing and pricing policy, and the dwindling importance of the smallholder sub-sector's share and rate of growth of the GDP and agricultural exports.

4.3.1 The Changing Structure of Land Tenure

In Nyasaland, during the colonial era, except for the Southern Region, large-scale land alienation did not occur. Hence, land shortages in the Central Region and, in particular, the Northern Region, were virtually unknown and hundreds of thousands of hectares of fertile

land retained trust land status. At the attainment of Independence in 1964, the proportion of land under leasehold and/or freehold estates was minimal.

In the early days of Independence, leasehold tenure remained stable and, in fact, experienced a decline in 1967. This reflected the changes in philosophy and policy regarding agricultural development that accompanied the dawn of independence.² But since 1967 a salient feature in the tenurial arrangements has been the steady decline in customary land and the substantial increases in the public and leasehold tenures (Table 4.2). In the 25-year period, 1964-1989, customary land

Table 4.2 Changes in Land Tenure Arrangements (Thousands of Hectares).

Year	Public Land		Customary Land		Freehold Land		Leasehold Land		Total
	Hectares	%	Hectares	%	Hectares	%	Hectares	%	Hectares
1964	1,107.7	11.6	8,183.3	85.9	167.8	1.8	72.0	0.8	9,529.7
1967	1,206.8	12.7	8,100.9	85.0	153.4	1.6	68.6	0.7	9,529.7
1970	1,525.6	16.0	7,777.7	81.6	147.5	1.6	79.0	0.8	9,529.7
1973	1,592.1	16.7	7,700.6	80.8	107.6	1.1	129.5	1.4	9,529.7
1976	1,681.3	17.6	7,602.3	79.8	85.3	0.9	236.8	2.5	9,529.7
1979	1,674.1	17.6	7,547.7	79.2	52.1	0.6	255.8	2.7	9,529.7
1982	1,659.5	17.6	7,358.3	77.9	51.8	0.6	379.1	4.0	9,448.7
1985	1,641.6	17.4	7,271.2	77.0	52.0	0.6	484.1	5.1	9,448.7
1988	1,641.0	17.4	7,066.2	74.8	52.0	0.6	688.9	7.3	9,448.7
1989	1,641.6	17.4	6,995.7	74.0	52.0	0.6	759.4	8.0	9,448.2

Source: Mkandawire et al., 1990.

2. Government was eager to demonstrate to the populace that significant changes were being made to redress the imbalances that were created in the colonial era. In the Southern Region, where population pressures were greatest, leasehold land was appropriated and redistributed for the resettlement of landless families. Some Europeans spontaneously abandoned land and left the country for fear that the nationalist Government would nationalize all private property under a socialist economy, a trend that was common in newly independent states in Africa.

shrank by approximately 1,187,600 hectares or 14.5%. Approximately 534,900 hectares were lost to public land and the rest to leasehold tenure. The amount of land in the public sector peaked at 1,681,300 hectares by 1976 but declined thereafter and stabilized at 1,641,600 hectares in 1985. However, following the policy changes of the late 1960s, discussed earlier, rapid increases in the leasehold tenure begun to emerge. In terms of numbers and land area, until 1970 there were only 229 registered leasehold estates operating 79,000 hectares. But between 1970 and 1979, a total of 876 new estates had been registered, operating a total of 176,800 hectares. By 1989, a total of 14,355 leasehold estates had been registered taking up 759,400 hectares or approximately 8% of the total land area (see Table 4.3).

Table 4.3 Leasehold Estate Expansion in Malawi, 1970-1989.

Year	# of New Estates	Area Leased (ha.)	Mean Size (ha.)	Cummulative # of Estates	Cummulative Area (ha.)	Cummulative Mean (ha.)
Till 1970	229.0	79.0	345.0	229.0	79.0	345.0
1970-79	876.0	176.8	202.0	1,105.0	255.8	192.0
1980	216.0	17.3	80.0	1,321.0	273.1	207.0
1981	765.0	46.9	61.0	2,086.0	320.0	153.0
1982	1,714.0	65.6	38.0	3,800.0	386.0	102.0
1983	1,006.0	49.2	49.0	4,806.0	435.2	91.0
1984	486.0	24.9	51.0	5,292.0	460.1	87.0
1985	363.0	31.4	87.0	5,655.0	491.5	87.0
1986	592.0	26.4	45.0	6,247.0	517.9	83.0
1987	1,867.0	70.2	38.0	8,114.0	588.1	72.0
1988	3,839.0	107.7	28.0	11,953.0	595.8	58.0
1989	2,402.0	63.6	26.0	14,355.0	759.4	53.0

Source: Mkandawire et al., 1990.

According to Mkandawire et. al (1990), during the 1980s the vast majority of newly established estates were relatively small in size. Over the period 1987-89, approximately 40% of the added leasehold area

was accounted for by smallholder farmers registering their customary land (see Table 4.3). These became what they call "graduated smallholders" or, if bigger, "small entrepreneurial estates". Until 1970, the mean size of the registered estates was 345 ha.; by 1980 the mean size had dropped to 80 ha., and in 1989 it was only 26 ha. per estate (Table 4.3). Mkandawire et. al (1990) suggested that the distinction into "smallholder" and "estate" sub-sectors in Malawi's agricultural sector is breaking down. It was believed that current changes in development policy, implemented under conditions of the World Bank's "Structural Adjustment Lending" (also known as "Structural Adjustment Loans") program (SAL), would further help the breakdown of the dualism in the agricultural sector.

Because of the crucial importance of the World Bank's "Structural Adjustment Loans" conditionality on Malawi's development policy, in particular, the smallholder agricultural policy, it is worthwhile to address the SAL program in some detail. Before addressing the SAL program, let us note the main characteristics differentiating the smallholder from the estate sub-sector. The main factors differentiating the two sub-sectors are:

- 1) The land tenure: smallholders are traditionally customary land cultivators whereas the estate sub-sector farms leasehold land.
- 2) The crops grown: high value crops (i.e. burley and flue-cured tobaccos, sugar, and tea) are reserved exclusively for the estate sub-sector while maize, groundnuts, and cotton are traditionally for the smallholder sub-sector.
- 3) Technology: in general, the use of tractors, implements, fertilizer, and chemicals is for the estate sub-sector. Hand hoe cultivation is for the smallholder sector with limited use of fertilizer and chemicals.

- 4) Access to markets and inputs: in the smallholder sub-sector input and output markets, including credit supply, are handled by the Government while the estate sub-sector trades and gets credit and other input supplies through private channels.

The most important of these differentials are the types of crops grown and the differential access to input and output markets. Although, holding size is not considered an important distinguishing factor between the smallholder and the estate sub-sector, land distribution data in the two sub-sectors reveals interesting features. I noted earlier that, at the national level, the land under leasehold estates is only 8% of the total land area. Of the total of 14,532

Table 4.4 Breakdown of Estates by Size Category.

Category (ha)	# of Estates	# as percentage of total	Total Area (000 ha)	Area as % of Total
0 - <10	232	1.6	1.67	0.2
10 - <20	6,650	45.8	93.82	11.6
20 - <30	3,044	20.9	72.99	8.9
30 - <50	2,223	15.3	83.65	10.3
50 - <100	1,275	8.8	86.94	10.6
100 - <200	559	3.8	75.69	9.2
200 - <500	359	2.5	109.22	13.3
500 - <1000	130	0.9	88.16	10.8
1000 & Up	60	0.4	207.25	25.3
Total	14,532	100.0	819.39	100.0

Source: Mkandawire et al., 1990.

estates, only 232 fell (1.6%) into the 0 < 10 ha. category; totalling 1,670 ha., and averaging about 7 ha. per estate (see Table 4.4). This represented 0.2% of the total land area under estate agriculture. In fact, from Mkandawire et. al (1990) data, 6,650, or approximately 46%, of the estates occupied a mere 11.8% of the leasehold estate land, while

a handful of people owning a mere 0.4% (or 60) of the 14,532 estates claimed 207,250 ha., approximately 25% of the total leasehold estate land with a mean holding size of 3,454 ha. Compared to the smallholder sub-sector, in 1984/85 it was estimated that there were 1,300,000 smallholders, cultivating a total of 1,488,000 ha., and averaging 1.14 ha. Eighty-six percent of these smallholders had holdings less than two hectares. Over 55% had holdings of 1 ha. or less (Malawi Government, 1989a:22). Such smallholders did not have enough land and relied on wage employment for income and on the market for food.

This situation has been described as dualism-within-dualism (Lele, 1990:4). Because of this double bifurcation, even within the smallholder sub-sector, a large number of farmers are systematically excluded from extension and credit facilities. Hence, while it is true that a substantial number of smallholders are converting their lands into leasehold tenure, as long as a large number of people are legally prevented from growing certain types of crops, and denied direct access to international markets, the dualistic structure of Malawi's agriculture remains intact.

The main aim of the conditionality attached to the World Bank's SAL program was to pressure the Malawi Government to address a number of macro-economic policy issues responsible for the balance-of-payments problems experienced in the mid-1970s. The SAL program is:

a series of discrete lending operations... to provide quick disbursing balance-of-payments support to a country which is prepared both to formulate and reach agreement with the (World) Bank on a structural adjustment program (Kydd and Hewitt, 1986a).

The SALs are loans or credits of foreign exchange to finance essential imports, with policy conditions attached. In 1980, the government of Malawi requested the World Bank to consider her for the SALs. The need for this facility arose from the balance-of-payments problems that Malawi had been experiencing since the mid-1970s.

The World Bank's critique³ of Malawi's economic policies and institutions identified six underlying structural weaknesses: the slow growth of smallholder produced exports; the narrowness of the export base; Malawi's heavy dependence on fuelwood for energy, supplemented by imported oil products; financial deterioration in the parastatal enterprises; increasing budget deficits; and the system of administered prices and wages. It appears that the World Bank, while aware of the differences between the estate and the smallholder sub-sectors, did not see the dual structure in the agriculture sector as directly relevant to smallholder problems.

Consequently, in the first SAL agreement (valued at US\$45 million and approved in 1981), the Bank recommended policy reforms on three fronts: namely, price incentives, resource management, and institutional improvements, without directly addressing the structure of the agricultural sector. On prices, the Bank required the Malawi government to agree to review its price control system (a proposal which was also contained in the 1978 NRDP loan agreement but was not adequately adhered to by the Malawi government), raise tariffs on various parastatals, and periodically review the exchange rate and the domestic interest rates. On resource management, the Bank required the Malawi government to reduce its domestic borrowing and improve the management of public debt. On institutional improvements, the government of Malawi agreed to carry out management studies of Press Holdings and Malawi Development Corporation companies.

In these SALs conditions, no issue was raised concerning the Agricultural Development and Marketing Corporation's (ADMARC's) monopoly over the marketing of smallholder produce. Hence, the initial steps

3. Kydd and Hewitt (1986b) also identified similar problems leading to the balance-of-payments crisis. The first was the encouragement of the estate sub-sector which made extensive use of imported inputs. The second problem was the aid-assisted build-up in the size of government service. And the third problem was the expansion of borrowing for prestige projects.

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taken by the Government involved a simple clarification of the legal status of private trade in smallholder produce. The clarification pointed out that legally ADMARC had a monopsony only in cotton and tobacco. All other crops were open to private trade; a fact that was never made clear to the public (Christiansen and Southworth, 1988). ADMARC still enjoyed monopsony in cotton and tobacco marketing. However, ADMARC's taxation of peasant farmers ended with the second SAL. By the late 1980s ADMARC paid export parity prices for smallholder grown tobacco (see Figure 4.1).

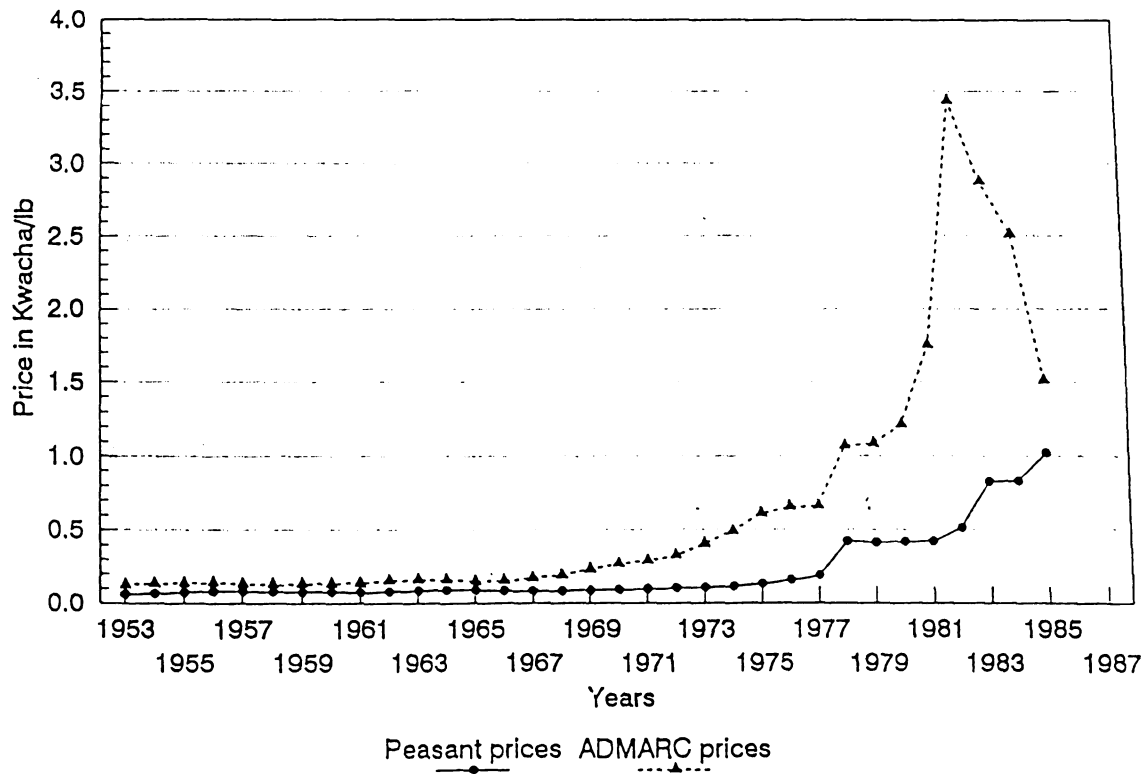
Furthermore, the SAL conditions did not require the Malawi government to change its policy of separating smallholders from the estate farmers, disallowing smallholders to grow certain high-value export crops, and providing different input and output access channels to the two sub-sectors. The SAL conditions only asked the government to soften price control in order to revive the production of traditional smallholder export crops: cotton, groundnuts, and tobacco.

Apparently, the Malawi government attached more weight to domestic food security concerns than to increased foreign exchange earnings from smallholder export crops. Over the two-year period of the first SAL, the government reluctantly raised smallholder export crop prices to levels considered inadequate by the Bank: 25%, 6%, and 12% for cotton, groundnuts and tobacco, respectively. The staple maize, on the other hand, received a total of 95% price raise during the same period (Kydd and Hewitt, 1986a). As a result, smallholders abandoned the production of the traditional export crops in favor of the more lucrative crop of maize. The volume of smallholder export crops fell to their lowest level.⁴

4. For a detailed discussion of the effect of structural adjustment lending conditions on the smallholder crop production see Christiansen and Stackhouse, 1989; Christiansen Southworth, 1988; and Kydd and Hewitt, 1986a.

The second SAL, valued at US\$45 million, was approved in 1983. At this time the Bank was more willing to use its considerable leverage to make Malawi comply with the SALs conditions. Thus, in the second SAL, the government raised smallholder export crop prices by 29-50%. But, at the same time, because of its preoccupation with domestic food security, the government also raised the producer price for maize by 4.5%. Again, the marketed volume of maize rose by 360% by 1985 (from 82,200 in 1980 to 296,300 metric tons in 1985). From then onwards, estimation of the marketed volume of smallholder maize became difficult due to the participation of private traders in maize marketing which started in 1986. The marketed volume of smallholder export crops also increased after the second SAL conditions were applied. Respective marketed volumes of cotton, groundnuts and tobacco increased from 13,400, 10,200, and 9,300 metric tons in 1983 to 21,400, 44,800, and 18,100 metric tons in 1988.

An important observation to be made about the price incentive approach to smallholder production revival is that the increases in marketed volumes resulting from producer price hikes came almost exclusively from expanded area and not intensification of production. Except for cotton, whose productivity improved from 403 to 704 kilograms per hectare, productivity in the other three crops virtually stagnated. Clearly, the World Bank's structural adjustment conditions did not adequately address the needs of the smallholder sub-sector. Christiansen and Southworth (1988) identified six non-price factors that need to be addressed to improve smallholder performance in Malawi: 1) a shortage of arable land, 2) a lack of credit with which to purchase inputs, 3) inappropriate technical packages, 4) timely and reliable supplies of inputs, 5) guaranteed markets for output, and 6) weaknesses in the transport infrastructure. These non-price problems are still important obstacles to smallholder agricultural production. For instance, in the the supplementary study of the EEC funded Mid-Term



Source: Kydd, Jonathan and Robert Christiansen. 1982.

Figure 4.1 Price Received by ADMARC at Auction Versus Price Paid to Peasant Growers for Dark-Fired Tobacco.

Evaluation of the Salima ADD, Mkandawire (1988) reported that, overall, 32% of the smallholder households did not even know the Extension Worker for their area. Among the male-headed households, 29% did not know their Extension Worker whereas, among the female-headed households, 37% did not know the Extension Worker in the area. Sixty-two percent of the sample households did not use fertilizer or insecticides in their gardens (54% male-headed and 77% female-headed households). In SLADD's fourth phase, officials admitted that credit in Salima had affected a maximum of only 18% of all the farming households (see Table 7.8 in Chapter 7). In 1986/87 season, a mere 9% of the households participated in the credit program (Fischer et al., 1988).

While I was conducting the survey in SLADD, word circulated of a new land policy in the pipeline that would establish 25 ha. as the new minimum size of land holding to qualify to convert land into leasehold tenure. The World Bank's 1980 study of the fiscal performance of the public sector made the proposal to introduce a land tax that would change the current ground rent of K1 per hectare per year to an annual land tax of K20 per hectare for all leasehold land. These legislations, if implemented, mean that many of the "graduated smallholders" and the "small entrepreneurial estates" will be excluded from the privileges enjoyed by the estate status. Such laws will also make it much more difficult for any of the 1,300,000 smallholders to graduate into the estate status. Thus, Malawi's agricultural sector remains characterized by a distinct bimodal structure with a dualism-within-dualism, and strategies need to be worked out to specially address the production problems of the smallholder sub-sector. In response to these criticisms, in 1988 the World Bank established new objectives and strategies for the the SALs in agriculture. These objectives and strategies are summarized in Table 4.5. The problem with these strategies is that by not identifying high value crops for the smallholder farmers, they fail to address one of the main disadvantages

in the smallholder sub-sector. Secondly, by insisting on alternative marketing arrangements for cotton and tobacco, the strategies fail to respond to the majority of farmers who grow neither cotton nor tobacco. Furthermore, the insistence on the removal of fertilizer subsidies is counter-productive to the objective of increasing coverage of smallholder seasonal credit. Finally, the SAL conditionality includes the removal of subsidies on education, health, housing, water, transport, etc. The Malawi government has been reluctant to implement this condition, and rightly so, because this condition will have detrimental effects on many households.

Table 4.5 Objectives and Strategies for Structural Adjustment in Agriculture.

Sector	Objectives and Targets	Strategies and measures
a. Productivity	Increase smallholder productivity through adoption of high-yielding maize varieties	Complete a master plan for research, including development of appropriate maize based technologies
		Increase coverage of smallholder seasonal credit through consolidation of various smallholder funds, and review credit uptake and administrative expenditure
		Train and set up adaptive research teams and improve extension methodology
	Reorient land policy to increase productivity	Carry out study on land tenure system
		Grant no new estate Land Leases in areas of high land pressure, except in case of experimental estates
b. Food Security	Ensure adequate food supply	Make food security monitoring fully operational
		Complete study on food security strategy, including the optimal size and operation of strategic grain reserve and ADMARC's role in market stabilization
c. Price incentives and marketing	Maintain producer incentives and encourage efficient production	Continue to set producer prices based on market factors, in consultation with the World Bank and the Fund
	Increase participation of private sector in marketing of smallholder crop	Reach understanding with World Bank and Fund on program for removal of fertilizer subsidy in subsequent years
		Carry out studies on alternative marketing arrangements for tobacco and cotton

Source: Fischer et al., 1988.

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While everything was done to make the estate sub-sector profitable, the treatment of the smallholder was inadequate. In the following sections, I argue that, in an attempt to make the estate sub-sector profitable, the government adopted a wage and produce marketing and pricing policy specifically configured to favor the development of the estate sub-sector.

4.3.2 Wage Labor Evolution and Migration

As noted in Chapter 3, in colonial Malawi the rise of wage labor was multidimensional, and reflected competition among various domestic and international forces. In transport, I noted that head portage was the main means of long-distance hauling of goods in the colony. This required much human labor power. Now, long-distance transportation of goods is carried out by motorized vehicles by rail and road. Transportation has, thus, ceased to be a major competitor for labor. However, high costs of transportation remain a major problem but in different ways.

Because of land pressure, the competition for labor between the estate and the smallholder sub-sector has been reversed. Now, among the smallholders, there is a combination of land shortage with labor shortage, especially at peak periods in the agricultural cycle. Hence, smallholders neglect their holdings because these are too small and compete for wage and *ganyu* casual labor and find wage employment or *ganyu* casual labor on the estates. The estate sub-sector has emerged as an important employer of wage and *ganyu* casual labor in recent times.

In contrast to the colonial era where *thangata* and *visiting-tenancy* were the dominant forms of wage labor, in the post-independence period *thangata* is extinct. On the other hand, the *visiting-tenancy* flourished in the 1970s, characterized by the same need for low cost labor as was the earlier estate production (Kydd and Christiansen, 1982). In addition there has been an increase in the number of men and

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Table 4.6

Year	Gender	
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women seeking direct wage employment. This indicates that smallholder agriculture is becoming unreliable as the sole means of earning a living. I have already shown that land is continually being expropriated from the customary smallholder sub-sector to the estate sub-sector and many people are becoming landless or semi-landless, indicating that they are unemployed or under-employed.

In a study of households in Zomba district in the Southern Region of Malawi, Peters (1989) found higher mean landholdings among the male-headed households, and a higher allocation of male labor to off-farm income activities in households with smaller amounts of land. The time allocation data showed that absences were much higher for men in the poorer, land short households. The general conclusion was that where farms were very small, men emigrated in order to find other more viable sources of livelihood (Vaughan, 1987; and Kydd and Christiansen, 1982).

The data in Table 4.6 shows the population of smallholders principally relying on cultivation of their own land. As can be observed from the Table 4.6, more people have to supplement their production with off-farm employment. In 1966, of the total of 2,007,500 smallholders, only 113,000 (or 3.6%) supplemented their production with

Table 4.6 Individuals Working on Their Own Holdings, 1966 and 1977.

Year	Gender	Employment Group					
		Full Year		Part Year		Full & Part Year	
		(Thousands)	%	(Thousands)	%	(Thousands)	%
1966	Females	1,178.5	62.2	9.3	8.2	1,187.7	59.2
	Males	716.0	37.8	103.7	91.8	819.7	40.8
	Both Males & Females	1,894.5	100.0	113.0	100.0	2,007.5	100.0
1977	Females	1,423.6	69.3	84.6	24.1	1,508.2	62.7
	Males	631.6	30.7	266.2	75.9	897.8	37.3
	Both Males & Females	2,055.2	100.0	350.8	100.0	2,406.0	100.0

Source: Adopted from Kydd and Christiansen, 1982.

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part-time employment. Women comprised only 8.2% of these part-time smallholders. By 1977, the number of part-time smallholders had increased to 350,800, representing a 310% increase in the proportion of part-time smallholders. The proportion of female part-time farmers was 24.1%, almost three times the 1966 level (see Table 4.6).

In general, the wage and salaried employment increased substantially. In 1966, 24% and 1.7% of the economically active males and females, respectively, were in some kind of wage employment. In 1977, the percentages increased to 50.1% for the males and to 5.5% for the females. The percent annual growth rates for the males was 9.8% and 17.8% for the females which averaged 10.8% for both sexes (see Table 4.6).

In Malawi, customary land is land that is held, used, or occupied under customary law and is the only land accessible to smallholder settlement. Under the Customary (Land Development) Act of 1967, customary land may be converted to private land under leasehold or freehold title with the consent of the chiefs. Many of the estates established in the 1970s and 1980s were established by converting customary land to leasehold land. In 1968, the estate sub-sector occupied 14% of the cultivated land area while the smallholders used 86%. By 1981, the share of the estate sub-sector of the cultivated land had increased to 19% and that of the smallholders' had declined to 81%. Thus, the combination of high population growth rate (between 2.6 and 3%) and the 1967 Customary (Land Development) Act caused the growth of the landless or near landless population among the smallholders and created labor competition. For many smallholders, ADMARC's payment of low producer prices made it difficult for them to satisfy their cash requirements from farming alone. This further helped to make the low wages on the estates more attractive. Migration of the male labor force onto the estates, low credit up-take, and inappropriate extension messages resulted in low productivity on the smallholder farms.

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Table 4.7. Employment by Sector (Excluding Smallholder Sector).

Sector	Labor Force (15-64 Years Old) ---Thousands---			Sectoral Share ---Percent---	
	1968	1978	1987	1978	1987
Estate	64.5	207.5	266.4	44.6%	43.2%
Government	31.6	36.6	52.6	7.9	8.5
Industry	82.6	133.8	176.4	28.8	28.6
Informal Sector	44.9	87.4	121.0	18.8	19.6
Total	223.6	465.3	616.4	100.0%	99.9%

Source: Mkandawire et al., 1990.

Furthermore, like in the colonial era, in the post-independence period Malawi experienced difficulties on how to handle emigration of labor to the South African and Southern Rhodesian mining and commercial farming interests. Government policy vacillated under the contrary pressures of, on the one hand, the labor requirements of the estate sub-sector and, on the other, the benefits to government revenue from migrants' remittances.⁴ The amount of revenue from migrants' remittances was not insignificant (see Table 4.8). It is possible to argue that in the early days of the post-independence era, international labor migration was actually allowed to flourish because of the revenue it brought into Malawi. However, with growing demand for labor from the fast growing estate sub-sector it became increasingly necessary to control emigration.

As can be seen from Table 4.8, in 1965 remittances from migrants amounted to K4.1 million or about 17.8% of the total value of domestic exports. By 1975, one year after migration was banned, the value of

4. For each miner contracted through the official channels, the South African mining companies paid the Malawi government a commission. These commissions were more than the amount of remittances by the miners.

Table 4.8

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Table 4.8 Remittances by Migrant Workers 1955-1983.

Year	Total Value of Main Exports ^a (K million)	Value of Remittances ^b (K million)	Remittances as Percentage of Exports
1954-57	n.a.	8.8	n.a.
1958-61	n.a.	10.1	n.a.
1962-63	n.a.	10.4	n.a.
1964	23.008	4.1	17.8
1965	27.084	4.3	15.9
1970	40.577	9.0	22.2
1975	106.283	32.1	30.2
1976	141.030	4.3	3.0
1977	171.970	2.4	1.3
1978	148.832	13.2	8.9
1979	178.160	11.0	6.2
1980	215.268	27.7	12.9
1981	232.710	31.0	13.3
1982	245.539	37.0	15.1
1983	283.150	25.0	8.8
1984	430.751	25.6	5.9
1985	410.769	29.9	7.2
1986	449.067	36.8	8.2
1987	602.488	47.2	7.8
1988	742.031	n.a.	n.a.
1989	731.811	n.a.	n.a.

Sources:

- a) Figures in this column are from the Reserve Bank of Malawi, Financial and Economic Review, 1990.
- b) From 1955-1963, the figures are from Dequin, H. 1969; from 1964-1977, the figure are from Gulhati, 1989; and from 1978-1989 the figures are from National Statistical Office, Malawi Statistical Yearbook 1987.

revenue from remittances was K32.1 million, a 683% rise in ten years or 30.2% of the total value of major commodity exports. This reflected the large numbers of migrants returning home bringing with them much money, following the Malawi Government's 1974 ban on labor recruitment by the South African mining companies.

Kydd and Christiansen (1982) argued that the return of migrants in the mid-1970s coincided with other push factors such as the decrease in demand for labor in neighboring countries due to changes in employment policies, civil war, and poor economic performance. It is noteworthy

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that the ban also coincided with the estate boom of the 1970s.⁵ The ban was lifted in 1978, but due to the factors already cited international labor migration has remained low.

4.3.3 Wage Policy in the Formal Sector

Malawi adopted what may be called a "multiple-floor" minimum wage policy that varies by economic sector and the location of employment. In general, the wage policy is biased against the rural sector as evidenced by the differential minimum wage structure which favors urban employees compared to the rural workers. However, within the urban areas, the level of urbanization also makes a difference in the minimum wage. Hence, Blantyre-Limbe and Lilongwe cities have the same minimum wage whereas Zomba and Mzuzu have lower minimum wages than either Blantyre or Lilongwe. In general, jobs requiring some formal education have higher minimum wages than those for which formal education is not required. The locality rule does not apply to jobs requiring formal education. Thus, a Field Assistant's beginning wage in the Ministry of Agriculture will be the same whether he/she is in Lilongwe, Blantyre, or Mzuzu City or some remote rural area such as Mphomphwa in Chitipa or Chapananga in Chikwawa. Of course, the employee's chances of salary acceleration and promotion are better if he/she works near the headquarters.

From 1954 to 1984, real wages stagnated. This was especially the case during the years of the Federation of Rhodesia and Nyasaland (i.e. 1953-1963).⁶ The year 1958 marked the beginning of important changes

5. The ban was a result of the 1974 Francistown plane crash in which 74 Malawian miners returning from South Africa died. Kydd and Christiansen (1982) pointed out that the concern over the air disaster was hypocritical since in the year preceding the crash they estimated that 528 healthy Malawian miners died from accidents and diseases in the mines. They suggested that the real reason for the ban was the need for low-cost labor for the estate sub-sector.

6. Until 1957, both real and nominal wage rates stagnated. The rates started to rise in 1958 primarily because of the bolstered strength of the Malawi Congress Party's (MCP) activism due to Dr. Banda's arrival in July of that year. The rise in wages was both a response to increased pressure and a treacherous attempt to sabotage and undermine the MCP's platform.

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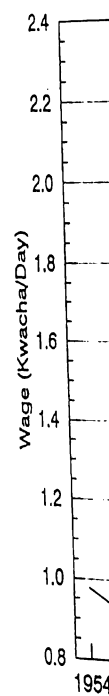
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in the economy of Malawi. This year saw the arrival of Dr Kamuzu Banda and the strengthening of nationalism through the Malawi Congress Party (MCP). Wages rose substantially. By 1962, real wages had risen 189%, over the 1957 minimum wage. Real wages rose continuously until they peaked in 1969.⁷ Since then real wages have declined, and in 1978-79 real wages plummeted to less than those received during the the Federation years (see Figure 4.2).

These trends coincided with the changes in agricultural policy discussed earlier. The rise in real wages from 1958 reflects an attempt by the colonial leadership, under pressure from the nationalist MCP, to respond to the demands of the natives by improving political, social, and economic conditions. The drop in real wages in 1970 resulted from a combination of several factors including the general worsening of the economy of Malawi. But it also coincides with the changes in agricultural policy in the late 1960s which emphasized estate agriculture and sought ways to reduce labor costs in the estate sub-sector.

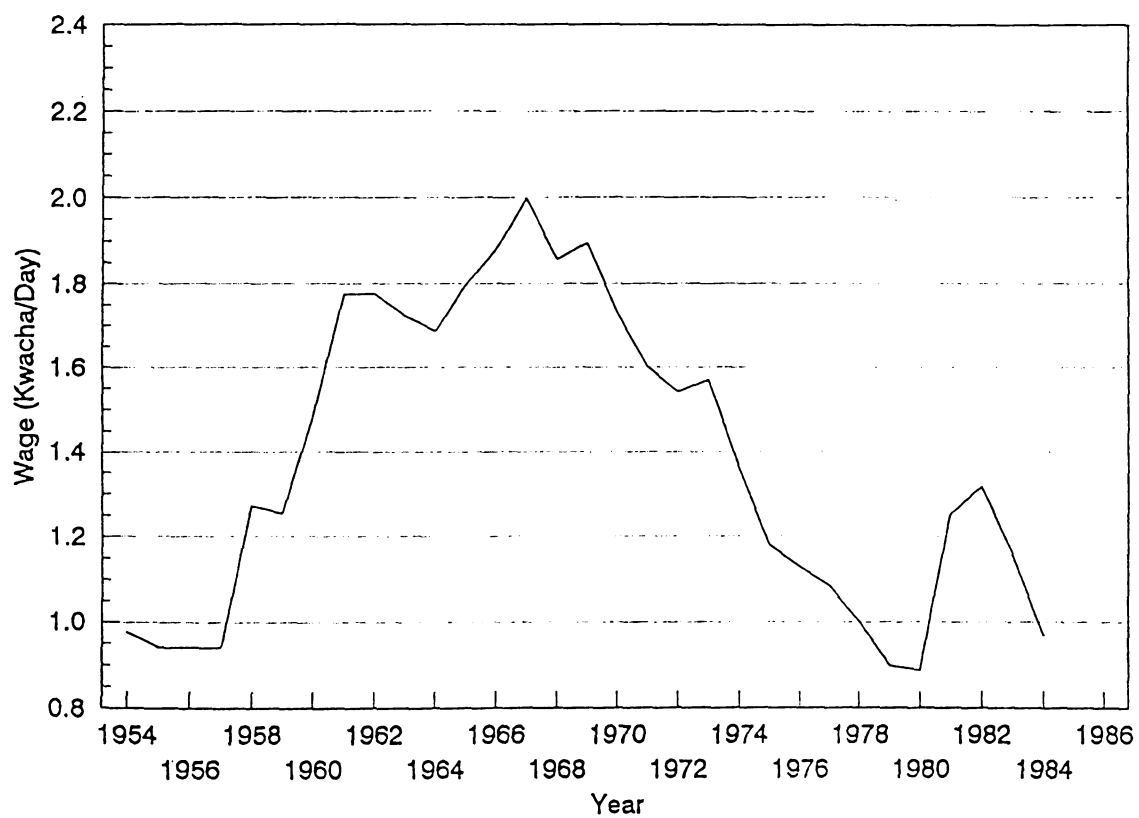
It may be argued that the post-colonial decline in average real wages was simply a result of changes in occupational, skill, racial, and sex composition of the labor force, mirroring the africanization and feminization of the labor force. It is true that the bulk of the new jobs created in the post-independence period were at the bottom of the wage scale. However, the formal sector wage structure in Malawi clearly showed a partiality against the agricultural labor force, the bulk of which was employed in the estate sub-sector.

7. The suggested slight decline in real minimum wage noticeable in 1963-64 did not really occur. It is a statistical artifact introduced by rounding off at the decimal when the colonial currency "Pounds and Shillings" was converted to the Malawi decimal currency of "Kwacha and Tambala" (Pryor, 1988:46).



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Source: Pryor, Frederic L. 1990.

Figure 4.2 Trend of Real Wages in the Formal Sector, 1954-84.

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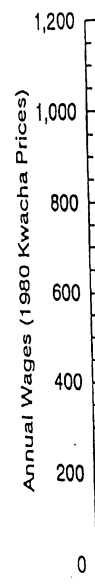
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Real wages in the agricultural sector have always been a small fraction of the wages in the non-agricultural sector. The ratio of real earnings in the agricultural to real earnings in the non-agricultural sector at 1980 prices averaged 0.25 over the eighteen-year period, 1968-1985 (see Figure 4.3). This is the net result of the multiple-floor minimum wage policy. Such a policy, along with the conscious creation of competitive labor markets and the discouragement of labor unionization, has allowed wages to be kept low in the estate sub-sector.

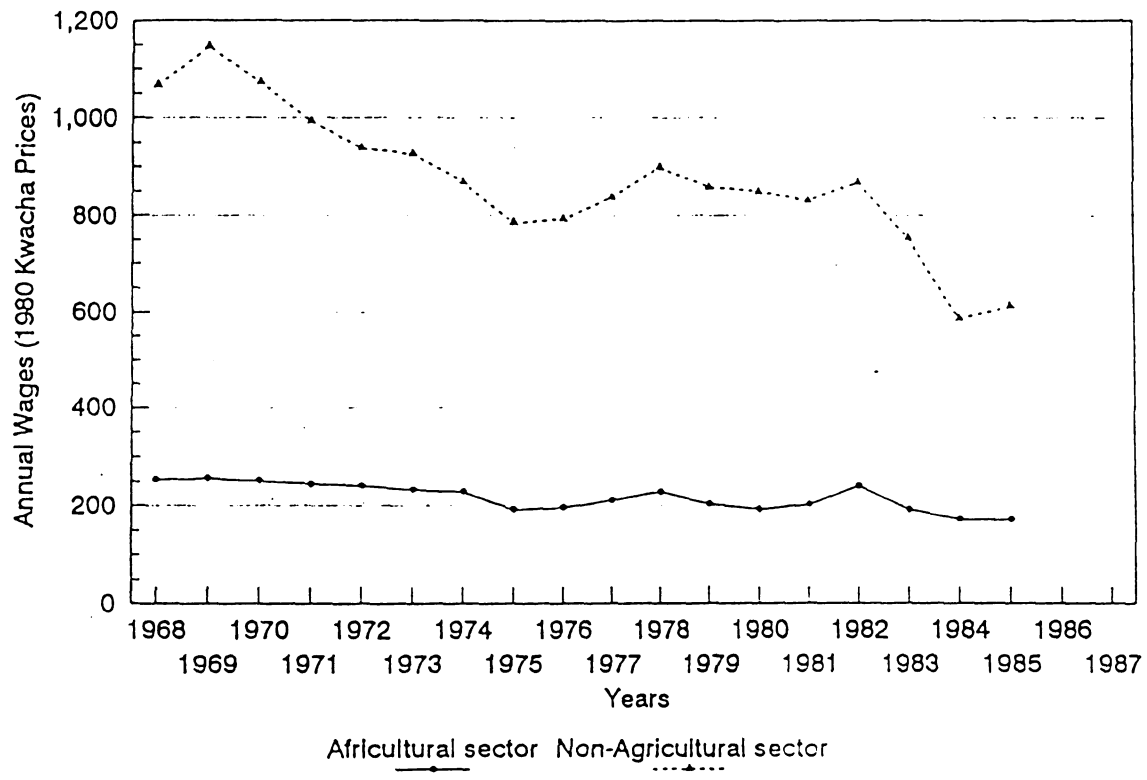
4.3.4 Marketing and Pricing Policy

The control of smallholder produce markets and prices was started in the colonial period through the establishment of "produce boards". According to Kettlewell (1965), during the colonial era emphasis was on cash crops and especially European grown crops. Only in 1926, was the Native Tobacco Board (NTB) established to organize and encourage production and orderly marketing of dark-fired tobacco. In 1951, a "Cotton Board" was set up, and, in the following year, a Produce (i.e. maize, peanuts, and beans) Board was established. In 1956, all the boards were amalgamated into the Agricultural Production and Marketing Board (APMB). At independence, the APMB was reorganized and became the Farmers Marketing Board (FMB).

In 1971, following the 1968/69 crop failure and the subsequent change in agricultural policy, FMB was reorganized once again to become the present Agricultural Development and Marketing Corporation (ADMARC). As the name implies, ADMARC's responsibilities still involved marketing of smallholder crops but it also played a major role as an investment company primarily to stimulate agricultural development. ADMARC's marketing practices made smallholder farming less profitable. ADMARC paid below market prices for smallholder grown food stuffs and the surplus was transferred in the form of food subsidies to the estate sub-sector which buys most of its food requirements. ADMARC also paid below market prices for smallholder export crops. Kydd and Christiansen



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Source: Pryor, Frederic L. 1990.

Figure 4.3 Trend of Agricultural and Non-Agricultural Wages, 1968-89.

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(1982) argued that to acquire the financial resources needed for the development of the estate sub-sector, it was necessary to impose a heavy tax on the smallholder sub-sector through ADMARC, the state owned corporation which, until recently, exercised exclusive monopoly rights to purchase crops from the smallholder sub-sector.

As we saw earlier, the ratio of prices received by the smallholder growers to those received by the government marketing agencies at auction floors averaged 0.36 in the post-independence era, 1964-1985. This ratio was 0.50 during the federal period, 1953-1963. Thus, prices received by smallholders were 14 points higher in the colonial era than they have been in the post-independence time (see Figure 4.1). It may be argued that the differential in prices can be justified if marketing costs incurred by the marketing agencies were considered. However, the most significant reason for the differential in prices between the smallholder and the auction floor has been the government's policy of taxing smallholders by paying low producer prices (Lele and Agarwal, 1989:16).

According to Kydd and Christiansen (1982), ADMARC made substantial profits from its crop marketing activities by purchasing smallholder produce at prices below the international ones received at the auction floors (see Figure 4.1). The surpluses were: 1) directly invested in the estate sub-sector, and 2) indirectly channelled into the estate through control of the commercial banks that lent to the estate sub-sector. Between 1970 and 1979 ADMARC extracted K181.9 million, K26 million of which was used to subsidise food for the estate and urban employers. ADMARC also invested K54.1 million in estate agriculture of which 66% represented direct investment in estate production. Gulhati (1989:21) noted that by 1981, ADMARC owned 12,350 hectares of land in tobacco estates and had lent approximately K50.0 million to Press Holding; a corporation that owns the two giant burley and flue-cured tobacco farming firms: General Farming and Press Farming Companies Ltd.

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As noted in section 4.1, ADMARC's taxation of peasant farmers ended with the second SAL even though smallholder farmers still have to sell their cotton and tobacco through ADMARC. By the late 1980s ADMARC paid export parity prices for smallholder grown tobacco (see Figure 4.1).

4.3.5 The Exploitation of the Smallholders

The irony of Malawi's agricultural sector is that crops that are amenable to capital intensification (i.e. maize, groundnuts, and cotton) are grown primarily by the smallholder subsector while those that are labor intensive such as tobacco and tea are reserved principally for the estate subsector. This can be explained by the recognition that the source of profit is the exploitation of labor. Labor is exploited by the estates by paying wages that are below subsistence costs.

