

**ADJUSTMENT AND KENYA'S FOOD SECURITY: THE DOMESTIC MAIZE
MARKET UNDER LIBERALISATIONⁿ**

BY

DAVID SIMIYU WANYONYI

**This research project is submitted in partial fulfillment of the requirements for the
award of the degree of Master of Arts in International Studies, University of Nairobi.**

University of NAIROBI Library

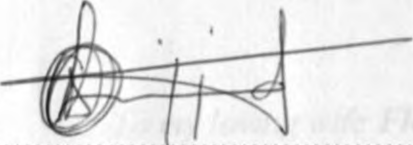


0472377 1

OCTOBER 2001

DECLARATION


Except for citations, this Research Project is my original work and has not been presented for a degree in any other University.

Signed 

David Simiyu Wanyonyi.

Date... 19.10.2001

This Research Project has been submitted for examination with our approval as University Supervisors.

Signed 

Mr. Gerrishon K. Ikiara.

Date... 15/11/2001

Signed 

Mr. Peter Kamau

Date... 16/11/2001

DEDICATION

*To my loving wife **Florence** and my son **Malcolm**
for their unflinching and challenging
encouragement.*

ACKNOWLEDGEMENTS

This research project was undertaken in several stages through the support of different persons. Consequently, my debts are even greater than those usually incurred by authors. First, I am deeply indebted to my supervisors Mr. Gerrishon K. Ikiara and Mr. Peter Kamau for their wise, careful and rewarding guidance during the writing of this project. Their “open door policy” encouraged me to seek help whenever it was required and certainly, they always granted it. I thank both my supervisors for their perspective comments and constructive criticism, without which this research project would not have been written.

I appreciate the stimulating companionship and fruitful ideas of my colleagues, Omar, Goga, Kagwe, Bereket, Wamwayi, and Judith, not to forget Emma, our pacesetter. They kept me on my toes and always incited me to keep the fire burning. I am also indebted to my colleagues in first year, especially Andrew Wenani, whose joining the institute made me realize that my “sell by date” was due, and hence I had to create room for someone else.

I passionately acknowledge the inspiration I derived from my late nephew Anthony Khaoya Simiyu who had nominated me his mentor. His choice inspired me to work hard in order to be a better example to him and others who wished to copy from me. Unfortunately, Tony did not live long enough to see all the achievements of his role model. I, however, have a strong conviction that his spirit can still realize my achievements. **Rest in peace dear Tony.**

Much credit goes to the librarians at the Jomo Kenyatta Memorial Library and the Upper Kabete Campus Library for their patience and support. Special thanks go to Mr. Nyoro of

the Tegemeo Institute and Mr. Chepukaka of the Ministry of Agriculture. These two gentlemen availed the data that beefed up this research project.

I also acknowledge my neighbour, Mr. Patrick Irungu for knowing the value in me, and my longtime friends, Rodgers Kikechi and Mr. Kanyari's family for their support.

While it is not possible to acknowledge all who assisted me, like Mr. Wanyonyi okhwa Muchanga of Womi Associates, I must thank Jane and Goretti, the ladies who made me reach this end through their high quality typing services at Hall 6. Never before had I encountered such dedicated and determined typists.

From the very bottom of my heart, I thank my loving parents, **Jacob Wanyonyi** and **Nancy Nawate** for bringing me on planet earth and for investing their time and money in me. They have made me approve of the saying that goes: "*A heavy tree stands on its roots*". Apart from my parents, the moral and financial help I received from my brothers and sisters, notably Elizabeth, Jessica and Alfred, was invaluable.

Finally, I thank my maker (God) for His infinite mercy, provision and protection.

ABSTRACT

Since the inception of Structural Adjustment Programmes (SAPs) in Africa, debate has raged on their impact on the various sectors of African economies. Many observers have expressed doubts on the ability of SAPs to initiate sustainable economic stability, development and management. However, others have regarded SAPs as a yardstick for development in Africa. This study is but a contribution to the SAPs debate.

The object of this research project was to establish the changes that took place due to the liberalization of Kenya's maize market, and how such changes affected the country's food security. The study was motivated by the lack of systematic analysis on the relationship between Kenya's food security and the broad framework of structural adjustment programmes (SAPs).

Since maize is the staple food of Kenya, the study used the crop as a sample to represent Kenya's food security and tested it against the Cereal Sector Reform Programme (CSRP), which was initiated in 1986. Narrowed further, the CSRP was represented by one of its measures, the liberalization of Kenya's maize market and the complementary measures that were undertaken to commercialize and eliminate the monopoly of the National Cereals and Produce Board (NCPB) in maize marketing, storage and distribution.

Chapter I proposes the study by way of introduction and provision of study objectives, the theoretical framework and hypotheses. Chapter II explores food security issues in sub-Saharan Africa. It broadly shades light on the African food situation from political

independence in the early 1960s to the year 2000. It then looks at the issues of food aid as a solution to food insecurity, vulnerability to food insecurity and the causes of food insecurity in the sub-Saharan African region. On these issues, it concludes that food aid is not a long-term solution to Africa's food crisis. It also observes that tackling internal rather than external constraints could better solve Africa's food crisis.

Chapter III revisits the Kenyan government's food policy with the simple aim of identifying the changes in policy instruments that the Kenyan government formulated and/or employed since political independence in 1963. It establishes that although the country operated without a specific food policy before 1981, the African Socialist paradigm encompassed in Sessional Paper No. 1 of 1965 catered for the national food needs indirectly.

Chapter IV is an analysis of the price, distributional and other changes that derived from the liberalization of Kenya's maize market. The study confirms that the liberalization measure benefited the country substantially by increasing the efficiency of the maize distribution channels across the country and by narrowing the price differentials between maize deficit and maize surplus areas.

With the aim of measuring the validity of the hypotheses espoused in Chapter I, Chapter V provides overall conclusions and recommendations derived from the preceding chapters. A research agenda for the future sums up the study.

TABLE OF CONTENTS	PAGE
Declaration	i
Dedication	ii
Acknowledgements	iii
Abstract	v
Table of Contents	vii
List of Tables, Figures and Maps	x
Abbreviations and Acronyms	xi
Chapter I	1
1.0 Introduction	1
1.1 The Statement of the Study Problem	3
1.2 Objective of the Study	5
1.3 Justification of the Study	5
1.4 The Literature Review	7
1.4.1 The Concept of Structural Adjustment Programmes (SAPs).....	7
1.4.2 The Concept of Food Security	14
1.4.3 The Adjustment – Food Security Links	17
1.5 The Theoretical Framework.....	21
1.6 Hypotheses of the Study	22
1.7 Methodology	23
Chapter II.....	24
2.0. An Overview of Food Security Issues in Sub-Saharan Africa	24
2.1 Introduction.....	24
2.2 Food Insecurity in Africa	29
2.3. Vulnerability to Food Insecurity in SSA.....	33
2.3.1. Vulnerability of Food Insecurity in the Horn of Africa.....	34
2.3.2. Vulnerable Countries in SSA	36
2.3.3. The Vulnerable Groups	38
2.4. Causes of Food Insecurity in Sub-Saharan Africa.....	40
2.4.1. External Causes of Food Insecurity in Africa.....	41
2.4.2 Internal Causes of Food Insecurity in Africa	43

2.4.3 Export- Food Crop Competition	44
2.5. Linking Poverty and Food Security	49
Chapter III	51
3.0. A Review of Kenya's Food Policy, 1963-2001	51
3.1. Introduction.....	51
3.2 The Evolution of Kenya's Food Policy	54
3.2.1 Era of Controls.....	55
3.2.2 Non-Land Policies in the Era of Controls	58
3.2.3 Some Results of the Policies in the Era of Controls	61
3.3 Era of Reforms.....	63
3.3.1 The National Food Policy	64
3.3.2 Agricultural Reform Policies.....	66
3.3.3 Impacts of Reform Policies on the Agricultural Sector	69
3.3.4 Effects on the Food Sub-Sector	69
Chapter IV.....	74
4.0. The Performance of Kenya's Maize Market under Structural Adjustment	74
4.1 The Food Security Situation in Kenya.....	74
4.1.1 Causes of Food Insecurity in Kenya	77
4.1.2 Attempts by the Government to Address the Issue of Food Insecurity.....	80
4.2 The Role of Agriculture in Kenya's Food Security	82
4.2.1 Production of Major Crops	84
4.2.2 Maize Farming and its Contribution to Kenya's Food Security	84
4.3 The Maize Marketing System before Reforms.....	86
4.4 The Cereal Sector Reform Program and its Effects on Maize Marketing and Distribution	89
4.4.1. The Distributional Effects of Liberalization	92
4.4.2. The Response of Maize Prices to Liberalization	95
4.4.3 Production and Household Level Responses to Liberalization.	101

Chapter V	104
5.0 Summary, Conclusions and Recommendations.....	104
5.1 Summary.....	104
5.2 Conclusions.....	105
5.3 Policy Recommendations.....	108
Bibliography	111

LIST OF TABLES, FIGURES AND MAPS

Table 1.1: Percentage Increase (1969-1981) in Average Crop Yields in SSA in Relation to Developing Countries.....	16
Table 2.1: The Undernourished in the Developing World (1990-92), (1994-96).....	31
Table 2.2: Food Energy Deficiency in Asia and Africa	32
Table 3.1: Gross Production of Selected Crops in Kenya (1964-80) (000mt)	62
Table 3.2: Major Turning Points in GDP Growth Rates in Kenya, 1964-78.....	63
Table 3.3: Maize Production Trends (1980-1999) ('000mt).....	68
Table 3.4: Total Production of Major Food Crops 1980-96 (000 Mt)	71
Table 3.5: Imports of Major Food Crops, 1980-96 ('000 Mt)	72
Table 4.1: NIB Irrigation Schemes by Number of Tenants and Crop, 1985	82
Table 4.2: Agro-Regional Zones and Administrative Divisions in Kenya	84
Table 4.3: Costs and Returns for Large and Small-Scale Maize Systems (1999).....	86
Table 4.4: Relationship Between Maize Production and Maize Consumption Per Province (Before and after Liberalization).....	93
Table 4.5: Maize Prices in Selected Markets (Constant 1997 Kshs/ 90-Kg Bag).....	98
Table 4.6: Effects of Maize Market Liberalization Phase 1 (1989-1993) and Phase 2 (1994-1998) on Regional Markets.....	99
Table 4.7: Domestic and Border Prices for Maize in Kenya (Kshs/90kg Bag) 1992 – 1996.....	100
Table 4.8: Percentage Household Involvement in Maize Production (1999) Compared to (1993)	103
Fig. 2.1 Cereal Food Aid Recipients (1978- 1990).....	29
Fig 2.2: Military Expenditure as % GNP of Countries in the Horn of Africa 1997.....	47
Fig 3.1: Connections between Macro-Economic Policy and Food Policy.....	53
Fig. 3.2: Real GNP Growth for Agriculture and Whole Economy in Kenya (1980-94)	68
Figure 4.2: A Generalized Maize Marketing Chain/Flow	97
Figure 4.3: Maize Production Trend 1993-1999.....	102
Map 1: Maize Deficit and Surplus Regions	76
Map 2:Maize Flow from Surplus to Deficit Area.....	96

ABBREVIATIONS AND ACRONYMS

ACARTSOD	African Centre for Applied Research and Training in Social Development
ADC	Agricultural Development Corporation
AFC	Agricultural Financial Corporation
AIDS	Acquired Immunity Deficiency Syndrome
CBS	Central Bureau of Statistics
CSRP	Cereal Sector Reform Programme
ECA	Economic Commission of Africa
EEC	European Economic Community
FAO	Food and Agriculture Organization
FTCs	Farmer Training Centres
GNP	Gross National Product
GoK	Government of Kenya
HIV	Human Immunodeficiency Virus
IFIs	International Financial Institutions
IPAR	Institute of Policy Analysis and Research
KANU	Kenya African National Union
KCC	Kenya Corporative Creameries
KGGCU	Kenya Grain Growers Cooperative Union
KMC	Kenya Meat Commission
KNTC	Kenya National Trading Corporation
LDCs	Less Developed Countries
LIFDCs	Low Income and Food Deficit Countries
MLG	Ministry of Local Government
MOA	Ministry of Agriculture
NCPB	National Cereals and Produce Board
NFSO	National Food Security Office
NGOs	Non-Governmental Organizations
NIB	National Irrigation Board
NICs	Newly Industrialized Countries
NMT	Non- Motorized Transport
NRDP	National Rural Development Program
OAU	Organization of African Unity
PAM	Policy Analysis Matrix
PEM	Protein Energy Deficiency
SSR	Self Sufficiency Ratio
TSC	Technical Service Contractor
U.S.A	United States of America
UN	United Nations
UNICEF	United Nations Children's Fund
USD	United States Dollar
USDA	United States Departments of Agriculture
WFP	World Food Programme
WHO	World Health Organization

CHAPTER I

1.0 INTRODUCTION

The most striking picture of pre-colonial Africa was its ability to feed itself, except in times of extreme natural or political disasters. The ability of African people to feed themselves was based on the importance they attached to food and their intimate knowledge of the resources needed for agricultural production. During this period, major African crops such as sorghum, millet, rice and maize were adapted to local conditions and they provided grain even in drought years.

However, the turn of events in the post-colonial period witnessed a great decline in Africa's food security. Generally, the sub-Saharan African (henceforth SSA) socio-economic crisis in this period is a well-documented record. Sharp declines in *per capita* income since the mid 1970's followed decades in which growth per head was either negligible or, in the case of the poorest countries, negative.

SSA's low level of productivity stems in part from the low yields of its agricultural sector, owing to its heavy dependence upon highly vulnerable weather conditions. For many countries in the region, chronic food shortages are a substantial dimension of the crisis. The food shortages are mostly attributed to the failure of production to keep pace with population growth. But this too is the result of a significant, largely drought-induced, fall in agricultural output. These factors notwithstanding, some commentators blame the crisis on the capitalist system for destabilizing the traditional egalitarian system, which provided mechanisms that assumed social stability and food security both in times of scarcity and plenty (Rau: 1991:12).