Smallholder exploitation was achieved through the manipulation of the supply conditions of labor by manipulation of its market price. Two main factors were important in this respect: land pressure and marketing practices. Land pressure, especially in the Southern and Central Regions, meant that a large number of people could not make a living in agriculture, thereby making it necessary for the landless and near landless smallholders to seek employment outside the smallholder subsector. Secondly, ADMARC's marketing practices made smallholder farming less profitable. In turn the low profitability of smallholder subsector made wages on the estate sub-sector look better; the opportunity cost of labor was made equal to zero. This is why even though the wages on the estates are low, smallholders gladly accept employment on the estates. The estate sub-sector could economize on labor and it was this economizing that causes the waste of life and health on the estates.

Thangata, the visiting-tenancy, and direct wage labor were the main means of labor exploitation in Malawi. There are important differences among *thangata*, visiting-tenancy, and direct wage-labor. These differences are similar to the differences Marx identified between

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colliers and wage-laborers (Marx, 1967). In *thangata*, the laboring of the smallholder worker for own subsistence and the compulsory laboring done for the landlord differed in space and time in the clearest possible way. The smallholder workers knew that they provided unpaid labor to the landlord while they also worked on their own plots for subsistence. Like in the *thangata* tenancy, in the *visiting-tenancy* the smallholder workers can also differentiate the labor they expend for their own subsistence and that which they expend for the landlord. The difference is that in the later system, the smallholder is compensated for the labor, even though not fully. But unlike both *thangata* and the *visiting-tenancy*, in direct wage labor, both paid and unpaid labor, appear as paid labor thereby mystifying the unfairness which is clearly seen in the other two systems. This explains why *thangata* did not endure and also explains why recently intra-sectoral migration of farm workers in Malawi is from the *visiting-tenancy* to direct wage-labor (CSR, 1989). Direct wage-labor creates an illusion of liberty. Direct exploitation is mystified and the system has the appearance of being fair. The case of the smallholders differs greatly from that of proletarianized labour. In the latter situation, the labouring class have no other means of subsistence except the wages they receive from their employment. Thus, wages are their only means for the reproduction of labor-power. On the other hand, the situation on the Malawi estate sub-sector is different. Complete proletarianization of the labor force has not occurred.

A survey carried out by the Center for Social Research (CSR) in 1988-89 showed that a majority of the estate labor force (61%) have their own gardens on which they grow crops to supplement the wages (CSR, 1989). On the estates in Mulanje, in the Southern Region, where land pressure is acute, the percentage of households that had their own plots was 49%. Only 3% produced enough food on these plots, the rest did not. Yet, 70% of the estate workers earned a nominal income less than K200

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per annum which, when adjusted for inflation, turned out to be only K18.48. On the estates the average household of approximately 5 persons, with at least two adults, received about 384 Kgs of maize per annum. The price of a 90-Kg bag of maize at the time of the survey was K24.44, so that the K18.48 annual income could only buy 68 Kgs of maize or 3/4 of a bag. Adopting a standard of 230 Kgs of maize per adult per annum, it is clear that estate workers subsist on a less than adequate income and are in marginal poverty. Not surprisingly, in October to March, 94% of the estate workers took only one formal meal per day (CSR, 1989).

The estate owners are not obliged to pay even subsistence wages to their laborers. It is possible to pay below subsistence wages because the smallholders supplement their food income with own production using their own or spouses' and/children's labor. Some occasionally employ ganyu casual labor. The smallholder subsector thus subsidized estate production in multiple ways. First, the labor was paid below subsistence and the deficit which, in actual fact, should have been in the expenses section of the ledger books of the estates, was made up for by the smallholder. Secondly, ADMARC paid below market prices for smallholder grown food stuffs and the surplus was transferred in the form of food subsidies to the estate sub-sector which bought most of its food requirements.

Furthermore, ADMARC also paid below market prices for smallholder export crops⁸ and inversed the surplus into the estate sub-sector. Finally, through the control of the banks, ADMARC and Press Holding were

8. Kydd and Christiansen (1982) argue that to acquire the financial resources needed for the development of the estate sub-sector, it was necessary to impose a heavy tax on the smallholder sub-sector through ADMARC, the state owned corporation which had exclusive monopoly rights to purchase crops from the smallholder sub-sector. ADMARC is said to have made substantial profits from its crop marketing activities by purchasing smallholder produce at prices below the international prices received at the auction floors.

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able to channel financial resources to the estate sub-sector.⁹

ADMARC's extraction of surpluses from the smallholder sub-sector reduced the real rate of return to that sector. The real value per worker from sells of produce to ADMARC remained constant from 1964-1980 (see Figure 4.1). This reduction in real wages explains the post-independence large increase in the agricultural paid employees. In a way, one might say the smallholders created the capital for their own exploitation in the same way that the modern industrial production workers are the creators of the surplus that is the capital which exploits their labor.

4.4 The Dwindling Importance of the Smallholder Sub-Sector

The overall impact of the changes in policy have been the decline in productivity of the smallholder sub-sector. This involves the shrinking and decline in the share and the rates of growth of the smallholder sub-sector of total Gross Domestic Product (GDP). It also is reflected in the smallholders' declining contribution to the value and quantity of agriculture exports.

In general, estate production of tobacco, tea, and sugar has increased significantly since independence while smallholder production of tobacco and tea has declined over the same period. According to Lele and Agarwal (1989:8), from 1970-1985, tobacco production by smallholders dropped from 40% to 27% of the total tobacco output. Smallholder share of the area sown to tobacco also dropped from 76.5% in 1970 to 53% by 1985. In general, in 1965 the value of officially marketed smallholder crops was about one-third greater than that of the estates, and smallholders produced almost all of the staple surplus traded within the domestic economy. However, by the end of the 1970s, the output value of the estates was more than twice that of officially marketed smallholder production (Christiansen and Kydd, 1983:314). The decline in production

9. Press Holding and the Malawi Development Corporation acquired majority interest in the Commercial Bank of Malawi in 1974. ADMARC, along with Press Holding, used the surplus extracted from the smallholder sub-sector to acquire majority interest in the National Bank of Malawi in 1977.

may be explained partly by the decline in the area of land under customary smallholder tenure. But another important factor is the decline in productivity on the smallholder farms. From 1970 to 1985, while the estate sub-sector's productivity in tobacco (i.e. yields of tobacco per unit area) increased by 1.44%, the smallholder sub-sector experienced a decline of -0.77% in productivity over the same period (Lele and Agarwal, 1989:9).

Within the smallholder sub-sector, maize productivity increased with holding size. The 1980/81 National Sample Survey of Agriculture (NSSA) data showed that households with holdings of less than 0.5 ha. produced 970 kilograms of maize per hectare while those with holdings of 3.0 ha. or more produced 1,687 kilograms of maize per hectare. In SLADD, the respective figures were 984 and 2,110 kilograms of maize per hectare (Malawi Government, 1984). The decline in productivity results from neglect by research, extension, and credit programs. As noted earlier, much of the extension and credit services in the smallholder sub-sector reach only a small number of the smallholder population, mostly the bigger farmers.

Research and extension services for most export and estate crops have been the responsibility of the government through statutory bodies such as the Tobacco Research Authority (TRA). Until recently the Government was responsible for tobacco research and extension services for the estate sub-sector through the TRA. The TRA was privatized and the name was changed to Tobacco Research Institute of Malawi. Research and extension for tea estates have always been in private hands.

The smallholder decline in productivity should not be confused with decline in efficiency. Productivity as used here refers to yield per unit area, regardless of other resources (such as fertilizers, chemicals, labor, etc.) used. Production efficiency, on the other hand, refers to yield obtained for a given amount of resources used, including

land. Lele and Agarwal (1989) used the domestic resource costs (DRCs)¹⁰ to determine the efficiency of resource use on the estate and smallholder farms. They found that sun/air-cured and dark-fired tobacco are generally inefficient crops whether grown by the estates or the smallholder. On the other hand, cultivation of maize and flue-cured and burley tobacco is as efficient on the smallholder farms as it is on the estates (Table 4.9). But when international prices are used, smallholder farms are more efficient than estates in all the crops including sun/air-cured and dark-fired tobacco. In general, as the prices of imported inputs increase, smallholder production of flue-cured and burley tobacco becomes more efficient than estate production.

Furthermore, if smallholder farmers were to receive auction floor prices for their sun/air-cured and dark-fired tobacco their efficiencies could improve significantly (Compare the ADMARC and auction floor derived DRCs for sun/air-cured and dark-fired tobacco in Table 4.9). Clearly, even though the productivity, i.e. the yield per unit area, has declined on the smallholder farms, these farms are still more efficient and more sustainable than the estates. Malawi's Gross Domestic Product (GDP) expanded substantially in the past two decades. In 1964 the GDP was reported at K144.6 million but by 1989 the GDP amounted to K935.4 million. Gulhati (1989:28-29) estimates that the GDP growth rate was between five and seven percent per year in the post-independence period. According to the report of the London-based Economic Intelligence Unit, the average annual growth rate of the real GDP was 4.9% in 1974-80, 0.4% in 1981-83, 3.3% in 1984-86, and 3.2% in 1987-89. The rate of growth of the estate sub-sector outperformed all but government services, and outgrew the smallholder sub-sector by six times. Table 4.10 shows the dwindling importance of the smallholder sub-sector in the composition of

10. The domestic resource costs (DRCs) measures the value of domestic resources needed to obtain one unit of foreign exchange through sales of export crops or import substitution crops. It is used to approximate production efficiency in agriculture.

the GDP from 1964-1989. As may be observed from the Table, the relative contribution of agriculture to the total GDP remained roughly the same from 1965-1989; declining only slightly. However, the contribution of the smallholder sub-sector to the total and agricultural GDP declined by nine and fifteen percent, respectively. On the other hand, the

Table 4.9 Resource Use Among Smallholders, Tenants and Estates.

	1982			1986			1986		
				Smallholder producer prices to calculate value of production			ADMARC auction prices to calculate value of production		
Domestic Resource Costs for Tobacco									
Crop/Type of Producer	DRC	DRC ^a	DRC ^b	DRC	DRC ^a	DRC ^b	DRC	DRC ^a	DRC ^b
Smallholder:									
- Flue-cured	0.45	0.37	0.30	0.49	0.42	0.35	0.49	0.42	0.35
- Burley	0.68	0.56	0.45	0.55	0.47	0.39	0.55	0.47	0.39
- Sun/Air	1.35	1.05	0.76	0.63	0.50	0.37	0.53	0.42	0.31
- Dark-fired (Northern)	1.62	1.26	0.90	0.82	0.65	0.48	0.50	0.39	0.29
- Dark-fired (Southern)	-	-	-	0.98	0.77	0.57	0.67	0.53	0.39
Tenant:									
- Burley	1.09	0.88	0.67	0.48	0.39	0.31	0.48	0.39	0.31
Estate:									
- Flue-cured	0.41	0.35	0.29	0.53	0.47	0.41	0.53	0.47	0.41
- Burley									
- Direct Labor	0.52	0.46	0.39	0.61	0.56	0.50	0.61	0.56	0.50
- Tenant	0.47	0.41	0.34	0.49	0.43	0.38	0.49	0.43	0.38
Domestic Resource Costs for maize by type of farm and type of tobacco grown									
Smallholder:									
- Flue-cured	0.42	0.35	0.28	0.83	0.71	0.60	0.83	0.71	0.61
- Burley	0.53	0.44	0.35	1.12	0.97	0.81	1.12	0.97	0.81
- Sun/Air	0.60	0.47	0.34	1.10	0.88	0.66	1.10	0.88	0.66
- Dark-fired	0.60	0.47	0.34	1010	0.88	0.66	1010	0.88	0.66
Tenant:									
- Burley	0.40	0.32	0.25	0.62	0.52	0.42	0.62	0.52	0.42
Estate:									
- Flue-cured	0.55	0.51	0.5	-	-	-	-	-	-
- Burley									
- Direct Labor	0.57	0.52	0.46	-	-	-	-	-	-
Domestic Resource Costs for groundnuts by type of farm and by type of tobacco grown									
Smallholder:									
- Flue-cured	0.95	0.77	0.59	0.90	0.75	0.60	0.90	0.75	0.60
- Burley	0.95	0.77	0.59	0.90	0.75	0.60	0.90	0.75	0.60
- Sun/Air	1.21	0.98	0.76	0.97	0.81	0.65	0.97	0.81	0.65
- Dark-fired	1.21	0.98	0.76	0.97	0.81	0.65	0.97	0.81	0.65
Estate:									
- Flue-cured	1.28	1.11	0.93	2.31	2.06	1.81	2.31	2.06	1.81

a/ Shadow wage rate calculated at 0.75 of the market wage rate.

b/ Shadow wage rate calculated at 0.50 of the market wage rate.

Source: Lele and Agarwal, 1989.

contribution of the estate sub-sector increased from only four and eleven percent of the total and the agricultural GDP in 1964 to nine and twenty-five percent of the total and agricultural GDP in 1989, respectively.

Table 4.10 Composition of Gross Domestic Product in Malawi, 1964-1989.

Year	Total GDP	Agric. GDP		Smallholder GDP			Estate GDP		
		Value	As % of Total GDP	Value	As % of Total GDP	As % of Agric. GDP	Value	As a % of Total GDP	As % of Agric. GDP
1964	144.6	56.1	39	50.2	35	89	5.9	4	11
1965	174.0	64.8	37	58.4	34	90	6.4	4	10
1970	240.8	83.6	35	114.8	45	89	14.5	6	11
1975	618.5	230.3	37	191.4	31	83	38.8	6	17
1980	764.4	284.2	37	231.2	30	81	53.0	7	19
1985	841.4	308.0	37	242.0	29	78	66.0	8	22
1989	935.4	329.7	35	247.4	26	75	85.3	9	25

Note: The 1964, 1965, and 1970 GDP is at current factor cost; 1975, 1980, 1985, and 1989 GDP is at 1978 factor cost;

Source: Malawi Government, Economic Reports, 1967, 1968, and 1975; and Reserve Bank of Malawi, Financial and Economic Review, 1990.

The smallholder's share of agricultural exports witnessed an absolute decline in the past 17 years from 1972-1989. Before 1972, the smallholder share of agricultural exports was consistently higher than the share of the estates. In 1972, the estates' share of the agricultural exports surpassed the smallholders' and by 1988, it peaked at 71% of the total agricultural exports (Table 4.11). The composition of exports from Malawi also went through much change. At independence, two major crops, tobacco and tea, represented the lion's share of the value of exports. In 1964, tobacco claimed 38% of the value of exports, tea 30%, groundnuts 10%, and cotton 9%. The sugar industry was established in 1965 by the multi-national corporation, Lonrho, which leased 11,770 acres of public land for 99 years (Wolgin, et al., 1983).

Production started in 1966 with 3,500 metric tons of sugar. By 1976, the composition of Malawi's exports was 51% tobacco, 21% tea, 18% sugar, 9% groundnuts, and cotton had dropped to only 2%. By 1989, tobacco had

Table 4.11 Peasant Share of the Tobacco Industry - Exports.

Year	Total Value of Tobacco Exports (K 000)	Percent Peasant Share	Percent Estate Share
1964	8,436	68	32
1965	10,260	76	24
1966	9,042	70	30
1967	8,452	60	40
1968	10,570	57	47
1969	12,646	51	49
1970	16,592	51	49
1971	22,066	53	47
1972	24,968	47	53
1973	30,259	40	60
1974	39,269	46	54
1975	51,132	48	52
1976	64,930	53	57
1977	86,651	45	55
1978	86,146	44	56
1979	98,638	43	57
1980	100,796	56	54
1981	99,391	21	79
1982	143,997	26	74
1983	145,616	35	65
1984	225,652	52	48
1985	185,453	42	58
1986	244,369	38	62
1987	373,702	35	65
1988	474,925	26	74
1989	457,957	29	71

Source: Malawi Government, Economic Reports, 1967, 1968, and 1975; and Reserve Bank of Malawi, Financial and Economic Review, 1990.

climbed to 71% of the total value of agricultural exports, tea 16%, sugar 10%, and cotton 4%, making the economy heavily reliant on a single export crop, tobacco (see Table 4.12).

A closer look at the tobacco industry reveals the government's bias against the smallholder sub-sector. Table 4.13 shows the percentage shares of the estate and smallholder sub-sectors in the total value of exports from the tobacco industry. In 1964, the total value of tobacco exports amounted to K8,436,000, approximately 70% of which was produced by the smallholders. By 1989, the total value was K457,957,000 of which

Table 4.12 The Changing Composition of Agricultural Exports, 1964-1989.

Year	Total Value of Agricultural Exports (K million)	Percent Share of Tobacco	Percent Share of Tea	Percent Share of Sugar	Percent Share of Cotton	Percent Share of Groundnuts	Percent Share of Other
1964	22.1	38.0	30.0	0.0	9.0	10.0	13.0
1965	26.1	39.0	29.0	0.0	8.0	13.0	11.0
1966	26.8	34.0	33.0	0.0	8.0	10.0	15.0
1967	32.0	27.0	28.0	0.0	4.0	22.0	19.0
1968	31.9	33.0	30.0	0.0	4.0	14.0	19.0
1969	34.3	37.0	28.0	1.0	5.0	16.0	14.0
1970	37.6	44.0	29.0	1.0	7.0	11.0	8.0
1971	46.6	47.0	26.0	1.0	5.0	13.0	8.0
1972	52.0	48.0	23.0	1.0	5.0	14.0	9.0
1973	63.4	48.0	22.0	5.0	3.0	9.0	13.0
1974	73.6	53.0	23.0	13.0	4.0	7.0	7.0
1975	93.6	55.0	23.0	13.0	2.0	7.0	7.0
1976	128.2	51.0	21.0	18.0	2.0	9.0	0.0
1977	154.5	56.0	27.0	10.0	2.0	6.0	9.0
1978	132.9	65.0	22.0	9.0	1.0	4.0	0.0
1979	157.9	62.0	19.0	11.0	1.0	6.0	3.0
1980	185.7	54.0	16.0	19.0	2.0	9.0	0.0
1981	199.1	50.0	15.0	29.0	1.0	5.0	0.0
1982	27.4	66.0	20.0	11.0	0.0	2.0	1.0
1983	231.5	63.0	24.0	12.0	0.0	1.0	0.0
1984	371.6	61.0	30.0	8.0	1.0	0.0	0.0
1985	347.4	53.0	26.0	15.0	4.0	2.0	0.0
1986	370.3	66.0	18.0	11.0	1.0	4.0	0.0
1987	512.1	73.0	12.0	12.0	0.0	3.0	0.0
1988	645.3	74.0	12.0	11.0	0.0	3.0	0.0
1989	642.2	71.0	16.0	10.0	4.0	0.0	0.0

Source: Malawi Government, Economic Reports, 1967, 1968, and 1975; and Reserve Bank of Malawi, Financial and Economic Review, 1990.

71% was claimed by the estate sub-sector. As a result, in the recent structural adjustment program, the World Bank along with other donor agencies pressured Malawi to shift away from the IRDP approach of the National Rural Development Program (NRDP) towards extension, research, credit, growth centers, fertilizer imports, food and fertilizer storage and fisheries. This shift is an expression, on the part of the donor agencies, of disenchantment with NRDP for failing to reach subsistence and below subsistence farmers (Lele, 1990).

4.5 Conclusion: The Four Pressures on the Smallholder Sub-Sector

In this chapter, I traced the evolution of agricultural policy from the early 1960s to the 1980s. The objective was to find out what emphases the agricultural policy laid on the smallholder and the estate

sub-sectors and how this affected the implementation and effectiveness of the modernization approach of the IRDPs. The evidence has shown that, although the smallholder sub-sector played an important role in the economy, agricultural policy was, by and large, biased towards the estate sub-sector. This bias was reflected in the land tenure policy which allowed the uncontrolled transfer of customary land onto the estate sub-sector. The agricultural policy also shielded the estate sub-sector from competition with the smallholder sub-sector by barring the smallholders access to input and output markets and from growing certain economic crops. Smallholders were also taxed and the proceeds were invested in the estate sub-sector.

Within the smallholder sub-sector, there was also a bias in favor of the relatively larger farmers as reflected in the *Achikumbe* or "progressive farmers" emphasis. The IRDPs' emphasis on "progressive farmers" resulted in agricultural extension and credit services to be concentrated on the relatively larger smallholders. Only a small proportion of the smallholder sub-sector benefitted from the agricultural extension and credit facilities provided through the rural development projects.

On the other hand, the estate sub-sector received much support from government policy. Not only did the estate sub-sector enjoy access to competitive private inputs and outputs markets and exclusive rights to grow certain crops, it also benefitted from the funds transferred from the smallholder sub-sector. In addition, I have argued that the wage level and its "multiple-floor" structure was designed to enable the estate sub-sector to have access to low cost labor. The estate sub-sector was permitted to flourish at the expense of the smallholder sub-sector. Land pressure, low wages, unprofitable farming, and AMARC's taxation are what I refer to as the four pressures on the smallholder sub-sector.

Land pressure, although partly due to natural increase of the population, was aggravated by the fast expansion of the estate sub-sector. The low wages in the agricultural sub-sector have a long history, beginning with the colonial administrators' attempt to make low cost labor freely available for the estate farmers. But, in recent times, the need for cheap labor on the tobacco, sugar, and tea estates compelled the government to adopt a policy of wage hike restraint buttressed by differential minimum wages between the agricultural sector and the other sectors. The minimum wage in Malawi remained below subsistence and was much lower compared to wages in the neighboring countries of Zambia, Zimbabwe, or Tanzania.

The low wages were exacerbated by low profitability of smallholder farming. There were three main ways in which smallholder farming profitability was influenced. First, smallholder farmers were excluded from cultivation of high-value crops. Secondly, they were denied direct access to the open markets for inputs and supplies as well as for their produce. Lastly, by compelling them to acquire their inputs and supplies from the government marketing agency, ADMARC, and requiring them to sell the produce through the same agency, it was possible to tax the smallholder farmers and discriminate some of them from participating in development programs. The taxes on smallholder farmers made the already low prices even lower.

The government's marketing agency, ADMARC, made large profits from the crops of the smallholder farmer. Instead of investing the funds generated in this way, ADMARC used the money to invest in private enterprises which directly competed with the smallholder farmers for the scarce resource of land. These factors explain the decline in productivity in the smallholder sub-sector. They may also explain the persistent poverty among the smallholder farmers.

CHAPTER 5

RESEARCH METHODS

5.1 The Research Site

This research project was conducted in the Salima Agricultural Development Division (SLADD) in the 1989/90 cropping season. The aim of the study was to assess the impact of integrated rural development projects (IRDPs) on poverty reduction as measured by food security, income, house quality, morbidity, and nutritional status. The impact of both micro- and macro-level factors (i.e. extension contact, credit participation, resource endowment, gender, land tenure and wage and marketing policies) on household food security and nutritional status of children in the households were examined. The general hypothesis is that the government controlled modernization approach to rural development does not adequately address the problems of smallholder producers and, therefore, fails to improve the living standards of the majority of the smallholder population.

Salima Agricultural Development Division, originally known as the Central Region Lakeshore Development Project (CRLDP) under the "Major Projects" concept, is one of the eight ADDs discussed in Chapter 4. It was initially funded by the Federal Republic of Germany. According to Dequin, Salima district was not attractive to both indigenous and colonial settlement because most of it lies on the lakeshore and mosquitoes and malaria were a deterrent to unaccustomed would be settlers. The high temperatures and the frequent droughts on the lakeshore aggravated the situation. Hence the main aim of the CRLDP was to improve the lands so as to make them attractive for spontaneous settlement (Dequin, 1969). Dequin must be referring to the northwestern part of the Salima lakeshore area because it is clear that the area from the district headquarters to the south and west (along the Linthipe

River) was well populated (see Figure 2.2 in Chapter 2). However, a substantial settlement activity occurred during the colonial period, and by the late 1950s and early 1960s an influx of landless farmers from the neighboring highlands was evident. Dequin (1969) noted that it is this spontaneous settlement movement and the rapid expansion of the area under cultivation due to natural population growth (estimated at 2% per annum) that prompted the initiation of the Central Region Lakeshore Development Project (CRLDP).

The CRLDP was initiated in 1968 under a bilateral loan agreement of K11.7 million between the Malawi Government and the Government of the Federal Republic of Germany. The land area covered by the project was determined to be 206,500 ha., 19% of which was under cultivation. Land under cultivation was expanding at a rate of 2% per annum. The pre-project population was estimated at 155,000 with a density of 43 persons per km², 95% of whom were smallholders. These smallholders produced 27,000 tons of maize, 2,400 tons of cotton, 3,500 tons of rice, 1,300 tons of groundnuts, 500 tons of beans, and 35 tons of sesame. Their annual income per capita was estimated at K15 (Dequin, 1969:154).

While the initial stages (Phase I and II) were supported by the German government, during Phase III (1977-1982), the project was brought under the NRDP concept. The European Economic Community (EEC) and Malawi Government took over its financial obligations; totaling K10.2 million (EEC K8.3 and Malawi Government K1.9 million). The project was then expanded in accordance with the NRDP concept to include the Bwanje Valley. The project now covered a total of 4,818 Km² with a population of 270,000 persons.

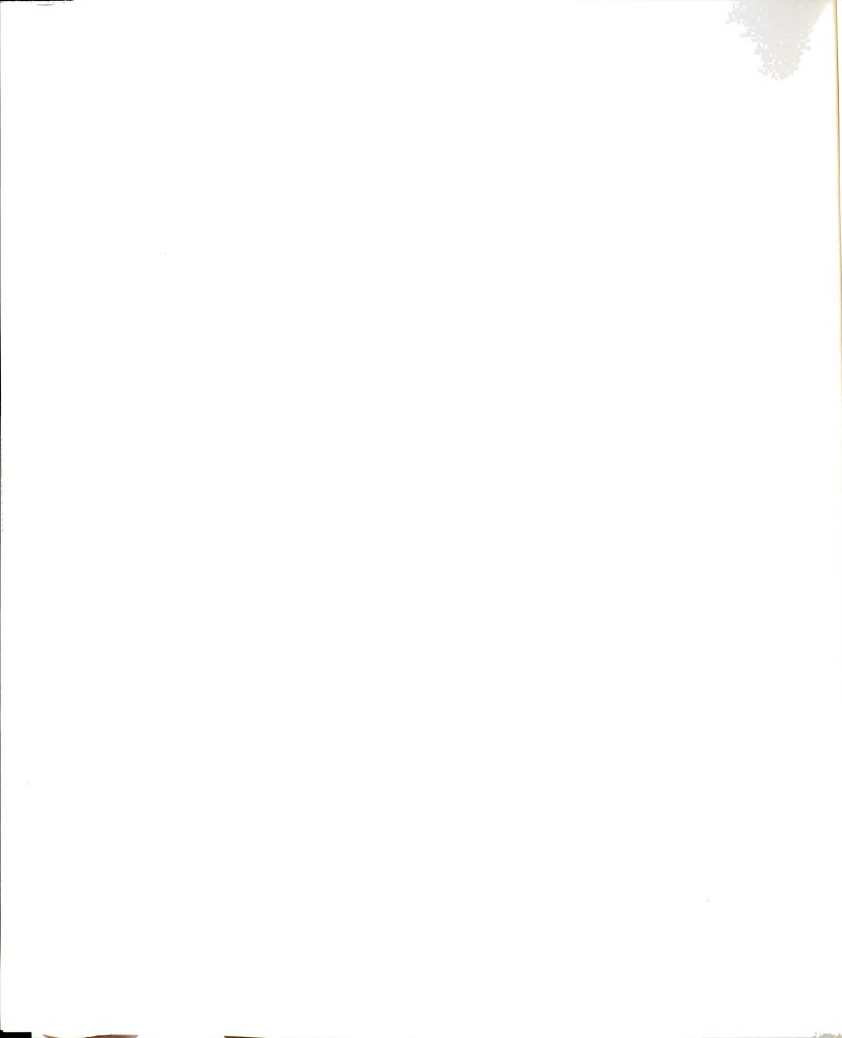
Phase IV was for a total cost of K19.3 million of which the EEC contributed K10.9 and Malawi Government K8.4 million. The first half of Phase IV started in the 1983/84 crop season and ended in the 1988/89 crop season. The second half began in 1989/90 and will end in the 1993/94 crop season. During Phase IV, the project was further expanded

to reach from Chia Lagoon to Dwambazi River; a 35% increase in the total project area, thus bringing the total to 5,960 Km². The estimated population covered in Phase IV was 413,400 persons which is equivalent to 99,500 farm families.

My research project was conducted in all three of the ADD's Rural Development Projects (RDPs), namely, Nkhotakota, Salima, and Bwanje Valley RDPs. I chose to conduct the survey in SLADD for several reasons. First, SLADD is the home of one of the first four IRDPs to be implemented by the post-colonial leadership. Secondly, according to data published by the Malawi National Sample Survey of Agriculture (NSSA), despite the fact that the IRDP has been in place for over twenty years, SLADD is among the ADDs with high rates of malnutrition among children. Thirdly, SLADD was one of the Agricultural Development Divisions (ADDs) with the highest proportion of households with land holdings less than one hectare (53.7%) in size. Furthermore, the annual rural household cash income is only K121, one of the lowest in the country. And lastly, SLADD includes the area where the first nutrition survey was conducted in 1939.

5.2 Organization of Salima Agricultural Development Division

In this section I want to address the question of how capital became the organizing force for smallholder production Malawi. The answer is in the rural development concept, embodied first in the "Major Projects" and now in the "National Rural Development Programme" or NRDP concept. Under the NRDP, smallholder production is organized through the agricultural credit and extension management. In both the "Major Projects" and the NRDP concepts the process of development was meant to involve injection of foreign finances into the rural areas. Hence, such projects had to show that they were capable of paying for the capital investments. All such projects then had to pass various forms of economic viability tests such as the internal rate of return (IRR). Salima ADD, like the rest of the IRDPs in the country, passed the



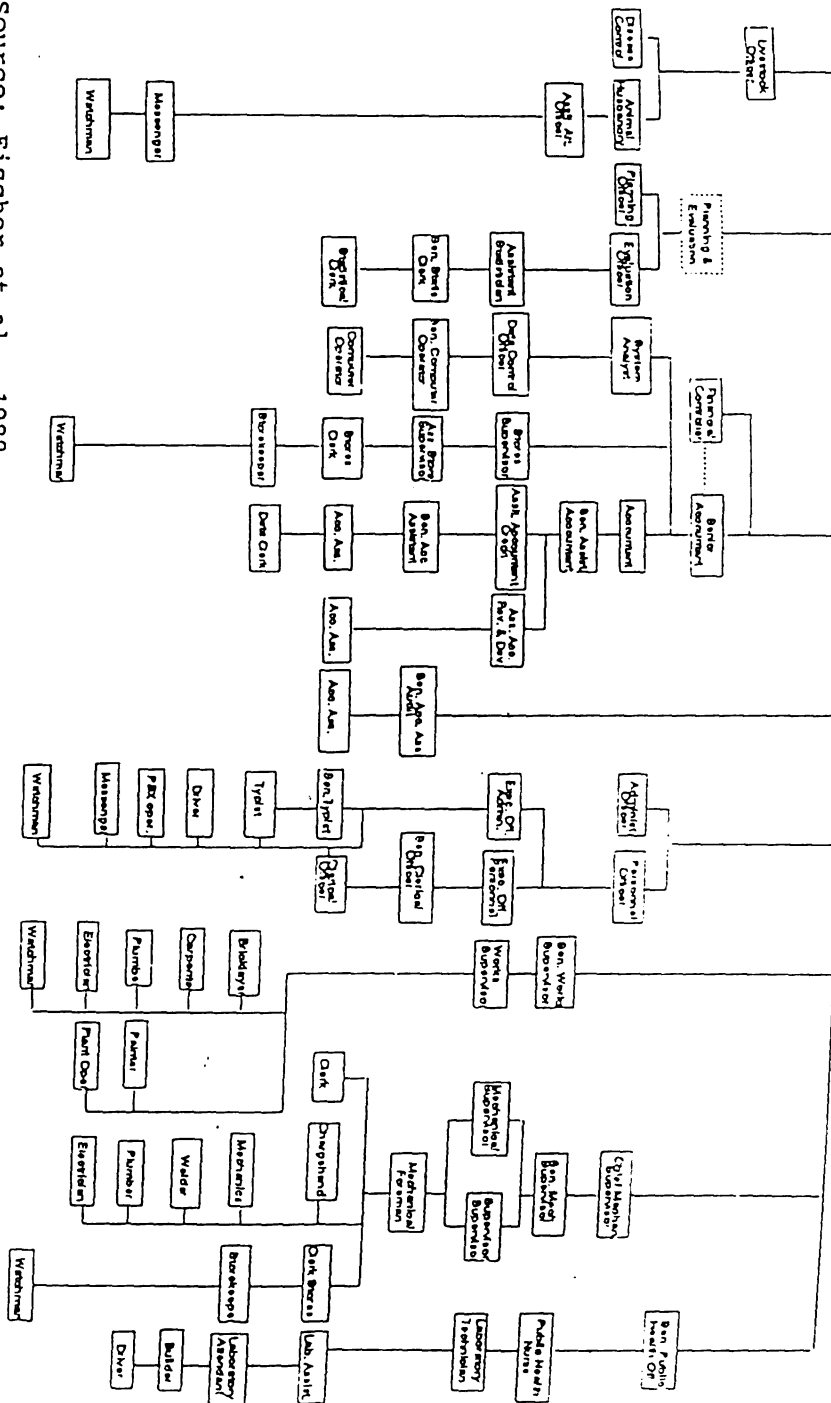
necessary viability tests. However, the problem was how to make the financial investment, organize the peasants' production, and make sure that the projects paid for the capital investment. The Government solved this problem by the strengthening of the smallholder credit and extension services and tying the smallholder farmers to the government Agricultural Development and Marketing Corporation (ADMARC). As noted in Chapter 4, the conditions associated with the World Bank's structural adjustment loans (SALs) have changed the role and function of ADMARC to some extent. However, in 1990 ADMARC was still the sole buyer of smallholder tobacco and cotton.

Salima ADD, like the other ADDs in the country, is headed by a Program Manager (PM) assisted by a Deputy Program Manager (DPM). The Principal Agricultural Officer (PAO) is in charge of all agricultural field offices (see Figure 5.1). At the ADD level, agricultural extension is headed by a Senior Agricultural Extension Officer (SAEO) who is supported by a number of Subject Matter Specialists (SMSs).

As noted earlier, the ADD is divided into three RDPs: Bwanje Valley, Salima, and Nkhotakota. The RDP is headed by a Project Officer (PO) assisted by an Assistant Project Officer (APO) (see Figure 5.1). The RDPs are divided into EPAs headed by Development Officers (DOs). Each DO is supported by an assistant DO, a Farm Home Assistant, and a Land Husbandry Assistant. The EPAs are further divided into sections, each covering 700 - 800 farming households. Each section is manned by a Field Assistant (FA).

The extension methods used cover a wide range but the main emphasis is on the "Block System" introduced in the country in the 1982/83 season. In this system, the FA divides his/her section into 4 - 6 blocks. In principle, the FAs are supposed to establish, for each block, a committee responsible for the establishment of a block garden to be used for demonstration purposes. At the section level, farmers are also supposed to be organized into farmers' clubs. Access to credit





Source: Fischer et al. 1988.

Figure 5.1 Salima ADD Phase IV Organizational Chart (Continued).



is only through the club, and if one member defaults in the club the whole club is held responsible and all members risk not getting credit the next season, unless the debt is repaid. Credit is also tied to production of a cash crop e.g. hybrid maize, rice, or cotton. Although it is possible to obtain credit for production of local maize, this is not easy because credit is issued in pre-packaged combinations. For instance, to get fertilizer to apply to local maize a farmer may have to buy hybrid maize seed together with the

fertilizer. The sizes of the credit packages have been modified under the World Bank's structural adjustment lending program. The impact of the smaller and more flexible credit packages on credit up-take has not yet been evaluated.

5.3 The Salima Agricultural Development Division Project Components

The project is an integrated programme of rural development designed to improve welfare mainly by increasing farm incomes but also health services. The agricultural objectives of the past four phases included increased farm production, with particular emphasis on rice, groundnuts, maize, cotton, and the encouragement of livestock production together with distribution of work oxen. Substantial investments in infrastructure (feeder roads, buildings, and boreholes) were made. The first part of Phase IV concentrated on strengthening of agricultural services but the second stage was to concentrate on rural infrastructure (Malawi Government, 1982). Nonetheless, in Phase IV of SLADD, there were many project components aimed at improving smallholder agriculture. These components included crop production, livestock improvement, horticulture development, women programs, and rural industries.

The main operations of the ADD concentrate on crop production, especially cotton and maize. Extension and credit services have been the main means through which crop production targets are achieved.

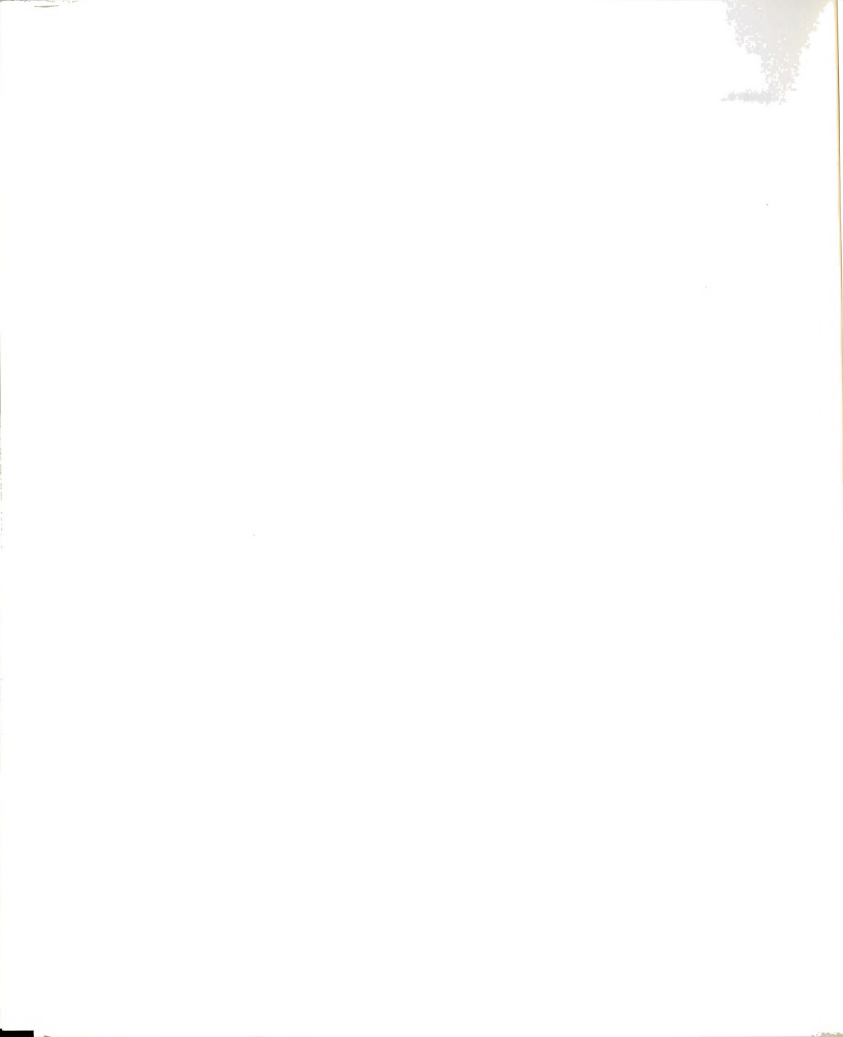


However, both the extension and credit systems, in their present design, seem to be only relevant to a small, relatively wealthy fraction of the smallholder community (Fischer et al., 1988).

Crop production improvement has been accompanied by land husbandry and farm mechanization as means to halt the deterioration of the agricultural resource base. These efforts have included promotion of *marker ridges, graded bunds*, storm drains, the use of compost manure, and the development of agro-forestry systems. The farm mechanization aspect has involved operation of a tractor unit and the promotion of ox-cultivation. The land husbandry unit has been largely inoperative, although the problems in the field are becoming even more pressing. Ox-cultivation has had some success, but recently seems to be stagnating. Let me describe the rice production improvement component, because it represented a new emphasis in SLADD.

In Malawi, rice production has been constrained by lack of efficient production methods at economically feasible costs, along with marketing and milling facilities. The estimated costs of fully irrigated schemes were as high as K750 per hectare in the early 1970s. Even using simple controlled gravity irrigation technology, the costs were K100 per hectare; excluding investments in marketing, milling, storage and transport (Malawi Government, 1971b). Besides, the major rice producing areas are in the Southern Region, in Chikwawa district, and in the Northern Region in Karonga district. In the SLADD area the important rice producing area is Nkhotakota.

In Phase IV of SLADD, four small self-help irrigation schemes were developed covering 284 ha. and 701 smallholders. The overall potential hectareage for irrigation schemes varies between 1,000 ha. and 10,000 ha. depending on level of technology. The lower estimate is considered more realistic given SLADD's financial, technological, and manpower capabilities. Three of the completed schemes are primarily rice schemes

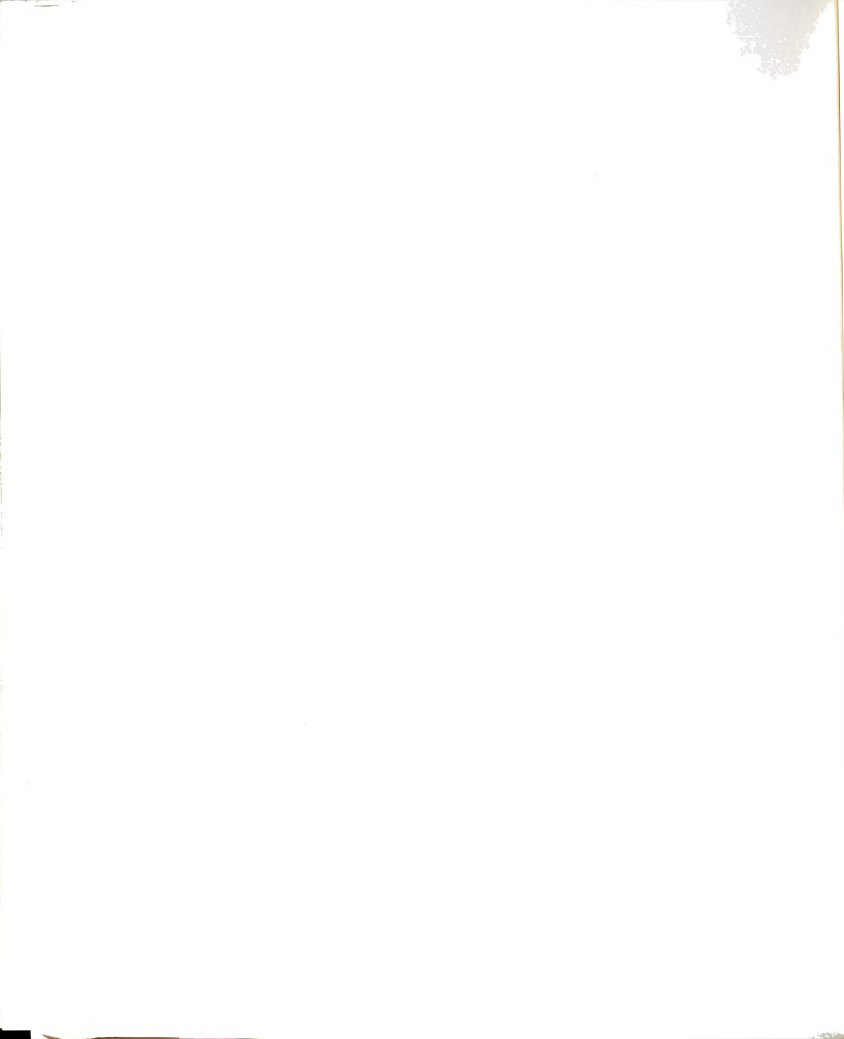


while the fourth one is a vegetable scheme.¹ Senga Bay and Lifuwu Extension Planning Areas (EPAs) were the only EPAs close to irrigation schemes (i.e. Ngolowindo and Lifuwu schemes) in this survey. These schemes have had a positive impact on income and production of those smallholder households involved (Fischer et al., 1988).

Livestock improvement in SLADD has concentrated on cattle. By 1988, there were 53,542 heads of cattle in the ADD owned by 10% of all the households. These cattle are served with 15 dip tanks for the control of tick-borne diseases. There is also a viral and bacterial disease control vaccination program. A cattle ranch at Kuti was developed in the early phases of SLADD to increase the size of the cattle herd in the ADD. The Ranch was also expected to produce steers for ox-training and heifers for breeding. By July 1988, the calving rate was 73% and the herd size was 1,072 heads.

About 40% of the households in SLADD have goats. Although goats outnumber cattle, inadequate attention has been paid to them and the other small livestock (sheep, pigs, and rabbits). In 1983, the Lifidzi cattle holding ground was converted into a Goat Breeding Center, as part of the Smallholder Goat Improvement Project. The objective of the Breeding Center is to produce genetically improved local goats for smallholders, improve goat management, and train both field staff and farmers. By 1988, there were 1,600 animals for breeding and 50 on-farm trials were being carried out with encouraging results. On the other hand, a great deal of effort was made, over the past twenty years, to improve poultry production by the introduction of the Mikolongwe *black austrope* to upgrade the indigenous flocks. I am not aware of any evaluations of these efforts. According to the SLADD Mid-Term Evaluation study, the livestock sector has played a rather minor role.

1. These schemes are Kasitu (gravity, 55 ha., rice, and involving 98 farmers); Mtandamula (gravity, 200 ha., rice/maize, and involving 440 farmers); Ngolowindo (groundwater, 15 ha., vegetables, and involving 144 farmers); and Lifuwu (lake pumped, 14 ha., rice, and involving 19 farmers).



In 1985/86, SLADD started a horticultural section within its establishment. The aim of the horticultural section is to promote the cultivation of vegetables and fruit trees in an effort to diversify production and increase winter cultivation. Activities of the section include extension activities, training, an operation of a fruit tree nursery. The Ngolowindo irrigation scheme referred to earlier is the only one operating on a semi-commercial basis. Vegetable schemes promise to be very important because they especially provide one of a few chances for women to generate income.

Approximately 30% of all households in SLADD are headed by women. A great deal of effort is made to improve the welfare of women through extension, training and credit. It is generally agreed in Malawi that the overall impact of these efforts is low. The inability to reach women is usually attributed to the women's economic deprivation and the high risks associated with credit packages. An exception has been the vegetable and fruit demonstration gardens, supported by the ADD's Horticultural Section, which have been beneficial to women. It is felt, among ADD officials, that more emphasis on the horticultural activities will benefit more women.

Rural industry is another of the many activities conducted by the SLADD. The objective of this unit is to disseminate knowledge with regard to income generating projects and appropriate technologies. It is interesting to note that, although there is a great deal of informal craft production (especially mats, pottery, brooms, sculpture, and furniture) in SLADD, the rural industry unit activities are mostly on bee and rabbit keeping. Tanning of goat skins, oil, soap, candle, and sisal/cement roof sheets production have been experimented with. The section has reached a very small section of the population. The unit would benefit from more organization, better planning and improved technical expertise.

5.4 Land Tenure

Because of lack of data, it is difficult to trace the development of the land tenure structure in the Salima ADD. In Phase IV of the Salima ADD a highly detailed land resource and suitability study was carried out. Fischer et al., (1988) reported that the study revealed that, apart from sub-regional population concentrations, land in general was not the major limiting factor for smallholder agriculture. Sixty-four percent of the total land area was classified as suitable for agriculture; the national figure as of 1980/81 was 56% (Malawi Government, 1982).

However, in terms of land under cultivation as a percentage of land suitable for agriculture, Salima cultivated 56% compared to the national average of 26%. Furthermore, in Salima the estate sub-sector claimed 16% of the cultivated area compared to the national average of nine percent (Mkandawire et al., 1990).

Data from Mkandawire et al. (1990) shows that in 1989 in Salima ADD, there were 1,621 estates covering 117,114 ha, averaging 72.2 ha. Of these 21% were less than 20 ha., 21% were between 20 and 30 ha, 24% between 30 and 50 ha., and 34% were 50 or more hectares. For the administrative district of Salima, there were a total of 713 estates operating a total of 35,000 ha. It must be noted that Mkandawire et al. figures include land for all the three RDPs of Salima ADD while Fischer's figures only included Salima and Bwanje Valley RDPs. In addition, 1987-89 were record years in the history of estate expansion in Malawi. A total of 8,108 estates were registered claiming 241,500 ha. of land; a 47% increase in leasehold estate land.

5.5 Population

The majority of the inhabitants of SLADD are Chewa, but the exact proportion is not known. However, some sections along the lakeshore are dominated by the Yao. In the survey area, the Yao dominated area are Traditional Authorities (TAs) Maganga, Bibi Kuluunda, and Ndindi. TAs

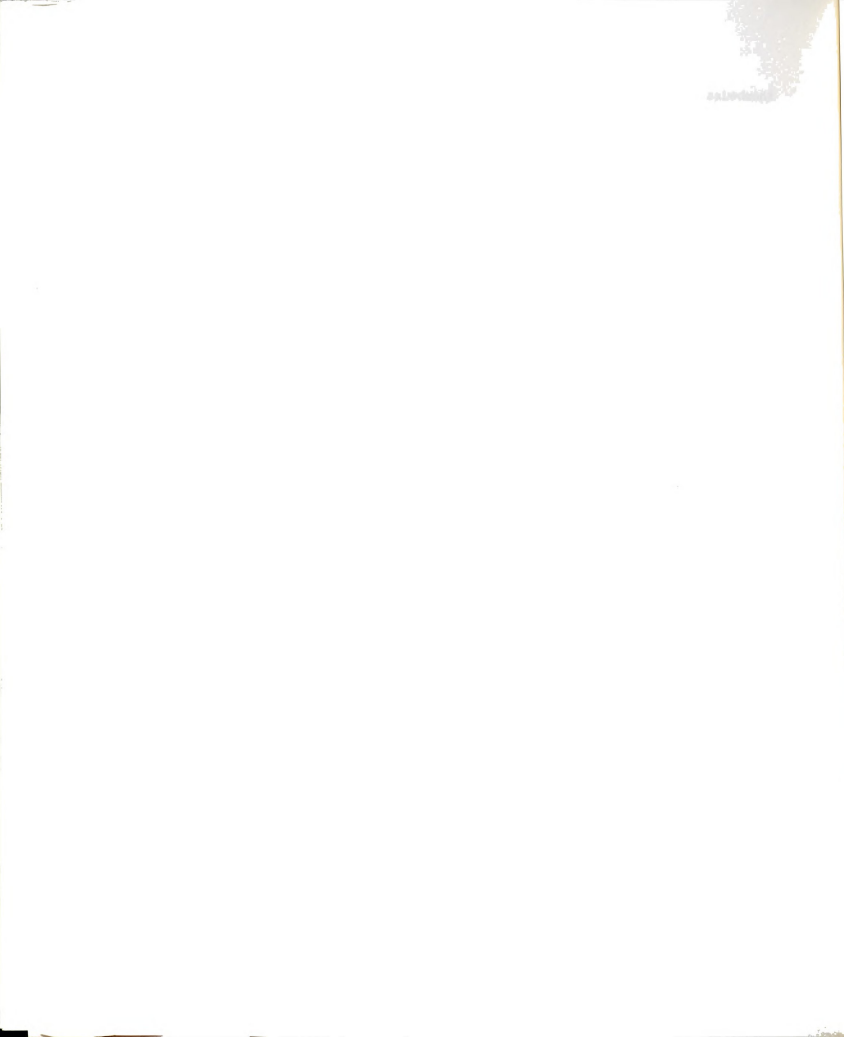
Khombedza and Mwadzama are predominantly Chewa. Traditional Authority Kachindamoto is a mixture of Chewa, Yao and Ngoni. Both the Yao and the Chewa ethnic groups are matrilineal and matrilocal. However, like most of the Central Region Chewa groups, in SLADD the practice of *chitengwa*,² discussed in Chapter 2, is more common than *chikamwani*. For this reason, the patriarchal influence of Gomani Chikuse Ngoni is not easy to isolate in Chief Kachindamoto's TA.

In the 1980/81 National Sample Survey of Agriculture (NSSA), the number of households in SLADD was estimated to be 76,600. At five members per household, the total population was approximately 383,000. In the NSSA sample, 62% of the households cultivated less than one hectare of land, 36% between one and three hectares, and two percent had three or more hectares. The overall man/land ratio was 5.7, with the highest man/land ratio (11.3) in the households cultivating under 0.5 hectares of land. Twenty-eight percent of the households were female-headed, and 83% of the female-headed households had holdings of less than one hectare compared to 53% of the male-headed households. Overall, in the NSSA sample of households, only 1.5% of the households heads were under 20 years of age, 47% were between 20 and 40 years of age, 31.5% were between 40 and 60 years, and 20% were 60 years and older.

5.6 Agro-Meteorological Conditions

Salima ADD lies on an altitude of 472-669M (or 1550-2200 ft.) above sea level on the lakeshores of lake Malawi. It is within the African Great Rift Valley. Generally, hydromorphic and calcimorphic alluvial soils (grey to dark brown) with some regosols (sandy soils) dominate the Salima lakeshore area (Nelson, 1975). Some variations are observed in soil types. In the Khombedza and Zidyana EPAs and some

2. See glossary for a full definition of *chitengwa* and *chikamwini*.



parts of Chipoka EPA, there are pockets of ferallitic soils and lithosols (yellowish red to red sandy soils) and some ferruginous soils and lithosols (dark red to reddish brown).

The topography includes low dissected hills with poor soils. A number of perennial rivers, with wide wet valley floors, cut across the valley on their way to the lake. Among the important ones are Linthipe (near Chipoka EPA), Lingadzi (Khombedza EPA), and Mkula (between Khombeza and Zidyana EPAs). The vegetation is composed of woodland, thicket and scrub types of low altitude Acacia seyal trees.

Climatically, most of the SLADD is dry and hot. The mean temperature is 27°C (81.5°F) with a range (i.e maximum minus minimum) of 10.0 - 12.5°C. The rainfall ranges between 82 and 103mm (32-40 in.) annually. The rain season is from November to about April and is mostly hot and humid. The months of May, June and July are winter-like i.e. cold and dry. The hot season is from August to November (Agnew and Stubbs, 1972).

Looking at the annual trends, maize crop production in the period immediately preceding the survey (1988-1989) may be characterized as above average and in recovery. Maize crop production declined from a high of 1,397,948 metric tons in 1984 to a low of 1,218,476 metric tons in 1987. In 1988, maize production increased to 1,426,894 metric tons and by 1989 the figure had risen to 1,520,057 metric tons.³ The decline in maize production from 1984 to 1987 was attributed to drought (Malawi Government, 1989b).

Although 1988 and 1989 looked like recovery years, agro-meteorological these were still very difficult agricultural seasons in some parts of the country. In 1988 there was a drought and a "mealy bug" attack on cassava (especially in the Northern Region). By December

3. When these figures are converted to per capita production, the per capita maize production in 1984 was 204 kilograms per person per year as compared to 187 kg/cap/year in 1989. Hence, maize production did not keep pace with the rate of population growth, and the 1989 production still represented a deficit.



662,225 people were estimated to have been affected by the drought and the "mealy bug" attack. In 1989 there were floods, tremors and cyclones and 147,786 people were affected. In SLADD, the total number of persons affected by the drought, the meal bug, the floods and the cyclones in both years was 191,000. Compared to the previous years, the agro-meteorological conditions in the study crop season (1989/90) were normal.

5.7 Sampling Frame

In my proposal, I planned to use registers of farmers at each Extension Planning Area (EPA) in the ADD as my sampling frame. The criterion for inclusion of a household in the sample was that the household should have at least one child under five years of age. The formula⁴ for determining the sample size is as follows:

$$n = K^2 R(100-R)/D^2$$

where n is the sample size to be estimated; K is the confidence interval or the critical region under the sampling distribution; D is the adopted margin of error; and R is the rate of malnutrition. I decided on a margin of error (D) of 10%; i.e. I was willing to overestimate the rate of malnutrition by 10%. I fixed my confidence interval (K) at 95% which corresponds to a critical region of 1.96 standard errors from the sample mean under the sampling distribution curve. The rate of malnutrition (R) was the one that I was interested in estimating. For determining the sample size, I used the NSSA rate of malnutrition as my estimate. In the 1980/81 survey, the NSSA data for SLADD showed that the first round (October/November) and second round (April/May) rates of malnutrition among under-five children were 64 and 54 percent, respectively. I adopted the upper estimate (64%) for my purposes. Substituting these values into the formula we get:

4. This formula is from Scott, C. 1985. Sampling for Monitoring and evaluation, The Word Bank, Washington D.C., p.20.



$$n = K^2 R(100-R)/D^2$$

$$n = 1.96^2(64)(100-64)/10^2$$

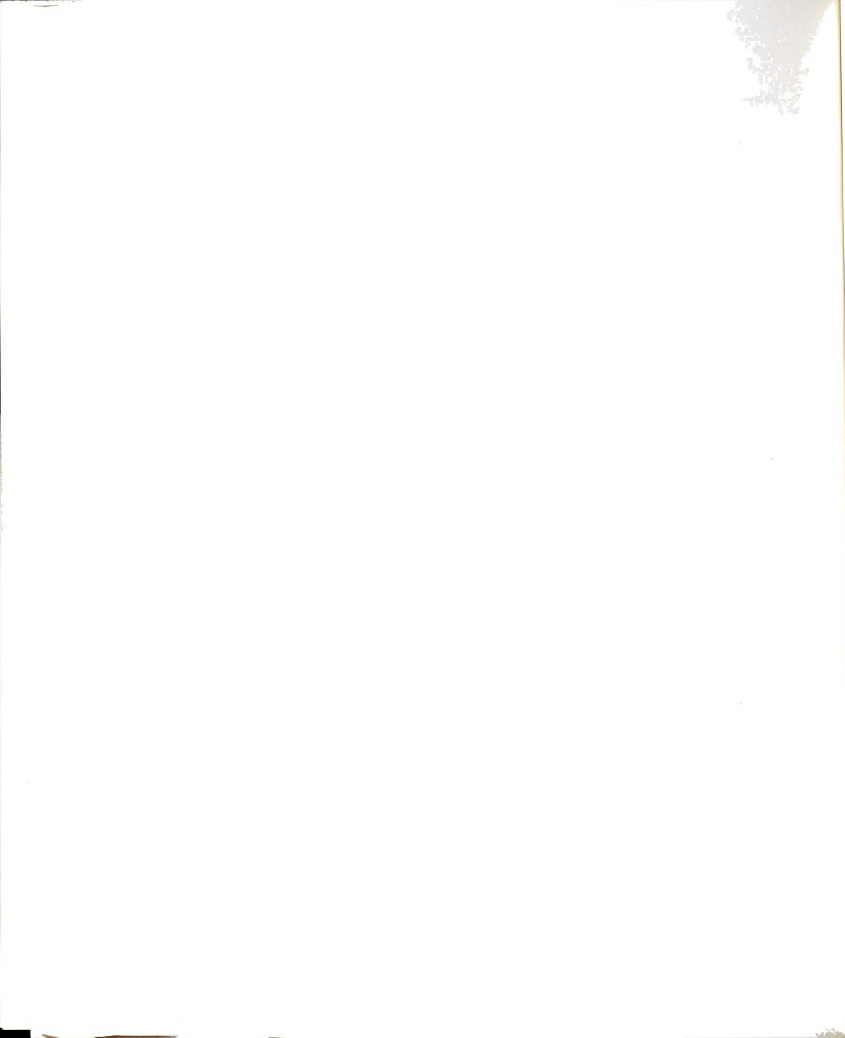
$$n = 88.5 \text{ households.}$$

When I was in the field, I was advised that the registers at the EPA offices were inaccurate because they contained only those households who are contacted by the Field Assistants (FAs). The FAs reach only a small fraction of the population of smallholder farmers. Consequently, I was encouraged to either develop my own sampling frame or use an existing one developed by any of the many agencies working in the area e.g. the ministries of health and agriculture. Because of delays in obtaining the research clearance, there was no time to construct my own sampling frame.

Fortunately, in SLADD, like in all the other ADDs, they have instituted what is known as the annual sample survey of agriculture (ASSA). The ASSAs are based on the National Sample Survey of Agriculture (NSSA) and gather information on household characteristics, labor availability, garden details, crops grown, crop yields, crop storage, income and expenditure, livestock, nutrition, and resources. These were aspects of agriculture which my research project was also concerned with. For this reason, I chose to use SLADD's ASSA sample for my research.

The decision to use an existing sample meant that I could not enforce the criterion of sampling only those households with under-five children. However, from the NSSA data, I discovered that approximately 50% of the households had children under five years of age. I decided that to obtain the estimated sample size of 88 households with under-five children, I needed to double the sample to a round figure of 200 households.

The ASSA sample is in clusters of 20 households each. Consequently, I needed 10 clusters to make up the 200 households. My sample included eight clusters (160 households) from Salima Rural



Development Project (RDP), one cluster (20 households) from Nkhotakota RDP, and another cluster (20 households) from Bwanje Valley RDP. In actual fact, a total of only 175 households were identified in the 10 clusters.

5.8 Research Design

As stated in Chapter 1, the objective of this study is to investigate the extent to which the integrated rural development projects (IRDPs) in Malawi have succeeded in modernizing the rural economy, and to evaluate the effects of the modernization process on poverty, food security, and nutrition among the smallholder farmers in Malawi. In Chapters 3 and 4, particular interest was on the structural/historical development of the agricultural sector and how modernization approach, through various types of state-initiated agricultural development programs and policies, affected the development of the smallholder sub-sector. These two chapters were concerned with the specific nature of the pre-capitalist social formations in Malawi and how capitalist modernization, through colonialism and post-colonial forces, shaped the development of smallholder agricultural production. It was argued, in these chapters, that state intervention through various land and labor policies and the IRDPs had adverse effects on the smallholder sub-sector in Malawi.

In Chapters 7 and 8, I concentrate on the impact of the post-independence IRDPs on the smallholders of one particular IRDP, Salima Agricultural Development Division (SLADD). I argue that the planning and implementation of the rural development projects (RDPs) in SLADD were premised on the same assumptions derived from the modernization model. These assumptions included the following: that smallholder agriculture is static, in equilibrium, subsistence-oriented, and at the traditional end of a traditional-modern continuum. The smallholder agricultural sector, therefore, needed to be modernized through the use of modern factors of production. The model predicted that such a change



would increase farmer income and the well-being of society as a whole, leading eventually to modernity. Commercialization was also usually taken to be part of the modernization process. Commercialization may be defined as the undermining of non-market ties whereby factors of production and subsistence are increasingly obtained through the market. In practice, commercialization involves introduction of cash crops for domestic and/or export markets (Binswanger and von Braun, 1991). The survey in SLADD focused on these assumptions as variables for analysis.

The independent variable was modernization as embodied in the rural development projects in Malawi. The variables comprising the operational definition of modernization included technology adoption (fertilizer, insecticides, hybrid seed, and husbandry practices), cash crop production, market involvement (credit use, product sold, etc). The dependent variable was poverty. Poverty was operationalized to mean food insecurity, low income, poor housing quality, high child morbidity, and poor nutritional status. Three indices were used to measure nutritional status, namely, weight-for-age, height-for-age, and weight-for-height.

Three surveys were conducted: 1) a baseline survey to document and analyze household composition, assets, land use, and demographic characteristics, at the beginning of the project; 2) continuous fortnightly interviews with household members to analyze incidence of child morbidity in those households where there were under-five children, income-generating production, and pattern of income expenditure over the entire study period; and 3) two anthropometry and morbidity surveys were conducted, on a sub-sample of 80 households with under-five children, two times during the study period in June and October. Data on agricultural credit, extension, and marketing was obtained from existing surveys.

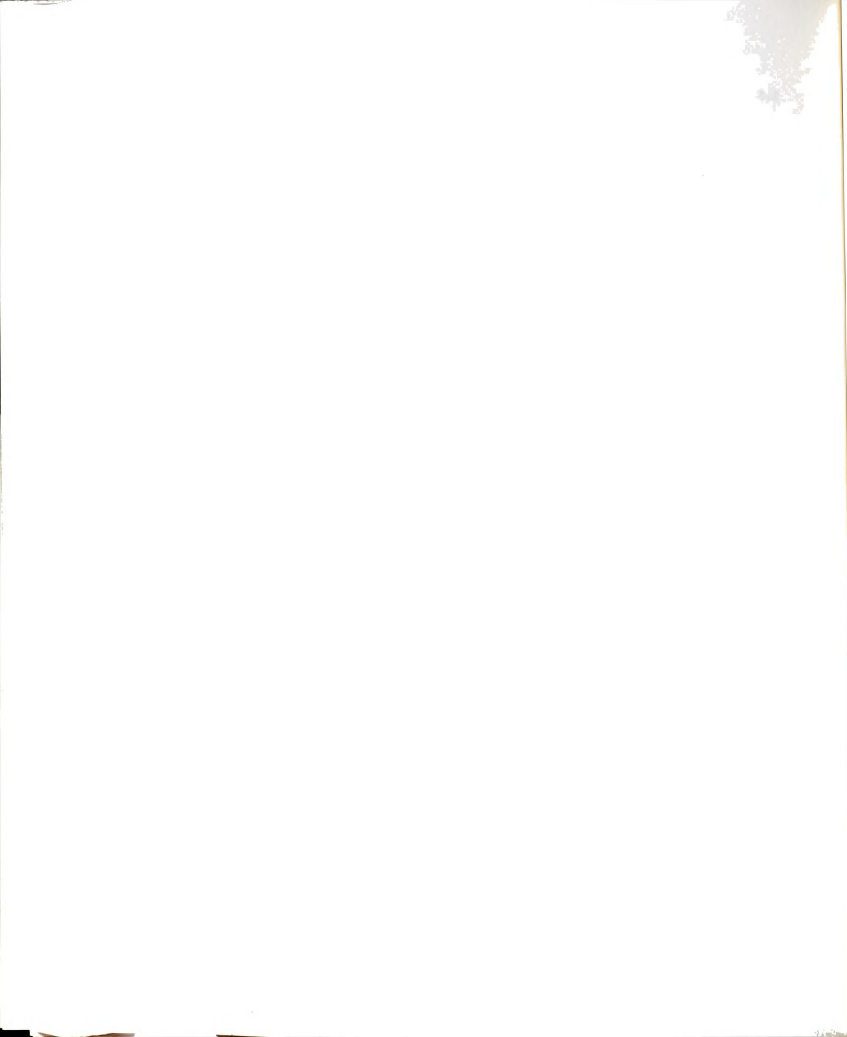
5.9 Instrumentation

The data gathering process was organized into three modules: the general baseline survey conducted at the beginning of the study; the fortnightly surveys conducted nine times during the research period; and the nutrition surveys conducted twice during the research period. The baseline survey was designed to elicit information on land holdings, crops grown the previous season, livestock kept, previous season's sources and approximate amounts of household income, agricultural implements and tools, other assets, land use, and demographic data.

The purpose of the fortnightly surveys was to collect information on two sets of variables: 1) sources and monetary values of household income and expenditure and 2) incidence of child morbidity in the sub-sample of households with under-five children. The sources of household income were determined to be from own production, labor sales, remittances, and the traditional welfare system. Likewise, it was reasoned that the main avenues of expenditure were own consumption, hiring labor, business investments, and donations to relatives, friends and neighbors. The child morbidity survey involved asking mothers of under-five children to indicate if their children were sick since they were last visited by the enumerator (in the previous two weeks), the type of sickness, and for how long.

For the nutritional status survey, anthropometric measurements of children under five years of age were taken. The measurements included the children's lengths or heights, weights, and ages. All the mothers remembered the exact ages of their children.

Supine lengths were measured on all children up to two years of age. For children older than two years or taller than 85 cm, standing height was measured. In either case, the measurements were that of a child in full extension, with bare feet. We used length-boards constructed with adjustable right angle blocks that easily slid along a clear plastic scale that could be read to the millimeter. For weight,



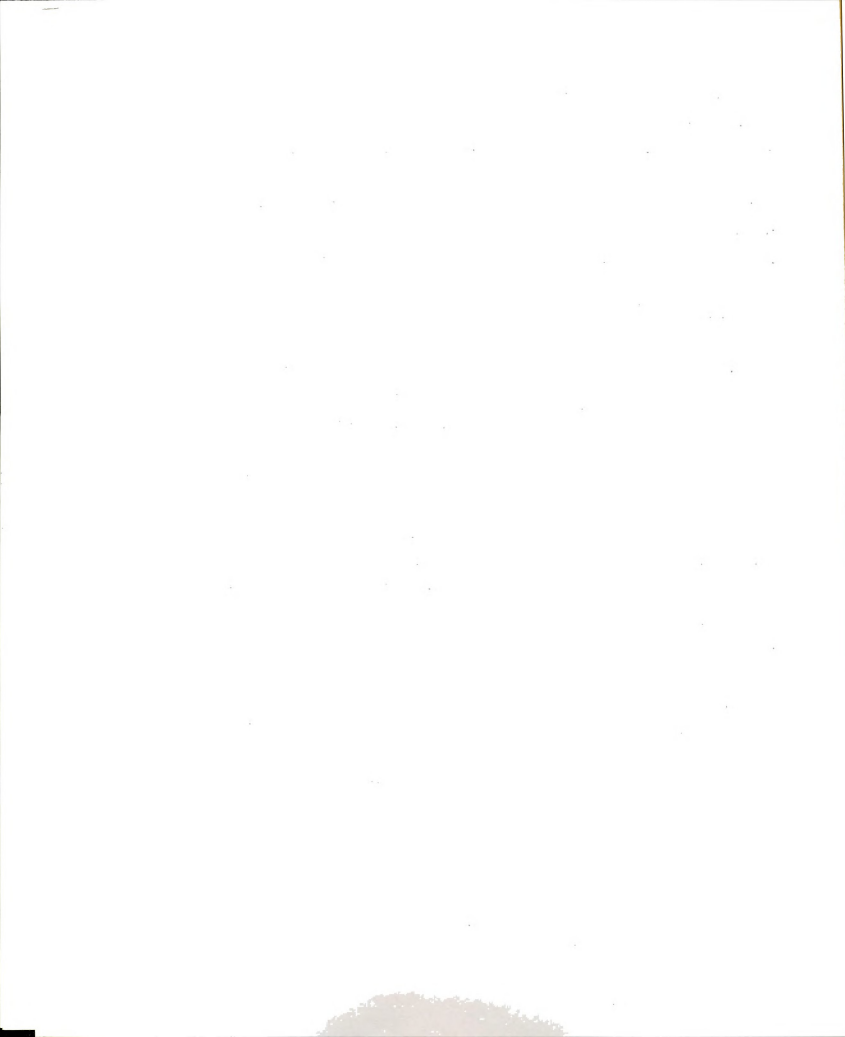
we used Salter hanging scales and accessories from the Home Economics and Human Nutrition (HEHN) Department at Bunda College of Agriculture. These scales were capable of taking weights up to 25 Kg and were calibrated to read to the nearest 0.1 Kg.

Enumerators took weights of children by hanging the scale on the cross-pole of the awning of the house. Where such supporting structures were not available, a nearby tree was used. All the surveys were conducted using interview schedules written in the local language (Chichewa). The respondents were identified by household number, village, Traditional Authority (TA), Extension Planning Area (EPA), and Rural Development Project (RDP).

5.10 Reliability and Validity

As noted already, the independent variable was modernization as embodied in the rural development projects in Malawi. Technology adoption (fertilizer, insecticides, hybrid seed, and husbandry practices) and cash crop production are the most important means by which the IRDPs attempt to modernize the smallholder sub-sector. Credit was also important because the adoption of certain technological packages required substantial financial investments. Furthermore, general involvement in the market was an important aspect of modernization because it indicated the breakdown of the traditional subsistence-oriented production system and the emergence of a modern market-oriented economic system.

Information on use of fertilizer, insecticides, and hybrid seed could accurately be recorded because these were major items on the household's expenditure. Besides, those households who used these technologies belong to farmers clubs and the clubs kept up-to-date records on the use of these items. The same was true with credit use. Husbandry practices involve time and methods of land preparation, time and methods of planting, weeding, etc. I did not record information on this variable because of lack of resources.



Market involvement was measured by the value of household production sold on the market and the value of consumption goods and services obtained from the market. In the general survey, respondents were asked to recall the amount of money they made from sales of field crops, *dimba*⁵ crops, livestock, crafts, and labor in the previous season. Since this required the respondent to recall transactions that occurred over a year's period, this information is only a rough approximation. In many cases the amounts given underestimated the actual market involvement because I believe respondents tended to remember only the major transactions and ignored the minor ones. For the same reason, the baseline interview schedule did not include questions on expenditure because the major sources of expenditure were on small items such as salt, soap, and maize milling which could not be recalled with any accuracy.

However, in the fortnightly interviews, the information was more accurate because it required recall of transactions only in the previous two weeks. These interviews covered sources and amounts of both income and expenditure. The first interviews were a little difficult but subsequent interviews were easier, as the respondents became familiar with the questionnaires and routinized the interviews. In many cases the respondents kept track of their financial transactions in anticipation of our visits.

In the fortnightly survey, a source of inaccuracy in income measurement is the fact that the information was collected for only half of the agricultural year, i.e. from May to October. As pointed out in the previous sections, the agricultural year in Malawi is divided into the rainy, cold, and dry seasons. The rainy season is from November to

5. A *dimba* is a *dambo* (valley floor or river bank that remains wet or moist during the dry season) garden commonly used by households for production of dry season crops, mostly vegetables, sugarcane, pulses, cassava, sweet-potatoes, and maize. It is also common to find citrus and other fruit trees in the *dimba*.



April, while the months of May, June and July are cold and dry. The months of August to November are hot and dry. These seasonal variations have important implications on economic activities of the smallholder farmers.

Because the survey was conducted during the winter and dry seasons, economic activities that occur during the rainy season were inevitably missed. Labor sales and hiring, crops produced, fishing, and crafts are all dependent on the season. First, since the rainy season is the peak labor period, the estates and other farmers would be expected to require extra labor during this time. The fact that the survey was conducted during the slack period may have the effect of underestimating the income from sales and expenditure on hiring of labor among the households. Salima ADD is an area with abundant mangoes whose season is November to January. Hence, income from mango fruit was not recorded in the fortnightly survey. Although fishing goes on year round, the types and the abundance of fish varies with the season.

It is not possible to determine what the effect of the seasonal variation is on the reported household income from fish business. The months of June to July (the cold season) are not the most favorable months for fishing. On the other hand, the dry season (August to November) are good fishing months, being especially favorable with respect to fish processing. The best catches, however, are during the rainy season but the fish processing conditions are most unfavorable at this time. The survey period captured the intermediate season and, therefore, may be considered representative of the average fish business activity.

With respect to field crops, *dimba* crops, and crafts production, the survey captured the greatest portion of the activity in these economic areas. The survey was conducted towards the end of the harvest period of most field crops, the peak period of *dimba* gardening, and also the most active period for crafts. Apart from the underestimation of

income from labor and mango fruit sales and expenditure on labor hiring, the incomes and expenditures in this survey are reasonable annual estimates of the average incomes and expenditures on the items of reference.

The dependent variable was poverty. Poverty was operationalized to mean food insecurity, low income, poor housing quality, high child morbidity, and poor nutritional status. Household food security was defined as the ability of the household to access food in sufficient quantities for the requirements of its members throughout the year. The main factors affecting this ability are own production, household income, hunting and gathering, remittances, and the community welfare system (the tradition of mutual obligation). On own production I simply asked the respondents whether the food they produced was sufficient to last them until the next harvest. Of course, the best way to handle this variable is to measure the actual amount produced in the year but I had neither the time nor the financial resource to do that.

All incomes from all sources were recorded in both the baseline survey and during the fortnightly survey. The limitations of these estimates have already been discussed. In the fortnightly survey, respondents were asked to indicate all items from hunting, gleanings, remittances, and gifts from relatives and friends. Housing quality was measured in terms of type of house (roofing, wall, and floor materials), number of rooms, and the surrounding environment (presence of a latrine, trash pit, bath house, and general cleanliness). Morbidity was measured directly, by asking the mother of an under-five child to report to the enumerator any illnesses the child suffered and the duration of the sickness.

Protein-energy-malnutrition (PEM) is one of the most important global health problems and affects large numbers of children in developing countries (Demayer, 1976; and Waterlow et al., 1977). It is widely accepted that for practical purposes anthropometry is the most

useful tool for assessing the PEM status of children (World Health Organization, 1986). The other forms of malnutrition are iron deficiency anemia, xerophthalmia (or vitamin A deficiency) which is a leading cause of childhood blindness, and endemic goiter and cretinism which are due to iodine deficiency. This study only examined PEM using anthropometric measurements.

Gomez et al. (1956) proposed the assessment of nutritional status of children using the deficit in weight-for-age. Until the early 1970s this was the most frequently used index for assessing nutritional status of children. In 1976, an FAO/UNICEF/WHO Expert Committee on Nutritional Surveillance recommended the use of height-for-age and weight-for-height as primary indices of nutritional status in children.

Weight-for-age values are used to indicate underweight at an arbitrary chosen cut-off point. For instance, Steinhoff et al. (1986) used a cut-off point of <75% of the median weight-for-age value. Children whose weight was <75% of the median weight-for-age value were thus considered underweight. In Malawi, the National Statistical Office used <80% of the median weight-for-age value of the reference group⁶ in the National Sample Survey of Agriculture of 1980/81. But the problem with weight-for-age as an index of malnutrition is that it does not distinguish between acute and chronic, or present and past, malnutrition (Waterlow et al., 1977). This index does not differentiate thinness from shortness.

Waterlow et al. (1977) recommended that for the assessment of nutritional status in cross-sectional studies, primary reliance should be placed on weight-for-height as an indicator of the present state of nutrition and on height-for-age as an indicator of past nutrition.

6. NSO uses the US National Academy of Science charts as the reference group.

However, the authors observed that weight-for-age as well as height-for-age were useful indices when serial measurements are made, as in clinics for children under five years of age.

In addition, weight-for-age was considered particularly useful in children under one year old and, if length measurements are not performed accurately, weight-for-age may be the most valid index. The terms stunting (stunted), wasting (wasted), acute malnutrition, and chronic malnutrition have been developed to serve as names for different malnutrition types. Stunting signifies slowing in skeletal growth (WHO, 1986). The growth rate may be reduced from birth, but a significant degree of stunting, representing the accumulated consequences of retarded growth, may not be evident for some years. While stunting represents a process, the term stunted implies an end-result.

Wasting indicates a deficit in tissue and fat mass compared with the amount expected in a child of the same height or length. Like stunting, wasting represents a process and wasted signifies an end-result. Wasting is sometimes referred to as thinness, while stunting is shortness. Terms such as acute malnutrition have been used to refer to wasting and chronic malnutrition for stunting. WHO (1986) has observed that acute malnutrition and chronic malnutrition are not direct observations but deductions and may not always be correct.

It is important to distinguish the two biological processes because, although they tend to be associated, their association has not been shown to be statistically significant (Keller and Fillmore, 1983). The prevalence of wasting is greatest between 12 and 24 months of age, when dietary deficiencies are common and diarrhoeal diseases more frequent, and tends to decrease later (WHO, 1986). By contrast, the prevalence of stunting increases over time up to the age of 24 or 36 months and then tends to level off. This observation is important. It cautions against the tendency to conclude that since the prevalence of stunting in a population of children is greater at four than at two

years, then more four-year-old children are malnourished. Such a conclusion may be erroneous since the prevalence may be greater simply because the process of stunting has been continuing for a longer period.

Inter-enumerator differences in anthropometric measurements usually result in large measurement errors. Care was exercised to minimize these errors. Habicht (1972) developed a set of standardized exercises in an attempt to minimize inter-enumerator measurement errors. These exercises were adapted for this study. During the training period and the pilot study, enumerators were asked to take several measurements of the same children. Variances were calculated for each enumerator and child measured, and these variances were used to indicate the amount of both the accuracy of the enumerators and the inter-enumerator error. By the start of the survey, the enumerator measurement errors had been minimized.

Since the number of enumerators, training, and experience are the major determinants of inter-observer error, the survey team was limited to five enumerators. These enumerators received adequate training at Bunda College Clinic under the supervision of Professor Beatrice Mtimuni and the two nurses of the College Clinic, Mrs Kalengamaliro and Sister Chirwa. After the training the enumerators conducted a pilot survey prior to the actual project survey.

5.11 Work Plan

This study was scheduled to be carried out between January and October, 1990. However, problems were encountered in getting the National Research Council of Malawi to clear the project and it was not approved until March, 1990. The survey started sometime in May, 1990. Prior to the actual beginning of the survey, organizational meetings were held with the SLADD's Programme Manager (PM), the Project Officers (POs), the Development Officers (DOs), party leaders, chiefs and village headmen of the villages concerned. These meetings were held to brief the various leaders on the project, and consult with them about the best

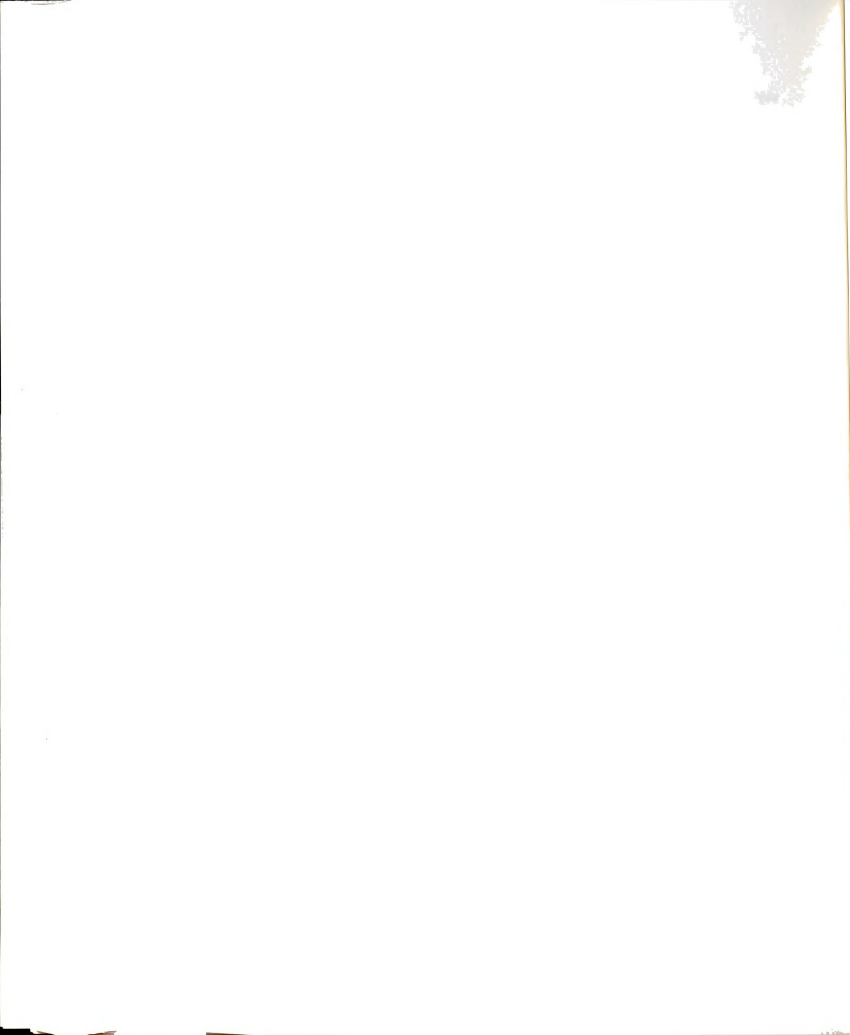
way to proceed. I operated from Bunda College of Agriculture where I work as a lecturer in Agricultural Extension and Rural Sociology. Bunda College of Agriculture provided me with office space and housing.

5.12 Problems in Conducting the Study

There were several problems in the implementation of the project. The first, as noted above, was the difficulty in obtaining research clearance. This problem compelled us to cut down the number of anthropometrical surveys to two instead of the planned three. The three anthropometric surveys were designed to yield information on the seasonal variability of nutritional status of under-five children. However, the general nutritional status of the children could still be obtained from the two surveys.