For many years, the world's hungry have been the inhabitants of countries classified as low-income and food-deficit countries (LIFDCs). Over 80 in number, these countries are located mainly in the developing world, and over half of them are from Africa. Estimates of the undernourished population vary ranging from less than a billion people to nearly two billion. In the mid-1980s, for example, the World Food Council estimated that about one billion people were chronically hungry. During the same time, the World Bank estimated that about 740 million people in 87 developing countries did not consume enough calories for an active life, with about half of these consuming less than 80% of the requirements (Barracough: 1991, quoting World Bank and World Food Programme: 1985). This was just but one of the indicators of Africa's economic plight that necessitated structural adjustment.

In an attempt to reverse the declining economic trends, many SSA governments began stabilization and Structural Adjustment Programmes (henceforth SAPs) that had been proposed by the World Bank in 1980 through its report: *Accelerated Development in Sub-Saharan Africa: An Agenda for Action* (popularly known as the Berg Report). Kenya signed a structural agreement with the World Bank in 1980 and entered the records as the first SSA country to sign such an agreement. However, SAPs were officially adopted by the Kenyan government in 1986 through Sessional Paper No. 1 on "Economic Management for Renewed Growth".

SAPs advocated for the reduction of the state's role in production and in regulating private economic activity. Pertinent to food security, Kenya's SAP measures included, among

others, the removal of government subsidies on agricultural inputs, cost-sharing and the liberalization of the domestic cereal market

Kenya has therefore had an experience of over two decades with the SAPs. However, since their inception, at the center-stage of debate has been the issue of whether SAPs are capable of improving the welfare (including food security) of the vulnerable groups, especially smallholder agriculturalists, pastoralists, the urban poor, landless rural workers and the handicapped. According to the FAO 2001 report, the food crisis in SSA is far from being redressed. In the East African region alone, 18 million people face severe food shortages and need emergency relief. Of these food poor, 4.4 million are Kenyan citizens (Daily Nation May: 2001). Food insecurity at both the household and national level is a growing threat, with female-headed households predominating. Moderate and severe child malnutrition ranges from 25% to nearly 70%. Besides food imports have risen dramatically to about 6% of all calories

It is against this background that this study seeks to analyze the extent to which the liberalization of Kenya's domestic maize market affected the production and distribution of this staple grain -maize.

1.1 STATEMENT OF THE PROBLEM

Many other SSA countries are food deficient. This situation has complicated FAO's international commitment to reduce the world's hungry by half by the year 2015.

Kenya continues to have problems with food productivity in spite of the implementation of measures aimed at reducing obstacles to agricultural production and marketing. So far, there has been protracted debate on the pros and cons of adjustment, especially with regard to its impact on the various sectors of the economy. In some cases, adjustment has been blamed for playing havoc on a number of sectors while in other cases, it has been seen as a yardstick for development. These two diametrically opposed views notwithstanding, another group of contenders argues that SAPs have been of no impact to some sectors, the agricultural sector being frequently cited.

Since SAPs are here to stay, their effect on the food situation is an issue Kenyans have to grapple with. One of the SAPs that were implemented in Kenya was the Cereal Sector Reform Programme (CSRP), which was initiated by the European Economic Community (EEC) and signed in April 1988. It was aimed at restructuring the grain marketing operations by use of market-targeted programmes and policies. Its premise was that grain marketing policies and operations had been extremely expensive and that the Government of Kenya's budget could not permit the continued application of such policies without creating inflationary pressures on the economy. This programme was followed by pressure from other donor institutions to liberalize the domestic cereal market of which maize played a key role. It is the purpose of this study to investigate the effect of the liberalization of the domestic market on the production, distribution, consumption and pricing of white maize in Kenya.

1.2 OBJECTIVES OF THE STUDY

Broadly, this study aims at investigating the pitfalls and opportunities brought about by SAPs, and their effects on Kenya's food situation. It also proposes measures that can be exploited by the government and other policy makers to promote the positive impacts of SAPs and counteract the negative impacts. The study has five specific objectives:

- (a) To investigate and trace the Kenyan government's food policy since independence.
- (b) To determine the food security status of sub-Saharan Africa.
- (c) To investigate the impact of the liberalization of Kenya's domestic maize market on the production of maize.
- (d) To examine the efficiency of the maize market before and after liberalization.
- (e) To analyze the changes in the prices of maize before and after liberalization

1.3 JUSTIFICATION OF THE STUDY

Food is a basic human need, which should be given the first priority by all governments and policy makers. Reducing hunger is not only a humanitarian justification but also a strong economic rationale since the economic cost of hunger and malnutrition as reflected in lost productivity, illnesses and death is extremely high. Many studies (FAO: The State of Food Insecurity in the World: Series) point to the fact that undernourishment not only lowers physical ability and cognitive development, but also reduces the return on investment. This study uses these observations as its point of departure and aims at bringing into light the effects and changes brought about by the liberalization of Kenya's maize market. By so doing, the study hopes to highlight the pitfalls and opportunities that were brought about by

the liberalized maize market so that the results can be used by policy makers to re-direct the reform process and improve Kenya's food situation.

Observers have argued (for example Omosa: 1998) that the Kenyan government has not had a well defined food policy since independence. This does not augur well with those who believe in the reverse (for example Smith: 1976). This study will take on the responsibility of constricting the gap between the two arguments by examining the Kenya government's food policy since independence. It is therefore expected to serve as a reference in matters pertaining to the Kenya government's food policy.

Another raging debate has been on the impact of the Cereal Sector Reform Programme since its inception in 1988. Mixed views have emerged and in the confusion, many people do not understand the effects and dynamics of the programme, especially on the food situation in Kenya. Without this knowledge, it is impossible to *ex ante* state whether the programme was beneficial or harmful to the country. This study hopes to eliminate the confusion by providing clear information to the public.

The study focuses on the maize market for simple reasons that maize is the main staple food in Kenya, representing between 40-50% of Kenya's total calorie intake. Therefore, the choice of maize as a study sample is more representative of the Kenyan food situation than any other sample.

Above all, the study is expected to add to existing knowledge in the subject area.

1.4 THE LITERATURE REVIEW

This section is organized under three sub-headings

- (i) The Concept of Structural Adjustment Programmes (SAPs)
- (ii) The Concept of Food Security.
- (iii) The Adjustment- Food Security Links.

1.4.1 The Concept of Structural Adjustment Programmes (SAPs)

Various scholars and authors have defined the concept of SAPs differently. Gibbon (1993) defines it as the economic reforms aimed at stabilizing developing countries' external and internal imbalances and promoting their export by devaluation, producer price changes, trade liberalization, privatization and supporting legal reforms (Gibbon: 1993).

Duncan and Howell (1992) define the concept as major policy and institutional changes designed to reverse deteriorating economic trends, while Jazairy (1992) defines it as programmes supported by International Financial Institutions (IFIs) and bilateral donors, meant to reduce fiscal and payments imbalances through reduction of public sector expenditures and a cutback in the scope of state activities, exchange rate adjustment, price and import liberalization, institutional reform and a greater reliance on market forces.

However, a typical adjustment package contains one or more of the following five-policy instruments: devaluation, trade policy, monetary and fiscal policies, market reforms, and other institutional reforms (World Bank: 1991)

Generally, the IMF and World Bank introduced Structural Adjustment Programmes (SAPs) in order to correct macro-economic imbalance, particularly the distortion of prices, and thereby restore incentives for production, revive economic activity and economic growth. However, after two decades of adjustment in Africa, results have been mixed and claims of success and failure counterbalance each other in the literature on economic development (Tibaijuka and Cormack: 1998)

Jazairy (1992) is more or less of the same opinion. He asserts thus:

"The results of these adjustment programmes have ... been rather mixed. Some have helped stabilize the balance of payments and the domestic fiscal position. There are also some signs, although rather fragile, of a degree of recovery in economic activity. Nonetheless, overall there has been considerable disappointment that, in spite of the considerable sacrifices that African countries have been making, the results have been patchy and slow in coming. Indeed, it is... clear that the process of adjustment is going to be more laborious and protracted than was first envisaged" (Jazairy: 1992: ix).

SAPs are an arena of antagonism between the proponents of two schools of thought: the *orthodox* and the *heterodox* (Tibaijuka and Cormack: 1998). The orthodox view best expressed by the World Bank and its supporters, argues that reforms have paid-off and that seriously adjusting countries have experienced a turn-round in their growth rates and other performance indicators including, in some cases, a reduction in poverty (Global Coalition: 1993).

The heterodox (*structuralist*) approach, best articulated by UNICEF in its work-'*Adjustment with a Human face*' (Cornia, *et al.*: 1987), the Economic Commission for Africa (1989), many African scholars and some Governments, dispute such claims (Campbell & Stein:

1991). While acknowledging the need for macro-economic policy reform and adjustment, it maintains that SAPs have failed to generate either sustainable equitable growth or, in most cases, to increase productive investment. Instead, SAPs have increased external debt and caused considerable social, economic and environmental dislocation. The central concern of the heterodox view is that under orthodox adjustment the social sectors have continued to perform poorly. This school argues that the continued failure of SAPs to provide for the basic needs of the population will render the adjustment process unsustainable (Thorbeck & Solomane: 1994)

Sympathizers of the orthodox school base their argument on the neo-liberal theorizing. Thus they advocate for reduced state intervention in the economy and withdrawal from social and welfare provision (Tibaijuka: 1998). For example, Ikiara (1995) gives a brief explanation of the benefits of adjustment in Kenya. According to him, the economic reforms undertaken in the 1990s expanded the overall employment in the informal sector from 1,237,500 people in 1992 to 2,240,500 people in 1995 and produced annual growth rates in informal sector employment of between 18.5% and 25% between 1993 and 1995 (Ikiara: 1995). He however noted that the implementation of SAPs without well-designed safety nets could have negative effects on the poor and other vulnerable groups.

Some commentators maintain that reforms *per se* cannot be blamed for the adverse effects felt by the vulnerable groups. Their contention is based on two grounds. First, such effects are often products of the distortion of the market by a politically powerful group. For instance following the import liberalization of maize and sugar in Kenya, the markets for these

commodities were flooded by large quantities of imports of the items by a group of influential people who often did not pay duty. This aggravated the disadvantaged position of the poor farmers who could not sell their maize or sugar in the market (Khasiani & Ndung'u: 1996:24).

Another argument is that, more often than not, SAPs were adopted during and in response to deep economic crisis (World Bank: 1994 a& b, Ikiara: 1995). For example, fluctuations and sharp declines in the terms of trade, high interest rates, which exacerbated the crushing burden of excessive foreign debts, and droughts that wiped out the gains made by many of the poor sub-Saharan economies (Sarageldin: 1989). Ideally, the impacts of this crisis should therefore be separated from those of structural adjustment (Levin: 1998; World Bank: 1994). This is often not possible, however because the impact of adjustment is not only controversial but also fairly complex. As put by Addison and Demery (1993):

"The relationship between macro-economic stabilization and poverty alleviation remains one of the least understood trade-offs... The added complexities introduced by the peculiar characteristics of developing countries, and by the empirical challenges that the subject issues, all combine to leave the impression of a story that remains mostly untold" (Addison and Demery: 1993:553).

Onjala (1995) advocates for deregulation as a check to the increasing involvement of the Kenyan government's involvement in unproductive development investments that absorbed 41.8% of total government investments by the financial year 1978/79. He gives a testimony of how SAPs have sorted out areas of inefficiency:

..."The government managed to bring down the budget deficit, the deteriorating balance of payments, domestic credit and inflationary pressure. Between 1980 and 1984, the overall budgetary deficit fell from 10 % of GDP to under 4%. The rate of domestic credit fell from about 19% to under 9% over the same period. The current account deficit as a percentage of GDP declined from 8.3% in 1981 to about

2% in 1984. Overall balance of payments surpluses were recorded in 1983 and 1984. Inflation declined from about 20% in 1981 to about 14% in 1982 and to an average of about 10% in 1983/84" (Onjala: 1995: 74).

He, however, acknowledges the negative impact of SAPs on growth, income distribution, employment and poverty.

The unveiling truth is that some short-term goals of adjustment have been achieved, but the long-term goal of extending the benefits to all citizens of adjusting economies has proved elusive. For example in Ghana, the economy recovered steadily from - 4.5% growth in 1983, to 8.7 in 1984, 5.1% in 1985, and 5.2% in 1986 (Pearce: 1992). Also, countries undertaking adjustment have found it easier to implement price-related than institutional reforms. In Kenya, prices of crops, credit and foreign exchange have been more or less realistic, but the institutional reforms have been sluggish (Ndung'u & Bigsten: 1992).

In supporting SAPs, Serageldin points out that during the period 1984-86, countries with sustained adjustment realized 0.8% annual growth rates of GDP *per capita* while those that had not adopted such programs registered a negative (-) 2.5% annual growth rate, compared to the pre-adjustment period (1980-84) scenario when both groups registered negative (-) 4% GDP *per capita* growth a year (Serageldin: 1989). To eliminate the negative impacts that SAPs "may" have on the poor, he recommends safety nets or intervention programmes that foster the participation of the poor in the process of economic growth, particularly the improvement of their access to jobs and income-generating assets.

According to the critics of the World Bank premise, SAPs are based on wrong and unrealistic assumptions of the efficacy of market economies. On their premise, the "trickle-down effect"

is not applicable in the African context because in Africa, both market mechanism and socio-economic institutions are so underdeveloped to operate as expected under the "trickle-down" hypothesis (Odada and Ayako: 1989:17). Moreover, due to lack of adequate financial resources, the poor groups are unable to adequately respond to the changes in relative prices brought about by the adjustment policies (Levin: 1998:1).

Structural adjustment measures that point towards the reduction of government expenditures have attracted their own share of criticism. Such measures (cost-sharing included) are obstacles in the government's efforts to improve the standard of living of the people through alleviation of hunger, ignorance, disease and poverty. Hence, they pose a major threat to the country's health care, as the poor cannot access adequate and good quality care (Ochoro and Omoro: 1989).