The second problem occurred in July of 1990, when one of my research assistants suddenly became sick and could not continue the survey. It was too late by this time to recruit and train a replacement. As a result, the two enumeration areas for which he was responsible were abandoned. This had the effect of reducing my sample to 139 households.

Thirdly, smallholder farmers in Lifuwu, Senga Bay, and Golomoti EPAs had temporarily moved and settled in their rice fields to guard the crop against damage by hippos. The fields were situated as far away as 15 km from the villages. The foot-paths to the fields were marshy and, in some cases, the water level was still as high as three feet. Apart from the fact that it was difficult to wade 7-15 km of bushy foot-paths, the major problem was that the gardens belonged to people coming from



different villages.⁷ As a result, farmers on contiguous gardens did not know each other because they came from different villages. This made the identification of our respondents very difficult but had no effect on the quality of the data collected.

7. In Lifuwu and Senga Bay EPAs, a number of farmers were participants in the Lifuwu Rice Irrigation scheme noted above, whereas in Golomoti EPA there is no rice scheme. In both situations, however, rice cultivation is in *dambo* areas (valley floors or river banks that remain wet or moist during the dry season). Most *dambo* areas are not cultivated because they are not suitable for rainy season cultivation of crops other than paddy rice. To obtain a piece of the *dambo* for cultivation, one only needs to get permission from the relevant village headman.

CHAPTER 6

RESULTS AND DISCUSSION

The data were analyzed in two stages. The first stage analyses involved simple descriptive statistics aimed at showing the general picture of the results of the surveys. In the second stage, more elaborate statistical procedures were used such as correlations to explore the main variables at work, investigate their relationships and test hypotheses concerning the relationships. I begin with a look at the descriptive statistics of the general survey.

6.1 The Baseline Survey

The analyses that follow are from data from the baseline. In this section I outline the current socio-demographic and agricultural situation after more than 20 years of Germany's and the EEC's involvement in development work in Salima ADD. The population of the ADD was 86,552 in 1966 with a density of 44 persons per km². In 1987, the population was estimated at 188,255 with a density of 86 persons per km².

6.1.1 Population Characteristics and Land Tenure

In the 1987-1996 statement of development policies, the Malawi Government (1987c) identified three groups of smallholder producers as follows:

the 35 per cent of smallholders with less than 0.7 hectares who cannot, with present technology, satisfy their own subsistence requirements from their holdings and even with modern technology these will remain dependent on off-farm income; the 40% per cent smallholders with between 0.7 and 1.5 hectares who, with current technology, normally satisfy their subsistence requirements and have the potential for modest cash crop sales; and the remaining 25 per cent with over 1.5 hectares who are commonly already involved in cash cropping.

In SLADD land has become scarcer over the past decade. The 1987 Staple Food Availability Survey classified land holdings into "small" (i.e. less than one hectare) and "large" (i.e. one hectare or larger).

Using this classification, 60% of the households in SLADD had "small" land holdings (Malawi Government, 1987c). In Table 6.1, the same classification was used. As can be observed in the Table, 58% of the households in this survey had "small" holdings. In this study an attempt was made to classify the holdings using the three categories identified by the government. The results are summarized in Table 6.2.

Table 6.1 Households by Land Size of Holding.

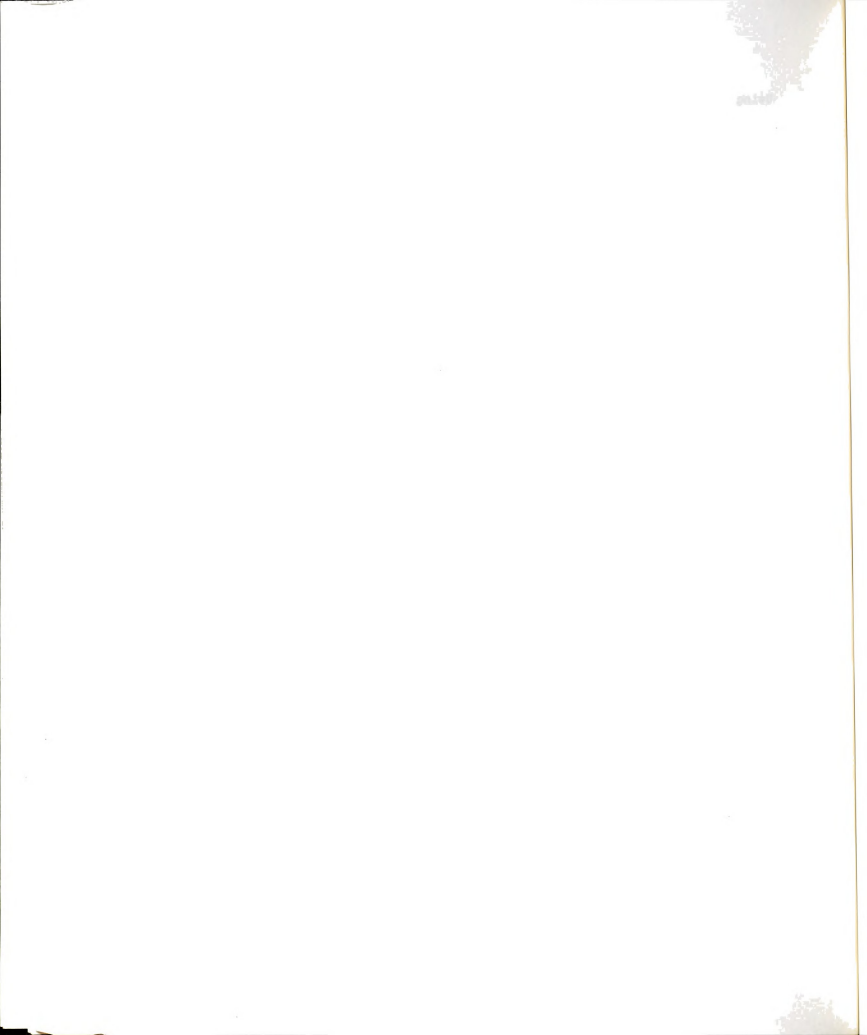
Holding size	# of households	Percentage
"Small"	38	58
"Large"	28	42
Total	66	100

In general, the mean holding size for female-headed households¹ was smaller than for the male-headed households. As may be observed from Table 6.2, female-headed households were over-represented in the category of less than 0.7 ha. Therefore, it was expected that female-headed households would be over-represented among the food insecure households. According to the sample findings, approximately 39% of the respondents have been residents of Salima for over 20 years (Table 6.3).

Table 6.2 Size of Landholding by Gender of Head of Household.

Holding Size	Sex of Head of Household		
	Male	Female	Total
Less than 0.7 ha.	29.5%	45.5%	34.8%
0.7 to 1.5 ha.	50.0	31.8	43.9
More than 1.5 ha.	20.5	22.7	21.2
Total	100.0	100.0	99.9
Mean (hectares)	1.13%	0.90%	1.06%

1. Female-headed households are of two main types: those whose heads belong to polygamous families and those whose heads, for one reason or another, have no husbands resident in the house. The latter may be on separation, divorced, widowed, or never married.



This implies that 61% of the population were either born or became residents of Salima only after independence. The mean number of years of residential status was 13. As matter of fact, 45% of the respondents have been residents of Salima for only ten years or less. Further analysis indicated that respondents in the upper (20 years or more) and lower (five years or less) residential categories had larger mean landholdings, 1.1 ha. and 1.3 ha. respectively, than those whose residential status was between 6 to 20 years. The larger holdings among the recent settlers may be explained by the fact that by the early 1980s land in SLADD had become scarcer. Access to land was quite competitive and village headmen distributed land commensurate with tips. Hence, only those who could afford generous tips to the village headmen were able to obtain land. On the other hand, in the 1960s and 1970s, Salima was sparsely populated and chiefs and village headmen gave land to everyone who migrated. However, it possible that even though people acquired sufficient land, by the late 1980s such holdings had been subdivided among children. The larger holdings among the those residents who have been in SLADD 20 years or longer can be explained by the fact they settled in the area at a time when land was unlimited.

Table 6.3 Years of Residence in the Village.

Years	Sample Households	Percentage
< 1	2	1.4%
1-5	24	17.4
6-10	36	26.1
11-15	12	8.7
16-20	10	7.2
> 20	54	39.1
Total	138	100.0%

Education does not appear to have any effect on the size of landholding. On the other hand, age is clearly important. Up to 60

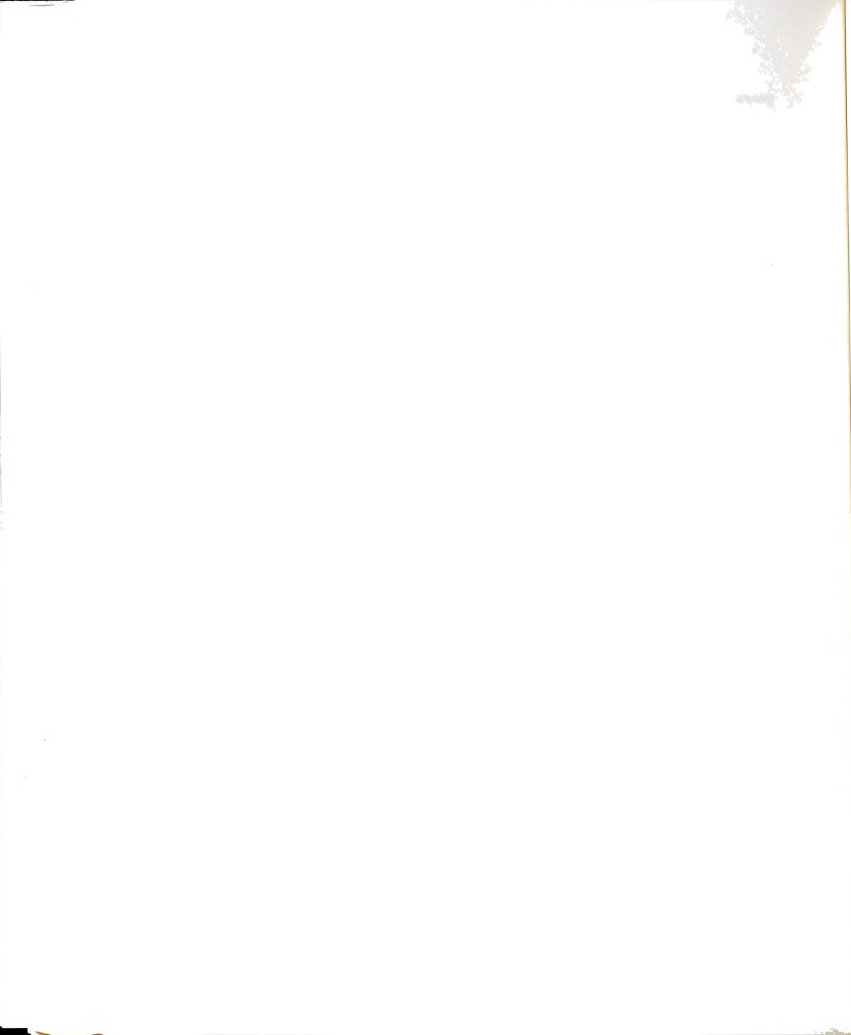
years of age, the relationship between age and holding size is positive and linear (Table 6.4). From 61 years of age on, the relationship appears reversed, i.e. the older households (age over 60) have smaller holdings. This is possibly due to redistribution of land by the older people to their children. Thirty-five percent of the sample households interviewed were female-headed. Eighty-two percent of the male-headed households are monogamous. Among the female-headed households, 24% belonged to polygamous families, 27% were monogamous with their husbands away, and 49% were single-headed.

Table 6.4 Size of Holding by Age of Household Head.

Age	Holding size (ha)	Percentage Households
< 21	1.0	3.2%
21-30	1.3	25.8
31-40	1.4	21.0
41-50	1.8	14.5
51-60	1.9	17.4
61-70	1.4	8.1
71-80	1.5	9.7
Total	-	99.7%

The average number of members per household, household size, was 5.1. These were mostly nuclear families comprising of parents and their children with an occasional grandchild or niece/nephew. Only in two cases did the family extend to the head of household's or spouse's parents. Households with landholdings 3 ha. or higher had smaller families (mean = 2.0 members) than the households with less than 3 ha. of landholding (range 4.6 to 5.6 members). This is because they are older and their children have moved to form their own households.

As said already, 24% of these were in polygamous marriages, 27% were in monogamous marriages, with their husbands away most of the time, and the remaining 49% were single-headed households. The female-headed



households had mean landholdings lower than the male-headed ones, 0.9 and 1.1 ha. respectively. The level of education, measured in terms of standard (grade) completed, was low, averaging approximately standard two. As would be expected in Malawi, the male-heads of households averaged 2.2 standards compared to 1.1 for the female heads of households. It is likely that this difference is insignificant with regard to functional literacy.

Seventy-two percent of the sample of respondents knew their dates of birth. The mean age was 44 years. Only four percent were less than 21 years of age. Forty-two percent were between 20 and 40 years, 37% between 40 and 60, and 17% were 60 years or older. Eighty-five percent of the respondents indicated that farming was their primary occupation. Five percent were fishmongers, two percent were business-persons, and the rest were in other occupations.

6.1.2 Housing and Sanitation

The majority (64%) of the houses were of rammed earth² or poles/mud. Thirty percent are of the *adobe* (unburnt bricks) type and six percent are burnt brick houses. Ninety-nine percent had thatch roofs with earthen floors. Only two percent were iron-roofed with cement flooring. Most (55%) of the houses were one-roomed, 29% were two-roomed, and only 16% had 3 rooms or more. The mean number of rooms was 1.6. Although there was a relationship between the size of the household and the number of rooms the main house had, the relationship was not strong. This is not surprising since it is customary in traditional Malawi to house adult children in separate dwellings. However, 65% of the households had no other types of dwellings. Twenty percent had kitchens, and the rest had other dwellings such as *gowelo* (children's dwelling) or animals' houses. A majority (65%) had no latrines, 76% had no trash-pit, and 54% had a change-house (a bath hut).

2. The walls are built by driving moist soil (preferably from an anthill) into a wooden mould with a pestle-like club, one layer at a time until the walls reach the desired height.

Visual quality assessment of the houses conducted by the enumerators rated the houses generally average (42%). Nineteen percent were rated clean and 39% were rated dilapidated. A majority (70%) of the people in the sample said they sleep on mats, 15% on beds, 14% on the floor, and two percent used some other bedding material such as hides. The commonest source of drinking water was the well; mentioned by 42% of the respondents. Only 34% had access to tap water and 24% obtained their drinking water from either a river or the lake. Ninety-four percent said they did not treat (boil) their drinking water and only seven percent had ever attended any health education course.

6.1.3 Farming Systems

The average number of gardens per household was 2.2 with 45% of the sample households indicating possession of two gardens. Twenty-four percent had only one garden, 22% had three gardens, and the rest had nine or more. Of those households who knew the total hectareage of their gardens, the mean landholding size was 1.1 ha. A majority of the households (76%) grew local maize because this is the staple food (Table 6.5). Only three percent of the households reported to grow hybrid maize. Rice was the second important crop grown by 62% of the households, followed by cassava grown by 28% of the households. The most important cash crop was cotton grown by 28% of the households. Only one percent of the households grew tobacco as a cash crop. Other crops grown were groundnuts, sweet-potatoes, cowpeas and finger-millet.

There was a great deal of variation in the cropping patterns among EPAs. As Table 6.5 shows, Khombedza, Zidyana and Senga Bay EPAs were more diversified in cropping patterns than Lifuwu EPA. Lifuwu EPA relied on the single crop of rice. Data was incomplete on the other EPAs, but the partial information indicated that cropping patterns in the other EPAs emphasized maize followed by rice.

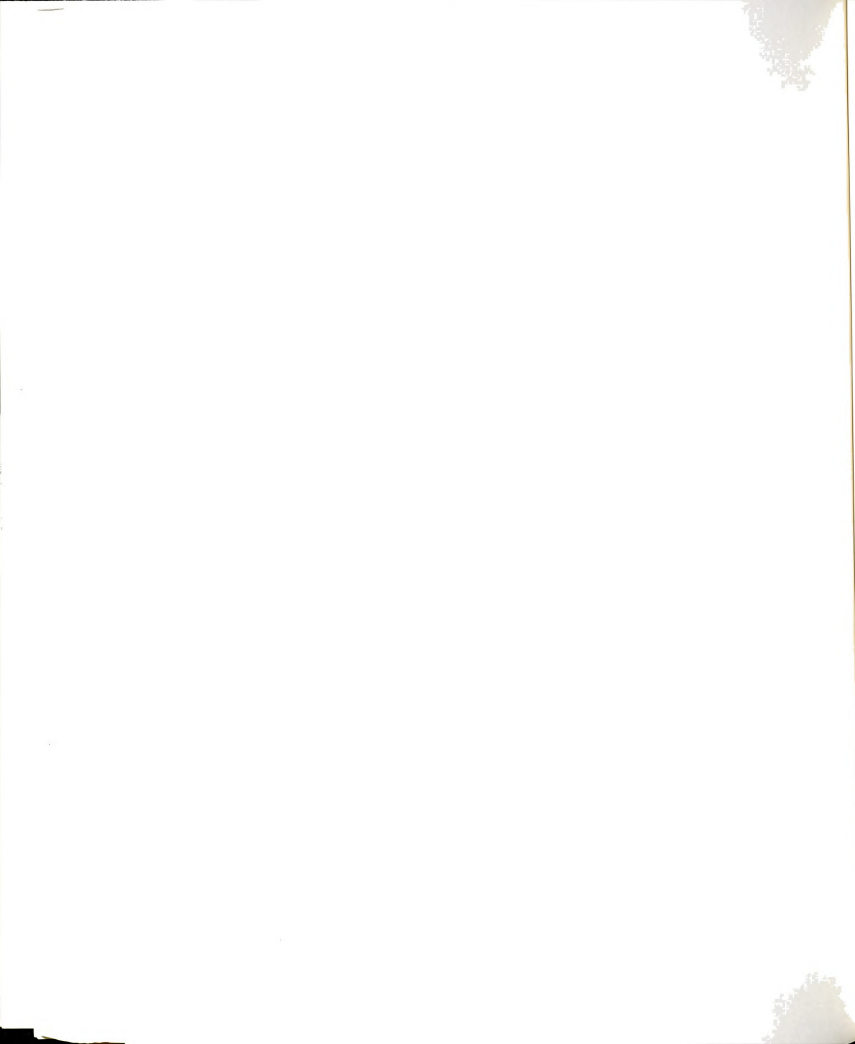
Other crops were inter-cropped with the main food or cash crops. These included *mphonda* (an edible type of gourd), cucumber, *misale* (or sorgo³), watermelon, and pumpkins. Thirty percent of the respondents said they owned a *dimba* garden in which they grew dry season drops such as beans, pumpkins, rice, sugarcane, tomatoes, mustard, and sweet-potatoes. Of these households with *dimba* gardens, 39% grew beans in the *dimba*. A good number of those households with *dimba* gardens also had fruit trees such as mango, papaya, banana, guava, oranges, and lemons. Out of the sample of 139 households, 48% had fruit trees. The common tree combinations were mango, mango/banana, banana/papaya, and banana/papaya/mango.

Table 6.5 Variation in Cropping Patterns by EPA.

Crops grown	% Total (N=70)	Senga Bay	Lifuwu	Khombedza	Zidyana
Local maize	76%	100%	14%	94%	95%
Rice	62	29	100	39	80
Cotton	28	0	0	57	55
Cassava	28	88	7	0	15
Sweet-potatoes	4	12	0	0	0
Cowpeas	3	12	0	0	0
Hybrid Maize	3	6	7	0	0
Tobacco	1	0	0	5	0
Finger-millet	1%	0%	0%	0%	5%

These smallholder farmers kept various kinds of livestock. Seventy-one percent had at least one kind of livestock and some had combinations. The chicken was the most common animal, owned by 61% of the sample households (Table 6.6), and each household averaged 8.4 chickens. Goats were second in popularity, averaging four per household and were owned by 25% of the households. Only 12% of the households had

3. A variety of sorghum grown for its cane. The cane produces sweet and watery juice which is sucked in the same way sugarcane is sucked.



cattle, averaging nine cattle per household. Even though SLADD had an ox cultivation campaign, less than one percent of the households owned oxen. The livestock ownership percentages compared well with the 1980/81 National Sample Survey of Agriculture (NSSA) figures. The percentages of households keeping livestock in SLADD as reported by the 1980/81 NSAA survey were: any livestock, 79%; poultry, 71%; goats, 28%, cattle, 5%, and work oxen, 1.4%.

The proportion of households keeping livestock varied by EPA. Khombedza and Mtakataka EPAs had the largest proportions of households keeping livestock, whereas livestock ownership was least popular in Senga Bay and Chipoka EPAs. More households raised goats in Khombedza and Mtakataka than any other EPAs. On the other hand, no households owned goats in Lifuwu and Senga Bay, and just a small percentage did in Golomoti. Other livestock owned were pigs, sheep, ducks, and pigeons.

Table 6.6 Percentage of Households Raising Livestock by EPA.

Animal	Extension Planning Areas							
	Sample (N=139)	Senga Bay	Lifuwu	Khombedza	Zidyana	Chipoka	Mtakataka	Golo-moti
Chicken	61	47	79	72	65	35	85	77
Goats	25	0	0	56	25	25	50	8
Cattle	12	35	21	0	10	0	25	8
Sheep	2	6	7	0	0	3	0	0
Pig	2	6	7	0	0	3	0	0
Ducks	3	6	0	6	0	0	10	0
Pigeons	< 1	0	0	6	0	0	0	0
Oxen	< 1	0	0	6	0	0	0	0
Any Animal	71	65	86	94	70	49	90	85

6.1.4 Agricultural tools and implements

The basic tool of cultivation was the hand hoe. Not surprisingly, 96% of the households owned at least one hoe (Table 6.7). The mean ownership of hoes was 2.5 hoes per household. The majority (52%) had

two hoes, only 13% have 1 hoe, and the remaining 35% had three or more hoes per household. The sickle, machete/panga, and axe were owned by 55%, 63%, and 49% of the households, respectively, averaging 1 sickle, 1 machete, and 1 axe per household. Only two percent of the households indicated that they had canoes, six percent had fishing nets, and another six percent had fishing hooks. Only 10% of the households owned bicycles. As with work oxen, no household reported owning an ox cart, or plough, or ridger. Furthermore, even though 28% of the households grew cotton, none reported ownership of cotton sprayers.

Table 6.7 Ownership of Tools and Implements.

Tool/Implement	Percent households	Mean # of tools
Hoes	96%	2.5
Machetes/pangas	63	1.2
Sickles	55	1.2
Axes	49	1.2
Canoes	2	1.0
Fishing nets	6	1.0
Hooks	6	12.0
Bicycles	10	1.0

6.1.5 Food security

As early as May, some households had already run out of food. When asked whether the food they harvested was enough to last them until the next season, 85% said it was not, 13% said it was, and two percent were not sure (Table 6.8). There were households that did not harvest anything from their gardens. By September all my research assistants

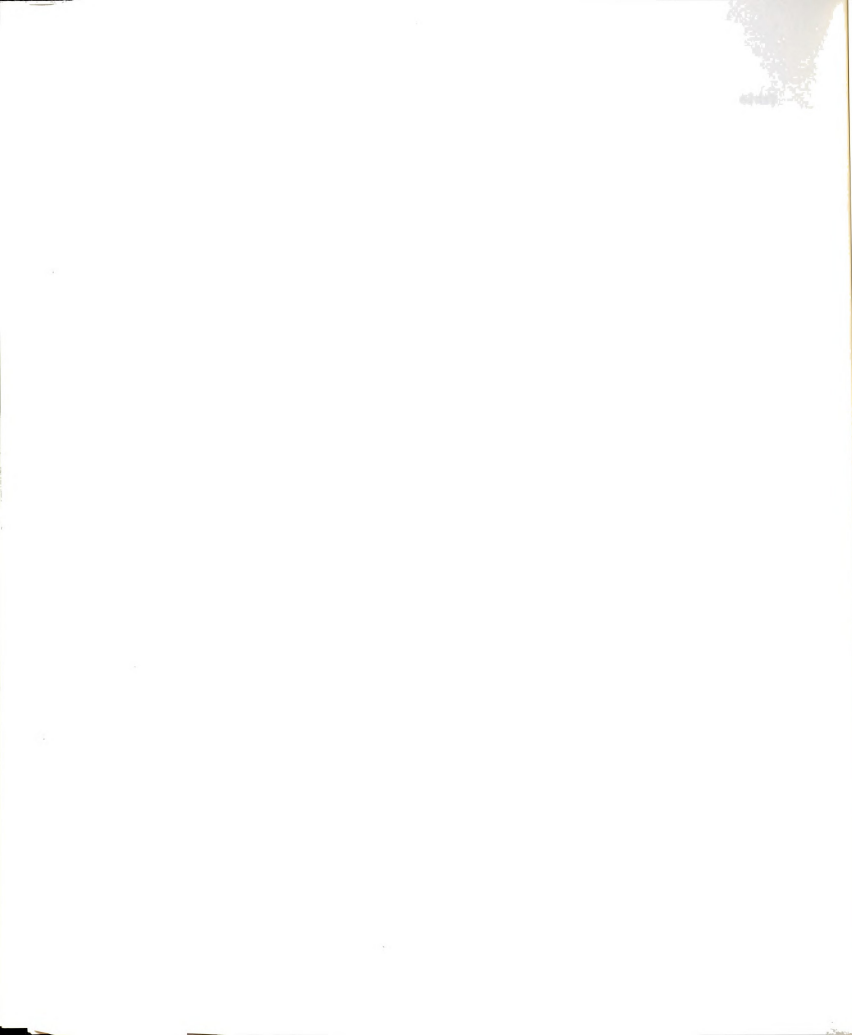
Table 6.8 Food Sufficiency of Household by RDP.

RDP	Number	Insufficient harvest	Sufficient harvest	Not sure
Salima	87	85%	12%	3%
Nkhotakota	19	74	26	0
Bwanje Valley	33	91	9	0
Total	139	85	13	2

reported that most households were running out of food stocks.⁴ "They simply tell us that they have nothing to eat," lamented one of my enumerators. "I think that if indeed what these farmers tell us is true, then many of them will starve to death by the end of December if nothing is done to provide them with food" he concluded.

Climatically, 1989/90 was a normal agricultural season. Food insecurity is a chronic problem in SLADD. One possible explanation for this is the smallness of the land holdings. As noted earlier, the SLADD's 1987 Staple Food Availability Survey, indicated that 60% of the households in SLADD had small land holdings (Malawi Government, 1987c). Overall, seventy-five percent of all the households had not harvested food sufficient to last until the next harvest. In the Salima RDP, where 62% of my sample came from, the Staple Food Availability Survey

4. The key issue regarding whether or not one should take reports of households running out of food as early as May seriously is the concept of food itself. In Malawi, food is synonymous with maize. When one has no maize, they have, by definition, run out of food, except in those areas where cassava or plantain is the ingredient for preparing *nsima* (porridge made from maize flour). Of course, cassava and plantain are becoming less important in the diets of most Malawians as maize is being introduced in areas where it was not previously grown. Many people now prefer *ufa* (maize flour) to *kandoole* (cassava flour). *Ufa* is prestigious compared to *kandoole*. Hence, when one runs out of maize, one will always report having ran out of food even though they may have groundnuts, cassava, sweet potatoes, rice, pumpkins, or other minor crops. For the same reason, snacks of sugarcane, bread with tea, berries, roots, insects, etc do not get to be counted as food. Hence, even though from the nutritional point of view these food sources are important, they are very hard to take inventory of. This is not to suggest that there is no food security problems at the household level, but merely to point out that the process of figuring out whether or not a household is food secure is complicated by these issues.



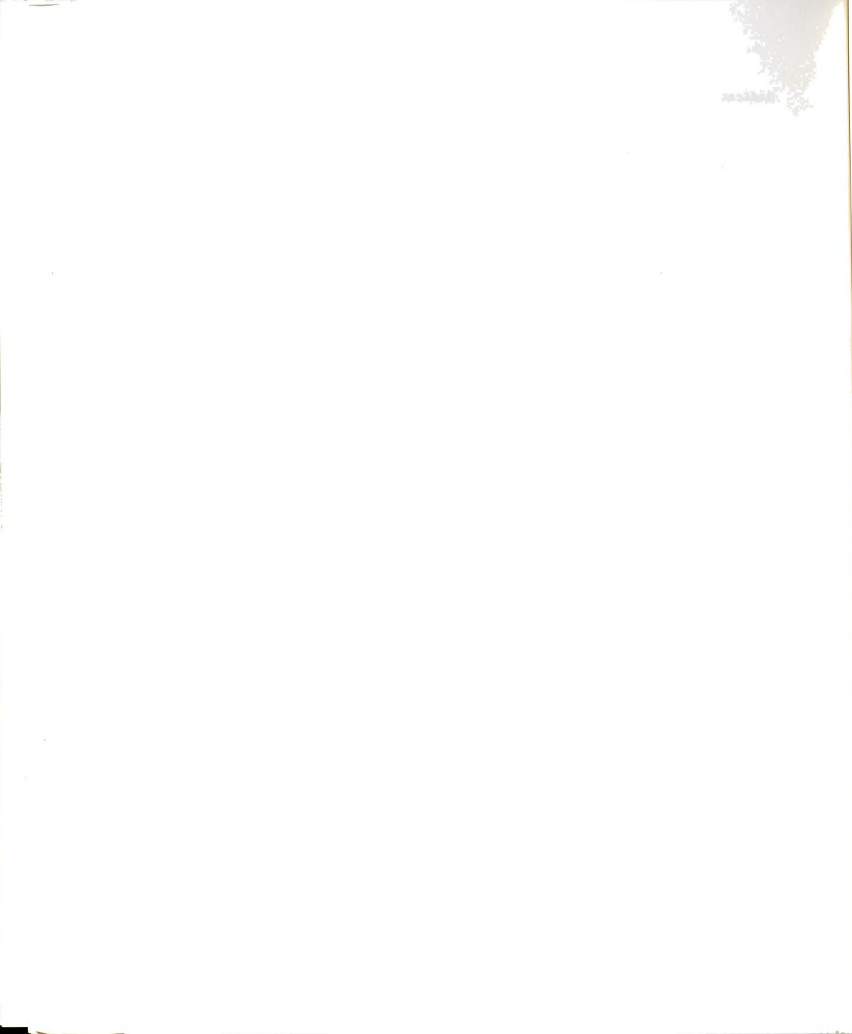
indicated that 93% of the households did not harvest sufficient food. Visual assessment of the children clearly suggested that many of those children were undernourished.

The same thing cannot be said about the adults who looked generally healthy. Many of these households store their food grain (maize) in *nkhokwe* storage bins made out of combed grass. Seventy-one percent store their maize in *nkhokwe*, 22% in hessian bags, and seven percent do not harvest enough to warrant storage.

6.1.6 Household Cash Income

An important objective in this study was to determine the extent of commercialization in the smallholder sub-sector. One indicator of commercialization was the extent of market involvement by the smallholder farmers. In this study, market involvement was estimated through cash income from sales of crops, fruits and vegetables, livestock, labor, crafts, fish and animal products, and business. Goods produced and consumed directly within the household were assumed to comprise the subsistence portion of the household economy and therefore not included in the cash economy.

In the baseline survey, household cash income was estimated by asking respondents how much money they made from sales of field crops, *dimba* crops, fruit, and livestock. The problems of under-reporting or over-reporting associated with recall questions should be born in mind when evaluating these data. Furthermore, even though labor sales and transfers (remittances and gifts) were recognized as important sources of household cash income, no questions on these sources were included in the baseline survey. This is because it was believed that respondents could not remember the amount of cash they obtained from these sources. However, according to the NSSA 1980/81 survey, the total cash income per household from sales of labor for SLADD comprised 15% of the annual



household cash income. Transfers and other sources of income comprised 12% (Malawi Government, 1984). The household cash income figures in this survey must be read with these caveats in mind.

Out of the 139 cases, 37% reported selling field crops. There were variations among the EPAs. Khombedza had the largest percentage of households reporting cash incomes from field crops. Lifuwu, Chipoka, and Golomoti EPAs had the least proportion of households earning cash income from field crops (Table 6.9).

Table 6.9 Percentage of Households Reporting Cash Incomes by EPA.

Source	Extension Planning Areas							
	Seng a Bay	Lifuw u	Khombedz a	Zidyana a	Chipok a	Mtakatak a	Golomo ti	Total
Field crops	18	7	56	90	3	35	0	37
Dimba crops	0	0	72	40	3	10	8	18
Fruit	6	0	17	30	5	35	0	14
Livestock	35	0	33	40	11	60	15	28

The mean household cash income from sale of field crops was K89.22 (Table 6.10). Here again, there were variation among the EPAs. The highest mean cash income from field crops was from Lifuwu EPA at K383.43, followed by Zidyana, Senga Bay, Khombedza, and Mtakataka EPAs. Chipoka and Golomoti EPAs had the lowest cash income from field crops (Table 6.10). The explanation for the variation among EPAs in the amount of cash income and the percentage of households obtaining cash income from field crops may lie in environmental and climatical differences among the EPAs. Khombedza, Zidyana, and Mtakataka are suitable for agriculture, in terms of soils and land availability. On the other hand, Lifuwu, Chipoka, and Golomoti EPAs are located in areas close to the lake and most of the fields are in wet *dambo* areas not good for field crops. Senga Bay EPA is mostly sandy and the *dambo* area next to this EPA, judging from the lack of gardens in it, is not suitable for field cultivation. Lifuwu EPA led in cash incomes from field crops



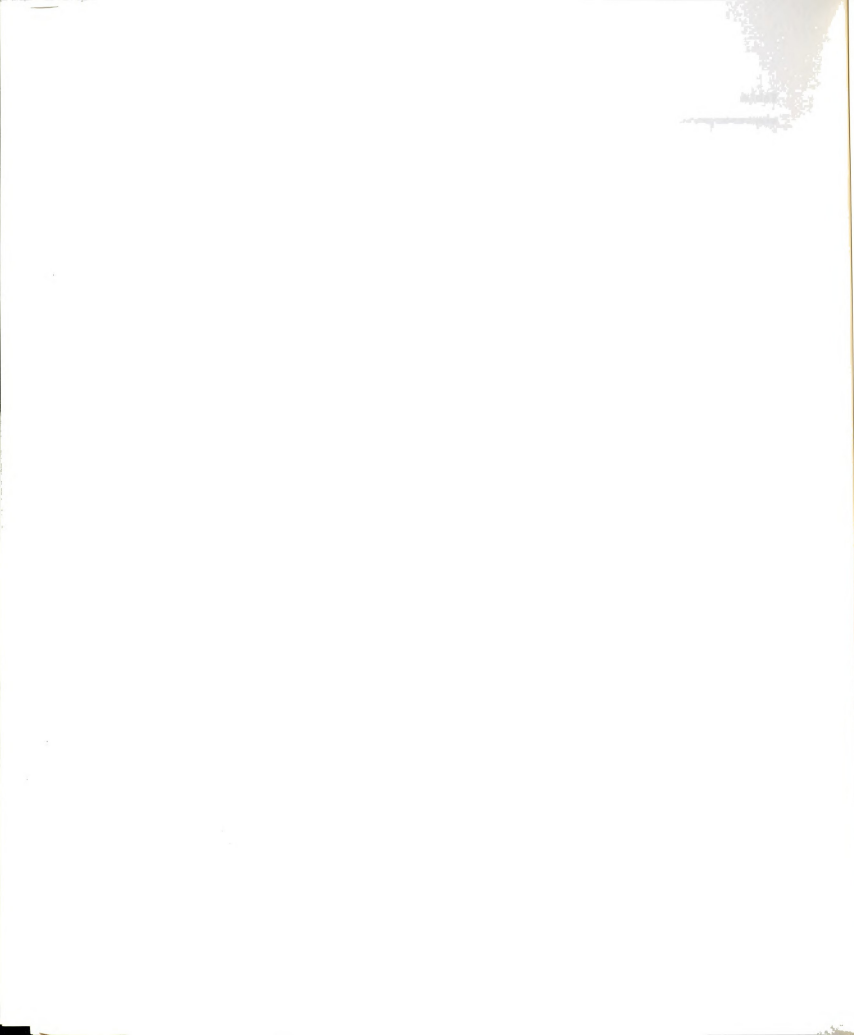
Table 6.10 Mean Household Cash Income by EPA (in Malawi Kwacha).

Source	Extension Planning Areas							Total
	Senga Bay	Lifuwu	Khombe-dza	Zidyana	Chipoka	Mtakata	Golomoti	
Field crops	101.29	383.43	56.56	186.65	0.05	27.94	0.00	89.22
<i>Dimba</i> crops	0.00	0.00	88.94	121.86	0.81	2.50	1.34	29.77
Fruit	44.71	0.00	2.11	9.55	0.02	5.34	0.00	7.89
Livestock	249.71	3.21	7.72	40.10	2.87	38.23	2.00	44.08
Total	98.93	96.66	38.83	89.54	0.94	18.50	0.84	42.74

because the few households who reported incomes from field crops were participants in the Lifuwu rice irrigation scheme noted in Chapter 5.

Approximately 30% of the households had *dimba* gardens. However, 18% reported selling some *dimba* crops. The mean income from *dimba* crops was K29.77. In many of the EPAs, many people made only small amounts of money from *dimba* crops. Zidyana EPA had the largest income (K121.86) from *dimba* crops, followed by Khombedza EPA with K88.94. This may be explained by the proximity of several river systems in these areas, including Lingadzi and Mkula Rivers, that provide good *dambo* areas for *dimba* crop cultivation. The other EPAs made only small amounts of money from *dimba* crops (see Table 6.10). In Lifuwu and Senga Bay there were virtually no *dimba* gardens.

As mentioned, forty-eight percent of the households had fruit trees with the most common combinations being mango, mango/banana, banana/papaya, and banana/papaya/mango. Only 14% reported incomes from sales of fruit. This was not surprising because mangoes are sold in small amounts over a long period and many people may not remember the total value of these sales. The mean income from sales of fruit was K7.89. Senga Bay EPA had the largest income from sales of fruit with a mean of K44.71 (Table 6.10). However, Mtakataka had the largest number of households with sizeable incomes from the sale of fruit. Both Senga Bay and Mtakataka EPAs are mango tree areas. The two EPAs differ in two main respects. In Senga Bay, a few households owned large numbers of

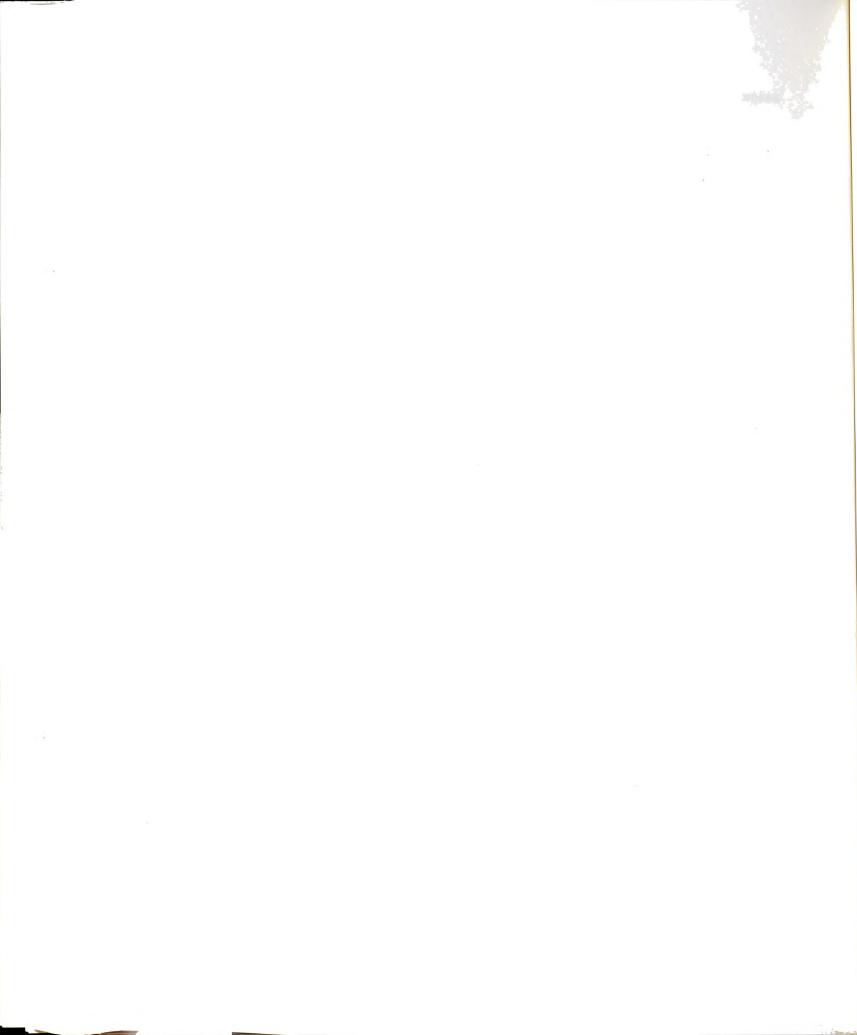


mango trees whereas in Mtakatka almost everyone owned a few mango trees. In addition, in Senga Bay farmers could wholesale their mangoes to businessmen for retail sales in Lilongwe City. Mtakataka farmers did not have this wholesale market and relied on roadside retailing. This may explain the differences in the cash incomes obtained in the two EPAs. Khombedza and Zidyana were similar to Mtakataka in that most households owned a few fruit trees but did not have a ready market for the fruit.

Seventy-one percent of the households in the sample had at least one kind of livestock and some households had combinations. Twenty-eight percent of the households reported incomes from the sale of their livestock. Table 6.10 shows that the mean income from the sale of livestock was K44.08. The high mean cash income from livestock in Senga Bay, Zidyana, and Mtakataka EPAs may be explained by the fact that there were butcher-men included in the sample of households in the three EPAs. In general, most people did not sell their livestock, except in situations of dire need.