Another argument is that the aid embargo since 1997 dealt a big blow to the government's revenue base and forced the government to fill the gap by instituting high taxes on some consumer products, for example beer. Unable to afford such conventional drinks, the number of Kenyans consuming illicit brews has grown day in day out. Due to growing levels of poverty, the situation is far from being arrested (Daily Nation: Nov. 16, 2000).

Drawing from the experience of the East Asian Newly Industrialized Countries (NICs), Lall argues that the interventionist role of the state in economic development is indispensable. According to him, the great success of many of these countries was due in large measure to

heavy and consistent public sector intervention in the key government agencies (Lall 1994, Ernst et al.: 1994)

Mlambo (1995) supports this argument. According to him, one of the most illogical measures imposed through SAPs is that which requires governments to reduce their "presence" in the economy, because in poor countries of SSA where capital is scarce, only the government, by virtue of its comparatively abundant resources accumulated over years, is the major catalyst for economic development. Therefore policies such as liberalization of trade and privatization of public corporations "can only further entrench foreign capitalist domination of the economy"(Mlambo: 1995:85) and the reform measures can be viewed as conditions for further lending since the current situation is unsustainable.

The World Bank (1994) explored these factors but quickly emphasized that the developing economies lacked the capacity to manage market distortions. However, despite the Bank's contention, more than 6000 NGOs and Associations from the world over issued an "alternative declaration" in Copenhagen, Denmark in 1995, which criticized the Bank, the I.M.F and the SAPs (Kabiecon & C.B.S.: 1995; Tibajjuka: 1998). The "declaration" rejected the dominant neo-liberal system as a universal model for development and assailed SAPs for undermining economic and social progress. Besides, the summit endorsed the 20/20 Compact, an initiative based on the idea of allocating at least 20% of Overseas Development Assistance and 20% of national budgets to priority basic social programmes (United Nations: 1995).

Over and above each assertion, there is dire need to reduce unnecessary debate and controversies about SAPs, evident in the literature. Largely, the debate "has persisted due to lack of in-depth studies on the relationship between SAPs and socio-economic variables. It is therefore important to design more focused studies to help move away from conclusions based either on purely speculative approaches or highly inadequate short-term information" (Ikiara 1995: 324). That is the imperative of this study.

1.4.2 The Concept of Food Security

According to Rempel (1984), food security is the assurance of reliable supplies of adequate nutrition for all the people.

The Government of Kenya defined food security as the assurance of an adequate supply of nutritionally balanced foods in all parts of the country, at all times (Sessional Paper No. 2: 1994: 24).

According to Reutlinger, food security is the access by all people at all times to adequate food for an active, healthy life. Conversely, food insecurity is the reduced access to sufficient food, and has two dimensions: chronic food insecurity - a continuously inadequate diet resulting from the lack of resources to provide or acquire food; and transitory food insecurity - a temporary decline in a household's access to enough food (Reutlinger 1987:205).

Food is vital for life such that its importance cannot be overstated. Even Hans Morgenthau (1995) acknowledges that food self-sufficiency is a major determinant of any country's power in the international political system. For example, India's weakness in international politics before the green revolution emanated from its inability to feed its own people (Morgenthau: 1995:130).

We have frequently heard or experienced hunger and starvation, but do we really know how they occur? People die of starvation, or go hungry, not because there is no food in their country (or region), but because they cannot afford it and have no other means of access. Thus, in most cases, it is not the physical absence of food that matters but the aggregate 'effective demand', that is demand with the money to back it (Raikes: 1988).

There are two explanations of the dominant food problems in Africa, which appear to be diametrically opposed. The tropical African states and their supporters place the blame on imperialism and the international capitalist system, or more specifically on the policies of the IMF and the World Bank. On the other side, the IMF and the World Bank blame it on the high population growth and low productivity compounded by the policies of African governments themselves (Raikes: 1988: 2).

According to Rau (1991), famine is neither a natural occurrence nor an act of nature. Instead, famine, hunger and poverty are products of a social and political process, thus they result from decisions about the control of resources and who benefits from the control (Rau: 1991).

In SSA, food self-sufficiency depends entirely on highly performing food and agriculture sectors, the same sectors that generate 67% of employment and account for 40% to 60% of GDPs. However, these sectors have performed otherwise, occasioning chronic food insecurity, serious dietary deficiencies and mounting food import bills (Pallangyo and Odera-Ogwel: 1995). It is manifest that cereal inputs grew about five times their 1970 level in fourteen years (Pallangyo and Odera-Ogwel: 1995) and the trend seems not to change.

Even though FAO's 1975 study points out that Africa has enough land to improve their overall food self-sufficiency ratio (SSR)*, the average crop yields from 1969 to 1981 have suggested otherwise (Table 1.1). What comes out is that SSA is the least productive region among the developing countries in terms of cereal production.

Table 1.1: Percentage Increase, 1969-1981, in Average Crop Yields in SSA in Relation to Developing Countries.

Crops	SSA	All developing countries
Maize	4.1	29.8
Wheat	7.1	41.1
Paddy	22.2	20.1
Cassava	-4.1	-1.2
Ground nuts	1.3	3.8

Source: FAO, The State of Food and Agricultural 1983, Rome, P. 76, table 1-26

$$* SSR = \frac{\text{Domestic Production} \times 100}{\text{Domestic Utilization}}$$

In Kenya, agricultural growth has also been declining. For example, it declined from 6.2% *per annum* between 1965 and 1973, to about 3.3% between 1980 to 1988. Besides, population growth increased at nearly 4% *per annum*, contributing to a fall in food production *per capita*. By 1981, it was estimated that 6,000,000 Kenyans (37% of the population) faced food insecurity (Ikiara, Jama & Amadi 1993)

The foregoing literature is devoid of statistics that allocate scores to the various factors that contribute towards food insecurity. Thus most of the claims made by the authors are not validated (qualified). This study hopes to come out clear on this issue.

1.4.3 The Adjustment – Food Security Links

It has been argued (see for instance Saha: 1991) that while recent policy emphasis has been on agriculture and social services, it is only industry that can create employment needed by the expanding populations. Agricultural adjustment aims to increase production by deregulating markets for products and inputs, and aligning local to world market prices, not to mention devaluation (Gibbon: 1993:13)

Commenting on Kenya's experience, Gibbon (1992) argues that SAPs have had little obvious positive impact on Kenyan agriculture. Further, he comments that the link between agriculture and reforms is at best ambiguous. This is on the premise that reforms in Kenya, which concentrated more on the cereals sector, were almost completely unimplemented.

The existing literature reveals that the Kenyan cereal sector has been subjected to structural adjustment, which took the form of the CSRP (Cereal Sector Reform Programme). It

incorporated (a) Currency devaluation, (b) removal of price controls and subsidies, (c) trade liberalization, (e) tax reform, (f) financial systems reform, (g) privatization and commercialization of government enterprises, and civil service reform (Murage, 1989). The impact on agriculture was therefore inevitable.

Ikiara (1995) argues that import liberalization in general and the liberalization of the marketing of cereals were of a gainful consequence to the consumers. For example, after liberalization of the marketing of cereals in Kenya, especially around 1993-95, the price of maize fell by about 2/3, making this staple food item more affordable for the poor (Ikiara, 1995:320). However, Levin (1998) contends that the relative prices arising from the alignment of local to world market prices must have increased the cost of consumption baskets for many people with low financial capital (Levin: 1988).

Price incentives have been an important ingredient in the adjustment programmes directed at agriculture (Chhibber: 1991). This led to a positive agricultural supply response. However, due to infrastructural deficits in the countryside, the rural dwellers cannot access the urban markets. In the view of Ogbu and Gbetibon (1990), simply raising prices cannot undo such constraints or other constraints such as excessive crop taxation and inefficient cooperative unions (see Bevan et al: 1987; Gibbon: 1992; Wagao: 1990). It is pragmatic therefore to remove such constraints since logically, peasants will not respond to price incentives if they are constrained in their production.

Besides, changes in agricultural prices lead to increases in food prices in urban areas, consequently lowering the purchasing power of the urban dwellers. Additionally, the resource differential in many parts of a country could render such reforms inefficient since they could enhance welfare in the resource –rich rural areas but decrease it in the less endowed ones (Levin: 1998). To demonstrate this, a study of Senegal by Weissman (1990) notes that higher official prices for groundnuts benefited rural dwellers who comprise 65% of the population, but hurt urban dwellers. Likewise, the elimination of marketing restrictions on millet, the country's staple, helped boost rural incomes. Thus for about 35% of the population, the cost of food was increased by liberalization.

A study of Niger, a Sahel country, illustrated other dimensions of differential effects of adjustment in rural areas. In high rainfall regions, the withdrawal of subsidies on fertilizer had little impact on agricultural output and incomes since most of the fertilizer used was imported from Nigeria, where the bulk of the output was subsequently sold. Conversely in the large irrigated areas, the removal of the fertilizer subsidy implied increased production costs (de Coninck: 1992).

It is sometimes argued that the differential impacts of agricultural reforms are due to conflicts related to programme implementation. However, even where the implementation was smooth, as in Malawi (Comwell: 1992), impacts have sometimes been adverse. Lele (1991) further observes that adjustment policies have failed to change the legal structure of land ownership in Malawi.

Studies on Ghana reveal that higher producer prices for certain crops had positive effects on employment in the farming sector. Unfortunately, households selling non-traded crops, often the poorest in the rural areas, saw a sharper increase in real labour costs than their richer neighbours (Pearce: 1992).

Lele (1991) points out that since the majority of Malawi's peasants depended on the market supplies for up to 48% of their food needs, increases in prices hit this group directly, while their richer neighbours benefited. He observes that the government's National Rural Development Programme (NRDP) supplied subsidized fertilizer to the hard-hit areas but was discouraged by the donors in favour of price incentives (Lele: 1991).

In their study on Tanzania, Mabele and Lugusha (1998) note that the liberalization of food markets which began in 1983 contributed to increases in rural real incomes and food supplies such that *per capita* incomes increased at an average rate of 2.4% *per annum*, during 1984-87, as compared to a decline of -0.63 per annum in the period 1979-83. The *per capita* consumption for the period 1984-8, therefore, increased at an average growth of 1.95% for maize flour, 3.68% for rice and 1.83% for beans. In contrast, during the 1976-83 period, *per capita* consumption of the major staples declined at an annual average rate of -0.7%, -1.0%, and -0.6 for maize flour, rice and beans, respectively (Mabele and Ligusha 1998, quoting Amani, *et al*: 1989).

There is therefore a relationship between SAPs and food security that has not been fully explored. A focus on the Kenyan situation may therefore shed more light on this relationship.

1.5 THE THEORETICAL FRAMEWORK

This study is guided by the **neoclassical** paradigm. The paradigm encompasses all those approaches that emphasize the powerful self-correcting forces in an economy. It has its roots in the writings of Adam Smith, J. B. Say, and John Stuart Mill. In particular, the paradigm is thought to have begun with the work of Adam Smith (1776), the author of *The Nature and Causes of the Wealth of Nations*. He and those who followed him, particularly David Ricardo and John Stuart Mill believed that the powerhouse behind the quickening pace of the economy was capital investment and the tight controls of a nation-state were not the best way to ensure efficient capital accumulation (Brown: 1995; Samuelson: 1995; Whitehead: 1970).

Today this policy is captured in the phrase *laissez faire*; from the French for “leave us alone”. This policy is the rationale for structural adjustment in SSA. Thus underlying the adjustment prescriptions is the neoclassical assumption that markets work; markets are generally competitive; and market signals are good guides to resource allocation. Structural adjustment thus means the introduction of more market-oriented policies – liberalization of markets, more efficient use of prices, greater openness to trade and a bigger role for the private sector. It demands the reduction of budget and balance of payments deficits through fiscal and monetary measures and advocates for a public service that is efficient and reliable, with transparent accounting for public monies. Additionally, it advocates for an active

private sector through divestiture of non-strategic parastatals and calls for the removal of biases against exports (tariffs). Why? Removing distortions and providing proper incentives to the private sector would: (1) increase production from underutilized productive capacity in agriculture and manufacturing, (2) achieve a more efficient use of resources, and (3) promote a higher rate of investment which expands production capacity (Gladwin 1991)

A complete reform package, therefore, derived from the neoclassical paradigm contains five components: (1) freeing markets to determine prices (*“letting markets work”*); (2) adjusting controlled prices to market values (*“getting prices right”*); (3) Shifting resources from government into private hands (*“privatisation”*); (4) rationalizing the government’s remaining role in development (*“budget rationalization”*); and (5) reforming institutions to carry out governments’ new roles (*“institutional reform”*).

1.6 HYPOTHESES OF THE STUDY

Five hypotheses guided the study. These are

1. There is no relationship between the Cereal Sector Reform Programme and food security.
2. Africa is less food insecure than Asia
3. The liberalization of the cereal market improved the maize production, distribution and marketing channels.
4. The price differential between maize deficit and maize surplus areas reduced after liberalization.

5. There were more actors in the maize market during the controls period than during the reform period.

1.7 METHODOLOGY

This study is based on both primary and secondary data. Primary data was derived from interviews with the personnel at the National Cereals and Produce Board (NCPB), the Kenya Seed Company, the Kenya Grain Growers Cooperative Union (KGGCU), and government officials like the personnel in the Ministry of Agriculture and Livestock Development. Further interviews targeted nutritional experts and NGOs that deal in relief food supplies.

Secondary data comprised the analysis of statistical data and collection and review of published data like academic papers, journals, books, government documents, electronic and print media.

The instruments of data included interview guidelines, which consisted of open-ended questions that were used in interactive interviews.

CHAPTER II:

2.0. AN OVERVIEW OF FOOD SECURITY ISSUES IN SUB-SAHARAN AFRICA

2.1 Introduction

The Sub-Saharan African region has over the years experienced a series of short term and long-term food crises that have greatly reduced the continent's ability to meet its food requirements. Short-term crises have, however, been more evident to observers and the news media than long-term ones.

Quite often, hunger victims get embroiled in wars and either flee as refugees or as drought-driven migrants. Examples of acute crises include the Biafran famine of the late 1960s, the Sahelian and Ethiopian drought and famine of the late 1960s and early 1970s; the wars and refugee problems of Angola, Chad, Ethiopia, Uganda and Zimbabwe; and the Sahelian drought and famine of the mid-1980s and 1999/2000.

The long-term crises are less dramatic, less immediate and less obvious to the casual observer. They are characterized by gradual (over a period of years or decades) changes and trends in economic or ecological factors or relationships. In the beginning, these trends are often merely worrisome, but their persistence over longer periods threatens the stability and existence of significant proportions of societies and economies. These chronic crises weaken national and local food systems by depleting reserves that would otherwise be available to individuals, families, villages and countries to help improve living standards. Examples of chronic crises in SSA include decreasing food production *per capita*, desertification, deforestation, increasing foreign debt, and increased importation of staple foods.

Acute crises are often independent of the long-term trends. In most cases, identifiable and immediate events are sufficient to aggravate the crises. For instance, when war began in the Ogaden area between Somalia and Ethiopia in 1978, hundreds of thousands of refugees appeared. Another example is the 1999 case of failed rains in northern Ethiopia, which drove people to cluster around Addis Ababa and other towns, with others fleeing to the neighbouring countries in search of food. These are short-term crises. However, their popular outcomes (the deaths and dislocations, and the subsequent inadequacy of national food systems) are directly linked with the more deeply rooted long-term crises (Mc Millan and Hanson; 1986).

The linkage between acute and chronic crises is often overlooked and many observers wrongly believe that the acute crises are the only crises. As Robert Mac Namara noted, “Ironically this avalanche of compassion for the open and visible suffering of the victims of famine, genuine as it is, has tended to obscure the more fundamental problems of SSA” (1985:12).

Over and above these assertions, SSA has for a long time borne the brunt of food crises starting especially in the early 1970s. As a whole, food production in the less developed countries (LDC’s) exceeded population growth in the 1970s. This was, however, not the case in Africa. In SSA alone during the same period, *per capita* food production declined by a significant –15%. This was a consequence of sporadic famine conditions that persisted in this period. “The SSA governments therefore, turned with speed to the securing of food imports,

because the alternative domestic “belt-tightening” or shifts in consumption patterns could not be pursued short of the risk of starvation and political unrest (Hopkins: 1986: 196-197).

By the early 1980s, the volume of food aid to Africa had increased tenfold, relative to the 1970s. In particular, international food aid to SSA countries grew from a mere 2.4% of total aid in the 1970s to more than 25% by 1981 and 31% in 1999 (Hopkins: 1986, FAO: 2000). In addition, from 1973 to 1980, SSA’s food imports grew at 9% a year, three times the rate of food imports for developed countries. This was dramatically alarming because over the same period, worldwide food aid declined by roughly 35% (Hopkins: 1986: 197).

The proportion of food aid to Africa has continued to rise. This has led some critics (see for example Raikes: 1988 and Rau: 1991) to attribute the African food crisis to food aid. The criticisms raised in this regard are: (a) That food aid serves as a disincentive to local food production. (b) That food aid distorts consumer preferences and creates an undesirable demand for imported food (basically wheat). (c) That it encourages wasteful projects and that (d) It props up unsavory or unresponsive governments and thus postpones reform.

For these reasons, the critics argue that food aid has done more harm than good and therefore should be abolished except perhaps for dire emergencies (Jackson: 1982; Lappe et al. 1980; Schultz; 1960).

However, there are those who regard food aid as a positive factor (see for instance Maxwell and Singer: 1980; Stevens: 1979; Christensen: 1982). Two factors account for the dramatic

rise in food aid to Africa from the 1970s. On the supply side, there was an international concern for the hungry African population. Food aid was then perceived as the most suitable solution, especially by the developed countries. Resources were therefore drawn globally for this humanitarian purpose. On the demand side, there was a dramatic rise in the demand for food in SSA due to the poor weather conditions. A brief substantiation of the two factors may perhaps suffice. On the supply side, the World Food Conference of November 1974 stimulated an expansion of organizational resources and the articulation of principles that contended that food aid be used less for political and more for emergency and developmental purposes. Consequently, Hopkins notes thus:

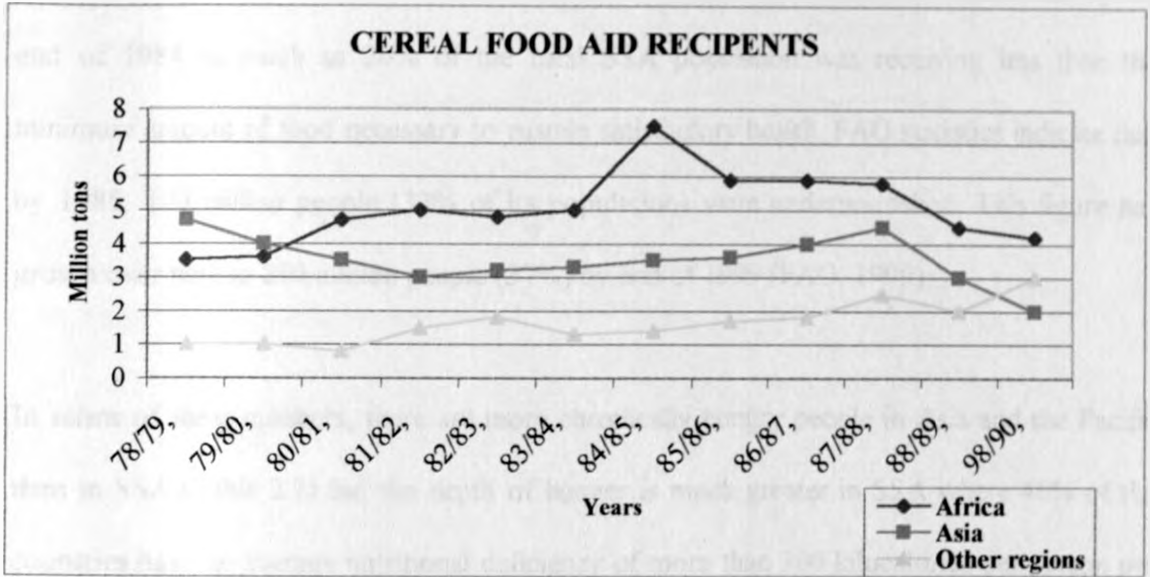
“Pledges to the World Food Programme (WFP) doubled in the mid-1970s. Additional donor countries in Europe and even Saudi Arabia undertook to provide food aid, and a renegotiated Food Aid Convention was signed in 1980 that raised minimum tonnage commitments from 4.5 to nearly 8 million tons of grain. At the level of individual donors, the United States which supplies about 60% of food aid, passed legislation that mandated a floor under the Title II grant program that is especially important for Africa because it is used as special emergency aid”.

Two further supply side factors favoured Africa. First, the importance of food aid in the domestic politics of donor states increased for humanitarian reasons (Stevens: 1979). In earlier decades, food aid was heavily oriented toward such donor country objectives as surplus disposal, market development and bilateral diplomacy. Interests in improving commercial and political ties with recipients shaped allocations. While these two factors were still important, their relative weight gradually declined (Wallerstein: 1980 and Singer: 1982). Second, European countries supplied a growing share of food aid, and as ex-colonial powers, they tended to favour Africa compared with the United States. Thus, the narrow focus by many food aid critics on the political uses of aid by the United States fails to explain the general rise in willingness to provide aid to Africa.

The decline in African *per capita* food production explains the rise on the demand side. African states found themselves driven to seek imports to make up for domestic shortfalls. These domestic food production failures were caused by a combination of climatic, economic and political factors. An assortment of these factors includes: (i) The serious droughts that hit the continent in 1973/74, 1984/85, 1987, 1992 to 1994 and in 1999/2000 (ii) War and internal conflicts in Chad, Ethiopia, Somalia, Uganda, former Zaire and elsewhere that created refugee movements and settlement camps that brought the need for emergency feeding. (iii) African governments' policies that increased risks and lowered the incentives to produce through policies that offered relatively low official prices for agricultural produce outlawed private food marketing and raised the cost of manufactured goods to farmers. (iv) The increased role of the government in supplying food, which led to producer disincentives because the governments maintained the prices of key marketed food staples at low levels. (v) Rapid population growth that outstripped food production growth.

These combined forces have resulted in a rapid growth of grain imports to feed the market dependent populations of Africa. As illustrated in fig 2.1 Africa has been receiving the highest volumes of cereal food aid in the world and is today characterized as the most food insecure continent

Fig. 2.1 CEREAL FOOD AID RECIPIENTS (1978- 1990)



Source: FAO, World Food Survey (Several Issues)

The focus on food aid is just but a single dimension of the African food crisis. Other dimensions include the decreasing *per capita* food production and *per capita* agricultural productivity. However, not all these dimensions can be exhaustively discussed in this chapter.

2.2 Food Insecurity in Africa

The SSA region faces great food challenges. This region is home to most of the world's poorest countries where prevalence of undernourishment is high and prospects for immediate and rapid economic growth is limited. Over 50% of SSA countries are estimated to be food insecure (FAO: 2000). In many of these countries, domestic food production is inadequate to supply even the minimal needs of growing populations, and earnings from exports are insufficient to permit enough food imports to make up the difference. As a result, starving African children have become a universal symbol of a deepening food crisis.

It is impossible to calculate chronic malnutrition and hunger related deaths with precision because there are no continent-wide surveys. However, the World Bank estimated that by the end of 1984 as much as 20% of the total SSA population was receiving less than the minimum amount of food necessary to sustain satisfactory health. FAO statistics indicate that by 1985, 140 million people (32% of its population) were undernourished. This figure has grown over time to 210 million people (37%) by end of 1999 (FAO 1999).

In terms of sheer numbers, there are more chronically hungry people in Asia and the Pacific than in SSA (Table 2.1) but the depth of hunger is much greater in SSA where 46% of the countries have an average nutritional deficiency of more than 300 kilocalories per person per day. By contrast, in only 16% of the countries in Asia and Pacific do the undernourished suffer from food deficits of this magnitude (FAO 2000)

Surprisingly, food production has actually increased over the years in most SSA countries, growing at the rate of 1.5%, 1.6% and 2.0% in the 1970s, 1980s and 1990s respectively (FAO 2000). However, the most important dimension of food self-sufficiency is not the volume of food produced but production *per capita*. Considering this fact, many SSA's food production has not managed to keep pace with the increase in population, which now stands at 4%. Compared to the developed world, Africa is in a much more serious dilemma. In the West, the food gap is normally and easily filled by food imports because of the stable purchasing power. Food imports are, however, difficult to sustain in many SSA countries and are therefore not a solution to Africa's food problem either in the short term or medium term.

Table 2.1 The Undernourished in the Developing World (1990-92), (1994-96)

Region	Percentage of the undernourished		Number of the undernourished	
	1990-92	1994-96	1990-92	1994-96
SSA	40	39	196	210
Near East & North Africa	11	12	34	42
East & South East Asia	17	15	289	258
South Asia	21	21	337	254
Latin America & Caribbean	15	13	64	63
Total	20	19	822	828

Source: FAO: *The State of Food and Agriculture 1998*.

Knowing the number of kilocalories missing from the diets of undernourished people helps round out the picture of food deprivation. Where the undernourished lack 400 kilocalories a day, the situation is more serious than in a country where the average shortage is 100 kilocalories. Where the average kilocalorie deficit is high, many people's diets are deficient in virtually all nutrients, including the starchy staple foods (carbohydrate-rich maize, potatoes, rice, wheat and cassava) that provide mostly energy (FAO, 2000)

A comparison of Asian and African countries confirms the earlier assertion in this chapter that Africa is more food insecure than Asia (see table 2.2). With 46% of its countries at an average deficiency of more than 300 kilocalories per person per day, SSA is comparatively more food insecure than Asia.

Table 2. 2: Food Energy Deficiency in Asia and Africa, 2000

ASIA AND PACIFIC COUNTRIES	ENERGY DEFICIENCY (K.cal)
Bangladesh	340
Korea DPR	340
Mongolia	310
India	290
Lao PDR	280
Vietnam	280
Cambodia	270
Pakistan	270
Philippines	270
Nepal	270
Papua New Guinea	260
Sri Lanka	260
Thailand	260
China	260
Indonesia	200
Myanmar	200
China, Hong Kong SAR	140
Malaysia	140
Korea, Rep	130
SUB-SAHARAN AFRICA	
Somalia	490
Mozambique	420
Burundi	410
Liberia	390
Congo, Dem Rep	380
Sierra Leone	380
Eritrea	370
Niger	350
Ethiopia	340
Zambia	340
Zimbabwe	340
Chad	330
Rwanda	330
Angola	320
Guinea	320
Central African Rep.	310
Madagascar	310
Malawi	310
Tanzania	300
Burkina Faso	290
Congo Rep	290
Kenya	290
Mali	290
Lesotho	280
Uganda	280
Cameroon	260
Namibia	260
Togo	260
Botswana	240
Gambia	240
Mauritania	240
Senegal	240

Sudan	240
Cote d'Ivoire	230
Benin	220
Ghana	210
Nigeria	210
Swaziland	210
Mauritius	180
Gabon	160

** Includes Taiwan Province of china*

Source: FAO: The state of food insecurity in the World, May 2000.

2.3. Vulnerability to Food Insecurity in SSA

The food situation of most SSA economies has deteriorated since independence. Severe food shortages, exceptional in the 1960's, are now widespread. Food security at the household level is directly influenced by poor agricultural performance. In many countries, malnutrition is seasonal and increases before the harvest, when food supplies have dwindled. The gap in food intake has been widening further in years of drought. Besides, recurrent famines in the 1980s and 90s have graphically illustrated the high degree of food insecurity in the region.