6.2 The Fortnightly Surveys

In the fortnightly survey, household cash income comprised data on money from sales of crops, fruits and vegetables, livestock, labor, crafts, fish and animal products, and business. Again, goods produced and consumed directly within the household were assumed to comprise the subsistence portion of the household economy and therefore were not included in the cash economy. Besides, data on the subsistence production was not collected. A major part of subsistence production is in the form of crops and livestock produced and consumed in the home. At the time of the survey, most of the households had already harvested their crops and it was not possible to ascertain the quantity already consumed and that reserved for consumption in the home. Most respondents, however, could readily tell us when they sold eggs, milk, chicken, or goats and for how much.



On the other hand, while respondents remembered the goods they produced and consumed, they could not make reliable estimates of the quantities. This was true whether the respondent was a male or female head of households. Consequently, it was not possible to accurately estimate the monetary values of the subsistence production. The lack of the subsistence portion of the household economy meant that it was not possible to estimate total household income. The income reported in this survey refers only to the monetary portion of household total income and is only a fraction of annual income. However, data from other sources indicate that, roughly, 90% of maize, cassava, and rice is retained for home consumption in SLADD (Fischer et al., 1988). For the purposes at hand, the magnitude of household cash income was all I needed to establish the nature of the economy of the smallholder sub-sector. However, one important caveat should be noted concerning the interpretation of the household cash income values.

The fortnightly interviews lasted only five to six months; i.e. from May to October, 1990. Therefore, the cash income values should do not represent annual household cash incomes. Table 6.11 shows annual and quarterly household cash incomes for SLADD in 1981 by source. As may be observed in the Table, the annual household cash income for SLADD was K9,407.60 in 1981. The first quarter economic activities contributed 10% to the household cash income, the second quarter 16%, and the third and fourth quarters contributed 42% and 32%, respectively. This trend was in line with the economic activities of the agricultural cycle. The months of June to August are agricultural produce marketing months, following the harvest season. Because of the increased money circulation, many businesses boom during this period. Consequently, the same trend of economic activity is maintained for all the different sources of household cash income (see Table 6.11).

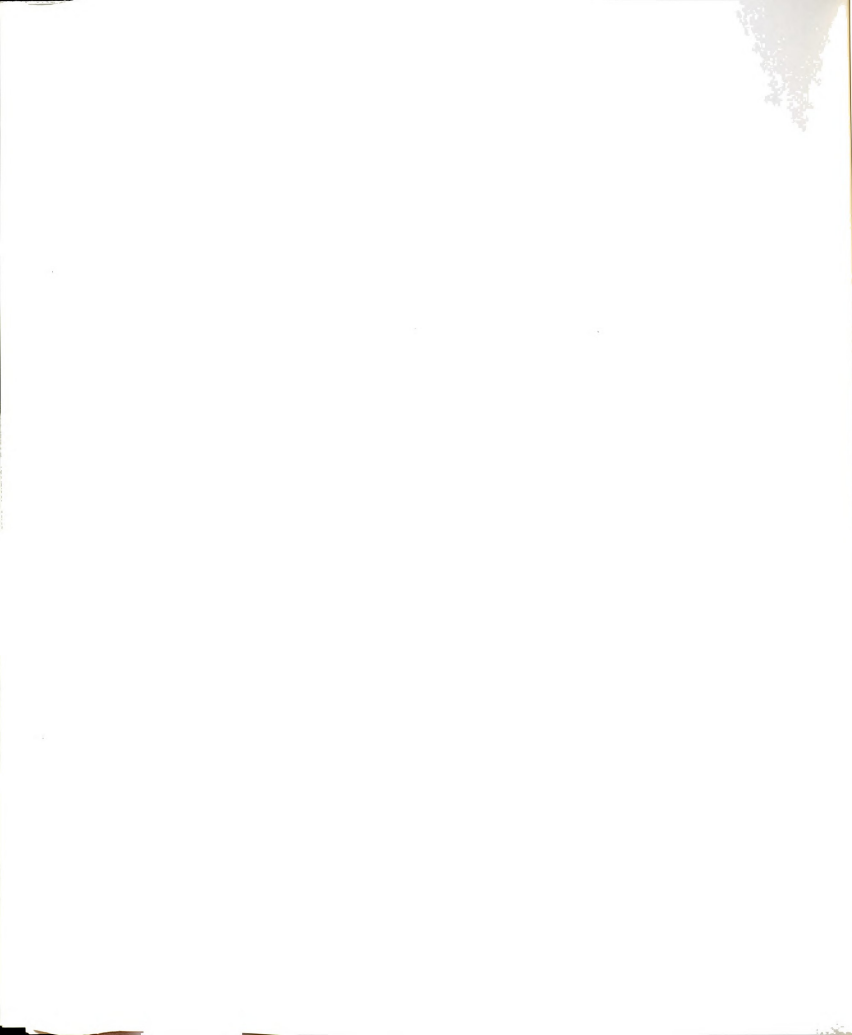


Table 6.11 Cash Income of SLADD's Households by Source (in Malawi Kwacha).

Source	Annual Dec.- Nov.	Quarter 1 Dec. - Feb.	Quarter 2 Mar. - May	Quarter 3 Jun. - Jul.	Quarter 4 Aug. - Nov.
All Sources	9407.60	952.30	1545.60	3917.20	2992.60
Food Crops	1183.40	83.30	206.10	604.90	289.10
Cash Crops	1688.40	3.10	156.30	1458.80	70.20
Livestock	595.30	58.30	64.10	177.10	295.80
Business	3469.40	356.80	686.80	1011.80	1414.00
Labor	1375.40	270.40	258.40	350.80	495.80
Transfers & other	1095.70	180.30	173.90	313.80	427.70

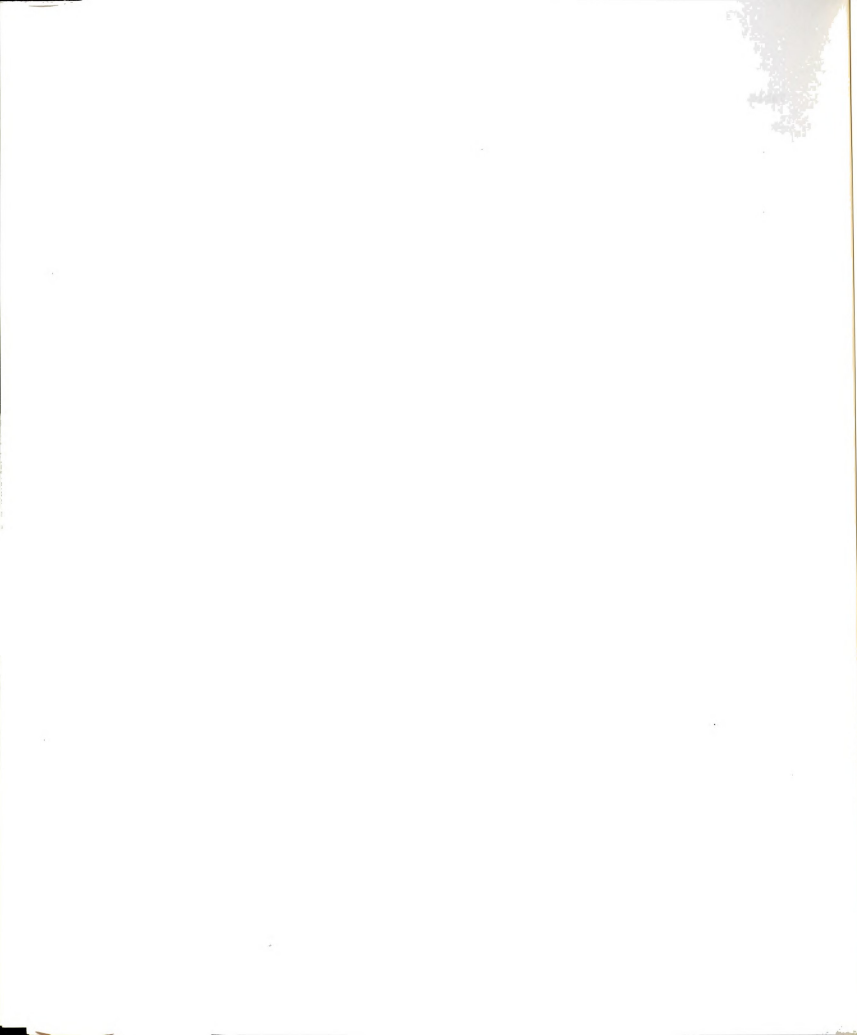
Source: Malawi Government, 1984. National Sample Survey of Agriculture, 1980/81, Vol. III. Zomba: National Statistical Office.

The fortnightly surveys in this study were conducted from May to October, or during the third and fourth quarters. In the NSSA data, the household cash incomes in the third and fourth quarters, together, represented approximately 74% of the annual household cash incomes in SLADD.

In these fortnightly interviews, the enumerators were encouraged to hold interviews with both the husband and spouse present, wherever possible. Except for the single-headed households, the responses to the interviews were a joint effort between the husband and wife. On some occasions, sons and daughters assisted in providing answers to our questions. The interviews became easier as the survey became routinized. In all cases, respondents were encouraged to answer for all members in the household.

6.2.1 Household Cash Income

The household cash income variables were grouped into field crops, fruits and vegetables, livestock, crafts, sale of labor or *ganyu*, sale of beer, sale of firewood and thatch grass, business sales, and remittances. Table 6.12 is a summary of the sources of cash income, the



total amounts in the five months period, and the means for the sampled households. Causal labor or *ganyu*, as it is popularly known in Malawi, was the most prevalent source of cash income with approximately 40% of the households hiring themselves out for *ganyu*. Those households whose members participated in *ganyu* made a total of K2,949.30, averaging K53.62 per household. Among field crops, rice, cotton, sweet-potatoes, and cassava were the significant crops grown/sold in Salima ADD. Rice and cotton were the major cash crops bringing in K182.24 and K216.95, respectively, per household over the five month period.

Situated on the shores of Lake Malawi, Salima ADD is an important source of fish. Twenty-three percent of the households received incomes from sale of fish. Salima ADD also provides abundant resources in the form of trees and material for crafts such as sculpture, pottery, mats,

Table 6.12 Mean Household Cash Income by Source (in Malawi Kwacha).

Source	Percent Households	Sample Totals	Income per Household
Ganyu	39.9	2,949.30	53.62
Rice	27.3	6,925.40	182.24
Crafts	26.6	1,919.70	51.88
Fish	23.0	8,225.90	257.06
Cotton	22.9	6,725.50	216.95
Firewood/Thatch	20.9	743.60	25.64
Remittances	19.4	506.70	19.49
Poultry	18.0	337.80	13.51
Fruit	16.5	277.00	12.04
Beer	11.5	654.90	40.93
Tea-room/Canteen	10.8	1,123.80	74.92
Sweet-potatoes	10.8	232.60	15.51
Vegetables	9.4	685.60	52.74
Cassava	8.6	73.80	6.15
Goats	6.5	590.50	65.61
Meat sales	2.2	1,276.00	425.33
Milk/Egg sales	1.4	320.50	160.25
Sheep	1.4	28.90	14.45
Total/Mean	100.0	33,597.50	241.71

and brooms. Approximately 27% of the households made money from sales of crafts. Other important sources of income were firewood, remittances, fruits, beer, vegetables, livestock products, and tea-room business. Overall, virtually all (94%) the households recorded cash

incomes from one or more of the above mentioned sources over the survey period. Twenty-five percent of the households had incomes of less than K50.00. Approximately 44% made between K51.00 and K300.00 from sales of various products. The mean income was K241.71 per household (see Table 6.13).

6.2.2 Traditional Welfare

One of the often heard arguments is that most rural households cannot completely run of food because the extended family acts as a highly effective social security system (Mkandawire, 1988). This is what I call the "traditional welfare" system. The traditional "welfare" system is still operative in Salima ADD. Food items such as *ufa* (maize flour), *nsinjiro* (groundnut flour) *nsima* (the staple thick porridge made from maize flour), etc. are the most commonly shared goods.

Table 6.13 Distribution of Household Cash Income in SLADD.

Income Category	# of Households	Percent Households
K0.00	9	6.4
K1.00 - K50	35	25.2
K51 - K100	19	13.7
K101 - K150	6	4.3
K151 - K200	14	10.1
K201 - K250	9	6.5
K251 - K300	13	9.3
K301 or More	34	24.5
Total (Mean=K241.71)	139	100.0

Approximately 42% of the respondents received gifts of food worth about K5.00 on average. Vegetables were the next commonly shared good. People also reported having received gifts of fruit, beer, livestock, and products from hunting. Fifty-five percent of the households

received some kind of gift and the total value of all gifts received was K1,104.40. The average value of gifts received by a household over the survey period was K7.95 (see Table 6.14).

Table 6.14 Sources and Amounts of Non-cash Income (in Kwacha).

Source	Percent Households	Income Sample Totals	Income per Household
Food items	42.4	294.10	4.98
Vegetables	29.5	118.80	2.90
Remittances	19.4	506.70	19.49
Fruit	15.8	28.80	1.31
Beer	12.2	52.50	3.09
Hunting	11.5	43.40	2.71
Livestock	7.2	60.10	6.01
Total/Mean	100.0	1,104.40	7.95

The traditional welfare system (mutual obligations) usually worked among members of the same village. The flow of gifts was from the richer households to the poorer ones or, rather, from those who had enough of an item to share to those who did not have the item. However, because even in normal agriculture years most of the households experience food deficits, the welfare system is likely to have limited impact on food insecure households. Mkandawire (1988) reported that very few households offer food to relatives as gifts during either the hunger months or the period soon after harvest. In addition, remittances are given for purposes other than food, such as fertilizer, house repairs, and school fees.

The commonly mentioned sources of gifts were parents, friends, and husbands. The recipients of gifts varied depending on the kind of gift. For instance, ufa flour and other foodstuffs were received more commonly by the female members of the households than by the male members. This is understandable since the women are generally responsible for feeding the household. On the other hand, beer gifts were received by men more often than the women.

6.2.3 Avenues of Household Expenditure

As noted earlier, goods produced and directly consumed in the home or on farm were not recorded. Hence, expenditures refer to cash expenditure in the market and the value of gifts in cash or in kind. The market expenditure is separated into home consumption and business expenditure. Business expenditure here refers to expenditure that was seen by the respondent as an investment explicitly incurred because profit was anticipated.

The results are shown in Table 6.15. As the Table shows, there was a broader and more extensive array of items of expenditure in the home than there were sources of cash income. Whereas, 18 significant sources of cash income were identified, almost thirty avenues of

Table 6.15 Expenditure for Home Consumption (in Malawi Kwacha).

Source of Expense	Percent Households	Total Expenditure	Expenditure per Household
Milling	100.0	1,119.60	8.06
Salt	99.3	644.80	4.67
Soap	95.0	1,246.20	9.44
Fish	94.2	1,680.90	12.83
Tea	86.3	931.90	7.76
Groundnuts	82.0	557.30	4.89
Vegetables	81.3	610.80	5.41
Maize	79.1	3,107.90	28.25
Social Events	72.7	571.80	5.66
Beans	71.2	476.90	4.82
Clothes	61.9	4,581.10	53.27
Meat	52.5	460.40	6.31
Cooking oil	48.2	227.40	3.39
Skin lotion	47.5	198.10	3.00
Travel	43.9	804.50	13.19
Paraffin	37.4	77.00	1.48
Fruits	31.7	40.60	0.92
Utensils	28.8	453.50	11.34
Soft drinks	25.2	68.90	1.97
Cassava	23.0	84.80	2.65
Cowpeas	19.4	44.70	1.65
Ufa (maize flour)	16.5	97.70	4.25
Beer	14.4	266.80	13.34
Rice	14.4	151.70	7.58
School fees	10.8	163.00	10.87
Nsinjilo	7.2	6.60	0.66
House repairs	6.5	414.50	46.06
Pharmaceuticals	5.8	87.80	10.98
Miscellaneous	4.3	113.50	18.92
Total/Mean	100.0	19,290.70	138.78

expenditure were recorded. All the households in the sample recorded milling expenses, making milling the most prevalent avenue of expenditure followed by salt, soap, fish, tea, etc. in that order (Table 6.15). In terms of mean value of expenditure, the leading item of expenditure was clothing. About 62% of the households recorded expenses on clothing. Taking into consideration only those products on which more than 30% of the sample households spent money, it was observed that maize purchases represented the second largest mean expenditure of K28.25, followed by travel, fish, soap, etc. in that order.

It is interesting to note that hot tea was drunk by 86% of the households in this lakeshore area where temperatures are relatively high. On the other hand, only 25% of the households reported spending money on soft drinks such as coke, sprite, or fanta. The average expenditures on beer and house repairs were quite high even though only a small proportion of the sample spent money on such items. The explanation for this is that a cup of hot tea with cream or milk cost roughly 20% the cost of a bottle of coke. Hot tea is more affordable than soft drinks. Table 6.16 shows cash expenditures in business investments. There were three kinds of businesses commonly referred to, namely: farming, fishing, and tea-room or canteen ownership.

Table 6.16 Business Expenses (in Malawi Kwacha).

Source of Expenditure	Percent Households	Total Expenditure	Expenditure per Household
Ganyu	19.4	1,401.00	51.89
Seed	12.9	563.70	31.32
Other business	7.9	491.50	44.68
Tea-room/Canteen	6.5	614.80	68.30
Fertilizer	4.3	97.50	16.25
Fish	2.9	283.00	70.75
Wheat flour	1.4	65.50	32.75
Total/Mean	100.0	3,517.00	25.30

Ganyu or casual labor, seed, and fertilizer were the most commonly recorded expenditures in the farming business. Nineteen percent of the households engaged *aganyu* (casual laborers) and spent a combined sum of K1,401.00 in casual labor payments over the survey period; each household averaging K51.89. No household reported paying *aganyu* in kind. Twelve percent bought maize seed at an average cost of K31.32 per household. Only four percent invested in fertilizer.

Approximately seven percent of the households (i.e. nine households) regularly operated a tea-room or canteen and invested in sugar, tea leaves, milk, and bread and/or wheat-flour. Other businesses included beer-brewing and occasional baking of *mandazi* or oil donuts. Three percent or four households retailed fish and invested a combined K283.00 in wholesale buying of fish over the survey period. Crafts are not included in the business category because the households who recorded sales of crafts did not record any expenditures on the business. In general, the raw materials for crafts are found freely in nature. The only expenditure is the cost of a license/permit required by the Ministry of Forestry. The cost of the permit is negligible compared to the money made from crafts. Besides, many crafts persons did not have licenses and sold their crafts through friends.

Other sources of expenditure were gifts in kind to relatives, friends, and neighbors. Overall, approximately 76% of the households reported giving some product to a relative or friend at least once during the survey. The total amount of gifts was valued at K820.20, and the average household gave out products worth about K5.90. As can be observed from Table 6.17, the most commonly donated category was foodstuffs. Other items included fruits and vegetables, meat, beans and groundnuts, cash gifts, poultry, clothes, soft drinks, and soap. Altogether, the total value of expenditure for the sample of households, in the five months period, was K23,627.90. Of this amount, K19,290.70

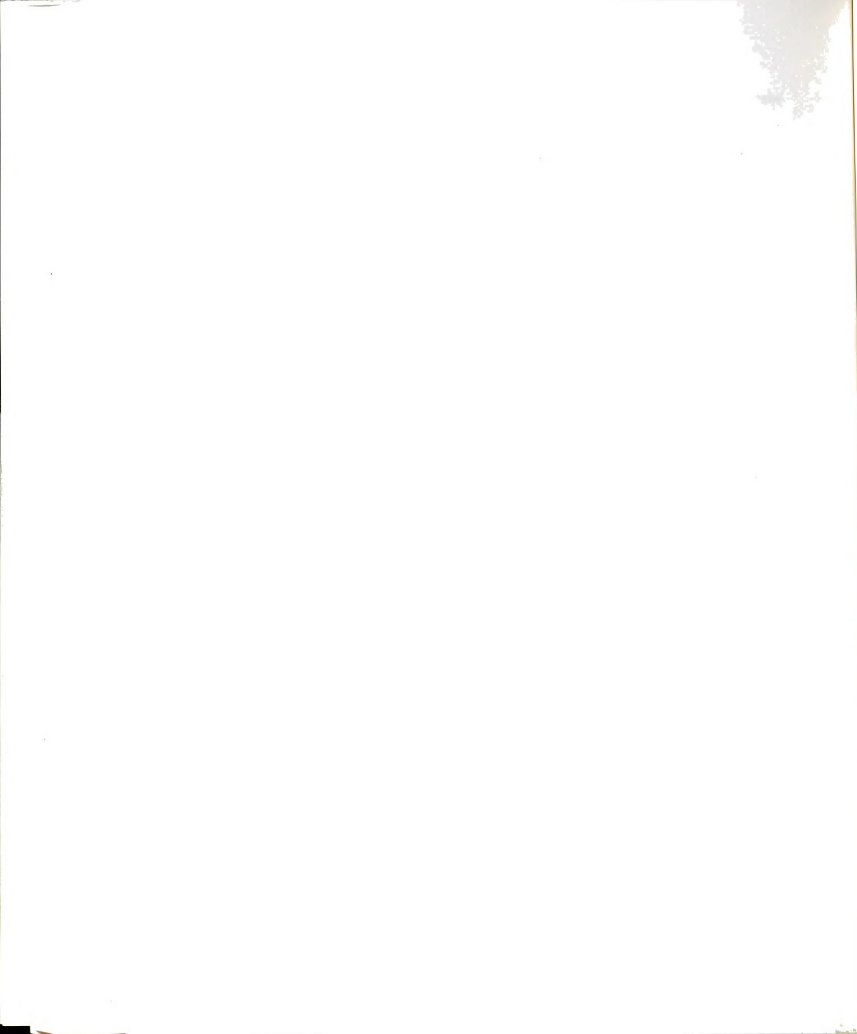
was consumed in the home, K3,517.00 was invested in business, and K820.20 was given away (see Tables 6.15, 6.16, and 6.17). On average, each household spent approximately K169.98.

Table 6.17 Household Donations (in Malawi Kwacha).

Source of Expenditure	Percent Households	Total Expenditure	Expenditure per Household
Foodstuffs	28.1	94.30	2.42
Grains	21.6	306.30	10.21
Fruits/Vegetables	15.1	46.30	2.20
Meat	11.5	71.30	4.46
Miscellaneous	10.8	50.50	3.37
Beans/Nuts	10.8	61.40	4.09
Cash	10.1	84.00	6.00
Poultry	8.6	57.80	4.82
Clothes	2.2	40.50	13.50
Soft drinks	2.2	6.30	2.10
Soap	1.4	1.50	0.75
Total/Mean	100.0	820.20	5.90

If the sample of households comprised the population of an economy and one wanted to understand the nature of the economy in terms of whether it ran a deficit or surplus, one could subtract the total value of expenses from the total value of income. The total value of income (i.e. cash plus non-cash income) of K34,701.90 minus the total expenditure (i.e. home consumption plus business expenses plus donations) of K23,627.90 would give us a surplus of K11,074.00. This would represent a healthy economy with per capita cash income surplus of K79.67.

One may argue that this is not a true representation of the sample households' cash income status for the following reason. Both the cash income and expenditure estimates were obtained during the busiest period of the agricultural cycle. While households may make most of their cash



incomes in the third and fourth quarters (June to November) of the agricultural year, most cash expenditures may be made in the first and second quarters of the agricultural year. The surplus observed in the third and fourth quarters may be completely wiped out in the first and second quarters. The fact is, according to the NSSA survey quoted above, both the household cash income and expenditures are highest in the third and fourth quarters. According to this source, 68% of the cash expenditure occur in the third and fourth quarters; 14% in the first quarter and 18% in the second quarter (Malawi Government, 1984). Therefore, it is not likely that the surplus could be used up in the first and second quarters.

On the other hand, if we were to treat the households as whole economies, a large proportion (47%) of our sample households would turn out to be deficit economies, whereas 53% would have surpluses (Table 6.18). In many of the households the value of total cash income was less than the value of total cash expenditure. Nine percent of the deficit households over-spent by between K100.00 and K524.00, and about 38% over-spent by between K1.00 and K100.00. The distribution of household cash income in the SLADD is skewed, reflecting the skewed distribution of resources and opportunities, especially the land resource and fish business opportunity.

Table 6.18 Household Total Income Less Total Expenditure.

Deficit/Surplus (Kwacha)	Frequency	Percentage
(100 - 524)	13	9.4
(1 - 99)	52	37.4
0 - 99	38	27.3
100 - 500	28	20.1
501 or More	8	5.8
Total	139	100.0

There are two possible explanations for the deficit spending in the SLADD smallholder households. The first explanation is that the households borrow money from local money lenders. The role of local money lenders in Malawi has not been studied, but it is probable that local money lenders play a significant role. A second explanation is that some households overstated their expenditures or understated their cash incomes or both. One reason that a respondent would wish to overstate expenditure is if the item of expenditure was prestigious. This may have been the case with expenditure on hot tea, soft drinks, cooking oil, and social events. During the survey, I discovered at least one household in which expenditures on bread and tea were reported by the respondent just to impress the enumerator. In fact, no bread or tea was purchased by any member in the household. The records were corrected.

On the other hand, no obvious reason is found for anyone to deliberately understate his/her cash income. Smallholders in Malawi pay flat annual "hut" taxes, not dependent on their annual income. Nonetheless, even if the respondents overstated their consumption expenditures on prestige items, excluding these expenses from the total expenditure did not change the deficit spending status. The first explanation, therefore, appears to be more plausible. But this is an area that requires further study.

6.2.4 Nutrition Status Surveys

The nutrition module of the survey was in two components: the anthropometric and the morbidity components. The anthropometric measurements employed in this survey were weight, height, and age of children under five years. The original plan was to apply the anthropometric module three times during the year; in February-January, May-June, and October-November. Because of delays caused by research clearance procedures, only two of the three surveys were implemented: May-June and October-November. The second component of the nutrition



survey comprised the fortnightly morbidity questionnaire. In this questionnaire, I sought to illicit information on health status and care of the children as well as the births and mortality histories of siblings within the household. This module was implemented seven times during the survey period.

Out of the sample of 139 valid households, there were 80 households with under-five children. Table 6.19 shows the distribution of the under-five children by sex and age. There were forty-six boys and 34 girls. The mean age of the children in June was 24.7 months. Twenty-two percent were between the ages of one and twelve months. Another 22% were between 11 and 24 months, and the rest were aged 24 months or older. The age distribution was similar for both sexes.

The median birth rank was fourth but the mode was third. There were no multiple births. Fifty-one percent of the children were still being breast-fed, the rest were weaned. Seventy-one percent were living in households where both parents were present; 25% were in single female-headed households; and four percent were being cared for by their grand-parents. The mean age of the mothers was 35 years. The mean number of living children per mother was 3.4 children; with a minimum of one and a maximum of nine living children per mother. The average total number of children born to a mother was five; the minimum being one and maximum 15 children per mother. The 80 mothers had lost a total of 103 children; giving the mean number of children dead per mother as 1.6.

Table 6.19 Gender and Ages of Sampled Children.

Age Category (Months)	Boys Percent	Girls Percent	Boys & Girls Percent
00 - 11	23.9	20.6	22.5
12 - 23	23.9	20.6	22.5
24 - 59	52.2	58.8	55.0
Total	100.0	100.0	100.0
Sample size	46	34	80
Average Age	23.6	26.1	24.7

Mothers were asked the cause of death for each child they lost. The responses to this question are summarized in Table 6.20. As can be observed, cause of death was not known for 25% of the 103 children who died. Neonatal deaths or miscarriages were the leading cause of death for children, claiming 20% of the children. The second leading cause of death was measles with 16.5% dying from it. Malaria and diarrhea came third, each claiming 11% of the children.

Table 6.20 Cause of Death for Siblings of Sampled Children.

Cause of Death	Number of Children	Percentage of Children
Not Known	26	25.24
Neonatal/miscarriage	21	20.39
Measles	17	16.50
Malaria	11	10.68
Diarrhea	11	10.68
Witchcraft/Poisoning	6	5.83
Respiratory tract Infection	5	4.85
Pneumonia	4	3.88
Tetanus	1	0.97
Epilepsy	1	0.97
Total	103	99.99

6.3.1 Morbidity

Since weight and height can be affected by the child's health status, we wanted to have some idea of the health status of our sample of children. Every two weeks the research assistants asked the mother if the child was ill in the past two weeks? If the child was ill, the mother was asked the type and duration of the ailment and medical attention provided. These questions were asked five times during the survey period. The results are presented in Table 6.21.

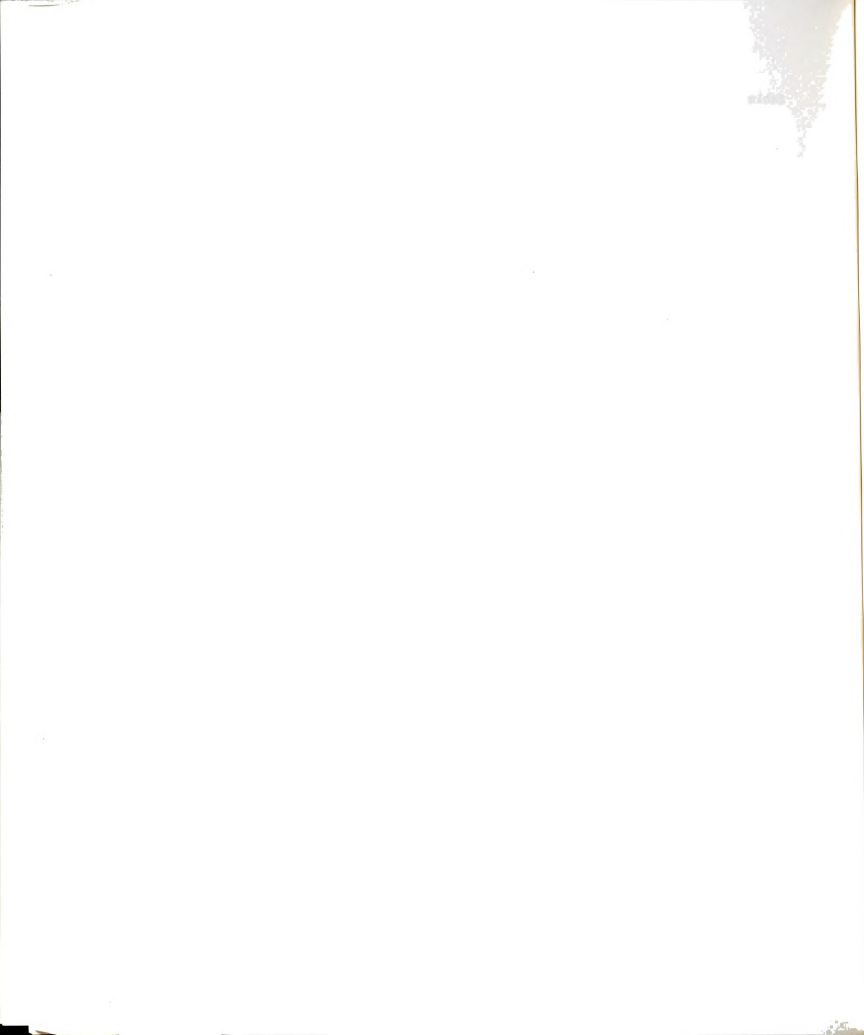
On average, about 63.5% of the children were reported to have been sick the previous two weeks. The sicknesses ranged from one day to as long as fourteen days. The children were sick for an average of 18 days during the survey period. Respiratory tract infections and diarrhea were the most common ailments, affecting 24% and 21% of the children, respectively. Unlike the case of cause of death, measles was the third

Table 6.21 Common Ailments of Under-Five Children.

Type of Ailment Reported	Percentage of children with reported ailment					
	Visit #1	Visit #2	Visit #3	Visit #4	Visit #5	Total
None	32.9	26.4	46.1	34.2	42.8	36.5
Respiratory tract infections	27.6	25.1	22.4	29.0	17.1	24.2
Diarrhea	25.0	29.0	21.1	18.4	10.0	20.7
Malaria	7.9	14.4	9.2	9.2	11.4	10.4
Eye Infection	4.0	2.6	0.0	7.9	10.0	4.9
Wounds/sores/ringworm	1.3	2.6	1.3	1.3	4.3	2.2
Otidus media	0.0	0.0	0.0	0.0	4.3	0.9
Measles	1.3	0.0	0.0	0.0	0.0	0.3
Total	100.0	100.1	100.1	100.0	99.9	100.0

leading ailment. The rate of infection for respiratory diseases and malaria remained roughly the same throughout the survey, except in October when a significant reduction was observed in respiratory infections. The rate of diarrhea infections steadily declined during the course of the survey. On the other hand, eye diseases appeared to affect more children in September and October. Of those children who were sick, 22% received no medical attention. Of the remainder, 42% received treatment at home in the form of aspirin, cough medicine, antibiotics, chloroquine, or oral rehydration treatment, 29% were taken to hospital, and the rest were given traditional medicine from a traditional doctor. The rates of infections in this survey were generally lower than those reported in Salima ADD's own morbidity survey. The general trend was the same, however.

According to SLADD's 1988 Child Morbidity Survey, 50% of the children in SLADD suffer from malaria annually, 45% respiratory diseases, 40% diarrhea, and 27% eye diseases (Malawi Government, 1988a). The rates of malaria, diarrhea, and eye infections were highest in Nkhotakota and Bwanje Valley RPDs. While malaria and eye infections were slightly higher in the wet season, respiratory disease infections

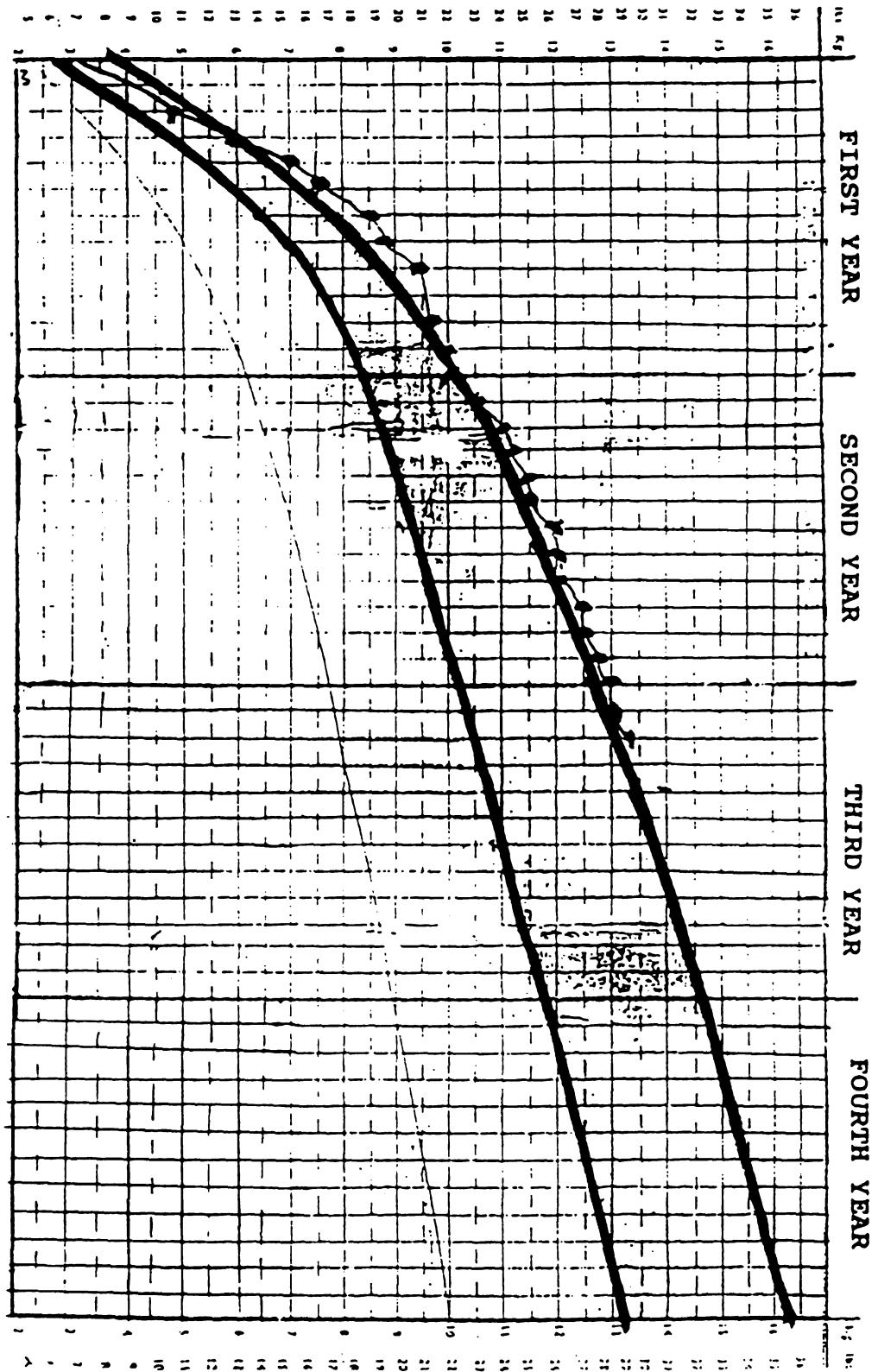


were more prevalent in the dry season. The rate of diarrhea infections remained the same throughout the year. From the size of the mean number of days children were sick, it is probable that the illnesses influenced the anthropometric measurements. Since high rates of respiratory tract and diarrhea infections tend to be associated with poor hygiene, the results of this survey lends further support to the conclusion that many people in SLADD live in poor health conditions.

6.3.2 Nutritional Status

Anthropometric measurements are widely used to assess the nutritional status of children between 0 and 5 years. In Malawi, the Primary Health Care clinics use growth charts to monitor growth of children under-five years of age and use the information to inform and educate mothers about proper care for healthy children. Figure 6.1 is a xerox copy of an actual Under-Five Clinic Growth chart for a 26 months old child. The chart is a weight-for-age grid with two curves. The upper curve is drawn to represent the 50th percentile of the reference values for boys, and the lower curve represents the 3rd percentile of the reference values for girls. In standard deviation scores (SDs), the 50th percentile is equivalent to the median, and the 3rd percentile is the equivalent of -2 standard deviations (SDs) from the median. The reference values used are those of the United States National Child Health Examination Survey (HANES). The intuitive interpretation of this chart is that if a child's weight-for-age values fall within the two curves, the child is growing normally.

Thus a child whose weight-for-age value falls above the upper curve is considered over-weight and vice-versa. For obvious reasons, the concern is more with those children whose weight-for-age values fall below the lower curve or the third percentile. These are considered malnourished and, in combination with other observations, are referred for appropriate treatment.



Source: Survey respondent gave me permission to copy her under-five child's Clinic Chart.

Figure 6.1 An Under-Five Clinic Growth Chart for a 26-Month Old.

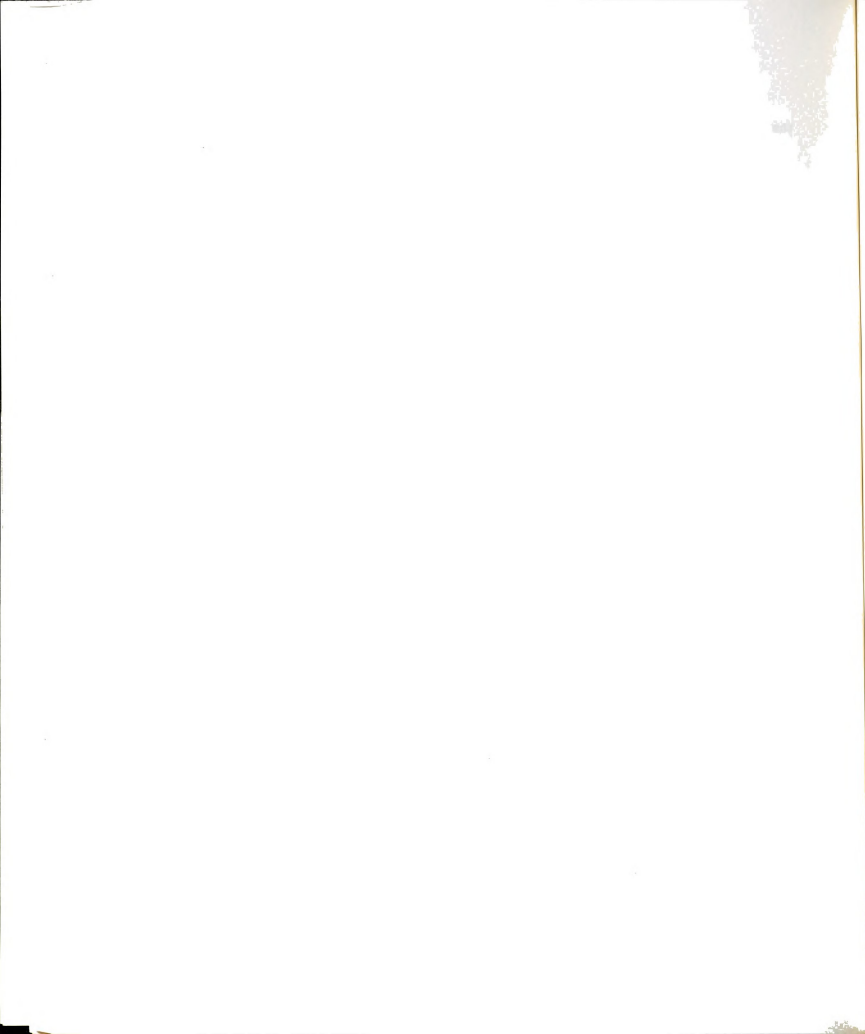
In this survey, the same HANES reference data were used to assess the nutritional status of the sample of children in the Salima ADD. Three indicators of nutritional status were used, namely, weight-for-age (an indicator of under-weight), weight-for-length (an indicator of wasting), and length-for-age (an indicator of past nutrition or stunting). The weight-for-age, length-for-age, and weight-for-length standard deviation scores (SDs) were calculated for the sample of children for the two rounds of measurement, in June and October.

In Malawi, the National Statistical Office (NSO) adopted -2 SDs as the cut-off point for underweight. Table 6.22 is a presentation of distribution of under-five children in the various nutritional categories. The general picture in this Table is that many children in the sample were under-weight. The prevalence of under-weight children was more in the June measurement than the October measurement. The trend was the same for both boys and girls, even though a larger percentage of the girls fell into the under-weight category.