In terms of energy intake in SSA, 2100 calories per person per day (about 85% of recommended requirements) were available between the 1960s and 2000. It is estimated that about ¼ of SSA's population – more than 100 million people – obtain, on average over good and bad crop years, less than 80% of the daily calorie supply recommended by FAO and WHO (World Bank: 1984; FAO 1999). In drought and other bad years, the numbers would be even larger. This brings the question: Who are vulnerable to food insecurity in Africa?

Many observers come up with different categories of vulnerability to food insecurity in SSA. Broadly, there are regions, countries and groups of people who are repeatedly

identified as being nutritionally vulnerable. The Horn of Africa, whose ensuing discussion is focused, is one of the regions most quoted as being food insecure.

2.3.1. Vulnerability of Food Insecurity in the Horn of Africa

Out of a total population of almost 160 million in the 7 countries of the Horn of Africa, some 70 million people (around 45%) live in areas which have been subject to extreme food shortages and the risk of famine, at least once every decade over the past 30 years. Before the turn of the 20th century, some 13 million people were judged to be in need of relief assistance (FAO: 2000), and were the target of a USD 378 million inter-agency appeal for emergency relief.

During the past 3 decades, when on a worldwide basis there has been ample food for all people, major famines have occurred in Sudan, Ethiopia and Somalia. In 1984/85, the region experienced life-threatening famine, and there were two major famines in the 1970s in Ethiopia and Eritrea, which led to massive loss of human and livestock life. In East Africa alone, 42% of the population is undernourished, and the figures for Somalia, Eritrea and Ethiopia are among the highest in the world (Daily Nation: May: 2001). Chronic undernourishment is reflected in a very high incidence of stunting amongst children and in reduced life expectancies. Child undernutrition, especially amongst those in the 6-24 months bracket, is particularly damaging in that it results in life-long reduction in physical and cognitive abilities.

Apart from the southern areas of Uganda and Kenya, the highlands of Ethiopia and parts of equatorial Sudan, most of the region has low and unreliable rainfall. Some

350 million hectares or 67% of total land area is classed as hyper-arid, arid or semi-arid (FAO: 2000). While drought and other natural disasters, such as floods, locusts and contagious human livestock diseases can predispose people to food insecurity, they need not necessarily lead to large-scale undernourishment. Instead, undernourishment is caused by failure to ensure access by all people at all times to sufficient food, in terms of quality, quantity and diversity, for an active and healthy life without risk of loss of such access.

In four of the countries in the region, average *per capita* daily energy supply (DES), is substantially less than the minimum requirement, with Somalia estimated at meeting only 74% of its requirements. Since 1974, there has been a downward trend in the availability of food supplies in the region. For example, from 1995 to 1997, the supply of pulses was half that in 1974 while that of cereals, a mere third (FAO: 2000).

Despite advances in national food production and some productivity gains in the higher rainfall parts of the region, the incidence of food insecurity has not declined and it is estimated that around 42% of the people in the region are undernourished. Chronic undernourishment is so widespread that even relatively small drops in food production could have devastating effects. This is true considering the fact that in the 1972/73, 1984/85 and 1999/2000 famine years, devastating as they were, aggregate national food production was not reduced by more than 6-7% on average (Lofchie: 1986 and FAO: 2000).

The 1999/2000 crisis demonstrated that the region's pastoralists – amounting to 15-20 million people, were particularly exposed to drought risks. Consequently, they lost a large part of their main productive assets – livestock. In Ethiopia, pastoralists lost an estimated 50% of their cattle and 20% of their sheep. In Somalia and Kenya, some 60-70% of the pastoralist communities were affected by heavy losses of livestock

2.3.2. Vulnerable Countries in SSA

Most of the countries with extreme depth of hunger are located in SSA. Others are found in the Near East (Afghanistan), the Caribbean (Haiti) and Asia (Bangladesh, Democratic People's Republic of Korea and Mongolia). The general figure is that 972 million people in 98 developing nations were not getting enough food to lead normal and healthy lives by the fall of 2000.

In SSA, more than 20 countries are classed as food insecure. The World Bank (1989) identified several of these countries. The Saharan countries and the Southern Central region (Botswana and the surrounding areas), where rainfall is meager and unreliable, form a core area of food insecurity, but all sub-regions have countries with the same problem, albeit with varying intensities.

A comparison of data from the World Bank and WHO enables categorization of food deficit SSA countries as follows: -

1. All countries in the Saharan region, that is the five former French colonies (Mauritania, Mali, Niger, Chad and Burkina Faso), together with Ethiopia and Sudan. This category is comprised of countries vulnerable to periodic droughts
2. Countries with frequent civil wars, such as Angola, Mozambique, Somalia, Liberia, and Sierra Leone.
3. Countries with poor infrastructure – Uganda and Zaire.
4. Countries whose economic management has either stunted growth or not supported equitable distributions of its benefits – Kenya, Mozambique, and Tanzania. These are countries with skewed income distributions and high incidents of poverty, even though their agricultural bases and national income levels are strong.
5. Countries with large poor urban populations – Zambia and Sudan.
6. Countries in the dry belt stretching from the coast of Angola through Botswana, Lesotho and southern Mozambique.

These categories seem to be overlapping, cyclical and endless. However, the stark truth is that the SSA region is a net victim of food insecurity and the only region in the world where *per capita* food production declined over the last three decades. It is observed that its food self-sufficiency ratios declined from 98% in the 1960s to around 86% by 1980, and down to 76% in the 1990s (ECA: 1983; World Bank 1984 & 1999). This implies that on average, each SSA country had 22% less home grown food in 1999 than 39 years earlier. The disappointing performance in agriculture and in food production reflects a very serious economic situation because the agricultural

sector, the mainstay in most African economies, makes the single largest contribution (40 – 60%) to the gross domestic product and provides over 50% of the export earnings of most African countries.

2.3.3. The Vulnerable Groups

Although the acute food insecure can be identified and mapped as each crisis occurs, it is more difficult to pinpoint those who are chronically food insecure. Nevertheless, the poor are found scattered across the SSA region. The old, infirm, very young and women in general tend to be disproportionately affected by food shortages, both acute and chronic.

Many of the small, resource-poor farmers living on the edge of subsistence in the higher rainfall parts of the region, who are far greater numerically than the pastoralists, are chronically food insecure and also vulnerable to external shocks. Their vulnerability is due to rapid population growth, which has placed extreme pressure on scarce land resources, and lack of access to assets and technologies needed for intensifying food production. They are also found in remote areas with limited access to markets for inputs or outputs.

While the majority of the food insecure live in the rural areas, food insecurity is also emerging as a growing urban phenomenon in major cities of the region, for example in Casablanca, Dar-es-Salaam, Nairobi, Dakar, Monrovia and Kinshasa. Rural urban migration, fuelled by rural deprivation and conflict, has led to a breakdown in

traditional coping mechanisms and widespread unemployment. Although it is often difficult to obtain precise estimates of the number involved, it is estimated that over 50% of Nairobi's 2 million people are food insecure, whilst there are 2-3 million long-term displaced people in and around Khartoum who are in constant receipt of food aid, and similar numbers of urban poor in Addis Ababa (Hopkins: 1986; FAO 2000). Their dependence on imported food than on local production suggest that governments have misallocated domestic resources and therefore courted a dangerous dependency.

The World Food Programme outlines three groups of victims of food insecurity in SSA: (i) People who face the threat of starvation and perhaps the violence of physical assault. These are the victims of humanitarian crises (those facing acute hunger due to conflicts or natural disaster) for instance, Rwandan refugees and drought-hit Ethiopians and the Sudanese. (ii) People who are more vulnerable than others at critical times of their life cycle, including babies in the womb, the new-born and young child-bearing and lactating women. (iii) Households with low and variable incomes, limited assets, few marketable skills and few powerful advocates to act on their behalf.

Raikes (1991) lists the following groups of victims: (i) Small peasants living at high density in relation to soil fertility and unable by reason of poverty to conserve the soil, to fallow the soil for long enough, and to avoid further damaging forest cover in their search for firewood. (ii) Small peasants who are pushed into increasingly

marginal rainfall areas, where land pressure, low income and high risk inhibit improvement. (iii) Pastoralists, whose physical livelihood is weakened by the loss of dry-season grazing, while their only security in times of shortage (sale of livestock) losses much if not most of its value just when most needed, (iv) Rural or small-town landless labourers, who are affected by rising food prices and falling levels of economic activity in the aftermath of a bad harvest, (v) Dependants of any of the above, (vi) Widows, labour-migration grass-widows and other women living alone with children on small plots, and (vii) People in areas raved by war, armed incursion or police action against the same.

2.4. Causes of Food Insecurity in Sub-Saharan Africa

Much of the literature on the causes of Africa's food crisis ranges along an intellectual continuum that can roughly be described as externalist-internalist in character. Such broad categorization involves an element of oversimplification, since no serious author falls unambiguously into a single analytical position. It does provide, however, a useful point of departure for establishing the enormous range of analytic opinion that currently exists.

Externalists assign primary responsibility for the African food crisis to causal factors outside Africa and, therefore beyond the jurisdiction of its political systems. On the other hand, internalists place greater emphasis on the policy failures of African governments (Raikes, 1990).

2.4.1. External Causes of Food Insecurity in Africa.

Externalists focus on the salient features of the international economic system including the declining terms of trade for primary agricultural exports. Since agriculture provides nearly one-third of African's merchandise exports prior to the discovery of oil in Africa, agriculture provided nearly 2/3 of Africa's merchandise exports* and 80% of the food consumed domestically (Bates: 1986) a small decline in agricultural production is a big blow to African's food security.

On this premise, the continent has suffered badly because of adverse changes in the international terms of trade. Thus, its current plight can be traced in large measure to the fact that the cost of African's imports has risen far more rapidly than the price of exported commodities. Lofchie observes that African's terms of trade took on a sharp downward trend beginning in 1979. He assesses this decline in the following stark terms:

"Between 1980 and 1982 prices of non-oil primary commodities declined by 27% in current dollar terms. The loss of income due to deterioration in the terms of trade was 1.2% of GDP for SSA; middle-income oil importers suffered the biggest loss (3% of GDP) ... and low income countries a loss of 2.4% of GDP" (Lofchie: 1986, quoting Eicher: 1982).

In many countries, decreasing prices for their products has eroded increased production. Sudan for example increased cotton production by about 50% in 1981 and 1982 but due to a sharp drop in the world market price for this product its foreign exchange position continued to deteriorate badly.

* Prior to the discovery of oil in Africa, agriculture provided nearly 2/3 of Africa's merchandise exports.

The scarcity of foreign exchange is compounded by another salient factor of the international economic system namely, the low demand elasticities for Africa's key agricultural commodities. The world demand for such critically important exports as coffee and cocoa has been virtually static for the past two decades, increasing by only about 3% (Lofchie 1986). Unfortunately, Africa as a price-taker cannot compensate for the low price levels by increasing the volume of agricultural goods it markets. Although any given agricultural exporter could potentially expand her market share by lowering prices, her increased volume of exports would necessarily occur at the expense of other countries dealing in the same commodity. Export led growth is therefore not a development strategy available to African nations in general. It is instead, a competitive market tactic available to individual producers and which is capable of increasing food insecurity.

African countries have also been affected by a host of other external shocks like the precipitous increase since 1973 in the price of petroleum. This move has increased the cost of agriculture and hence food production, because many agricultural inputs are petroleum derivatives. Adding to the list of external factors is the over-valuation of the U.S dollar, which has increased the difficulty of debt repayment and fuel costs, since international loan repayments and trade in petroleum products are both conducted in U.S dollars.

These factors have made some people to conclude that these circumstances are beyond Africa's control. Taken together, these factors add up to a strong case that African countries confront a deeply inhospitable international environment, one that would have created critical economic difficulties even under the best internal management conditions.

2.4.2. Internal Causes of Food Insecurity in Africa

Internalists (see for instance Serageldin: 1998; Lofchie: 1986 and World Bank : 1981) attach greater importance to economic policies pursued since independence by African states. Chief among these is the continent-wide tendency to control and suppress agricultural prices. African farmers have been subject to pricing policies that reduce the prices they receive to a level well below world market prices. In Africa, keeping prices low has been a standard government technique accepted by many as the cause of continent-wide food deficits. Unlike Asia where guaranteed prices for food products have been in place for a long time, most of Africa's producer prices are not guaranteed. Thus, most African food pricing policies are consumer oriented and fixed at a low level to favour urban consumers. This is a definite disincentive to producers who end up producing less.

The bias towards urban consumers is not a new phenomenon. It mostly arises from governments' fears for violent demonstrations against increases in the prices of foodstuffs. Governments that cannot provide an adequate supply of reasonably priced foodstuffs to their urban population have experienced sharp increases in public opposition manifested by the high incidence of food riots in many capital cities. In many cases, the riots provide the catalyst for coups d'états, as was the April 1979 rice riots in Monrovia that led to the ousting of the Tolbert regime in Liberia in 1980 and the April 1985 demonstrations in Khartoum which culminated in the overthrow of the government of President Gaafar el-Nimeiry of Sudan. Thus, due to vulnerability of governments to urban pressure, food imports are normally subsidized to keep prices low, while domestic food prices are normally reduced through the operation of government controlled marketing institutions.

Since independence, efforts for industrialization in many African countries and the so-called *cash crop syndrome* have greatly affected the continent's food security. This was a mere projection of colonial policies that did not give food the priority it deserved (Eicher 1982, Hines and Dinham: 1984). Resources of the colonies were, instead, diverted away from food into the production of industrial raw materials, for the simple reason that export crops and industrial crops were more productive in terms of returns. Consequently, little attention was paid to investments in research on food crops and virtually all peasants were left pretty much to their own devices to feed themselves" (Tandon: 1981).

2.4.3 Export- Food Crop Competition

Governments' emphasis on exports – the cash crop syndrome – has had its share of blame for the African food crisis. The emphasis on exports inherited from the colonial era meant that in many cases, meager public investments were allocated to agriculture. This move adversely affected food production. The case of tobacco as a cash crop in Tanzania is illustrative of the adverse impact of the cash-crop syndrome on the food production sector. The emphasis of the Tanzania government on the tobacco production in Mpanda in the 1970s resulted in the rapid decline of local maize production from 1,110 tonnes in 1969-70 to 131 tons in 1974-75, while tobacco production increased from 184 tonnes to 310 tonnes over the same period. Mpanda thus became dependent on imports of maize (U.S department of agriculture: 1981, as cited in Clute: 1982).

Complementary to the cash crop syndrome is the general neglect of the agricultural sector by most African governments. The trend has proved that, "African governments have not been

backing their avowed food self-sufficiency objective by increasing allocation of public resources to the food sector” (ECA: 1984). Inter-country comparisons are not easily available due to definitional data and measurement problems. However, in the 1970s, around 10% or less of planned development expenditure was allocated to the agricultural sector in Kenya and Mali, as compared with 31% in India during the first five year plan in 1951, and 20% of the subsequent 3 plans (Lele 1984: 440). By way of contrast, in both Ghana and Nigeria, the commitment to agricultural development was merely verbal. Ghana allocated a mere 7% of public investments to the agricultural sector during (1974-76), while in Nigeria’s third development plan (1975-1979), less than 6% of the total expenditure, recurrent and capital, was reserved for agriculture, despite professed belief in its important role (Hinderrink & Sterkenberg: 1983: 6 – 8). This neglect of agriculture has resulted in little research on food crops and inadequate investment in farm-to-market transportation, hence producers have had no incentive to produce in surplus for family and social needs.

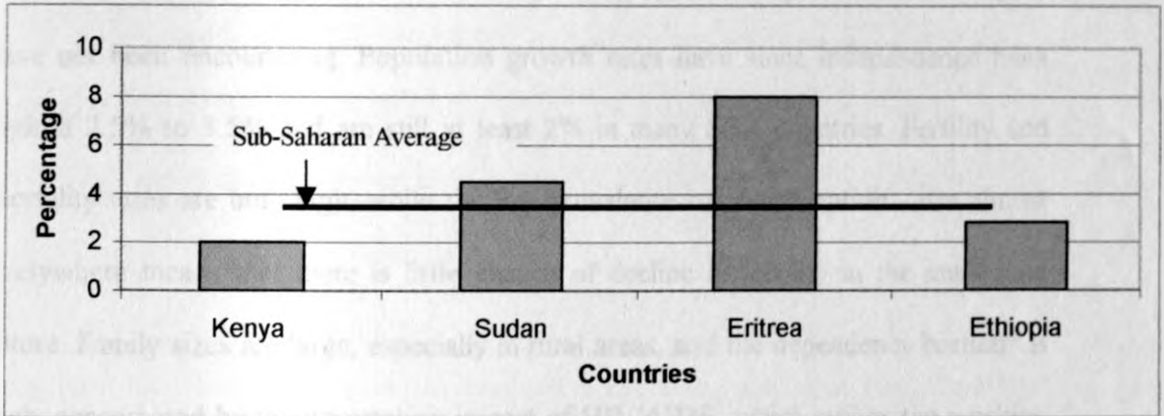
Of all the government policies, which have had negative impacts upon the agricultural sector, none has had more devastating subsequences than the tendency to overvalue the exchange rates (World Bank: 1981). Until recently, over-valued currencies made food imports artificially cheap in relation to domestic production. This brought an unfair competition between food imports and domestic food stuffs and stimulated a market shift in consumer tastes in favour of “new” foods that were not well suited to domestic production, such as bread and rice, hence dependence on imports to satisfy the demands of politically powerful groups. At worst, the policy failed to stimulate domestic production.

State marketing boards or parastatals and their poor choices of development strategies were the most “powerful disincentives to agricultural growth” to which the Berg Report drew attention (World Bank; 1981: 21-27). Instead of the parastatals playing their role in controlling trade, regulating prices and directing operations within national borders, they increased consumer costs and reduced producers’ revenues. For example, Ghana launched state farms in the 1960’s with a total work force of 20,000 and budgetary allocation of approximately 90% of the total agricultural development budget. They later turned out to be a gigantic failure. Instead of realizing its original objectives, Ghana’s Agricultural Development Corporation, which managed most of the 132 state farms, accumulated a loss of USD. 4 million by 1964, USD. 7 million by 1965, and over USD. 9 million by 1966 (Bates 1981: 46-47) Parastatals and state farms are therefore inappropriate, expensive and not directed to the needs of the peasant farmers. Besides, African parastatals have been characterized almost everywhere by destructive levels of corruption, inefficiency and mismanagement.

Hosts of other internal factors are responsible for the African food crisis. The role of conflict(s) and population growth also cannot be underrated. Africa has been plagued by conflict since time immemorial. The continent has suffered from continuous civil conflict over the last 30 years. It is estimated that in the Horn of Africa alone, countries devoted between 8% and 50% of central government expenditure on the military, or between 2% and 8% GNP and totaling US\$ 2billion in 1997 (FAO: 2000). (See Fig. 2.2).

These figures rise substantially, of course, whenever conflict flares up and this undoubtedly exacerbate the famine and food security situations triggered by drought

Fig 2.2: - Military Expenditure as % GNP of Countries in the Horn of Africa 1997.



Source: World Bank Development Indicators, 2000.

Conflict, especially civil wars deny farmers the time to concentrate on food production as priorities lean towards the wars and other related political wrangles.

As illustrated in Fig 2.2 also, many governments with political instability assign higher proportions of their budget towards militarization. At the end of the day, the agricultural sector receives less attention hence, food production declines. Even in countries that are fairly politically stable, militarization has always been a higher priority than food security. In many countries, leaders are not ready to forgo the privilege of power for this important course. For example, out of Kenya's government expenditure for the financial years 1995/96 and 1996/97, defence consumed 4% and 5% of the expenditure while agriculture consumed only 2% and 3.7% respectively.

Certainly, such budgetary allocations have marginalized the agricultural sector, and hence contributed to food insecurity.

Over and above the other causes of food insecurity in SSA, population growth has a major impact on the region's food situation. The population dynamics of the region have not been encouraging. Population growth rates have since independence been high at 2.5% to 3.5% and are still at least 2% in many SSA countries. Fertility and mortality rates are both high, while the low prevalence of contraception - use almost everywhere means that there is little chance of decline in fertility in the immediate future. Family sizes are large, especially in rural areas, and the dependency burden* is high, exacerbated by the devastating impact of HIV/AIDS, which strikes the working age population hardest.

Population increase has also led to a dramatic increase in energy demand, which has been met largely by wood. The natural resource base has, as a result, declined as land degradation and urban encroachment on arable land loom large. To the extent that there has been an increase in the area of land being farmed, this has taken place largely in marginal areas, using system which may not be sustainable. For example, in many parts of the SSA region, the pressure of human and livestock populations on the resource base has increased to the point where land use, with present technology and management systems, is not sustainable. This is particularly true in the arid and semi arid lands, which make up to 50% of the region and where the resource base is fragile.

*The proportion of the population below 15 years and above 64 years. to the working population

Shrinking land resources have not been compensated for by increases in land productivity. Average cereal yields are a mere 860 kg/ha (FAO 2000) and, where comparative data are available, the statistics confirm the general impression that yields are declining.

For example, in Sudan and Uganda, average yields have dropped by 12% and 18% respectively, over the last decade (FAO: 2000). The result is that SSA farmers have to cope with reduced productivity and less land upon which to feed themselves and supply food to the ever-expanding cities.

The foregoing discussion confirms that there are more internalist than externalist causes of food insecurity in Africa. Consequently, addressing internal variables rather than the external ones can best solve the African food crisis.

2.5. Linking Poverty and Food Security

These categorizations notwithstanding, the basis of food insecurity in SSA is poverty.

The poor who generally have least access to natural resources, entitlements, employment opportunities and income, are the most chronically food insecure. They are also the ones who are most vulnerable to acute food insecurity when external shocks, such as droughts, floods or migratory pests result in shortages and concomitant food price rises.

The Horn of Africa presents perhaps the most difficult challenge in the world to achieving the goal set out in the UN Secretary General's Millennium Report of halving

the proportion of people living in extreme poverty by 2015. In 2000, it was estimated that over 50% of the people in the region survived on less than \$ 1 per day. Under this situation, resources needed to purchase a diet that provides the minimum acceptable energy requirements are inadequate.

The connection between poverty and food insecurity is thus of paramount importance. Food production is also equally important because, for the majority of the poor, agriculture is their main source of livelihood. However, it is only through poverty reduction that the level of food insecurity can be substantially reduced. Consequently, the long-term solution to food insecurity lies beyond the production of additional food and includes the need to address rural livelihoods. Social safety nets of various sorts are also part of the solution to absolute poverty and food insecurity, not only in exceptional circumstances such as drought, but also in the long period required to arrive at inclusively sustainable solutions.

CHAPTER III

3.0. A REVIEW OF KENYA'S FOOD POLICY, 1963-2001

3.1. Introduction

National food policies of most countries are designed to achieve four basic objectives: (i) Efficient growth in the food and agricultural sectors, (ii) Job creation, (iii) A decent, minimum standard of living, and (iv) Security against famine or extreme food shortages (Timmer et al: 1983: 14-15).

The emphasis placed on each objective varies from country to country. The importance of each objective usually reflects the contribution of each to a nation's health and welfare and, implicitly, to its political stability or national interests. Thus, understanding the causes of Africa's food problem should lead to better policy and the subsequent alleviation of food insecurity.

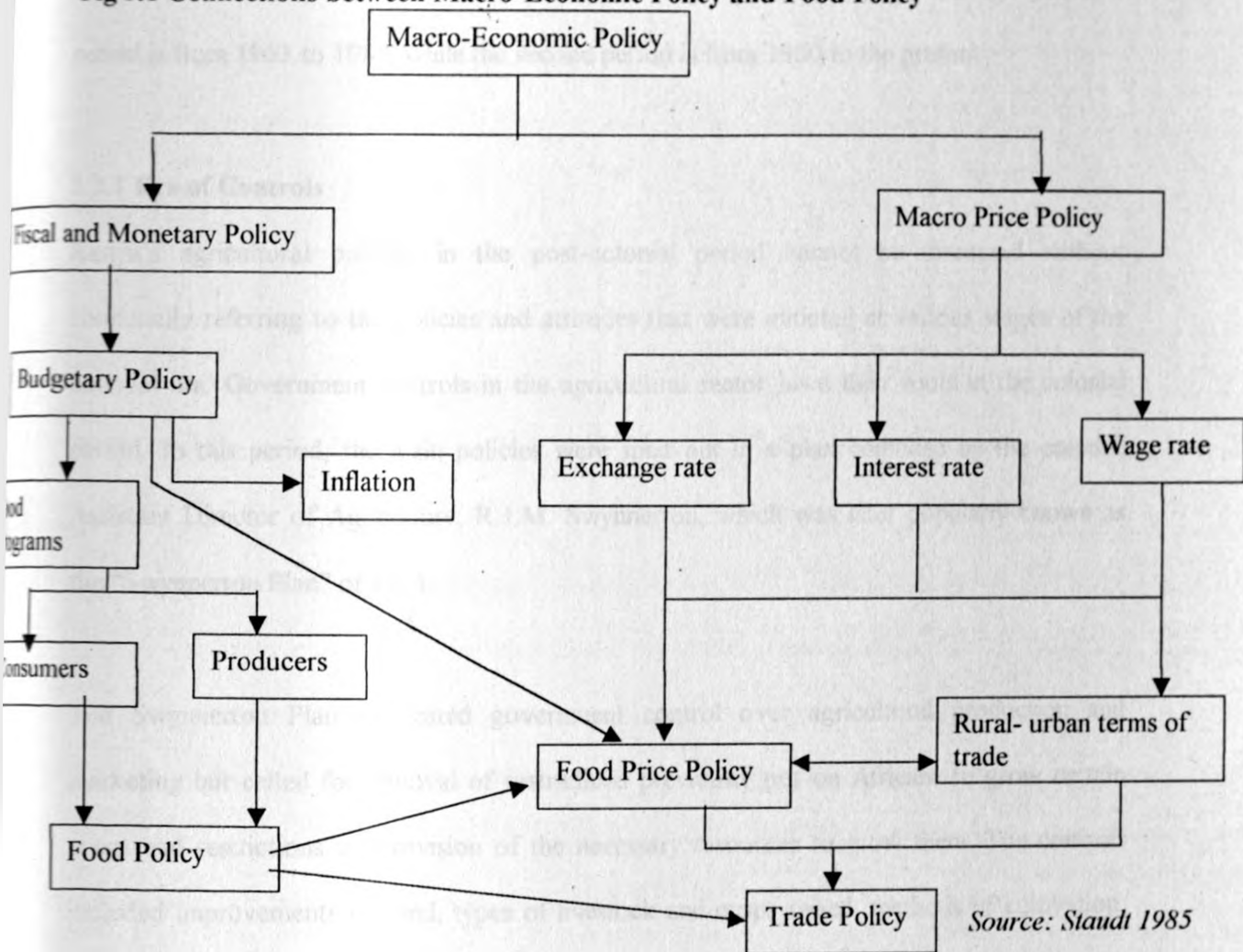
As is clear from Chapter II above, the poor performance of African agriculture cannot be attributed only to physical, natural and infrastructural constraints. The key to Africa's agrarian malaise can be found in government policies over the years. Agricultural, food and other rural policies set by governments are crucially important in creating incentives and in shaping the economic environment within which food producers operate. Given the required incentives and realistic policy directives, physical and biological constraints are factors that farmers are able to transcend (Bates 1981; Tarrant: 1980). It is for this reason that Schultz argues that "incentives to guide and reward farmers are a critical component" in food production, and once there "are investment opportunities and efficient incentives, farmers

can turn sand into gold” (Schultz: 1964). Although this may seem a little oversimplified, the significance of Schultz’s argument may hardly be disputed. Undoubtedly, it is the “complex web of relationship between Africa’s agricultural markets and government policies” that has created the present agrarian malaise. Markets and government policies have not received much attention, probably because they are complex and because pronouncements concerning them are more “politically volatile” than are evaluations of technical and physical problems (Scarlett: 19891). However, it is precisely within this more controversial arena that understanding of Africa’s food problems must be sought and future research areas and policy reforms must be identified.