Table 6.22 Nutritional Status of Under-Five Children by Gender.

Indicator	N=80	Both Sexes		Boys		Girls	
	Category	Round 1 %	Round 2 %	Round 1 %	Round 2 %	Round 1 %	Round 2 %
Weight-for-Age (Under-weight)	< -2 SDs	34.2	30.3	25.6	23.7	45.5	39.3
	-2 SDs - Median	43.5	49.9	51.1	55.2	33.3	42.8
	Above Median	22.3	19.7	23.2	21.1	21.2	17.9
	Total	100	100	100	100	100	100
Length-for-Age (Stunting)	< -2 SDs	52.6	62.1	55.8	60.5	48.5	64.3
	-2 SDs - Median	30.2	25.7	25.6	31.6	36.4	25.0
	Above Median	17.0	12.1	18.6	7.9	15.1	10.7
	Total	100	100	100	100	100	100
Weight-for- Length (Wasting)	< -2 SDs	3.8	2.9	4.3	2.4	2.9	3.6
	-2 SDs - Median	48.9	47.8	45.6	41.5	52.9	57.1
	Above Median	47.6	49.2	49.9	56.1	43.5	39.3
	Total	100	100	100	100	99	100

A larger proportion of children showed signs of stuntedness than did for under-weight. However, unlike under-weight, stuntedness was more prevalent in the October measurement than the June measurement. On



the other hand, only a small percentage of the children showed signs of being wasted. As a matter of fact, quite a large percentage of the children were over-weight in both first and second round measurements (see Table 6.22). When the children were separated into three age categories of under-ones, one to two years, and older than two years, the general trend was the same. The only exception was in the under-one category where all nutritional status indicators showed increases in malnutrition prevalence from the first to the second round measurement (see Table 6.23).

These findings are in general agreement with the 1980/81 NSSA nutrition survey results for SLADD. The NSSA survey, revealed that under-weight was more prevalent in May than in the October measurements; 33% and 30%, respectively. About 54% of the children were stunted in May, whereas 64% were stunted in the October measurements. And much like in this survey, less than one percent (0.7%) of the children showed signs of being wasted in October and in May 1.2% were wasted (Malawi Government, 1984). The significance of these findings is far from clear, especially the jump in the prevalence of stuntedness from June to October measurements and the prevalence of over-weight children. The lower prevalence of under-nourished children in October compared to June may be explained by the fact that June immediately follows the harvest season. Even though food may be plentiful in many households at this time, its nutritional effects may not start showing until later. The effects of the adequate nutrition of the after harvest period would show up in October. The explanation for the observed trend in stuntedness is a difficult one.

According to the NSO report, severely under-nourished children may develop oedema and enlargement of the internal glands resulting in a relatively high weight-for-length. This may explain the high prevalence of over-weight children. On the other hand, the low weight for age prevalence trend needs a different explanation.



Table 6.23 Nutritional Status of Under-Five Children by Age.

Indicator	Category	Age Categories (Months)					
		0 - 11 (N=18)		12 - 24 (N=18)		>24 (N=44)	
		Round 1 %	Round 2 %	Round 1 %	Round 2 %	Round 1 %	Round 2 %
Weight-for-Age (Under-weight)	< -2 SDs	5.6	20.0	55.6	41.2	37.5	29.4
	-2 SDs - Median	50.1	66.7	27.8	23.5	47.5	55.8
	Above Median	44.5	13.4	16.7	35.3	15.0	14.7
	Total	100	100	100	100	100	100
Length-for-Age (Stunting)	< -2 SDs	33.3	40.0	55.6	70.6	60.0	67.6
	-2 SDs - Median	38.9	46.7	22.2	11.8	30.0	23.6
	Above Median	27.8	13.3	22.2	17.7	10.0	8.8
	Total	100	100	100	100	100	100
Weight-for- Length (Wasting)	< -2 SDs	0.0	6.7	17.7	0.0	0.0	2.7
	-2 SDs - Median	38.9	53.3	55.6	58.8	50.0	40.5
	Above Median	61.2	40.0	27.9	41.2	50.0	56.7
	Total	100	100	101	100	100	100

The prevalence of low weight for age scores (stunting) increases over time up to age 24 or 36 months and then tends to level off. The World Health Organization (WHO) noted that it is possible for a significant degree of stunting, representing the accumulated consequences of retarded growth, not to be evident for some years. It may be that, in the span of the five months period of the survey, the children variously slid into the peak points of their accumulated retarded growth. This may explain the observed spurt in the prevalence of stuntedness from June to October measurements. As may be observed in Table 6.23, stuntedness was most prevalent in October among the 12-24 months old children. But among the children older than 24 months, stuntedness appeared to level off.

6.4 Conclusion

In this Chapter we looked at the results of all the three modules of this survey: the baseline survey, the fortnightly interviews, and the nutritional status survey. The baseline survey revealed that there is variation in landholding size, food security status, length of residence, annual cash income, crops grown, livestock raised, etc. Some of the observed variation may be attributed to environmental variations,

for instance, the variation in cash crops grown and some to social differentiation. The fortnightly survey revealed differences in the amount of household cash income and expenditure. Again, these differences may be attributed to social differentiation as well as environmental factors. In general, many households were poor. The findings on nutritional status could not be easily interpreted. However, the indicators of stuntedness and under-weight revealed that many children were under-nourished. The specific relationships between the various social and environmental factors were not investigated in this Chapter. Chapter 7 is devoted to the analysis of these relationships.

CHAPTER 7

ANALYSIS AND DISCUSSION

Chapter 6 was devoted to descriptive statistics of the survey in general. In this chapter, more elaborate statistical procedures are used to explore the main variables at work, investigate their relationships and test hypotheses concerning the relationships. The variables of interest include technology adoption (fertilizer, insecticides, and hybrid seed), cash crop production (rice and cotton), market involvement (product sold) in relation to poverty. Poverty is indicated by food insecurity, low cash income, poor housing quality, high child morbidity, and poor nutritional status. The underlying variables of investigational interest were the rural development approach, ecological, and sociological factors.

7.1 Ecological Factors

Analysis of variance of household cash income with poverty key variables revealed that income was closely related to the key poverty variables such as landholding size, food insecurity, and house quality. Table 7.1 summarizes the results of analysis of variance of income with various poverty key variables. As may be observed from the Table, larger landholding size, household food sufficiency, burnt brick house, multi-roomed house, etc. were associated with larger mean incomes. This finding was the expected one. My interest was to determine the factors that influence household income. Further analysis showed that income was also associated with other key variable such as Extension Planning Area (EPA), district, Traditional Authority (TA), Rural Development Project (RDP), and even with enumerator.

This finding suggested that the geographical location of the household may play an important role in the amount of household income. As it was noted in Chapter 6, soil types, existence of *dambo* areas,

Table 7.1 Variations in Mean Cash Income (in Kwacha) by Key Indicators.

Variables	Categories	Number of Households	Mean cash income
Landholding size	Less than 1 ha.	38	123.44
	More than 1 ha.	24	360.87
Food Sufficiency	Yes	18	446.71
	No	118	207.86
House type	Burnt brick house	9	543.06
	Unburnt brick house	41	225.28
	Rammed earth	24	208.33
	Poles/Mud	63	238.00
Number of Rooms	One-roomed house	76	131.25
	Two-roomed house	40	268.11
	Three-roomed house	15	430.51
	Four-roomed house	1	945.04
House Quality	Very clean	1	2,003.00
	Clean	26	358.86
	Average	58	228.18
	Dilapidated	50	182.37
	Very dilapidated	4	127.10
House roof type	Thatch	137	234.00
	Corrugated iron sheets	2	1,009.00
House floor type	Earthen	137	221.63
	Cement	2	1,916.00

irrigation schemes, etc. appeared to influence types of crops grown, sources of income as well as household mean cash incomes.

A question of interest was what ecological factors made the difference in household income? A comparison of mean incomes by EPA showed that Senga Bay and Lifuwu EPAs had the highest mean incomes in the survey. Chipoka, on the other hand had the lowest mean income (Table 7.2). Breaking the area into Traditional Authorities (TAs) resulted in the distribution presented in middle of Table 7.2.

Traditional Authorities (TAs) Maganga and Kuluunda had the highest

incomes while Ndindi had the lowest, followed by Kachindamoto. Mtakataka and Golomoti EPAs are in TA Kachindamoto's area whereas Chipoka is in Chief Ndindi's TA. Senga Bay EPA is in Chief Maganga's and Lifuwu is in Chief Kuluunda's TA. Zidyana EPA is in Chief Mwadzama's TA and Khombedza EPA is in Chief Khombedza's. Even when the incomes were analyzed by district, Dedza was by far poorer than either Salima or Nkhotakota (see bottom of Table 7.2). In the analysis by district, the effect of the low income in Chipoka EPA was to reduce Salima's otherwise very high income.

Table 7.2 Cash Income of Households (in Kwacha) by Extension Planning Area, Traditional Authority, and District.

Geographical division	EPA	Number of households	Household income
Extension Planning Area	Senga Bay	17	575.57
	Lifuwu	14	576.55
	Khombedza	18	238.41
	Zidyana	20	311.26
	Chipoka	37	47.08
	Mtakataka	20	134.95
	Golomoti	13	106.26
Traditional Authority	Maganga	17	575.57
	Kuluunda	14	576.55
	Khombedza	18	238.41
	Mwadzama	20	311.26
	Ndindi	33	46.33
	Kachindamoto	37	116.04
District	Salima	83	288.36
	Nkhotakota	19	314.09
	Dedza	37	116.04

The explanation for these findings may be in the fact that Senga Bay and Lifuwu EPAs are close to Salima ADD and RDP headquarters as well as the district town center. The close proximity to these two centers provides opportunities for a variety of money generating activities.

Salima ADD headquarters is located in an area with two other important aspects: The Kamuzu Military College and the lakeshore beaches which attract many tourists. Senga Bay EPA is right next to the Kamuzu Military Barracks and within a mile of SLADD headquarters and the beaches.

Another ecological aspect is the fact that these two EPA's, Lifuwu and Senga Bay, are located close to the largest fishing camps in the central lakeshore area. One at Lifuwu and the other at Livingstonia beach. Both Lifuwu and Senga Bay EPAs are located near two irrigation schemes discussed in Chapter 6: the Lifuwu rice irrigation scheme and the Ngolowindo horticultural irrigation scheme. In addition, these two EPAs are located in an area of mangoes which find a ready market from the affluent population of the area in addition to a wholesale market to businessmen from the City of Lilongwe. Finally, the two EPAs are located near a large reserve of woodland where raw materials for crafts are plentiful.

In the case of Khombedza and Zidyana EPAs, the important ecological factors are the system of rivers that flow through these EPAs. These rivers, in particular Lingadzi and Mkhula rivers, provide fertile soils and rich *dambo* resources for dry season rice and bean crops. In addition, these EPAs are situation within the vicinity of large commercial estates, including the Chikwawa Estates of Press Farming Ltd. We believe that, although there is overt conflict between the estates and the surrounding communities, many people find *ganyu* casual labor opportunities on these estates especially during the peak periods. But on the whole, the higher incomes can be explained by the off-season crop opportunities offered by the rivers in these EPAs.

On the other hand, Chipoka and Golomoti EPAs are located in areas with none of the features found in the EPAs discussed above. Even though, on the face of it, one would argue that since Chipoka is a major port on Lake Malawi, it should offer similar opportunities as those



offered by Senga Bay and Lifuwu. The fact is that the two clusters chosen for study in Chipoka EPA were far removed from Chipoka Harbor. Ngodzi and Lifidzi clusters were about 10 Km on either side of Chipoka. Golomoti and Mtakataka used to be thriving trading centers both fed by a railway line from Salima to Blantyre. Since the departure of the Indian shopkeepers from the rural areas, Golomoti and Mtakataka have since deteriorated. Mtakataka is better than Golomoti because of its proximity to the Malawi Police Training School and Mua Mission and tourist center. Besides, Mtakataka is a rich mango fruit area.

Further analysis to test the above hypotheses were done. The results are summarized in Table 7.3. As can be observed in Table 7.3, the effect of the rice irrigation scheme on the income of Lifuwu smallholder farmers is obvious. Lifuwu EPA had the highest mean income from rice than any other EPA. A good number of smallholders grew rice in Golomoti EPA but they did not make as much money as their counterparts in Lifuwu. This may be due to the fact that they did not have the benefit of an irrigation scheme. Zidyana and Khombedza indeed benefitted from the rivers as seen in the high incomes from *dimba* dry

Table 7.3 Variation of Income (in Kwacha) by Source of Income by Extension Planning Area.

Extension Planning Area	Source of Income							
	Rice		Dimba Crops		Firewood		Fish	
	Mean Income	House-holds	Mean Income	House-holds	Mean Income	House-holds	Mean Income	House-holds
Senga Bay	12.82	17	-	-	19.15	17	353.24	17
Lifuwu	385.16	14	-	-	18.91	14	78.57	14
Khombedza	16.44	18	100.06	16	0.00	18	1.39	18
Zidyana	2.75	20	203.09	12	5.42	20	40.40	20
Chipoka	2.21	37	3.75	8	0.84	37	6.70	37
Mtakataka	5.82	20	2.50	20	0.58	20	0.00	20
Golomoti	59.35	13	20.00	1	0.17	13	3.08	13

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1873

season crops. Likewise Senga Bay and Lifuwu had higher mean incomes from firewood, fish, ganyu casual labor, and crafts. All the other sources of income can be explained in the same way.

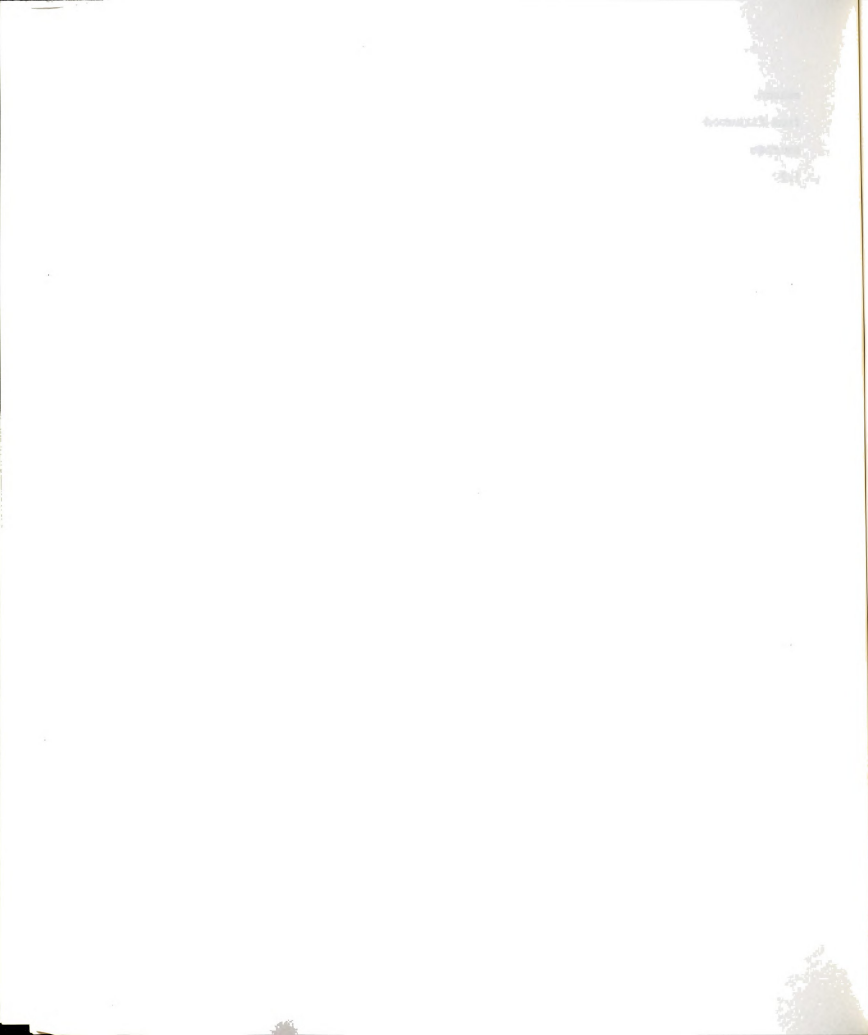
7.2 Sociological Factors

Ecological factors were not the only ones that varied with income. Gender and marital status of the head of household also influenced the size of household mean income. This suggested that another variable other than the geographical location of the household may be at work. This variable is called the sociological factor. When the ecological factors were controlled, the sociological factors started to operate. The sociological variables appeared to differentiate households' access to physical resources like land which, in turn, determined the households' farming system, participation in agricultural extension services, and access to credit, thereby determining the households' income.

7.2.1 Household Income and Gender

The most important sociological variables in the study area were access to land, access to credit, and participation in agricultural extension activities. In Chapter 6, it was observed that the mean landholding size for female-headed households was lower than that for the male-headed-households. In addition, female-headed households were over-represented in the lower holding size category. Furthermore, according to the Malawi Government, access to land was related to use of modern technology which, in turn, was related to household food self-sufficiency, cash crop production, and household cash income (Malawi Government, 1987c).

In Malawi, the fact that agricultural extension and credit services are biased against resource poor households has been adequately documented (see for example Kaunda, 1990; Msukwa, 1985; Fischer et al., 1988; and Mkandawire, 1988). Consequently, in this study, resource-poor households were expected to have lower household incomes than the



resource-rich households. Because, female-headed households dominated the resource-poor group of smallholders, their mean household incomes were expected to be lower than those of the male-headed households. Table 7.4, is a summary of household income by type of source.

As may be observed from Table 7.4, the mean total household income for female-headed households was lower than the sample mean while that of male-headed households was higher than the sample mean. This is not surprising because, as noted earlier, the mean land holding size for female-headed households was lower than that for male-headed households. Since most of the income comes from sales of crops, female heads of households would be expected to make less money compared to male heads of households.

The interesting observation is that when the income data were desegregated by source, so that income from the various sources was considered separately, there were sources of cash income in which female-headed households clearly made more money than the male-headed households and others in which the male-headed households did better. For example, when the female-headed households were analyzed separately by EPA, it was found that, although the physical ecological factors were still operating, the female-headed households had significantly ($P=0.03$) higher mean income from fish than did the male-headed households (see Table 7.4). Insofar as the fish business is concerned, in all the EPAs where income from fish business was reported, female-headed households had higher mean incomes from fish than the male-headed households.

Female-headed households also had higher mean income from rice than male-headed households, although this was not significant at 10% confidence level. However, in the rice irrigation scheme in Lifuwu EPA where only one female was a participant, this female-headed household earned more money from rice than the male-headed households (Table 7.4). Rice and cotton are the important smallholder cash crops in SLADD. However, cotton is clearly a male-headed household crop. Those few

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S-2000
T-2000

Table 7.4 Household Income by Source and by Gender of Head of Household.

Source of Household Income	Gender of H of H	Extension Planning Areas (Income figures are in Malawi Kwacha)							
		Senga Bay	Lifuwu	Khombe-dza	Zidyana	Chipoka	Mtaka-taka	Golo-moti	All EPAs
Cotton	Male	0.00	0.00	151.39	174.86	20.00	65.00	4.25	69.66
	Female	0.00	0.00	20.00	81.50	0.00	11.67	0.00	9.31
Rice	Male	0.00	347.10	14.93	3.44	0.00	3.26	60.30	61.78
	Female	3.56	880.00	24.00	0.00	3.28	11.80	48.00	27.85
Cassava	Male	0.38	0.00	0.40	0.47	0.00	3.57	0.07	0.75
	Female	0.00	0.00	0.00	0.00	0.12	0.58	0.00	0.13
Fruits	Male	0.21	0.05	1.36	1.13	0.00	12.65	0.00	2.42
	Female	0.97	0.00	0.00	0.00	0.00	8.42	0.00	1.21
Poultry	Male	1.31	1.00	2.13	0.00	8.89	4.97	1.83	2.82
	Female	0.00	0.00	0.00	0.00	3.36	0.00	0.00	1.71
Milk/Eggs	Male	39.69	0.00	0.00	0.00	0.00	0.00	0.00	3.52
	Female	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Firewood	Male	8.39	20.37	0.00	5.81	0.00	0.82	0.18	4.87
	Female	28.72	0.00	0.00	3.88	1.24	0.00	0.00	6.22
<u>Ganyu</u>	Male	120.25	22.32	3.66	57.66	0.00	12.90	2.09	27.06
	Female	0.61	0.00	27.13	98.68	1.20	0.00	2.00	10.48
Fish	Male	56.88	84.62	0.67	40.19	1.58	0.00	3.33	25.19
	Female	616.67	0.00	5.00	41.25	9.16	0.00	0.00	121.61
Crafts	Male	15.44	57.94	53.09	10.00	3.21	0.21	0.00	20.83
	Female	0.78	0.00	11.67	0.00	0.12	0.00	0.00	0.92
Total Income	Male	440.25	551.67	264.62	322.67	82.12	155.35	110.58	270.14
	Female	695.86	900.00	107.33	265.63	30.26	87.33	54.50	201.68
Sample Income	Both Sexes	575.57	576.55	238.41	311.26	47.08	134.95	106.26	246.01

female-headed households who grew cotton had, on average, significantly ($P=0.04$) lower incomes from cotton than their male counterparts. In those EPAs where smallholders grew rice without an irrigation scheme, such as Golomoti, women made lower cash incomes from rice. This may be due to the fact that women were discriminated in extension advice and credit service. These observations on fish, rice, and cotton incomes

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suggest that SLADD's rural development approach discriminated against female-headed households. The Lifuwu rice irrigation scheme, in particular, suggests that when a crop is elevated to the status of a cash crop through a crop improvement program, men will benefit from it more than women. Currently, it appears that the most important avenue for women to increased earnings is fish retailing. This means that projects designed to improve fish retailing must be planned carefully to avoid depriving the women of their only avenue for increased earnings.

There did not appear to be a clear relationship between residential status (the number of years a household's head had been a resident of SLADD) and household income. However, the female-headed households belonging to polygamous marriages of two wives had the highest incomes followed by those whose husbands had three wives and those who are separated. Clearly, the absence of a husband is a serious disadvantage to women.

7.2.2 Nutritional Status

An attempt was made to relate the various variables to nutritional status of children. The interpretation of the role of the ecological factors were tempered by the small size of the sample of children. It was not possible to obtain meaningful results when analyses were made to reflect differences within the same ecological setting. Hence, even though Chipoka and Lufuwu were quite dissimilar based on household income levels, they displayed similarity in levels of malnutrition. To be able to clearly identify the households that had the malnourished children, it would require analysis of variance within each EPA based on income categories. The sample size did not permit such an analysis which would shed some light on the nature of poverty in a seemingly plentiful ecological environment.

The analyses involving house type and quality as related to nutritional status showed no special trends. The quality of the house, as rated by the enumerators, also showed no relationship to nutritional

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status. A possible explanation for this finding is that the majority of the houses were of the same type, i.e. of mud/poles. Residential status showed no significant relationship with child nutritional status.

The results of correlation of household income with nutritional status variables were easier to interpret. Using all three measures of nutritional status, i.e. weight-for-age, length-for-age, and length-for-weight, the higher the household income, the better the nutritional status of children. The mean SD scores for the children in the female-headed households were slightly below the sample mean but this was not statistically significant. This was true in both rounds of the study i.e. June and October. This is why it is important to understand the manner by which the sociological and ecological factors influence the amount of income in a household.

7.3 Sources of Income

In this section the relationship between the source of income and the size of the total household income was investigated. It was hypothesized that the amount of household income depended on the source of that income. Hence it was expected that different sources of income would yield different mean household incomes. The results of correlations of income from various sources with the total household are presented in Table 7.5.

Among the crops, only rice showed a strong statistically significant ($P=0.001$) relationship with total household income. This positive correlation reflected the significant role of income from rice, especially in Lifuwu EPA where there is a rice irrigation scheme. It also reflected the fact that the market for rice was never completely controlled by the Government marketing board (ADMARC). Although households that grew cotton had higher total mean income than those that did not, correlation of income from cotton with mean total household income was very weak and not significant. This is probably because of the price control of cotton. In the case of cotton, ADMARC must first



consult with David Whitehead and Sons (Malawi) Ltd., (DWM), before deciding on the price of cotton to farmers. DWM is owned by the United Kingdom based multinational David Whitehead and, being the only textile firm in the country, buys a large percentage of the Malawi grown cotton. It has been observed that ADMARC's determination of prices for cotton favors DWM's interests (Wolgin et al., 1983).

Table 7.5 Correlations of Total Income with Income from Each Source.

Source of Income	Correlation (** = significant P=0.001)
Cotton	0.1957
Cassava	0.0646
Rice	0.5444**
Vegetables	0.0794
Sweet-potatoes	0.0800
Beer	-0.0014
Crafts	0.2681**
Fish	0.6381**
Ganyu	0.0683
All Field Crops	0.6869**
Fruit	0.2087
Tea Room	0.0836
Firewood	-0.0086
Goats	0.0711
Chickens	-0.0945
Remittances	0.0452
Dimba crops	0.2004
All Livestock	0.4262**

It appears that, in SLADD, the more detached a farmer's economic activities are from the organizing forces of ADMARC, the higher the income of that farmer. Households that reported incomes from sales of rice, fish, crafts, and livestock had significantly higher incomes than those households that did not (see Table 7.5).

There are two possible explanations for this. First, ADMARC is



not the only marketing avenue for these products and therefore their producer prices are less controlled by ADMARC. Secondly, there is the fact that ADMARC, until recently, favored the production of certain crops over others. For instance, rice production benefitted from subsidies from ADMARC of between 54% to 117%, while groundnuts, cotton, and tobacco were being taxed 130%, 26%, and 270%, respectively.

On the other hand, certain avenues of earning income suggest chronic poverty. Consequently, even though such avenues may not be under the control of ADMARC, the mean incomes of households that relied on these avenues as primary means of earning cash income will, generally, be lower than the mean incomes of households that had other avenues of earning cash income. In this sample, incomes from sales of cassava, fruits, beer, firewood/thatch, and poultry were signs of poverty or desperation. Cross-tabulations of these sources of income with total household income showed negative correlations (see Table 7.5).

On the other hand, some income sources were negatively correlated with total household income. These sources of income included cassava, fruits, beer, firewood/thatch grass, and chickens. It appears that as a household's income from these sources increased, the household's total income decreased. For example the higher the amount of cash income from cassava, the lower the total household income. Although the correlations were weak and not statistically significant, they did shed light on the nature of poverty. Those households that were not able to grow a cash crop were compelled to sell their own staple. Failure to grow a cash crop reflected land constraints. As noted earlier, in this study the important cash crops were cotton and rice. In terms of landholding size, those households that grew cotton or rice had significantly larger land holdings than those that did not (Table 7.6). It is not surprising that the households that did not grow a cash crop had low income.



Table 7.6 Comparison of Cash Incomes between Households Growing and Those Not Growing Cotton and Rice.

Cash Crop	Whether or not the household grew crop (Mean Landholding Size in Hectares)		Significance (P=0.10)
	Yes	No	
Cotton	1.40	0.89	0.008
Rice	1.35	0.80	0.002

Rice is largely a cash crop in Salima¹ and the staple crops are maize and cassava. For a household to grow rice, it must first satisfy the household's staple requirement and must have access to *dambo* plots for rice growing. Which means that only the land-rich households grow rice. Those households whose land holdings do not satisfy their maize or cassava requirements cannot grow rice. But because of the need for cash, they must sell their staple crop. However, quite often the staple is not even enough to permit any sales. Thus, such households must depend on other less traditional sources of earning cash income such as selling fruits, firewood or thatch grass, chickens, and beer brewing.

Traditionally, chickens in Malawi are kept for social occasions such as funerals, weddings, or as treats when there are visitors in the home. The sale of a chicken, therefore, indicates some level of desperation for cash within the household. Although Salima ADD is along the lakeshore, fish is expensive and difficult to obtain because its demand in the country, and particularly in the urban areas, is very high. Therefore, not everyone can become a fishmonger. Crafts on the other hand are limited to those with skills of molding, or carving, or

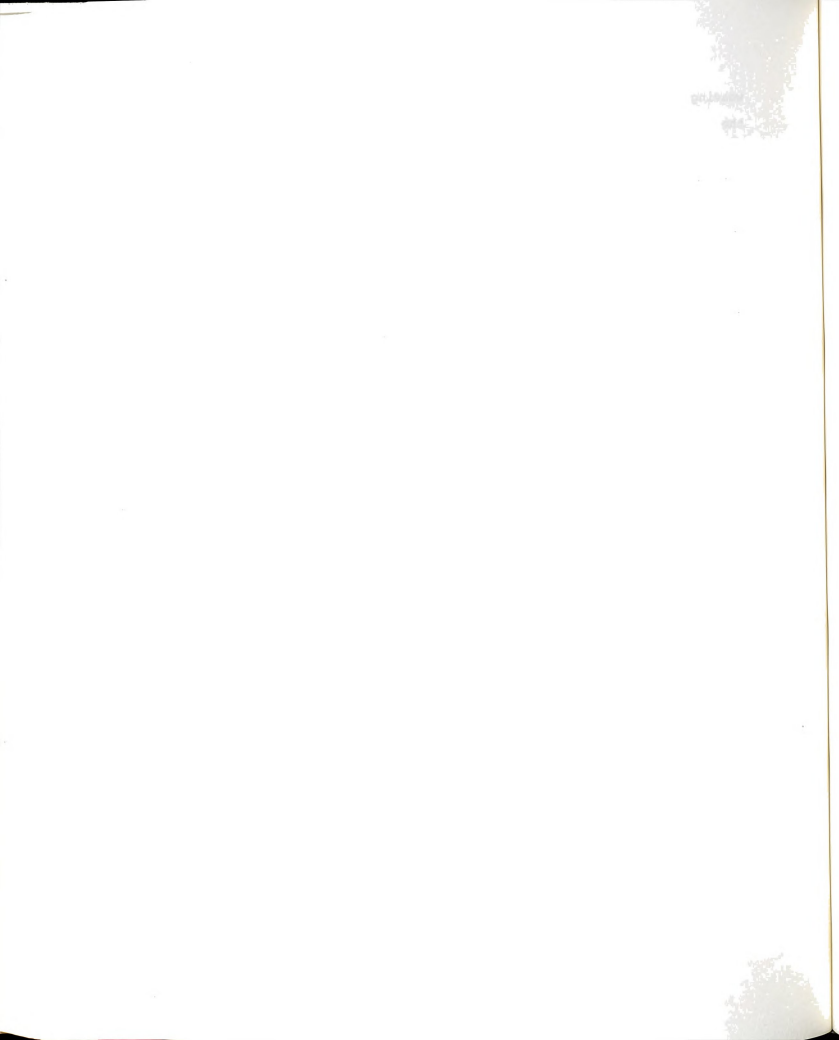
1. The fact that Fischer's report shows that about 90% of rice is retained for home consumption probably stems from the fact that Fischer used ADMARC's figures to estimate the proportion of rice sold. I argue that a great deal of rice is sold through informal channels e.g. local tenders and private consumers. Thus ADMARC figures always under estimate the marketed portion of smallholder production.

weaving. So even though the raw materials for crafts are free and (for the time) abundantly available, only a handful of people take advantage of this resource.

7.4 Peasant Trading in the Formal Sector

An important component of the exploitation of the smallholder farmer in Salima is terms of trade. Salima ADD produces a variety of agricultural produce as already enumerated in Chapter 6. Malawi has price controls on eight staple commodities, all grown by the smallholder farmers. It has been argued that the price control for these commodities is necessary because they are primarily used by low-income groups. Of course, this has been deliberately made necessary because, as argued in Chapter 4, wages are kept below subsistence and are not commensurate with consumer prices, prices for imported goods, or prices of internationally traded commodities. To enable the poorly paid urban and estate workers obtain their food requirements, the prices of smallholder produce are kept low. In the urban centers of Blantyre and Lilongwe, large bulletin boards are placed in all the produce markets displaying the maximum prices permitted for all the controlled commodities. Government officers pay unannounced visits to the markets to catch any vendors charging prices in excess of the announced prices. In principle, commodity prices can be increased after submitting requests to the Ministry of Trade and Industry. However, such requests must be justified by cost increases. Peasants have no forum for making such requests, besides they lack records of production costs to justify their requests for price increases.

On the other hand the prices of manufactured goods rise uncontrolled because retailers can defend their requests for price hikes using inflation, transport costs, and many other reasons. Even though prices are, in principle, controlled in this sub-sector, the control has been largely ineffective. It is noteworthy that prior to independence, merchant capital circulating in the rural areas was controlled almost



wholly by Indian shopkeepers. After independence the Indians were removed from the rural areas and confined to the urban areas in Lilongwe, Blantyre, and Zomba. African businessmen were expected and encouraged to take the Indian place in the rural areas. Chipiku stores, a company owned by Press Corporation, through the Import and Export Company, took the wholesale arm of the Indians. The African shopkeepers, for a variety of reasons, did not perform as well as the Indians did. However, the merchant capital circulating in the rural shops and stores has been a major means of exploiting the farmers. The prices of groceries and clothing in the stores and shops in the rural areas have risen sharply since independence. As a result many households in the Salima ADD area devoted large portions of their meager incomes to the purchase of necessary groceries.

Table 6.15 (Chapter 6) shows cash expenditures for home consumption. As can be observed, the maize mill takes a toll on household income. Anybody who owns a maize mill must be a rich person in Malawi. In the five month period of the survey, the 139 households spent K1,119.60 on milling, averaging K8.06 per household. Salt, soap, tea leaves, clothes, cooking oil, vaseline, paraffin, soft drinks, and pharmaceuticals together account for more than 60% of the average household expenditure. In addition, 79% of the households bought maize from ADMARC, averaging about K28.25 or one 90 kg bag of maize. One of the charges by dependency theorists is that smallholders are poor because of unfavorable terms of trade between manufactures and agricultural produce.

The exchange of primary goods produced with labor at below subsistence cost for manufactures produced with non-competitive expensive labor is unequal because the exchange value of the primary goods is below the true value. This results in transfer of value to the industrialized sector or nation. The level of smallholder market involvement in SLADD, when seen against the price controls for



agricultural produce, furnish some support to this claim. Clearly, the smallholder sub-sector is part and parcel of the capitalist economy, offering a larger market for consumer goods. Smallholders cannot successfully withdraw from the capitalist market because they do not produce some of the items they require. The high cost of manufactures has meant that many households in Salima ADD go without some basic necessities. Housing is one such basic necessity. Many households in Salima ADD cannot afford a decent house. Ninety-four percent of the respondents lived in mud houses with thatch roofs and mud floors. A majority (65%) of these households had no latrines, and 76% had no trash-pits. Only 19% of the households were considered clean and 39% were rated dilapidated. A majority (70%) of the people in the sample said they slept on mats, 15% on beds, 14% on the floor, and 2% used some other bedding material such as hides.

It may be argued that mud houses with thatch roofs and mud floors is no proof of poverty. An explanation is in order here. As a matter of fact, some people may wish to argue that the mud walls and grass thatch are excellent insulation against the intense heat of the harsh summer sun common along the lake-shore. Two points must be taken into account when evaluating these houses. In the first place, it must be known that even in the harsh hot environment of the lakeshore area, the average person prefers a brick and iron roofed house to the mud-thatch house. There are several reasons for this preference.

Apart from conferring prestige and high status, the modern brick and iron roofed house is also more durable than the traditional mud house. Whereas the traditional mud house requires new thatch every season and frequent repairing and maintenance of the walls and floors, the brick house does not. In this era, where population pressure has meant that all land must be brought under cultivation, finding grass for thatch is becoming increasingly difficult and expensive. In the long run, brick houses are not only durable, they are also cheaper.



Secondly, from the health point of view, there are at least two points against the traditional mud house. The mud walls and thatch roofs compare poorly to the brick walls and iron roofs under the threat of the heavy torrential rains and frequent floods of the lake-shore. The thatch roofs are not only inadequate deterrents of the heavy down-pours, but they become water-laden and too heavy for the water-logged mud walls to support. Thus the traditional houses are death traps under heavy rains and floods. Secondly, it is common knowledge to many Malawians that mud walls and floors are excellent breeding grounds for *mphutsi* maggots, *nsikidzi* bedbugs, *nkhufi* ticks, and many other bugs. These bugs are health risks which can be avoided by the brick house and cement floor. Lastly, thatch roofs are more prone to catch fire than the iron 'roofs. Hence, the prevalence of the traditional house among the sample households is a definite indication of poverty.

7.5 Technology and Credit Participation

In this study, only 17% of the households applied fertilizer to local maize (Table 7.7). Only two households grew hybrid maize and, as expected, both applied fertilizer. All the rice growers did not apply fertilizer even though fertilizer is recommended in rice. Judging from these data, it may be said that the impact of the changes in credit packages has been negligible.

Table 7.7 Smallholder Use of Fertilizer for Selected Crops.

Crop	Percent Households Using Fertilizer		
	Last Season	This season	Sample size
Local maize	25.0	17.1	133
Hybrid maize	-	100.0	2
Rice	0.0	0.0	45
Tobacco	0.0	0.0	1



The FAs visit each block once per week with one day reserved for meetings and planning. The "Block System" was meant to improve staff effectiveness and increase farmer coverage. However, the narrow range of technologies demonstrated at the blocks guarantees that only club members will attend the club activities. Thus the "Block System's" major criticism has been its inability to reach a wider audience of farmers.

Through the agricultural credit and extension services and the marketing agency provided by the government, capital was able to organize the production and marketing of peasant agriculture in Salima ADD. Only those farmers that had demonstrated, by the size of their holding, that they were capable (with the use of fertilizer, chemicals, and equipment) of producing a marketable surplus qualified for membership in the credit clubs. Because of the high ratio of farmers to extension workers and the fact that project success was based on good credit repayment rate, extension workers concentrated their efforts on club farmers who had obtained credit. They helped the farmers to get the most out of the credit package. My own observation has been that farmers pay more attention to plots on which they have used inputs on credit than those plots on which they have not.

In its fourth phase of the program, officials admitted that credit in Salima had reached a maximum of only 18% of all the farming households (see Table 7.8). In 1986/87 season, a mere 9% of the households participated in the credit program. In addition, of those smallholders who were members of the farmers clubs, only a small percentage were women. The clubs discriminate against women in their membership. Interestingly, as the strength of club membership declined from 1984/85 season to 1987/88 season, women membership remained stable. This suggest that women are better credit risk takers than men. The use of modern technology by smallholders is dependent on their access to credit. As can be observed from Table 7.9, a large portion of the input



Table 7.8 Credit Participation in the Salima ADD Phase IV.

Season	1983/84	1984/85	1985/86	1986/87	1987/88
Farmers' Clubs	546	694	611	455	437
Total # of Household	68,021	70,607	73,293	76,082	78,640
Membership	9,461	12,433	10,067	7,110	7,864
Percent	14	18	14	9	10
-Male	7,948	11,031	9,025	5,910	6,145
-Female	1,513	1,402	1,402	1,200	1,719
Female as percent of total membership	16	11	14	17	22

Source: Fischer et al. 1988. .

sales were on credit basis, suggesting that an increase in club membership could improve the credit up-take. For the same reason, as club membership declined, credit up-take also declined. Furthermore, the discrimination against women in club membership also means that many women may have been denied credit services, even though they may be better risk takers, thereby excluding them from the development efforts.

Table 7.9 Farm Input Sales in Salima ADD Phase IV (Values in Kwacha).

Season	1983/84	1984/85	1985/86	1986/87
Fertilizer	391,106	577,089	535,415	489,887
Chemicals	172,665	289,254	445,407	180,619
Seeds	50,515	70,362	74,584	172,660
Total Sales	614,286	936,705	1,055,407	843,166
-Cash sales	129,232	217,648	172,200	201,927
-Percentage	26	30	19	31
-Credit sales	485,054	719,057	883,207	641,238

Source: Fischer et al. 1988.



As noted earlier, analysis of variance of mean income between farmers who grew cotton and those who did not grow cotton revealed that there is no statistically significant difference in the mean incomes of the two groups of farmers. This suggests that even on the few farm households on which capital was invested, the benefits accruing to the farmer were negligible. In Chapter 4, it was observed that productivity in cotton improved from 403 to 704 kilograms per hectare, during the 1980s. However, even though there were these substantial increments in productivity in cotton, the surplus realized by the farmer all went to credit repayment. More important was the tying of all smallholders to ADMARC's monopoly marketing. The method used by ADMARC to decide on cotton producer prices has already been discussed. ADMARC favored David Whitehead textile company in its determination of cotton producer prices.

Table 7.10 presents Salima ADD Phase IV values of crop production. As can be observed, there was no improvement in productivity among the smallholders. In terms of crop production value per unit area, productivity remained the same over the Phase IV period. The net returns to farmers also stagnated. Production costs however, rose from K21.29 per hectare in 1984/85 to K40.13 per hectare in the 1987/88 crop season. At constant prices, returns per hectare declined by 19%.

7.6 Conclusion

In this Chapter, two sets of variables in relationship to household cash income were investigated: the ecological and the sociological variables. The results of the investigation showed that, in the first place, ecological factors are very important in agricultural societies because the environment determines what farmers can grow or raise. Other aspects of the ecological factor include access to markets, availability of natural resources, and proximity to activity centers. Hence, some of the regional variation in cropping systems and household income may be explained by the ecological factor.



Table 7.10 Value of Crop Production in Salima ADD Phase IV.y

Detail	1984/85	1985/86	1986/87	1987/88
	(Values are in Malawi Kwacha at current prices)			
Gross Value of Production	16,873,736	18,178,375	17,734,422	20,321,671
Production Costs	1,781,068	2,753,409	3,400,226	3,544,870
Net Value: Agric.	15,092,668	15,424,967	14,334,196	16,776,800
Crop Production	(Kwacha per Hectare)			
- Gross Income	200.91	208.52	197.91	221.21
- Production Costs	21.29	32.35	39.76	40.13
- Net Returns	179.62	176.17	158.16	181.08
	(At constant 1983/84 prices)			
Gross Value of Production	16,873,736	17,801,138	13,633,169	15,035,839
Production Costs	1,781,068	2,301,561	2,248,433	2,032,171
Net Value: Agric.	15,092,668	15,499,577	11,384,747	13,003,668
Crop Production	(Kwacha per Hectare)			
- Gross Income	200.91	204.06	152.23	163.56
- Production Costs	21.29	26.81	26.09	22.65
- Net Returns	179.62	177.25	126.15	140.91

Source: Fischer et al. 1988.

In this study, smallholders in Lifuwu and Golomoti EPAs grew rice while Zidyana and Khombedza EPAs were cotton areas because of the suitability of the soils. Mtakataka EPA is a mango fruit area whereas crafts were from Lifuwu and Khombedza. Households in Senga EPA led in fish trading and in ganyu casual labor. It has been argued that these variations can be explained on the basis of the ecological factor. However, when the ecological factor was controlled, there was still variation in these variables. The variation observed after controlling the ecological factor was explained by sociological factors.

Land distribution varied with the gender of the head of household. The female-headed households had smaller holdings compared to the male-headed households. This variation was a source of discrimination in the

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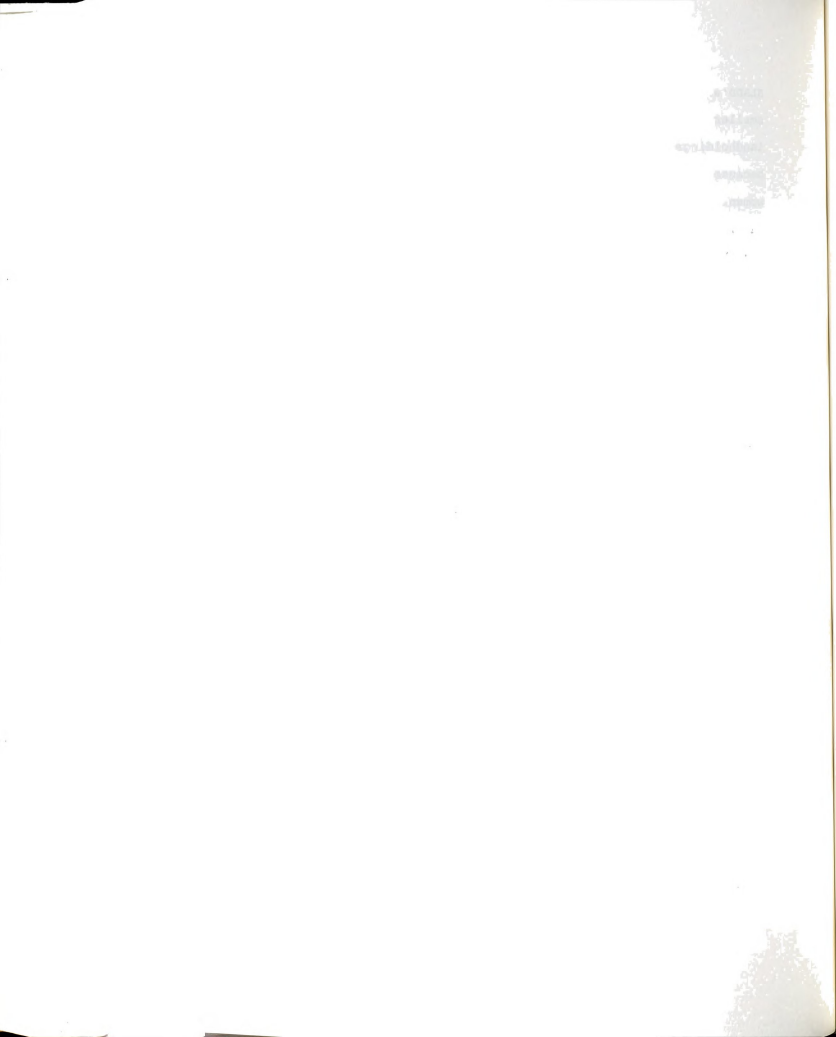
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SLADD's development programs which were biased against households with smaller holding sizes. Since more female-headed households had smaller landholdings than male-headed households, development efforts in SLADD, because of their bias towards the larger farmers, discriminated against women. From the Lifuwu rice irrigation scheme there was only one woman participant in the sample. Discrimination against female-headed households may explain the lower mean household cash incomes among the female-headed households. When the various income sources were analyzed by sex of the head of household, it was found that women's avenues of earning cash income were from fish trading and not from the agricultural development efforts.

In general, judging from the rate of participation in cash crop production, credit up-take, and fertilizer use, the SLADD's commercialization approach to agricultural development reached only a small number of farmers. Of the sample of 139 households, only one percent grew hybrid maize, 17% grew cotton, and 32% grew rice. Many farmers did not use fertilizers or chemicals. To some extent, it may be said that the dependence theorists were right in charging that the modernization approach distorts resource use pattern. As was observed in the previous Chapter, smallholders grow a combination of crops, some of which are inter-cropped. The ADD's emphasis on a few cash crops fails to pay attention to the diversity in the smallholder cropping system. The crops from which the majority of the smallholders earn cash income are not the ones receiving attention in the extension services. In addition, an attempt was made to investigate the extent to which the smallholders are involved in the market. It was found that a substantial portion of the smallholders subsistence needs are met in the market. It was concluded that smallholders were vulnerable to exploitation by merchant capital through the operation of unfavorable terms of trade.

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CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

8.1 Overview

The Salima ADD agricultural development program was part of the post-independence "commercialization of agriculture" move of the post colonial modernization era. Like many programs in the post-colonial Malawi, Salima ADD emerged amidst fears that economically Malawi could not stand on her, and that self-determination would be accompanied by poverty, political unrest, and possibly radical anti-capitalist ideologies. Malawi being predominantly rural, integrated rural development projects (IRDPs) were deemed necessary if the specter of poverty, with its resultant civil unrest, was to be avoided. This study aimed at finding out the extent to which the IRDPs in SLADD have succeeded in modernizing the rural economy, and to evaluate the effects of the modernization process on poverty, food security, and nutrition among the smallholder farmers.

In Chapter 1, two approaches to the study of agrarian societies were distinguished: the modernization model and what I have termed the "structural/historical perspective". Chapters 2, 3, and 4 provided the structural/historical context within which the Salima Agricultural Development Division's (SLADD's) integrated rural development projects (IRDPs) were investigated. In Chapter 3, it was observed that colonial relations were not only exploitative, but also outright detrimental to the colony and set in motion forces that make it difficult for the colony to achieve any substantial progress in the post-colonial development process. Chapter 4 was devoted to the analysis of the development policies and strategies of the post-independence period. In this period, Malawi underwent many changes. However, it was noted that the approach to rural development did not depart very much from the

colonial strategy. The same agricultural boards that the colonial government created mainly for the organization and control of peasant agriculture had been consolidated and the purpose remained the same. Wages remained low for the estate sub-sector and real wage levels declined 6% annually. The labor policy, except for the abolition of the *thangata*, remained the same, aimed at keeping wages low for the benefit of the estate sub-sector. Smallholder farmers were still excluded from production of economic crops and were compelled to sell their agricultural produce through the government marketing boards. The impact of the post-independence policies and strategies was summarized in what I termed the four pressures, viz: the land pressure, the wage pressure, the price pressure, and the institutional pressure. It was argued that the policies and strategies adopted in the post-independence period resulted in a process of rural impoverization.

Table 8.1 summarizes the general implications of such policies on the rural population of Salima ADD. The absolute rural poverty income in Malawi is estimated to be US\$99.00 (Fischer et al., 1988). Thomas (1975:38) noted that during the first six years of Germany development aid to the Salima ADD, a group of 570 privileged farmers was established with annual incomes in excess of K350 while the poorest farmers were still obtaining only K50 (US\$20) per annum, well below the estimated absolute rural poverty income. A mid-term evaluation study, carried out in 1988 by a team of consultants contracted by the Malawi Government and the European Economic Community (EEC) mission to Malawi made this observation:

the funding of SLADD PHASE IV was aiming at "increasing agricultural production, raising living standards, and improving family incomes". Though the social services components of the project, i.e. rural water supply, public health infrastructure, and Primary Health Care, so far being effectively implemented, have had a positive impact on social general welfare the agricultural and income objectives of the project were not achieved. Over the project period so far the agricultural production declined, and the living standard deteriorated, and the family income decreased (Fischer et al., 1988).

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Table 8.1 Salima ADD Phase IV: Net Household Income.

Detail	1984/85	1985/86	1986/87	1987/88
	(at current prices)			
Net Household Income	241.72	275.33	214.53	275.55
US\$ Equivalent	140.86	147.32	96.67	106.99
- Agriculture	221.89	218.46	195.58	220.51
- Off farm income	20.16	37.12	39.41	67.76
- Subs. gap/surplus	(0.33)	19.75	(20.45)	(12.72)
- Cash	73.90	92.82	25.68	73.53
- Non cash	167.82	182.51	188.85	202.02
	(at constant 1983/84 prices)			
Net Household Income	241.72	263.83	162.23	191.59
US\$ Equivalent	140.86	141.17	73.10	74.39
- Agriculture	221.89	219.52	155.33	170.92
- Off farm income	20.16	24.75	22.52	30.12
- Subs. gap/surplus	(0.33)	19.56	(15.62)	(9.45)
- Cash	73.90	81.85	18.62	40.90
- Non cash	167.82	181.98	143.61	150.68

Source: Fischer et al. 1988.

Table 8.1 shows household net incomes for smallholder farmers as reported by the Phase IV evaluation study team. The US dollar equivalents of the Salima ADD household net incomes are shown. As can be observed, the average household subsisted on income barely above the absolute poverty income. Moreover, because income distribution tends to skew to the right, in reality, a majority of the households subsisted on income below the absolute poverty.

8.2 Conclusions Related to the Research Questions

The main objective of this study was to assess the extent to which SLADD's integrated rural development projects (IRDP) succeeded in reducing poverty among the smallholder farmers. The results of the survey showed that the IRDP approach in SLADD has had limited success. The IRDP's emphasis on "progressive farmers" or *Achikumbe* stimulated and



promoted differentiation of the smallholders into Raikes' (1982) three typical rural classes: 1) the rich peasants, 2) the middle peasants, and 3) the poor peasants. The Malawi Government (1987) classified the smallholders as follows 1) those with less than 0.7 ha. of land, 2) those with between 0.7 and 1.5 ha., and 3) those with 1.5 ha. or more land. The findings in this study revealed that, various project components were biased against the smaller farmers and particularly women. The evidence also suggested that the irrigation technology in SLADD discriminated against female-headed households. As was observed in Chapter 7, only one female-headed household belonged to the Lifuwu Rice Irrigation Project. Furthermore, the irrigation project catered for a very small percentage of smallholders in the Lifuwu EPA.

Technologically, smallholders in SLADD continue to rely on traditional methods of cultivation. The hand hoe was still the major means of cultivation. No tractor or ox-cultivation was reported in the survey, despite the fact that SLADD ran a special tractor and ox-cultivation program. The two main cash crops in SLADD were rice and cotton. Again, only a minority of the smallholders grew these crops. In the case of cotton, the evidence suggested that cotton did not improve a household's cash income sufficiently to allow the household members to lead a better life. This was attributed to the exploitative producer prices offered by ADMARC to smallholders which tended to favor David Whitehead, the textile company.

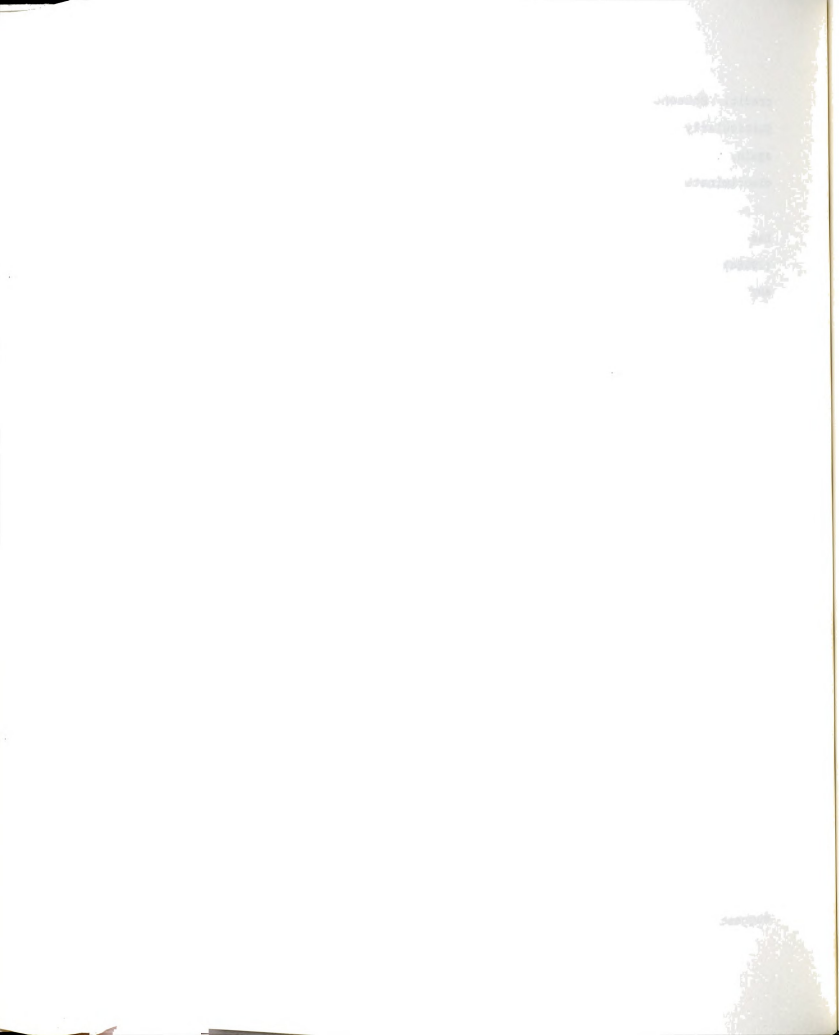
I did not ask a specific question on smallholder credit participation in this study, except through the question on fertilizer and insecticide use. The findings showed that all the cotton farmers did not spray their cotton, even though cotton spraying was strongly recommended. Likewise, none of the rice growers in the survey applied fertilizer to their rice crop. Only the two households that reported to grow hybrid maize applied fertilizer. Judging from the mid-term evaluation records, a majority of the households had no access to

credit. Households with less than one hectare of landholding were particularly disadvantaged. Women formed the bulk of this group. Here again, the project efforts appeared to neglect or systematically discriminate against women.

The consequence of SLADD's failure to reach a majority of farmers has been continued impoverization. As a matter of fact, Kydd and Hewitt (1986a) have argued that the IRDP project areas in Malawi have not done any better compared to the non-project areas. The evidence in this survey suggested that the standard of living for a majority of the smallholders in SLADD had not improved very much. The study results showed that a majority of the people had low cash incomes, were food insecure, lived in poor houses, and their children showed high rates of malnutrition. The morbidity module of the survey indicated that the most common childhood diseases were the infectious diseases of respiratory tract infections and diarrhea, reflecting the poor living conditions in the villages (i.e. poor water sources, poor houses, lack of latrines and trash pits).

8.3 Policy Implications

Several important lessons have been learned from this study. First, smallholders are quite diverse in the types of crops they grow and livestock they raise. However, IRDPs, while recognizing this diversity, have, by and large, not supported this diversity. Many farmers do not receive extension advice on the proper cultivation of the many traditional crops they grow. Extension services concentrate on cash crops that are grown by only a few farmers. This is also true for livestock. While less than 10% of the households owned cattle, a large part of the SLADD project funds were spent on improvement of cattle production. It was only in the mid-1980s that a goat component was incorporated in the Salima RPD. Many households lack advice on the proper methods of raising chickens, pigs, sheep, and ducks. It is suggested that, because traditional livestock and crops form a major



component of the farming systems of the smallholder sub-sector, research and extension should pay sufficient attention to these types of activity and find ways to improve productivity. Such a strategy is more likely to benefit more people than the current approach.

Secondly, in this study, it was found that a variety of crafts are manufactured informally by smallholders. Households that reported incomes from crafts had significantly higher mean household incomes than those who did not. As the land pressure builds in SLADD, the need to find alternative sources of earning a living becomes more pressing. The crafts industry in SLADD suggests that there may be many alternate ways through which rural households can make a living other than farming. There is need for further research in this area, especially on the distribution of skills, the training process, marketing, and availability of raw materials. The rural industry unit in the SLADD would benefit from specialized studies in this area.

A third policy issue is the apparent discrimination of farmers with smaller landholdings. This stems from the fact that rural households adopt a strategy of food first when deciding on the crops to grow. As such, households with small landholdings cannot afford to grow cash crops. Since extension and credit services are targeted at cash crop farmers, these households are left out. Women form the bulk of these households. But female-headed households are also excluded from the extension services, credit clubs, and even the irrigation projects for other reasons. This systematic discrimination may stem from the prevalence of the system of virilocal residence (*chitengwa*) among the Central Region Chewa and Yao. Women in *chitengwa* are considered bad credit risks because their residence in a village is considered temporary. Since permanent residence is often one of the criterion for qualifying club members, many women in *chitengwa* are denied membership. Furthermore, although the clubs are formed locally, because of the rampant male-chauvinism in rural areas, female-headed households are not

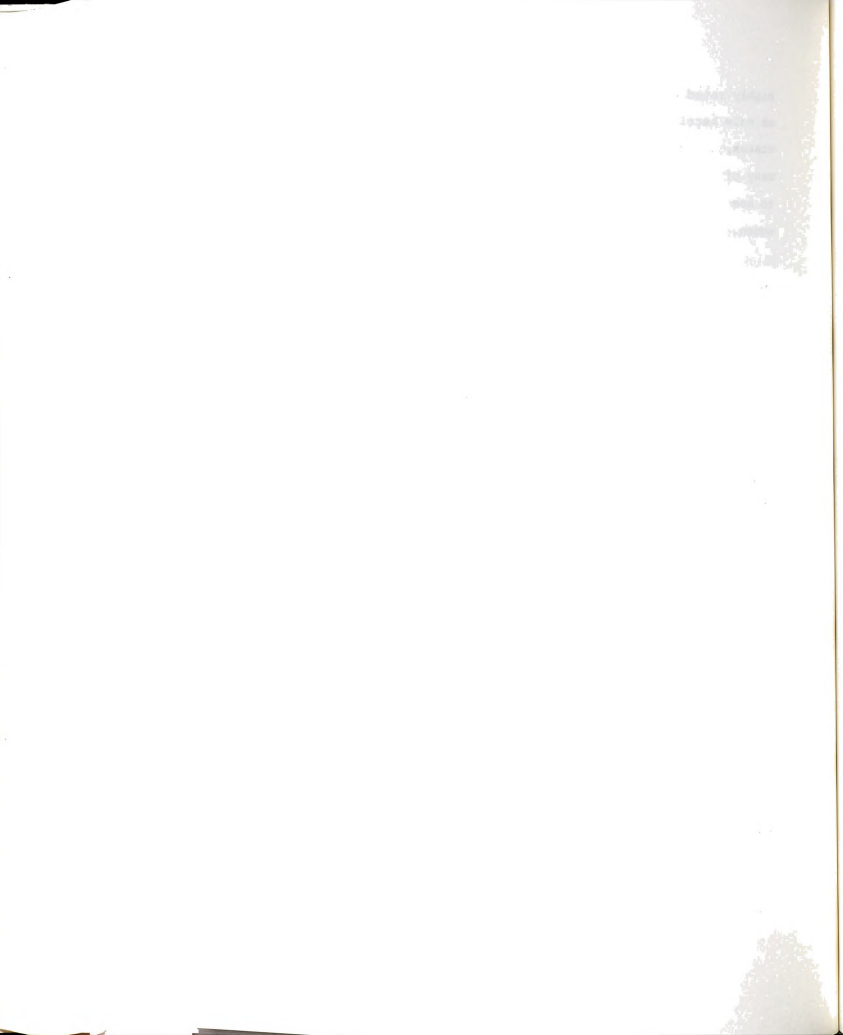
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OF THE
MUSEUM
OF
COMPARATIVE ZOOLOGY
AND ANATOMY
HARVARD UNIVERSITY

1900

highly rated and are quite often shunned in activities that are prided as male territories. The combination of small landholdings, *chitengwa* status, and the male-chauvinism means that women are disadvantaged in many of the projects offered by the IRDPs. Special effort is necessary to see to it that there are programs specifically offered to benefit women.

Let me, at this point, make an observation. There seems to be a pervasive phenomenon whereby work that has traditionally been performed by women in the domestic realm gets to be taken over by men when the pay is good. In Salima, I found many women tending rice fields, especially in the Golomoti EPA. It appeared that rice was a women's crop. The interesting thing is that, in sample, women suddenly disappeared from rice production in the Lifuwu Rice Irrigation Project, where the crop had been elevated to cash crop status through the irrigation scheme. Men took over control of rice production. This suggests that project design and implementation ought to be planned in such a way as to avoid such change overs from happening. In this survey, fish trading appeared to be currently dominated by women. It would be a tragedy to see women lose this source of income through project activities. One way to assist women is to identify the avenues through which they earn cash income and design programs specifically targeted to improve those areas of activity; making sure that men do not take over those activities.

Fourth, it was noted in Chapter 7 that it appeared that in SLADD, the more detached a person's economic activities were from the organizing forces of the state marketing agency, the higher the income of that person. Hence, households that reported incomes from sales of rice, fish, and livestock had significantly higher incomes than those households that did not. It appears that the organization of the rural development projects such as SLADD, with state control of input and output markets, prevents smallholders from fully participating in the market economy and experiencing the full benefits of the market. While



this may be justified on the grounds that state control protects the smallholders from market vacillation, at the same time such policies prevent smallholders from getting the full benefits of the market. The World Bank SALs conditions initiated change in this area but at the time of this study, cotton and tobacco were still under the control of ADMARC.

About morbidity, Marmot et al., (1987) observed that there is a relationship between disease and economic status, whereby diseases such as diarrhea are associated with poverty and neoplastic diseases are associated with affluence. Two possible explanations for this relationship are environmental factors and lifestyles. The high prevalence of diarrhea and respiratory tract infections among the under-five children in this study may be related to the unhygienic environment in the household resulting from poverty. SLADD's smallholders would benefit from a stronger, well staffed, disease prevention health component in the ADD.

Finally, I turn to the policy issues related to the four squeezes discussed earlier. These must be relaxed. Land pressure can be relaxed by curtailment of further leasing of customary land. In addition, strict control could be exercised to make sure that those who have acquired leasehold titles to land use the land for production purposes. Those who fail to use it, such land must resort back to customary tenure.

High-value crops are best suited to smallholder production because of the high labor requirement. Permitting farmers to grow these crops will go a long way in reducing poverty. It may be argued that allowing smallholders to grow burley tobacco would result in over-production and loss of quality. I suggest that the same "quota system" that has been successfully applied for the dark-fired tobacco can also be used for other crops. The auction floors should be open to the smallholder farmer. After all, if the smallholder farmer is not efficient, he/she

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WASHINGTON, D. C.

1964

will automatically be competed out.

At the national level, policy should aim at development using local resources as much as possible. The first step in this process is the development of industries that use local resources. The aim should be to develop an economic base centered around internal linkages. This means that agricultural projects should aim at technological development in agriculture that improve production of crops that can be used in local industry. To encourage demand for agricultural produce, wages must be at levels that increase the purchasing power of workers. In that way, high prices can be afforded for the agricultural produce. For those landless, or near landless peasants, there is need to develop local industry to absorb this growing population.

At the local level, we need to pay more attention to sociological and ecological factors in the design of development projects so that we are able to target our efforts more accurately. For instance, the current "fertilizer-for-work" program in Malawi does not take into account the ecological factors that influence the need for fertilizer. Many people who do not need to use fertilizer may not benefit from such a program.

8.4 Further Research Direction

One of the more interesting areas of research is the detailed documentation of how rural household generate and expand income. It is often puzzling to learn that some household made K246.0-0 in a year, run out of food in May, but managed to survive until the next harvest in February - March. There must be some process in the *banja* economy that has not yet been understood. The so-called informal sector needs to be researched into to find its potentials and find ways in which production and marketing in the informal sector can be improved.

In Salima ADD, crafts, pottery, tea-room, and thatch grass are important areas of the informal sector that need research. The government is already taxing craft manufacturers even though it is not

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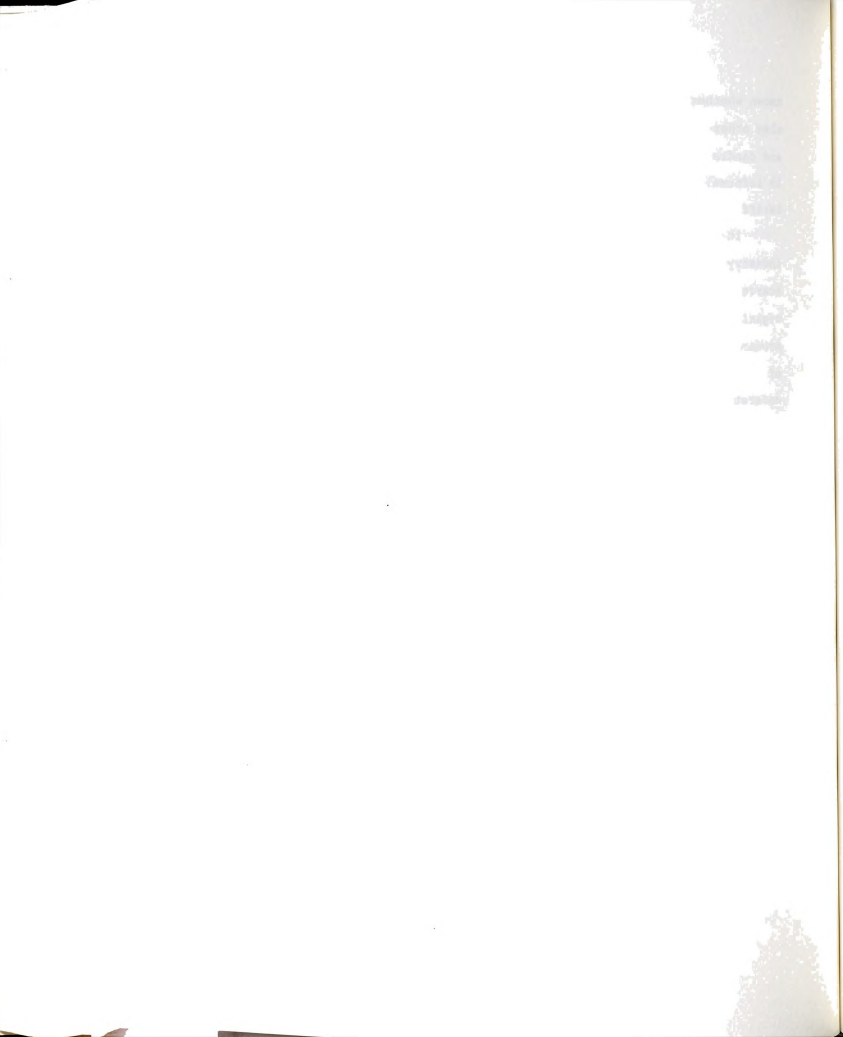
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known whether the crafts manufacturers make profit or not. There are also other areas of the informal sector such as tailoring, bee-keeping, and candle and soap-making. Because the extent of garment manufacturing in informal sector is not known, sewing machines attract a sizeable tariff.

It would be interesting to research into the informal sector industry. What is the nature of the resources and how abundant or scarce are these resources. Are there any possibilities for organization of the informal sector to take advantage of scale economies. I believe this so-called informal sector is the life blood of the rural economy of Malawi. Hence it is imperative that we understand it and find ways to improve it. Improvement in the informal sector will go a long way in providing self employment to many people and improving the incomes of the poor. In the absence of a strong industrial base, this will turn out to be the best alternative.

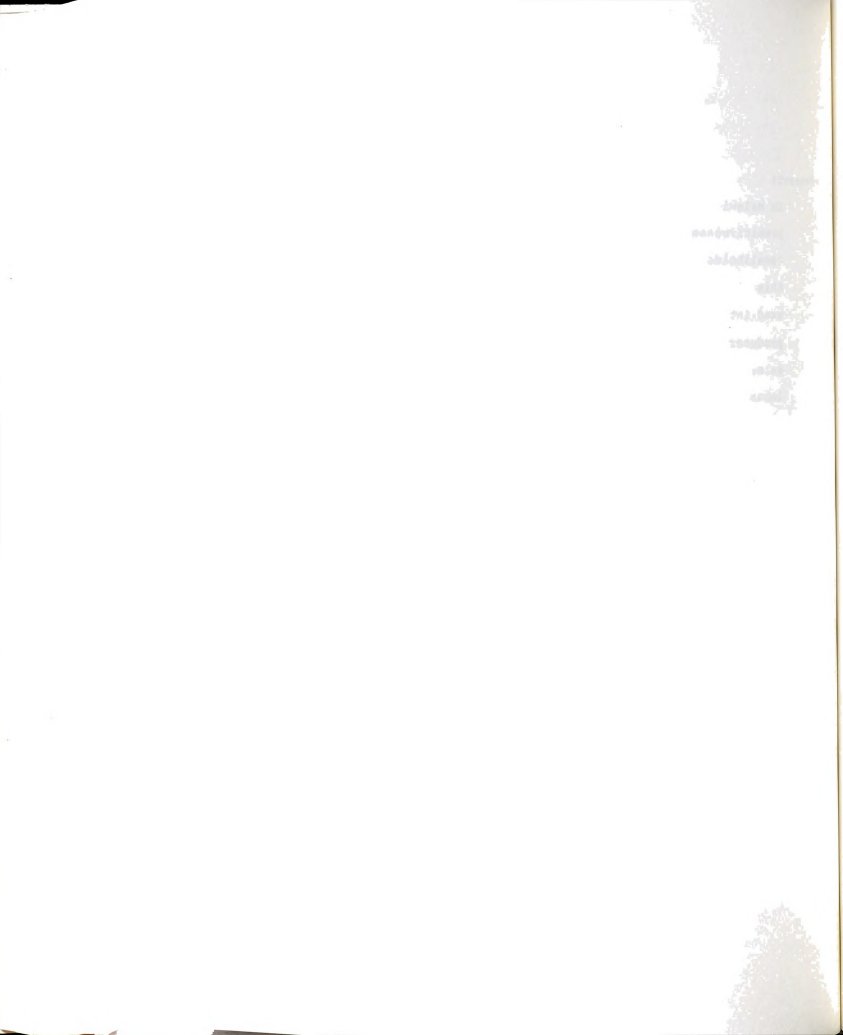


APPENDIX A

DEFINITIONS OF TERMINOLOGY

Peasant:

In Malawi, the term peasant is not used because of its connotation of premitiveness and conservatism. The preferred terminology is "smallholder farmer" which connotes modernity and progresiveness. In this dissertation, the terms refer to the same group of farmers and are used interchangeably. Peasants or smallholder farmers are rural producers who produce mainly for their own consumption but also for sale, using their own and family labor. However, hiring and selling of labor power is also possible and quite compatible with peasant society (harriss, 1982:24). An important aspect of the Malawian peasantry is that, beginning from the colonial to the present times, the peasantry has been subject to state control as contrasted to the estate or commercial farmers. The peasant cultivators are characterised by the cultivation of land on customary tenure. Customary land tenure offers some degree of independent control of the means of production, even though limited to usufructuary rights only and depended on membership to a village. They are restricted to the growing of non-high value crops such as maize, groundnuts, cotton, and pulses. They use hand hoe cultivation and have limited application of modern technology e.g. fertilizer and chemicals. Legally, they have access only to those markets and inputs supply channels which are controlled by the Government. However, the peasantry is not a homogeneous group and is frequently marked by considerable inequality.



Customary land:

Land that is held, used, or occupied under customary law. Under the Customary (Land Development) Act of 1967, customary land may be converted to private land under leasehold or freehold title with the consent of the chiefs.

Private land:

Land that is owned, held, or occupied under private ownership in the form of freehold or leasehold titles.

Public land:

Land which is occupied, used, or acquired by the Government and any other land not being customary or private land.

Mbumba:

Mbumba, even today, refers to the entire matrilineage or patrilineage of the *banja* family extending to the children, grand-children, and great grand-children (Gwengwe, 1965:7-8). Gwengwe's definition of the *mbumba* connotes a significantly different sense from the popularized definition which likens *mbumba* to the western concept of a sorority group. Gwengwe appears to think of the *mbumba* as either a matrilineage or a patrilineage. Such a definition is broad enough to allow the concept to be applicable to both patrilineal and matrilineal systems. On the other hand, his illustration of the *mbumba* as referring to female offsprings, their children, and grand-children on the maternal side only, is probably incorrect.

Nkhoswe:

Nkhoswe, in the matrilineal societies of Malawi, is the elder brother to the maternal stem of the *mbumba*. *Nkhoswe* or custodian of the *mbumba*, is a very broad concept conferring all-encompassing responsibilities on the incumbent. IN the lives of the *mbumba*, the *nkhoswe* is a patron, an arbitrator, a referee, a convener, a trustee, a provider, a counselor, and so on.

1880
1881
1882
1883

Chikamwini:

Chikamwini is practiced only among the matrilineal groups in Malawi, but there were variations from place to place. Mandala describes *chikamwini*, as practiced among the Mang'anja in the Shire Valley region, in colonial Malawi, as simply a bride-service performed by a *mkamwini* (plural *akamwini*) or prospecting son-in-law for the prospective mother-in-law for a an agreed period of time (Mandala, 1990:30-31). In the Central Region, however, *chikamwini* is an institution of obligatory matrilocal residence for an unspecified length of time, during which time, the young man must show that he is a responsible individual and capable of raising and providing for a family. The time one serves in *chikamwini* is often based on the status of *chiwongo* bridal payment, but also on the character and reputation the *mkamwini* son-in-law establishes during his stay in the village. The bride-service is only part of the institution. The term *chikamwini* originates from the Chewa word *mwini* which means "owner". The prefix *ka-* means "it" or "something". Sometimes "ka" signifies small size. Hence, *kamwini* may mean that "it" or "something" is someone's property. The prefix *chi-* in this use also means "something". In this case *chikamwini* means something done or performed as an act of appreciation for and show responsibility in the use of another person's property. It may refer to the bride-service or the obligatory matrilocal residence, or both. In either case the act is performed in appreciation for the fact that the young man will be permitted to enjoy the services of "something" (i.e. the prospective wife) that is not his property and to show that he will do so responsibly. The prospective husband performs bride-service or matrilocal residence or both in recognition of the fact that he does not own the woman. Her parents "own" the woman. As such, before he is permitted to enjoy

the privileges and services of the woman, he must fulfill certain obligations for the parents, of whom he will deprive the young woman's services and privileges. As long as he remains in *chikamwini*, the man remains an alien in the village and has only usufructuary rights to property.

Chiwongo:

The term *chiwongo* comes from the Chewa (or Chewalized Ngoni) word *wonga* whose meaning approximates the verb "thank" in English. *Kuwonga* means "to thank". The prefix *chi-* means "something". Hence *chiwongo* is a concept referring to a bridal payment, often a heifer or its monetary equivalent, by the matri-kins (*ankhoswe*) of the prospective husband to the matri-kins (*ankhoswe*) of the prospective wife, symbolizing thankfulness on the occasion of acceptance of the man to marry the woman. In most cases, full payment of the *chiwongo* is the precondition for *chitengwa*, the corollary of *chikamwini*.

Chitengwa:

Chitengwa is the feminine corollary of *chikamwini*. The Chewa word *kutengwa* (short for *kutengedwa* or *kutengewa*) literally means "to be taken". *Chitengwa*, therefore, is an institution whereby a man, after fulfilling all the obligations of *chikamwini*, is permitted to take his wife and his children and establish a permanent residence at his own village. The wife, when taken in this way, becomes a *mtengwa* (literally "one who is taken") in her husband's village. Even though the *ankhoswe* matri-kins of the woman may still regard and refer to her husband as a *mkamwini*, he really is not obliged to perform *chikamwini* as before. He sort of graduates into independence. The woman, on the other hand, must perform obligatory *chitengwa* duties for her in-laws on a regular basis. She remains secure in the village as long as she remains married to her husband's family.



Cable Address: PRESMDN, Lilongwe
Telephone: 734 591/734 784
Telex No.: 44399 PRES MJ

Our Reference No. **NRCM/CONF/010/39**

Your Reference No.



NATIONAL RESEARCH COUNCIL OF MALAWI
OFFICE OF THE PRESIDENT AND CABINET
P.O. BOX 30745
LILONGWE 3
MALAWI

13 March 1990

The Research Co-ordinator,
University of Malawi,
P.O. Box 278,
Zomba

Dear Sir,

**AUTHORITY TO DO RESEARCH : EFFECTS OF CROPPING PATTERNS AND
HOUSEHOLD COMPOSITION ON THE NUTRITIONAL STATUS OF CHILDREN
(UNDER-FIVES) IN SALIMA A.D.D. BY MR S.W. KHAILA**

out

This is to inform you that Government clearance has been obtained for the above-mentioned study to be carried by Mr. S W Khaila.

By copy of this letter the researcher is informed of this development; and by copies of the same letter the District Commissioner for Salima and the Chief Agriculture Officer are hereby also informed. For the smooth-running of his project the researcher is advised to call on the District Commissioner and the Programme Manager of the A. D. D. for whatever assistance he may require.

Yours faithfully,

U B S Mtshkoma
For : Secretary for National
Research Council of Malawi

- cc : The Chief Agriculture Officer, P.O. Box 30134, Lilongwe 3.
: The District Commissioner, P.O. Box 15, Salima
: Mr S.W. Khaila, Bunda College of Agriculture, P.O. Box 219,
Lilongwe.



UNIVERSITY OF MALAWI

TELEPHONE ZOMBA 522 62
TELEGRAMS UNIVERSITY ZOMBA



UNIVERSITY OFFICE
P.O. BOX 278, ZOMBA, MALAWI

Ref: 1/12/3/12/1

Date: 19th March 1990

Mr S W Khaila
Bunda College of Agriculture
P.O. Box 219
Lilongwe.

Dear Sir,

CLEARANCE FOR YOUR PROJECT

I am pleased to inform you that the NRCM has advised this office that your project "Effects of Cropping Patterns and Household Composition on the Nutritional Status of Children (under-fives) in Salima A.D.D.", has received both government and security clearance. Please note from the enclosed clearance letter that you are required to report to the District Commissioner of each district before starting your work.

I wish you success in your research work and look forward to your report when the work has been completed.

Yours faithfully

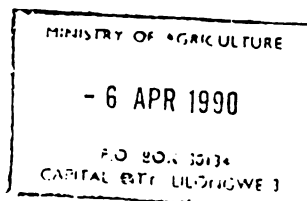
Ehimi

DP
D.C. Munthali
UNIVERSITY RESEARCH COORDINATOR

Encl.

DCM/ejp





REF. NO. 33/23/2F

6th April, 1990

FROM: THE SECRETARY FOR AGRICULTURE, P O BOX 30134, LILONGWE 3.

TO : THE PROGRAMME MANAGER, SALIMA ADD, P/BAG 1, SALIMA.

DOCTORATE IN-COUNTRY RESEARCH
MR. S. W. KHAILA

The bearer, Mr S.W. Khaila is a Sociology Lecturer at Bunda College of Agriculture. He is currently a doctorate student in the United States of America. He is in the country for his in-country reasearch by the National Research Council of Malawi. He intents to carry out his field research in your ADD (SLADD).

The purpose of this letter is to introduce Mr Khaila to you and to seek your cooperation in this activity. Please assist him accordingly.


I.I. Chirambo
FOR: SECRETARY FOR AGRICULTURE



BASELINE SURVEY INTERVIEW SCHEDULE

Date: ____/____/____
Administered by: _____

Household ID#: _____
RDP: _____

Village: _____

EPA: _____

T.A. _____

District _____

Name of HH: _____

1. Zaka..... Years _____

2. Sex 1=mwamuna []
2=mkazi

3. Sukulu mudalekeza kalasi yanji? Years _____

4. Nanga mumagwira ntchito yanji?
1=Ulimi []
2=Malonda (groceries)
3=Usodzi wa Nsomba
4=Ulenje/Uzimba
5=Zina (specify) _____

5. Nanga malo ano mwakhalapo nthawi yotalika bwanji?
1=Less than 1 Year []
2=1 - 5 Years
3=6 - 10 Years
4=11 - 15 Years
5=16 - 20 Years
6=More than 20 Years

(ENUMERATOR: If male HH ask question #6, BUT if married female HH go to #7)

6. Kodi muli ndi akazi angati? No. _____ 7.
Kodi amuna anu ali ndi akazi angati? No. _____

8. Nanga muli ndi minda ingati? No. _____

9. Kodi minda yanu yonse ikukwanira mahekitala angati No. _____
Kukula kwake? Hectares _____

1882
1883

1884

1885

1886

<u>Crops Grown</u>	<u>Area(in hectares)</u>		<u>Harvest(in Kgs)</u>		<u>Fertilizer(in Kgs)</u>	
	<u>Last Year</u>	<u>This Year</u>	<u>Last Year</u>	<u>This Year</u>	<u>Last Year</u>	<u>This Year</u>
Chimanga:						
Lokolo 10.	11. _____	12. _____	13. _____	14. _____	15. _____	
Hybrid 16.	17. _____	18. _____	19. _____	20. _____	21. _____	
Thonje 22.	23. _____	24. _____	25. _____	26. _____	27. _____	
Fodya 28.	29. _____	30. _____	31. _____	32. _____	33. _____	
Mpunga 34.	35. _____	36. _____	37. _____	38. _____	39. _____	
Mtedza 40.	41. _____	42. _____	43. _____	44. _____	45. _____	
Chinangwa 46.	47. _____	48. _____	49. _____	50. _____	51. _____	
Mawere 52.	53. _____	54. _____	55. _____	56. _____	57. _____	
Nyemba 58.	59. _____	60. _____	61. _____	62. _____	63. _____	
Khobwe 64.	65. _____	66. _____	67. _____	68. _____	69. _____	
Nzama 70.	71. _____	72. _____	73. _____	74. _____	75. _____	
Kachewere 76.	77. _____	78. _____	79. _____	80. _____	81. _____	
Mbatata 82.	83. _____	84. _____	85. _____	86. _____	87. _____	
Sunflower 88.	89. _____	90. _____	91. _____	92. _____	93. _____	
Soyabean 94.	95. _____	96. _____	97. _____	98. _____	99. _____	
Nandolo 100.	101. _____	102. _____	103. _____	104. _____	105. _____	
Mapira 106.	107. _____	108. _____	109. _____	110. _____	111. _____	

Kodi m'munda mwanu munabyalamo mbeu izi chaka chino?