There is a widespread recognition that a nation’s food policy is determined by the interaction of decisions and actions taken by many ministries and organizations, not just those within the ministry of agriculture. This is to suggest that although food and agriculture are closely tied, food security is not always at the behest of agricultural supplies. The overriding factor in most cases is the income of different households, which determines the ability to purchase the minimum amount of food required for adequate nutrition.

Like in many countries, Kenya’s macro-economic policy has an indirect but powerful bearing on food prices and on the overall terms of trade between rural and urban centres. The macro-economic policy normally has many connections with food policy. These connections are summarized in fig 3.1. Although all the arrows in the figure flow in one direction, feedback effects do occur.

Fig 3.1 Connections between Macro-Economic Policy and Food Policy



It should, however, be noted that in an agricultural economy like Kenya, agricultural and food policies are almost synonymous. Measures affecting food security consist of government decisions that influence the level and stability of input and output price, public investments affecting agricultural production, costs and revenues, and those affecting allocation of research and development funds to improve farming and other related activities. Some of the policies affect agriculture more directly whereas others do so indirectly. The basic policies, however, are those believed to accelerate agricultural growth and food productivity. They are classified as; (i) Agricultural pricing and marketing policies, (ii)

discussed under the titles, “Era of Control” and “Era of Reforms”, respectively. The first period is from 1963 to 1980, while the second period is from 1980 to the present.

3.2.1 Era of Controls

Kenya’s agricultural policies in the post-colonial period cannot be discussed without continually referring to the policies and attitudes that were initiated at various stages of the colonial era. Government controls in the agricultural sector have their roots in the colonial period. In this period, the main policies were spelt out in a plan compiled by the colonial Assistant Director of Agriculture, R.J.M. Swynnerton, which was later popularly known as the “Swynnerton Plan” of 1954.

The Swynnerton Plan advocated government control over agricultural production and marketing but called for removal of restrictions previously put on Africans to grow certain crops and restrictions on provision of the necessary resources to grow them. The controls included improvements on land, types of livestock and crops raised, methods of cultivation, provision of extension services and credit, and marketing of commodities. The plan emphasized intensive agriculture as a means of increasing agricultural productivity and advocated for a land tenure system with security to the African farmer. It argued thus:

“Sound agricultural development is dependent upon a system of land tenure which will make available to the African farmer a unit of land and a system of farming whose production will support his family at a level, taking into account prerequisites derived from the farm, comparable with other occupations” (Swynnerton: 1954).

By and large, the reasons behind the controls were to protect European settler farmers, maintain standards of output, and provide a sound foundation for improved African farming. The rationale was that African farmers lacked farming skills and hence, the need for assistance and support. Rather than improve the African farmer's skills in commercial farming, the colonial system reduced them to mere cultivators with few decisions to make on production and marketing of commodities and created dependence on government, a tendency which persisted for many years and which had disastrous effects on agricultural development in Kenya.

Although the Kenyan government did not develop a specific food policy before 1981, the country's food requirements were met through the pursuance of broader policies within the agricultural sector. Since 1963, food security concerns were mostly subsumed in agriculture because it was assumed that agricultural growth would automatically translate into adequate food at the household level.

Some authors (see for example Omosa: 1998 and MOA: 1988) argue that the early development plans and Sessional Paper No. 1 of 1965 contained no reference to food security or nutritional policies. However, the policies initially grounded in the African Socialism paradigm provided a broad framework that was applied in improving the country's food situation. With their focus on land policies, a major land redistribution programme was carried out immediately after independence. The government distributed to small-scale farmers a considerable amount of land in the high and medium potential areas that previously belonged to European settlers. This was mainly done through the famous "Million Acre

Scheme" through which over 35,000 families were settled on 470,000 hectares and the Haraka scheme by which 14,000 families were settled on 105,000 hectares. By 1976, about 1/3 of the large-scale mixed farms had been officially sub-divided and given to small-scale African farmers (Senga: 1976).

Although the settlement programme at independence took the centre stage and had important effects, the performance of the agricultural sector and food production in particular was found not to depend on access to land alone. The government therefore urged that such access be complemented with the necessary discipline and sacrifice that goes with hard work. Prosperity was perceived to revolve around land development and its doors were described as "open to only those who prefer to work hard and those who follow the advice of government officers" (Sessional Paper No. 1:1965). Complementary to the issue of discipline, the government cautioned against absentee land ownership and mismanagement of farms and threatened to confiscate idle land (Sessional Paper No. 1 1965). This threat was, however, never carried out.

The call for hard work, alongside the need to consider government policy was necessitated by an emerging fear that the period of transformation would impact negatively on agricultural production. Other than the movement from large to small-scale production, a substantial number of African farmers were assumed to have begun their operations with little previous experience in producing for the market. They also had insufficient working capital to run the farms at a high level of production. In addition, despite having acquired some parts of the former white highlands, the government realized that Kenya's greatest but

untapped potential lay among small holders, and most of them inhabited the former non-scheduled areas. There was therefore an attempt to aim at projects and programmes that were assumed to create, enhance and sustain the potential to make food available (Omosa, 1998).

3.2.2 Non-Land Policies in the Era of Controls

Another policy issue during the controls period was the issue of modernizing agriculture. Enabling farmers to acquire modern inputs was seen as a means to empowering them to embark on production methods that would earn them cash income. Within the food sub-sector the primary objective was to ensure that adequate supplies were available “at prices which were reasonably low from the consumer’s viewpoint but still sufficiently high to give the efficient producer a fair return” (National Development Plan: 1970 – 74; 196-235). To this end, high yielding rust resistant varieties of seed were introduced. The most commendable achievement was in the releases of various hybrid varieties for medium and high attitude areas and *Katumani* maize varieties for low rainfall areas, starting 1966.

Agricultural research was heavily subsidized by the government through the ministry of agriculture which spent about 10% of its annual budget on research, or about 2.05% of the value added from agriculture (Heyer and Waweru: 1976). As a result of these investments, there were major breakthroughs, particularly in the release of new high-yielding varieties of maize and wheat. Cash crops, mainly coffee, tea, cotton and sugar cane had special research programs (Nyangito: 1999 and Okech: 1996) through which the industry responsible financed the research using funds from the government. A major problem in research was the adoption of improved technologies by small-scale farmers. Since the researchers did not

appreciate the economic difficulties facing small-scale farmers, most of the recommendations were not adopted.

Alongside advocating modernized farming activities, the government also focused its attention to teaching farmers how to improve yields through encompassing and emphasizing the economics of production. For example, efforts were made to identify more efficient methods of using a range of farm equipment such as alternative cultivation techniques for improved soil and water conservation. To reach this end, the government expanded its extension services rapidly, both in quantity and quality that by 1973, there were about 4,500 front-line extension agents (assistant agricultural officers, technical assistants, and junior technical assistants) compared to 3,400 in 1963 (Nyangito: 1999). The approaches used in disseminating knowledge to farmers included individual and group farm visits, field demonstrations, and whole-farm integrated project management. Through the government's commitment to the expansion of training facilities, many Farmer Training Centers (FTCs) were established. As a result, extension services expanded rapidly that by 1973, the ratio of extension staff to farmers was 1: 310, as compared to the 1: 820 ratio in 1963.

Extension activities were effective in disseminating improved farming practices to farmers, although they were relatively expensive to run and concentrated resources on a few people, mainly the well-to-do at the expense of the majority. One study (see Staudt: 1985) observed that although courses offered by FTCs were highly subsidized by the government, a fee of Ksh 10.50 was required and this was a sizeable sum for farmers without a regular cash income.

Marketing policies also featured prominently in the period of controls. As early as 1964, the government had established the Kenya Agricultural Produce Board, a statutory board whose responsibility was to extend organized marketing of all agricultural produce in all provinces. This board was amalgamated with the Maize Marketing Board in 1967 to form the Maize and Produce Board (MPB). To regulate and indeed consolidate its role in the country's search for food security, the government declared that the Maize and Produce Board would be responsible for all imports and exports of maize. In addition, a grain reserve and food supply monitoring system was put in place (Smith: 1976; Omosa: 1998). These measures were based on the assumption that once food is available nationally, the same could be concluded of the situation at the household level. However, as was explained in Chapter II there is always a discrepancy between national food supply and the actual food situation at the household level.

Over 40 other statutory boards were also active (Ikiara, Jama and Amani: 1993). This was a boost to agricultural development possibly because of the provision of readily accessible markets. Like in the case of maize, the marketing arrangements were such that the statutory boards were the only market outlets for export crops, although there existed unofficial parallel market outlets for cereals and livestock products.

As far as marketed volumes were concerned, supplies to the statutory boards were higher during glut periods, compared to supplies during poor production periods. This was because the boards offered a uniform price regardless of supply and demand conditions. The prices offered during glut periods were higher than in parallel markets, while the converse was true

for periods of scarcity. Thus, the boards acted as buyers of last resort depending on prevailing marketing conditions. These phenomena brought some losses to the boards as a result of over-utilization and under -utilization of storage and processing capacity in the glut and scarcity periods, respectively (Gordon and Spooner: 1992).

Apart from the above constraints, it has been noted (see for example Ikiara, Jama and Amadi 1993: 94) that economic and political mismanagement of parastatal marketing enterprises were another source of inefficiency in the marketing of their respective crops. "This led to low farmer morale, low productivity and a major drain to the state exchequer (Ikiara, Jama and Amadi: 1993).

3.2.3 Some Results of the Policies in the Era of Controls

Fuelled by land reforms (land sub-division and redistribution) and heavy government and donor involvement through subsidized services and inputs, the era of controls witnessed a steady increase in the production of crops (Table 3.1). This was also attributed to the shift from extensive to intensive farming, a trend that resulted to large increases in the volume of agricultural production, especially in the former white highlands.

There was also a steady increase in the marketed volumes of cash crops throughout the period while for food crops, despite an increasing trend up to 1977, there were fluctuations over the years and a decline thereafter (World Bank 1990).

Table 3.1: Gross Production of Selected Crops in Kenya (1964-80) (000mt)

Year	Maize	Wheat	Rice	Tea	Coffee	Sisal
1964	299.5	128.9	13.0	18.0	43.7	69.9
1965	187.7	143.0	11.3	20.2	37.2	63.0
1966	285.7	132.2	14.4	19.8	51.2	57.3
1967	403.2	179.1	13.9	25.5	52.2	51.3
1968	511.2	238.9	17.4	22.8	33.8	50.3
1969	619.2	222.6	18.7	29.8	45.6	49.8
1970	727.2	215.5	22.7	36.1	52.8	43.9
1971	835.2	176.9	28.5	40.2	54.9	44.8
1972	943.2	170.3	30.0	36.3	58.3	41.2
1973	1051.2	149.6	33.8	53.3	74.7	58.0
1974	1159.2	137.9	36.1	56.6	72.0	84.0
1975	1267.2	157.8	33.2	53.4	65.4	43.6
1976	1375.2	161.9	32.1	56.7	73.8	33.6
1977	1597.1	180.7	39.3	62.0	97.3	33.5
1978	1671.4	165.9	41.4	86.2	81.4	31.4
1979	1620.0	157.5	35.8	93.4	72.9	36.9
1980	1606.5	155.1	37.5	99.3	91.0	46.9

Source: C.B.S., *Economic Surveys, Several Issues*.

From 1963, there was expansion in cultivated land, which was progressively brought under agriculture. New settlement and irrigation schemes also brought some land under cultivation. This area expansion is estimated to have contributed 60% of growth during the first two decades (Chemengich: 1996). By the end of the reference period, most of the 8.6 million hectares of Kenya's high to medium agricultural potential land was utilized for the growing of crops or for livestock production.

The agricultural sector and its sub-sectors grew rapidly between 1964 and 1972 (table 3.2), although this was a common trend for all sectors of the economy. Within the agricultural sector, the export sub-sector outpaced the domestic sub-sector until 1978 when the volume of export crops virtually stagnated, rising only by 1.5%. In general, the data (table 3.2) indicates that policies of the 1960s and 1970s were generally successful resulting in a rapidly growing agricultural sector.

Table 3.2: Major Turning Points in GDP Growth Rates in Kenya, 1964-78

Sector	1964-72	1972-78	1978-82
Agriculture	4.9	3.8	2.1
- Export crop sc	6.3	5.6	1.5
- Domestic sc	4.4	3.0	2.3
Manufacturing	8.0	11.0	5.1
Government	9.9	6.3	5.3
Total GDP	6.7	5.3	4.1

Source: Sharpley, 1984

3.3 Era of Reforms

In spite of the successes in the period of controls, the food crises in the 1980s raised considerable national and international concern (Omosa: 1998). In the 1980s, two significant drought experiences had great effects at the national level. The first of these was experienced in 1979 and 1980, and the second in 1984 and 1985. Both droughts resulted in shortfalls in food production and led the government to formulate new food policies. In the late 1980s, the government also started implementing some of the SAP policies. These policies considerably affected the agriculture and food sectors, as will be observed in the later sections of this

chapter and the rest of Chapter IV. Due to the above two factors, there was a policy shift from those discussed in the preceding section to those that emphasized food self-sufficiency and structural adjustment.

3.3.1 The National Food Policy

In the aftermath of needing to import more than 320,000 mt of maize in 1980 (Sessional Paper No. 4: 1980), the government formulated a national food policy, published as Sessional Paper No. 4 of 1981. This paper acknowledged that the rapidly expanding population and a shortage of unexploited high potential arable land were “beginning to expose a potentially dangerous imbalance in the relationship between the national supply of and demand for food”(Sessional Paper No. 4: 1981). Among other things, it recognized the need for a national food policy, and proposed to go about establishing it on the basis of the following objectives: (i) “broad self-sufficiency in the main foodstuffs, (ii) a calculated degree of food supply for each area of the country and (iii) distribution of foodstuffs such that every member of the population could have a nutritionally adequate diet” (Sessional Paper No. 4: 1981:2).