<u>Mbeu</u>	<u>Kuchuluka kwake</u>
112. Mabvende	_____
113. Mphonda	_____
114. Zipwete	_____
115. Kayimbe	_____
116. Mabiringanya	_____
117. Nkhanyanga	_____
118. Mnkhaka	_____
119. Misale	_____

120. Kodi mudapeza ndalama zingatizi kuchokera ku zokolola za kumunda kwanu chaka chatha? K _____

121. Kodi muli ndi dimba? 1=eya 2= ayi []

(ENUMERATOR: If no to question #121 proceed to #140)

Mumalimamo mbewu zanzi mdimbamo?

122. Spinach____ 123. Nsawawa ____ 124. Anyezi ____ 125. Tomato ____ 126. Kabichi____
 127. Maungu ____ 128. Rape ____ 129. Zitheba ____
 130. Tanaposi____ 131. Kale ____ 132. Cassava____ 133. Nzimbe ____
 134. Mbatata____ 135. Kachewere____ 136. Kaloti ____ 137. Lettuce ____
 138. Chinese kabichi _____

139. Mudapeza ndalama zingati kuchokera ku zokolola za kudimba kwanu
 chaka chathachi? K_____

Nanga kodi muli ndi mitengo ya zipatso?

140. Nthochi ____ 141. Malalanje____ 142. Mandimu ____
 143. Grape Fruit ____ 144. Papaya ____ 145. Macademia____
 146. Mango ____ 147. guwafa ____ 148. Mables ____

(ENUMERATOR: If no to questions #140 - 148 proceed to #150)

149. Mudapeza ndalama zingati kuchokera ku mitengo yanu ya zipatso
 chaka chathachi? K_____

Kodi muli ndi ziweto zanzi?

Chiweto

Zilipo zingati

- | | |
|-----------------------------|-------|
| 150. Ng'ombe | _____ |
| 151. Mbuzi | _____ |
| 152. Nkhosa (abira) | _____ |
| 153. Nkhumba | _____ |
| 154. Nkhuku | _____ |
| 155. Ng'ombe za ngolo/Abulu | _____ |
| 156. Mbira | _____ |
| 157. Abakha | _____ |
| 158. Akalulu | _____ |
| 159. Nkhunda | _____ |
| 160. Nkhuku ndembo | _____ |
| 161. Nkhanga | _____ |
| 162. Zina (specify)_____ | _____ |

163. Mudapeza ndalama zingati mutagulitsa ziweto zanu chaka chatha?
 K_____

164. Kodi chakudya chomwe munakolola chaka chatha chinali chokwanira
 kudyetsa banja lanu chaka chonse?

1=eya []
 2=ayi

165. Kodi zokolola zanu mumasunga kuti?

1=nkhokwe []
 2=m'matumba
 3=Kwina (specify) _____

1871

1872

1873

1874

1875

1876

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1878

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1899

1900

1901

1902

1903

1904

1905

Kodi muli ndizipangizo zina zili zonse mwa izi?
(Ngati muli nazo ndi zingati?)

166. _____ Makhasu 167. _____ Chikwakwa 168. _____ Panga/chikwanje
169. _____ Nkhwangwa 170. _____ Ngolo 171. _____ Ox-drawn plow
172. _____ Bwato 173. _____ Ukonde 174. _____ Mbedza
175. _____ Wilibala 176. _____ Njinga 177. _____ Wailesi
178. _____ Ox-drawn ridger 179. _____ Ox-drawn cultivator
180. _____ Zina (specify) _____.

181. Kodi nyumba yanu mudaimanga ndi zipangizo ziti?

- 1=Njerwa zowotcha []
2=Zidina zosawotcha
3=Mdindo
4=Nsitchi
5=Chimato
6=Zina (specify) _____

182. Nanga denga ndilofolera ndi chiyani?

- 1=Udzu []
2=Malata
3=Zidebe/migolo
4=Matailososi
5=Zina (specify) _____

183. Nanga pansi pa nyumba yanu mudakonzera chiyani?

- 1=Dothi []
2=Simenti
3=Zina (specify) _____

184. Kodi nyumba yanu ili ndi zipinda zingati? (Number of rooms): _____ 185.

Kodi muli ndi nyumba zinanaso?
(ENUMERATOR MUST PROBE)

1. _____
2. _____
3. _____

186. Nanga muli ndi chimbudzi?
(ENUMERATOR MUST VERIFY)

- 1=Eya []
2=Ayi

187. Kodi muli ndi dzala kapena nkhati yotayamo zinyalala?

(ENUMERATOR MUST VERIFY)

- 1=Eya []
2=Ayi

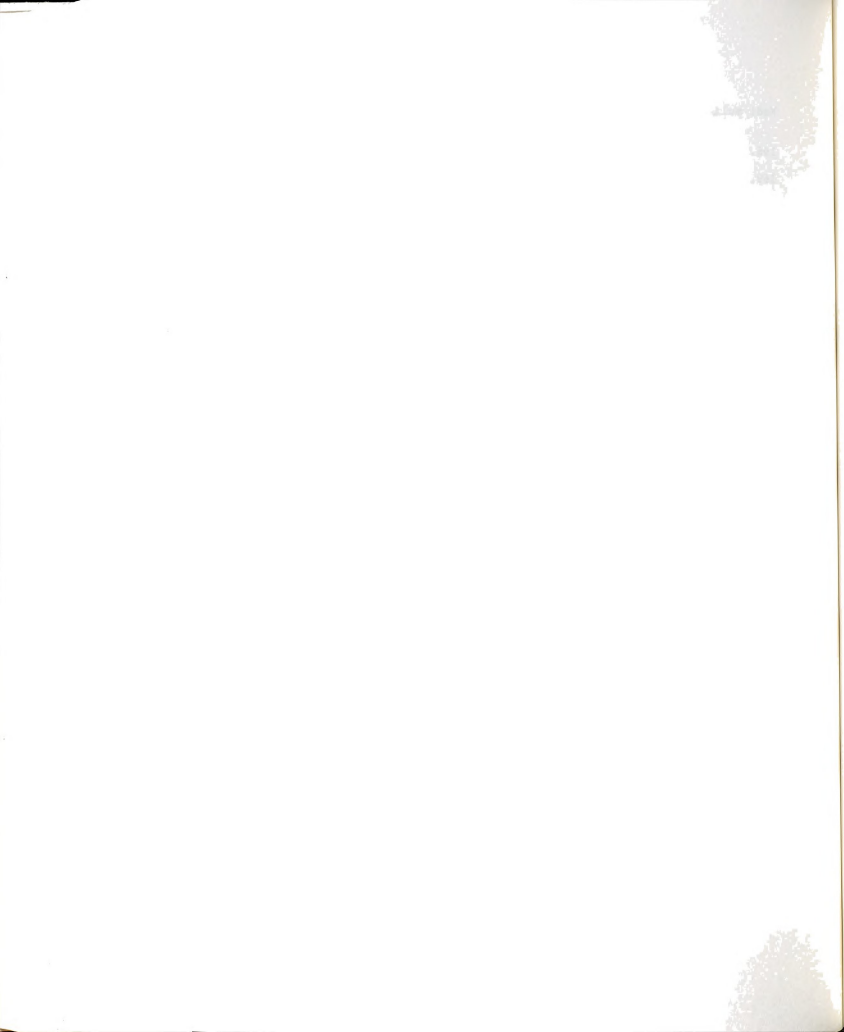
188. Nanga bafa muli nalo?

(ENUMERATOR MUST VERIFY)

- 1=Eya []
2=Ayi

189. (ENUMERATOR: What is your visual assessment of the household?)

- 1=Very clean []
2=Clean
3=Average
4=Dilapidated
5=Very dilapidated



190. Kodi mumagona pachiyani? 1=Mphasa/Mkeka []
 2=Chikopa
 3=Bedi
 4=Kama
 5=Pansi
 5=Zina (specify) _____
191. Nanga madzi akumwa mumakatunga kuti? 1=Kumtsinje []
 2=Kuchitsime
 3=Pampope
 4=Kunyanja
 5=Kwina (specify) _____
192. Kodi mumaphitsa madzi wanu akumwa? 1=Eya []
 2=Ayi
193. Kodi munayamba mwachitapo maphunziro a za umoyo? 1=Eya []
 2=Ayi

Household Members

<u>Dzina</u>	<u>Relation</u>	<u>Sex</u>	<u>Zaka</u>	<u>Maphunziro</u>	<u>Kokhala</u>
_____	194. _____	195. _____	196. _____	197. _____	198. _____
_____	199. _____	200. _____	201. _____	202. _____	203. _____
_____	204. _____	205. _____	206. _____	207. _____	208. _____
_____	209. _____	210. _____	211. _____	212. _____	213. _____
_____	214. _____	215. _____	216. _____	217. _____	218. _____
_____	219. _____	220. _____	221. _____	222. _____	223. _____
_____	224. _____	225. _____	226. _____	227. _____	228. _____
_____	229. _____	230. _____	231. _____	232. _____	233. _____
_____	234. _____	235. _____	236. _____	237. _____	238. _____
_____	239. _____	240. _____	241. _____	242. _____	243. _____

CODES:

- Relation: 1) Head, Sex: 1) Male
 2) Spouse, 2) Female
 3) Son/Daughter,
 4) Parent of Head/Spouse Age: Number of years
 5) Grandchild Education: Number of years
 6) Son/Daughter-in-law
 7) Nephew/Niece
 8) Other relative
 9) Resident hired employee
 10) Other
- Residential Status:
 1) Resident
 2) Polygamist (spending time with other wife(wives))
 3) Resident at a local school
 4) Resident away at school/college
 5) Visitor
 6) Other



A.

NUTRITIONAL STATUS SURVEY OF UNDER-FIVES

Date: ____/____/____

ID # _____

Administered by: _____

RDP: _____

Village: _____

EPA: _____

Name of HH: _____

1. Kodi muli ndi ana angati?

Number _____

2. Koma mudabelekapo ana angati?

Number _____

Kodi mungakumbukire chomwe ana anu amene adatisiyawo adamwalira nacho?

Dzina la mwana Adamwalira ali ndi zaka zingati?

Amadwala chiyani?

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

9 _____

10 _____

11 _____

12 _____

13 _____

14 _____

15 _____

16 _____

17 _____

18 _____

19 _____

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21 _____

22 _____

23 _____

24 _____

25 _____

26 _____

27 _____

28 _____

29 _____

30 _____

31 _____

32 _____

33 _____

34 _____

35 _____

Name of child surveyed: _____

36. Tsiku la kubadwa ____/____/____

Zaka (in months) _____

37. Sex

1=Mwamuna []
2=Mkazi

38. Kodi pa ana anu amoyo uyu ndi wachingati?

Rank _____

39. Kodi mwana ameneyi anabadwa mapasa?

1=Eya []
2=Ayi

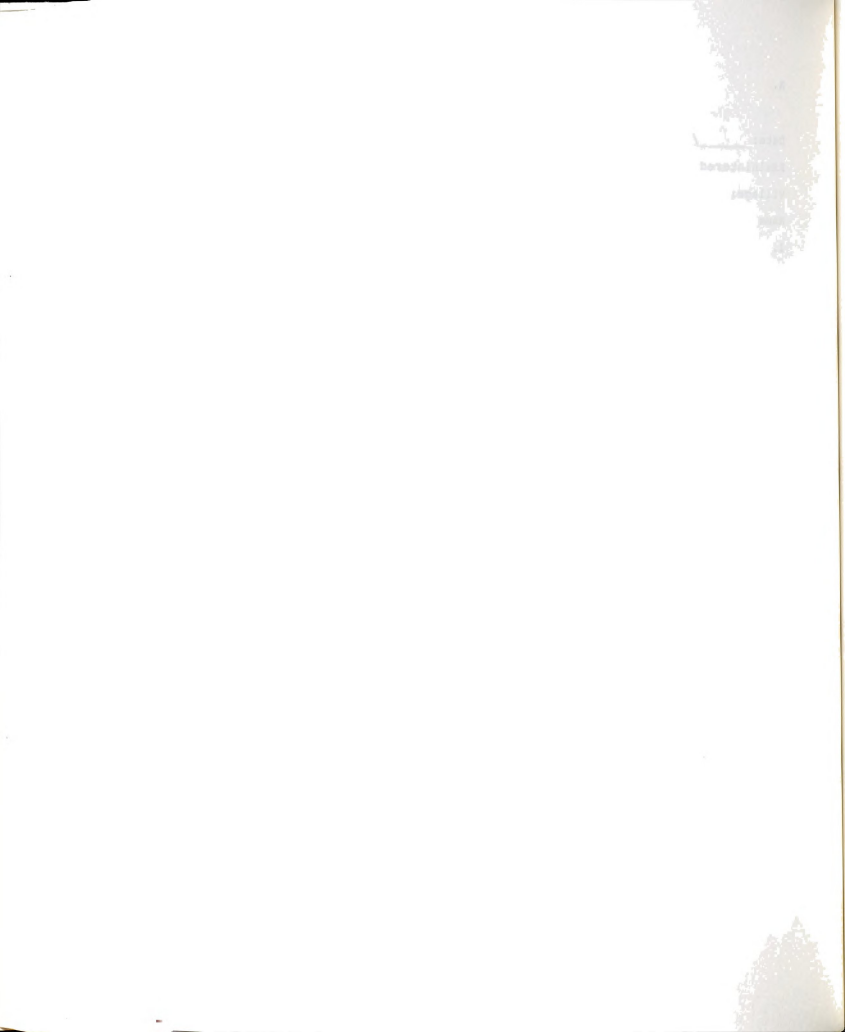
40. Kodi mwanayu akuyamwabe bele?

1=Eya []
2=Ayi

(Enumerator, if the answer to #40 is yes, go to question #42 otherwise ask question #41)

41. Kodi mwana wanuyu mudamuyamwitsa kwa nthawi yotalika bwanji?

Months _____



42. Kodi mwanayu amakhala ndi yani?

1=Makolo ake []

2=Mai wake

3=Bambo wake

4=Agogo wake

5=Ena (specify)

(Enumerator: If the father or mother is not present in the household, ask):

43. Kodi mwanayi amalandira chithandizo china chili chonse kuchokera kwa kholo lomwe palibelo?

(Fotokozani):

44. Kodi amene amayanganira ana anu mukapita kuntchito ndani?

1=Mai []

2=Anansi

3=Agogo

4=Okha

5=Antchito

6=Ena (specify) _____

45. Weight of child

Kilograms

46. Length of child

Centimeters

47. Arm circumference

Centimeters



FORTNIGHTLY MORBIDITY SURVEY

Date: ____/____/____

ID # _____

Administered by: _____

RDP: _____

Village: _____

EPA: _____

Name of HH: _____

Name of child surveyed: _____

Kodi mwana wanu anadwalapo matenda ali onse mwa awa pa sabata ziwiri
zapatizi?

<u>Matenda</u>	<u>Anadwala masiku anqati?</u>	<u>Analandira chithandizo chanji?</u>
1. Chikuku	2. _____	3. _____
4. Kamwazi	5. _____	6. _____
7. Kutsegula	8. _____	9. _____
10. Malungo	11. _____	12. _____
13. Chinfine	14. _____	15. _____
16. Kolera	17. _____	18. _____
19. Chifuwa	20. _____	21. _____
22. Maso	23. _____	24. _____
25. _____	26. _____	27. _____
28. _____	29. _____	30. _____

31. Kodi mwana wanuyu anadya chiyani dzulo?

<u>Main meals</u>	<u>Amount</u>	<u>Snacks</u>	<u>Amount</u>
1. _____	_____	6. _____	_____
2. _____	_____	7. _____	_____
3. _____	_____	8. _____	_____
4. _____	_____	9. _____	_____
5. _____	_____	10. _____	_____

FORTNIGHTLY INTERVIEWS

Date: ____/____/____

ID # _____

Administered by: _____

RDP: _____

Village: _____

EPA: _____

Name of HH: _____

1. Ndalama Zopeza (Income):

A. **Zokolola zomwe zimadyedwa pa nyumba pompano.**

Crops produced
last two weeks

Amount (in Kgs)

Person in Charge

Chimanga

Chinangwa

Thonje

Fodya

Mtedza

Zipatso

Zakudimba

Nyemba

Nzama

Khobwe

Mawere

1900
1901
1902
1903
1904

B. Zogulitsa (income generating)

Crop sales

<u>last two weeks</u>	<u>Amount (in Kgs)</u>	<u>Person in Charge</u>
Chimanga	_____	_____
Chinangwa	_____	_____
Thonje	_____	_____
Fodya	_____	_____
Mtedza	_____	_____
Zipatso	_____	_____
Zakudimba	_____	_____
Nzama	_____	_____
Khobwe	_____	_____
Mawere	_____	_____

Non-Agricultural sales

<u>last two weeks</u>	<u>Value (in Kwacha)</u>	<u>Person in Charge</u>
Mowa/Thobwa	_____	_____
Zosemasema	_____	_____
Zolukaluka	_____	_____
Zakudya	_____	_____
Nkhuni	_____	_____
Zipatso	_____	_____
Nsomba	_____	_____
Za ku Ulenje	_____	_____
Ganyu	_____	_____
Kuwumba Njerwa	_____	_____
Ntchito zina ¹	_____	_____

1

For instance, services such as watch, radio and shoe repairs, carpentry, midwifery, building, etc.

Livestock sales
last two weeks

	<u>Value (in Kwacha)</u>	<u>Person in Charge</u>
Ng'ombe	_____	_____
Mbuzi	_____	_____
Nkhuku	_____	_____
Nkhosa	_____	_____
Abakha	_____	_____
Nkhumba	_____	_____
Nkhunda	_____	_____
Akalulu	_____	_____
Mbira	_____	_____
Nkhuku ndembo	_____	_____
Zina (specify):	_____	_____

C. Transfers

Gifts received
last month

	<u>Value (in Kwacha)</u>	<u>Recipient</u>
Ziweto	_____	_____
Zakudya	_____	_____
Zipatso	_____	_____
Zakudimba	_____	_____
Mowa/Thobwa	_____	_____
Za ku Ulenje	_____	_____

Zina (specify): _____

Kodi munalandilapo mphatso zili zonse sabata ziwili zapitazi?
(Remittances received in the past two weeks)

	<u>Value (in Kwacha)</u>	<u>Received From</u>	<u>BY Whom</u>
Cash	_____	_____	_____
Other	_____	_____	_____

1918-1919
1920-1921
1922-1923
1924-1925
1926-1927
1928-1929
1930-1931
1932-1933
1934-1935
1936-1937
1938-1939
1940-1941
1942-1943
1944-1945
1946-1947
1948-1949
1950-1951
1952-1953
1954-1955
1956-1957
1958-1959
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1962-1963
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1982-1983
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1986-1987
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1998-1999
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2006-2007
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2010-2011
2012-2013
2014-2015
2016-2017
2018-2019
2020-2021
2022-2023
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2100-2101
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2110-2111
2112-2113
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2158-2159
2160-2161
2162-2163
2164-2165
2166-2167
2168-2169
2170-2171
2172-2173
2174-2175
2176-2177
2178-2179
2180-2181
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2192-2193
2194-2195
2196-2197
2198-2199
2200-2201
2202-2203
2204-2205
2206-2207
2208-2209
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2214-2215
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2222-2223
2224-2225
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2238-2239
2240-2241
2242-2243
2244-2245
2246-2247
2248-2249
2250-2251
2252-2253
2254-2255
2256-2257
2258-2259
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2. Ndalama zimene zagwilitsidwa ntchito (Expenditure):A. Zakudya (Consumption Expenditures in the last weeks)
Zogula zakudya

	<u>Value (in Kwacha)</u>	<u>Who Spent</u>
Chimanga	_____	_____
Ufa	_____	_____
Mtedza	_____	_____
Nsinjiro	_____	_____
Nyama	_____	_____
Zakudimba	_____	_____
Nsomba	_____	_____
Nyemba	_____	_____
Khobwe	_____	_____
Nzama	_____	_____
Za ku Ulenje	_____	_____
Zipatso	_____	_____
Zina (specify)	_____	_____
Zogula zobvala	_____	_____
Ndalama zoyendera	_____	_____
Ndalama zakuchigayo	_____	_____
Zokonzetsera nyumba	_____	_____
Ziwiya za mnyumba	_____	_____
Zochitika m'mdzi ²	_____	_____

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Other consumables:

Shuga

Zakumwa

Mchere

Mafuta ophikira

Sopo

Mowa

Zina (specify):

B. Investment:

Zolipira antchito

School fees

Zipangizo za ulimi

Fertilizers

Mbeu

C. Transfers:Gifts given awayValue (in Kwacha)Given by1.

2.

3.

4.



BASELINE SURVEY INTERVIEW SCHEDULE

Date: ____/____/____

ID#: _____

Administered by: _____

RDP: _____

Village: _____

EPA: _____

Name of HH: _____

1. Age.....

Years _____

2. Sex

Male 1[]

Female 2[]

3. How many years of schooling did you complete?

Years _____

4. What religion do you practice?

NONE 1[]

CCAP 2[]

Catholic 3[]

Anglican 4[]

SDA 5[]

Moslem 6[]

Other(specify)_____ 7[]

5. Do you have any positions in the church?

Yes 1[]

No 2[]

6. If yes, specify the position(s) held: _____

7. What is your primary occupation?

Farming 1[]

Trading (groceries) 2[]

Fishing 3[]

Other(specify)_____ 4[]

8. How long have you lived in this area?

Years _____

9. How many wives do you have?

NUMBER. _____

10. If married female head of HH, how many
wives does your husband have?

NUMBER . _____

11. How many gardens do you cultivate?

NUMBER. _____

12. What is the total hectareage of the
gardens you cultivate?

Hectares _____

Crops Grown	Area(in hectares)		Harvest(in Kgs)		Fertilizer(in Kgs)	
	Last Year	This Year	Last Year	This Year	Last Year	This Year
Maize:						
Local	13. _____	14. _____	15. _____	16. _____	17. _____	18. _____
Hybrid	19. _____	20. _____	21. _____	22. _____	23. _____	24. _____
Cotton	25. _____	26. _____	27. _____	28. _____	29. _____	30. _____
Tobacco	31. _____	32. _____	33. _____	34. _____	35. _____	36. _____
Rice	37. _____	38. _____	39. _____	40. _____	41. _____	42. _____
G/nuts	43. _____	44. _____	45. _____	46. _____	47. _____	48. _____
Cassava	49. _____	50. _____	51. _____	52. _____	53. _____	54. _____
F/millet	55. _____	56. _____	57. _____	58. _____	59. _____	60. _____
Beans	61. _____	62. _____	63. _____	64. _____	65. _____	66. _____
Cowpeas	67. _____	68. _____	69. _____	70. _____	71. _____	72. _____
G/Beans	73. _____	74. _____	75. _____	76. _____	77. _____	78. _____
I/Potatoes	79. _____	80. _____	81. _____	82. _____	83. _____	84. _____
S/Potatoes	85. _____	86. _____	87. _____	88. _____	89. _____	90. _____
	91. _____	92. _____	93. _____	94. _____	95. _____	96. _____

Did you intercrop any crops in your garden this year?

1) Yes []

2) No []

97. How much money did you make from your field crops last year?

K _____

1000000000

1000000000

1000000000

1000000000

1000000000

1000000000

1000000000

1000000000

98. Do you have a dimba garden?

Yes 1[]

No 2[]

What crops do you grow in the dimba garden?

99. Bananas____ 100. Oranges ____ 101. Lemons ____ 102. Grape Fruit____
 103. Papaya ____ 104. Macademia____ 105. Mangoes____ 106. Carrots ____
 107. Spinach____ 108. Peas ____ 109. Onions ____ 110. Tomatoes ____
 111. Cabbage____ 112. Pumpkins ____ 113. Rape ____ 114. Green Beans____
 115. Turnip ____ 116. Kale ____ 117. Cassava____ 118. Sugarcane ____
 119. S/potatoes ____ 120. I/potatoes ____ 121. Other (specify)____
 122. How much money did you make from your dimba garden last year?

K_____

What kind of livestock do you own?

<u>Livestock</u>	<u>Number Owned</u>
123. Cattle	_____
124. Goats	_____
125. Sheep	_____
126. Pigs	_____
127. Chickens	_____
128. Oxen	_____
129. Guinea pigs	_____
130. Ducks/Geese	_____
131. Rabbits	_____
132. Pigeons	_____
133. Other (specify)_____	_____

134. How much money did you make from sell of livestock last year?

K_____



135. Was the food you produced last year sufficient to feed your family the year round? Yes 1[]

No 2[]

136. Where do you store your grains? Nkhokwe 1[]

Bags 2[]

Other(specify)_____ 3[]

Do you own any of the following? (Enumerator: If yes indicate quantity)

137. _____Hoe 138. _____Sickle 139. _____Panga

140. _____Axe 141. _____Ox-cart 142. _____Ox-drawn plow

143. _____Fishing boat 144. _____Fishing net 145. _____Fishing hooks

146. _____Wheelbarrow 147. _____Bicycle 148. _____Radio

149. _____Ox-drawn ridger 150. _____Ox-drawn cultivator

151. _____Other(specify)_____.

152. What is the respondent's house made of?

Burnt bricks 1[]

Timber bricks 2[]

Rammed earth 3[]

Poles & mud 4[]

Other(specify)_____ 5[]

155. What is the roof made of?

Thatch 1[]

Iron sheets 2[]

Tins 3[]

Tiles 4[]

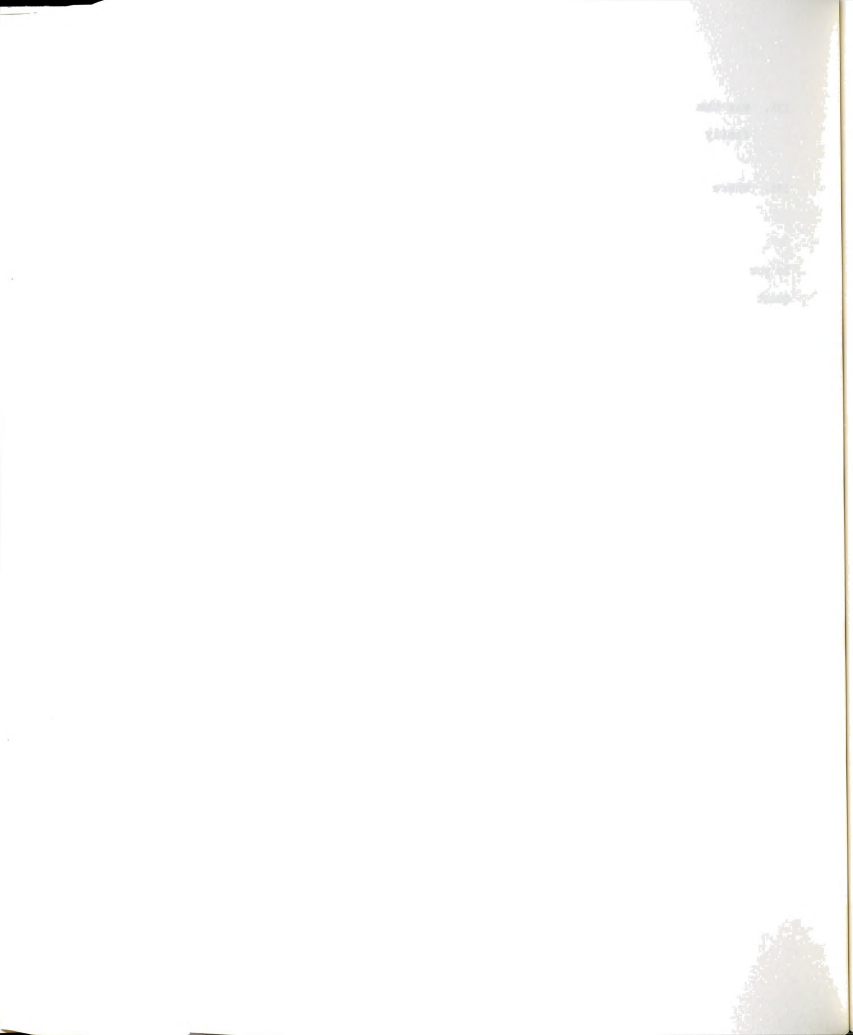
Other(specify)_____ 5[]

156. What is the floor made of?

Earth 1[]

Cement 2[]

Other(specify)_____ 3[]



157. How many rooms has the house? Number of rooms: _____

158. What other houses does the respondent have? (Specify):

1. _____
2. _____
3. _____

159. Do you have a latrine? Yes 1[]

No 2[]

160. Do you have a rubbish pit? (Verify) Yes 1[]

No 2[]

161. Do you have a bath-house? (verify) Yes 1[]

No 2[]

162. What is your visual assessment of the household?

Very clean 1[]

Clean 2[]

Average 3[]

Dilapidated 4[]

Very dilapidated 5[]

163. What do you sleep on? Mat 1[]

Hide 2[]

Bed 3[]

Floor 4[]

Other(specify)_____ 5[]

164. Where do you get your drinking water? River 1[]

Well 2[]

Piped 3[]

Lake 4[]

Other(specify)_____ 5[]

165. Do you boil your drinking water? Yes 1[]

No 2[]

CHURCH OF THE

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166. Have you attended any health courses?

Yes 1[]
No 2[]Household Members

Name	<u>Relation</u>	<u>Sex</u>	<u>Age</u>	<u>Education</u>	<u>Residence</u>
_____	167. _____	168. _____	169. _____	170. _____	171. _____
_____	172. _____	173. _____	174. _____	175. _____	176. _____
_____	177. _____	178. _____	179. _____	180. _____	181. _____
_____	182. _____	183. _____	184. _____	185. _____	186. _____
_____	187. _____	188. _____	189. _____	190. _____	191. _____
_____	192. _____	193. _____	194. _____	195. _____	196. _____
_____	197. _____	198. _____	199. _____	200. _____	201. _____
_____	202. _____	203. _____	204. _____	205. _____	206. _____
_____	207. _____	208. _____	209. _____	210. _____	211. _____
_____	212. _____	213. _____	214. _____	215. _____	216. _____

CODES:

Relation: 1) _____ Son, 2) _____ Daughter, 3) _____ Mother, 4) _____ Father
 5) _____ G/parent, 6) _____ Employee, 7) _____ Relative
 8) _____ Neighbor

Sex: 1) _____ Male 2) _____ Female

Age: Number of Years

Education: Number of Years

Residence: 1) _____ In the HH, 2) _____ Out of village

A. NUTRITIONAL STATUS SURVEY OF UNDER-FIVES

Date: ____/____/____ ID # ____

Administered by: _____ RDP: _____

Village: _____ EPA: _____

Name of HH: _____

1. How many children do you have? Number ____

2. How many children have you given birth to? Number ____

Can you remember the cause of death for the missing children?

<u>Child</u>	<u>Age at death (months)</u>	<u>Cause of death</u>
3 _____	4 _____	5 _____
6 _____	7 _____	8 _____
9 _____	10 _____	11 _____
12 _____	13 _____	14 _____
15 _____	16 _____	17 _____
18 _____	19 _____	20 _____
21 _____	22 _____	23 _____
24 _____	25 _____	26 _____
27 _____	28 _____	29 _____
30 _____	31 _____	32 _____
33 _____	34 _____	35 _____

Name of child surveyed: _____

36. Birth Date ____/____/____ Years ____

37. Sex Male 1[]
Female 2[]

38. Rank of child among living children..... ____

39. Is child twin? Yes 1[]
No 2[]

40. Is child breastfeeding? Yes 1[]
No 2[]

41. If not breastfeeding now, how long did you breastfeed? Months ____



42. Is child living with:
- | | |
|-----------------------|------|
| Both parents | 1[] |
| Mother only | 2[] |
| Father only | 3[] |
| Grand Parents | 4[] |
| Other (specify) _____ | 5[] |

43. If the father or mother is not present in the households, what links does the child and/or single parent have with the absent spouse?

Explain: _____

44. Who is the person responsible for the care of the children when you are at work?

- | | |
|-----------------------|------|
| Mother | 1[] |
| Grandmother | 2[] |
| Siblings | 3[] |
| Other (specify) _____ | 4[] |

- | | | |
|-----------------------|-------------|-------|
| 45. Weight of child | Kilograms | _____ |
| 46. Length of child | Centimeters | _____ |
| 47. Arm circumference | Centimeters | _____ |

B.

FORTNIGHTLY MORBIDITY SURVEY

Date: ____/____/____

ID # ____

Administered by: ____

RDP: ____

Village: ____

EPA: ____

Name of HH: ____

Name of child surveyed: ____

Did your child suffer from any of the following ailments in the past two weeks?

<u>Ailment</u>	<u>Duration (in days)</u>	<u>Medical care sought</u>
1. Measles	2. ____	3. ____
4. Dysentery	5. ____	6. ____
7. Diarrhoea	8. ____	9. ____
10. Malaria	11. ____	12. ____
13. Flu & Coughs	14. ____	15. ____
16. Vomiting	17. ____	18. ____
19. ____	20. ____	21. ____
22. ____	23. ____	24. ____
25. ____	26. ____	27. ____
28. ____	29. ____	30. ____

31. What did your child eat today?

<u>Main meals</u>	<u>Amount</u>	<u>Snacks</u>	<u>Amount</u>
1. ____	____	6. ____	____
2. ____	____	7. ____	____
3. ____	____	8. ____	____
4. ____	____	9. ____	____
5. ____	____	10. ____	____



FORTNIGHTLY INTERVIEWS

Date: ____/____/____

ID # ____

Administered by: _____

RDP: _____

Village: _____

EPA: _____

Name of HH: _____

Income:

A. Production for home consumption

<u>Crops produced</u> <u>last week</u>	<u>Amount (in Kgs)</u>	<u>Person in Charge</u>
Maize	_____	_____
Cassava	_____	_____
Cotton	_____	_____
Tobacco	_____	_____
G/nuts	_____	_____
Fruits	_____	_____
Vegetables	_____	_____

B. Income generating

<u>Crop sales</u> <u>last week</u>	<u>Amount (in Kgs)</u>	<u>Person in Charge</u>
Maize	_____	_____
Cassava	_____	_____
Cotton	_____	_____
Tobacco	_____	_____
G/nuts	_____	_____
Fruits	_____	_____
Vegetables	_____	_____



<u>Non-Agricultural sales last week</u>	<u>Value (in Kwacha)</u>	<u>Person in Charge</u>
Beer	_____	_____
Crafts	_____	_____
Food	_____	_____
Firewood	_____	_____
Fruits & Vegetables	_____	_____
Fish	_____	_____
Game & Hunting	_____	_____
Labor	_____	_____
Brick-making	_____	_____
Services ³	_____	_____
<u>Livestock sales last week</u>	<u>Value (in Kwacha)</u>	<u>Person in Charge</u>
Cattle	_____	_____
Goats	_____	_____
Chickens	_____	_____
Sheep	_____	_____
Ducks/Geese	_____	_____
Pigs	_____	_____
Pigeons	_____	_____
Rabbits	_____	_____
Guinea pigs	_____	_____
Other (specify): _____	_____	_____

³ For instance, services such as watch, radio and shoe repairs, carpentry, midwifery, building, etc.

LAURENCE
ON 2nd. 1898

2nd

C. TransfersGifts received
last weekValue (in Kwacha)Recipient

Livestock _____

Food _____

Fruits & Vegetables _____

Beer _____

Game & Hunting _____

Other(specify): _____

Remittances received last month:Value (in Kwacha)Received FromBY Whom

Cash _____

Other _____

Expenditure:**A. Consumption Expenditures last month****Food expenditures**Value (in Kwacha)Who Spent

Maize _____

Staple flour _____

Groundnuts _____

Gnuts/flour _____

Meat _____

Vegetables _____

Fish _____

Beans _____

Cowpeas _____

Nzama _____

Game & Hunting _____

Fruits & Vegetables _____

Other (specify) _____

Clothing expenditures	_____	_____
Transport expenditures	_____	_____
Milling expenditures	_____	_____
House repairs	_____	_____
Expenditure on durables	_____	_____
Social obligations ⁴	_____	_____
Other consumables:		
Sugar	_____	_____
Soft drinks	_____	_____
Salt	_____	_____
Cooking oil	_____	_____
Soap	_____	_____
Alcoholic beverages	_____	_____

Other (specify): _____

B. **Investment:**

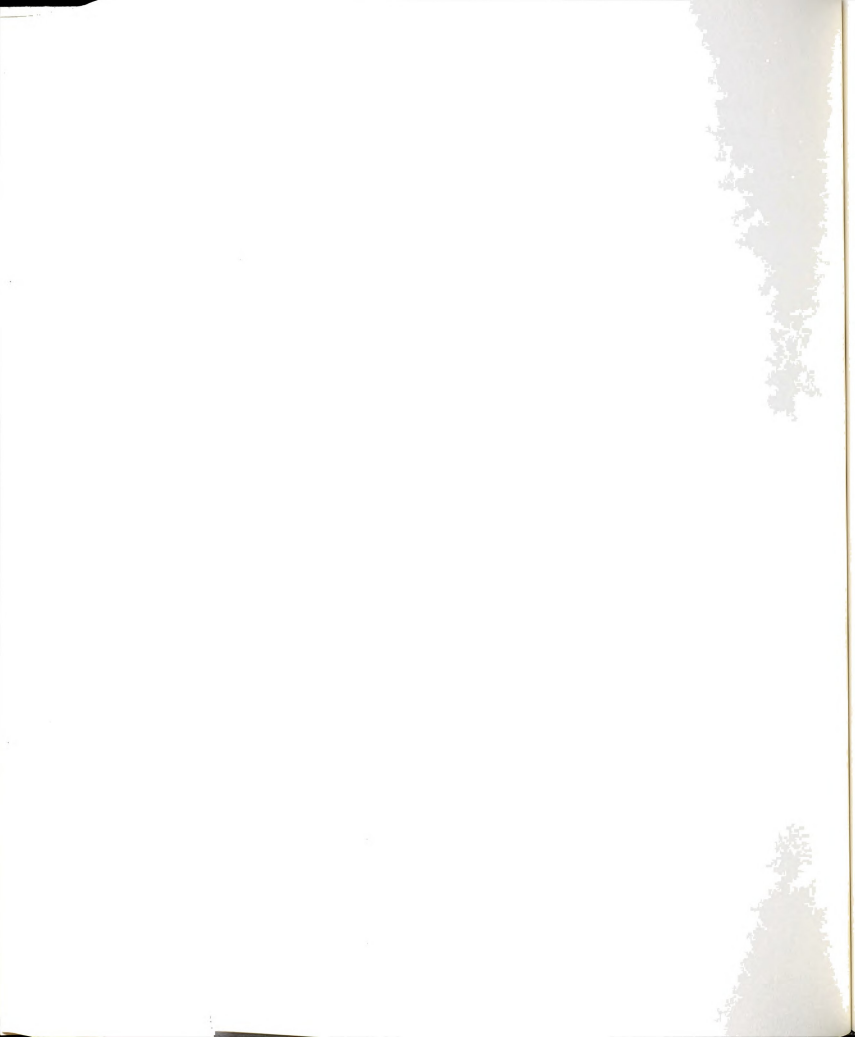
Payments to farm laborers	_____	_____
School fees	_____	_____
Agricultural equipment	_____	_____
Fertilizers	_____	_____
Seeds	_____	_____

C. **Transfers:**

<u>Gifts given away</u>	<u>Value (in Kwacha)</u>	<u>Given by</u>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

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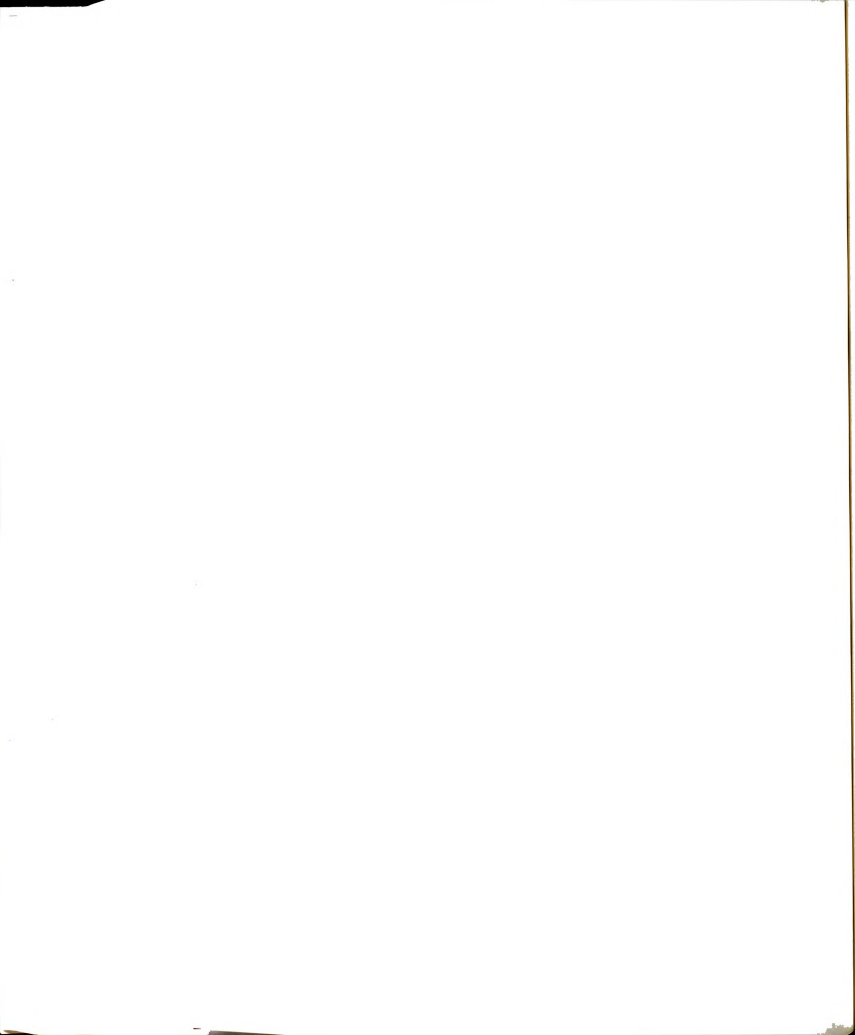
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