The majority of policies and programs laid out in Sessional Paper No. 4 related to increasing the production of food within the country. The paper acknowledged that a significant proportion of the population was malnourished because of inequalities in the distribution of purchasing power, seasonal food shortages and lack of nutritional education. Apart from increasing food supply, and improving its distribution, programmes addressing nutritional status were confined to proposals for evaluating the schools milk programme, expanding the governments relief efforts, raising the number of nutrition teachers, designing food

fortification initiatives, monitoring quality of processed foods, improving the Home Economics Service and monitoring nutritional status through detailed surveys. No explicit programmes were proposed for raising purchasing power of low-income groups. Implicitly, this was to be taken care of through unspecified “policies aimed at reducing inequalities in the distribution of income” (para. 3:26).

For increasing production and improving marketing, there were proposals aplenty. Some of these were initiated in succeeding years, such as attempts to improve the process of setting producer prices, increase the supply of fertilizers, improve extension, intensify research on food production, build up the national grain reserve to 4 million bags of maize plus other staple foods, and increase the catch of fish. These were implemented at a faster pace compared to measures like removal of restrictions on inter-district and inter-regional movement of maize and reducing the monopolistic role of the National Cereals and Produce Board, which were implemented at a rather slower pace. The desire to expand agricultural credit was, however, not realized.

Many of the elements of the above food policy, especially those relating to increasing agricultural production were reinforced in Sessional Paper No.1 of 1986 on Economic Management for Renewed Growth. The policies comprised in this paper gave rise to the reforms discussed in the succeeding sections of this chapter.

3.3.2 Agricultural Reform Policies

In early 1987, the government with support from the European Community adopted an agricultural reform program to increase growth in the sectors and support fiscal stabilization. The program focused on three inter-related strategies: (i) intensifying production through improved supplies of key inputs (especially fertilizers) (ii) enhancing producer incentives and market deregulation, and (iii) improving the allocation and efficiency of public investments and expenditure in agriculture, including steps to formulate and implement reforms in a number of agricultural parastatals. Of the steps the government planned to take, actions involving fertilizers, maize marketing and rationalization of public expenditures were considered more important (World Bank: 1990).

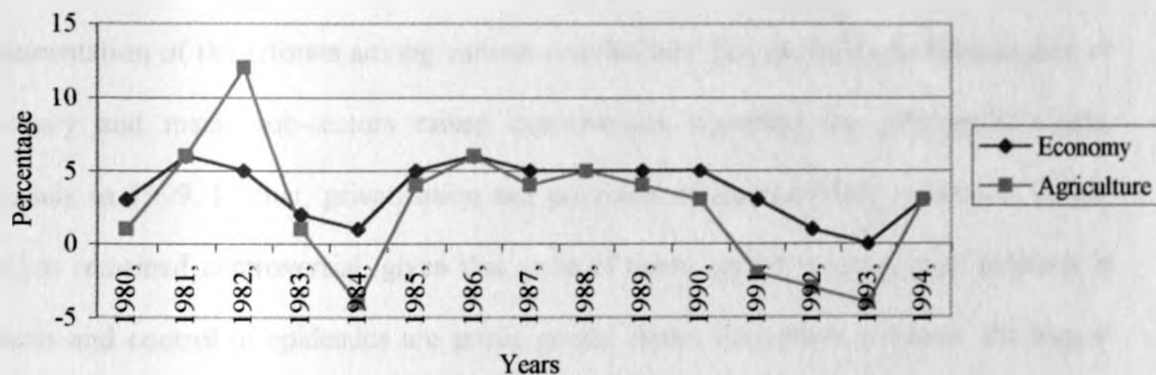
Although the implementation of reforms since inception to late 1991 was not characterized by public controversy, the implementation record was not impressive and was characterized by considerable official ambiguity and covert and overt resistance (Ikiara et al; 1993). While the government gave the impression that it was not opposed to agricultural and other economic reforms, only half-hearted efforts were made to implement them. For instance, in grain marketing, the reforms emphasized restructuring of the NCPB to confine its role to being buyer and seller of the last resort, but the government insisted on some central regulation for food security reasons. As a result, there was an on-and-off removal of controls until 1993 when the sub-sector was fully liberalized, though the NCPB is still involved in marketing alongside the private sector. The NCPB's current primary roles are: (a) to ensure national food security through the maintenance of strategic maize reserves tentatively set at 3 million bags and a half a million bags for famine relief, (b) market stabilization by setting a

ceiling price as a maximum indicative price and a floor or minimum indicative price for producers, and (c) creating an enabling environment for private sector development by appropriate policies and providing market information (Muthee: 1996).

Despite a modest average growth in agricultural production of about 3.5% per annum during the first period of implementation of the reforms (1983-90), the second phase realized a steady decline ranging from -0.4% in 1991 to -4.1% in 1992-93 (fig 3.2). The reasons for the decline in production included poor implementation of policies, bad weather, deteriorating terms of trade between agricultural exports and imports, rapid population growth, shortage of land in the high and medium potential areas, and a decline in public investment in agriculture, which was a mere 1/3 of the levels in the 1960s and 1970s (Nyangito and Kimenye: 1995).

The withholding of external aid on the advice of the World Bank and the International Monetary Fund (IMF) in 1991 and 1992 was also a factor which denied Kenya foreign exchange resources for financing imports of agricultural inputs and investments. An equally significant factor was the tribal clashes that disrupted farming activities in the grain-producing areas of Rift valley province in 1991 and 1992. Data on maize production however, indicates that since 1983, the production level has been almost constant declining only in years of bad weather (Table 3.3) for instance, in 1983 and 1993 when the maize yields were at lows of 1,500 and 1,773 metric tones, respectively.

Fig 3.2 Real GDP Growth Rates for Agriculture and whole Economy in Kenya (1980-94)



Source: CBS Economic Surveys Various Issues

Table 3.3: Maize Production Trends (1980-1999) ('000MT)

Year	Production
1980	1888
1981	2560
1982	2450
1983	1500
1984	2440
1985	2870
1986	2400
1987	3140
1988	3030
1989	2890
1990	2544
1991	2205
1992	2340
1993	1773
1994	2363
1995	2060
1996	1908
1997	2430
1998	2550
1999	1800

Source: CBS Statistical Abstracts, Various Issues.

A wave of substantial implementation of agricultural reforms toward liberalized markets was started in 1993. Coupled with good weather conditions, there was an upsurge in agricultural

growth and the first positive growth rate in the 1990s was registered at 2.8% in 1993-94 followed by 4.8% in 1994-95. Despite this growth, controversies arose over the implementation of the reforms among various stakeholders. For example, the liberalization of the dairy and maize sub-sectors raised controversies regarding the government's role, especially in 1999. Further, privatization and provision of some services to farmers at full-cost has remained controversial, given that some of them, such as promotion of products in markets and control of epidemics are public goods. Apart from these problems, the biggest challenge the government faces in terms of food policy and agricultural development, in general, is how to keep food prices at tolerable levels for the poor consumers at a time when production incentives must be increased and subsidies eliminated.

3.3.3 Impacts of Reform Policies on the Agricultural Sector

It is not possible to make a sweeping conclusion on the impacts of the reforms on the agricultural sector. This is in view of the fact that each of the reform measures is different and therefore bears different results. Thus, each measure needs to be analyzed separately and tested against a specific sub-sector. A general analysis for the impacts of the reforms on the food sub-sector and on food security is given below, and a more specific analysis on the effects of liberalization on Kenya's maize marketing, distribution and production will feature in Chapter IV.

3.3.4 Effects on the Food Sub-Sector

The trend in the "production of food commodities declined from the late 1970s to the early 1980 (see table 3.4) but started to increase in 1984, reaching the highest levels in 1987.

However, production started to decline again except for sugarcane for which production started to decline in 1991. The highest levels of production for maize, in particular achieved in 1987 have yet to be reached to date (Table 3.3). This decline in production is attributed to poor price incentives as a result of poor pricing and marketing policies in the reform era. Apart from the poor pricing and marketing policies, the decline is also attributed to high costs of inputs (resulting from the removal of government subsidies and the implementation of cost-sharing) low levels of use of inputs, and drought conditions, particularly in 1980/81, 1983/84 and 1999/2000 seasons.

Nyangito (1999) presents other effects of the reforms on the food sub-sector. He argues that producer prices received during the reform period steadily increased in nominal terms over the years until 1989. This was because the prices were still set and controlled by the government despite the policy of liberalized markets. In the early 1990s, there was a general decline in nominal prices for almost all commodities. This was also attributed to government controls on the pricing of food crops.

However, with the liberalization of the food sector in 1993, there was a dramatic price increase for all commodities except, for rice whose prices were under the control of the National Irrigation Board (NIB) (Muthee: 1996). The poor response in production despite an increase in nominal prices is explained by the fact that real producer prices fluctuated heavily while the terms of trade between outputs and inputs worsened. Consequently, profitability of growing food crops was low and therefore, the price did not provide adequate incentives for increased production of crops.

Trade liberalization of food commodities led to an increased import of foodstuffs, particularly rice, wheat and sugar. Although Kenya has been a net importer of wheat and rice over the years, the large imports of these commodities (Table 3.5) in recent years led to depressed domestic production and hence, reduced marketed volumes.

The policy reforms also increased private participation in food commodity trade, unlike in the controls period when public institutions dominated the trade. For example, the number of private firms involved in the processing and marketing of milk has rapidly increased and the private sector now accounts for about 30% of the market share from 0% before the reforms (GOK: 1999). The number of private firms and individuals involved in the domestic distribution of sugar, rice, wheat and maize have also increased, unlike in the past when public institutions such as the Kenya National Trading Corporation (KNTC) and the National Cereals and Produce Board (NCPB) had the monopoly to do so.

Table 3.4 Total Production of Major Food Crops 1980-96 (000 MT)

Year	Maize	Wheat	Sugarcane	Rice
1980	1888	189.0	3972.0	36.4
1981	2560	225.0	3822.0	38.7
1982	2450	244.0	3107.0	38.6
1983	1500	251.3	3188.0	36.6
1984	2440	144.4	3611.0	36.4
1985	2870	201.0	3463.0	39.5
1986	2400	252.0	3551.0	21.3
1987	3140	207.0	3698.0	30.1
1988	3030	234.0	3835.0	31.7
1989	2890	244.0	4261.0	31.5
1990	2544	190.0	4200.0	28.0
1991	2205	195.0	434.0	12.9
1992	2340	125.0	4047.0	14.2
1993	1773	76.9	3839.0	11.4
1994	2363	107.8	3308.0	13.5
1995	2060	128.6	4000.0	14.6
1996	1908	135.0	4100.0	15.9

Source: CBS Economic Surveys

Table 3.5 Imports of Major Food Crops, 1980-96 ('000 MT)

Year	Maize	Wheat	Rice	Sugar
1980	323.0	48.5	1.2	3.1
1981	77.3	49.2	4.6	2.1
1982	89.0	139.3	11.9	2.2
1983	0.0	81.9	44.8	2.4
1984	4.5.4	149.9	0.5	1.7
1985	125.5	14.8	0.6	39.1
1986	0.7	115.3	61.7	126.3
1987	0.0	217.9	39.2	49.1
1988	0.0	75.6	10.0	42.0
1989	0.0	123.5	30.0	80.0
1990	0.0	322.6	28.0	64.0
1991	0.0	242.6	61.2	59.7
1992	414.9	100.8	58.9	153.8
1993	12.9	314.4	37.2	184.8
1994	650.4	353.1	93.5	256.1
1995	12.0	364.0	30.7	244.0
1996	0.0	486.9	47.9	65.8

Source: CBS Statistical Abstracts and Economic Surveys

An analysis of the impacts of policy reforms (see Okech: 1996) indicates that liberalization has yet to improve the profitability of agricultural commodities. The real prices received are still low, while the costs of inputs are high. However, liberalization has created more income-earning opportunities in the private sector through increased trade and processing of food commodities. Consumers have also benefited more from the implementation of the reforms in the food sub-sector through availability of commodities at lower prices possibly due to availability of cheap imports.

In terms of food security, even though the government has emphasized self-sufficiency in major food crops (see Sessional Paper No. 1 of 1986 and Sessional Paper No. 2 of 1994), the country has yet to achieve self-sufficiency in the production of most foodstuffs. Instead, reliance on food imports has increased in recent years (Table 3.5). Food importation could be appropriate for as long as the country can be able to generate enough income through activities such as sale of export crops to earn foreign exchange for purchasing the imports. However, foreign exchange is short while the production of cash crops is restricted to medium and high potential areas where proceeds from their sale is mostly used to achieve household food security through the purchase of food imports. For the larger part of the Kenyan population, domestic production remains the dominant means of achieving food security.

CHAPTER IV

4.0. THE PERFORMANCE OF KENYA'S MAIZE MARKET UNDER STRUCTURAL ADJUSTMENT

4.1 The Food Security Situation in Kenya

Before 1977, Kenya lacked data on the national nutritional level of her population. The first nation-wide rural nutrition survey was conducted in February and March 1977 by the Central Bureau of Statistics (C.B.S). With the assumption that the nutritional status of children reflects that of the rest of the population, the survey covered 1,400 children of over 1 and under 4 years of age. The findings established that the problem of malnutrition was spread all over the country though at varying degrees. The survey attributed the problem to such independent variables like the cash crops syndrome, high illiteracy and income levels and morbidity. Consequently, these were the first areas identified for investigation (C.B.S: 1977).

The second national survey was carried out between October 1978 and January 1979. It covered a sample of 3,525 children aged between 6 and 60 months and included children from both rural and urban areas of the country. It confirmed the findings of the first survey and noted a small overall improvement in the national nutritional status (C.B.S: 1978).

The third survey was carried out during the period of June to September 1982. Like the preceding surveys, it focused on children. In summary, the last two surveys concurred that the most prevalent form of malnutrition in Kenya was that of Protein-Energy Malnutrition (PEM) for which the cause is basically lack of food (Mbatia: 1990).

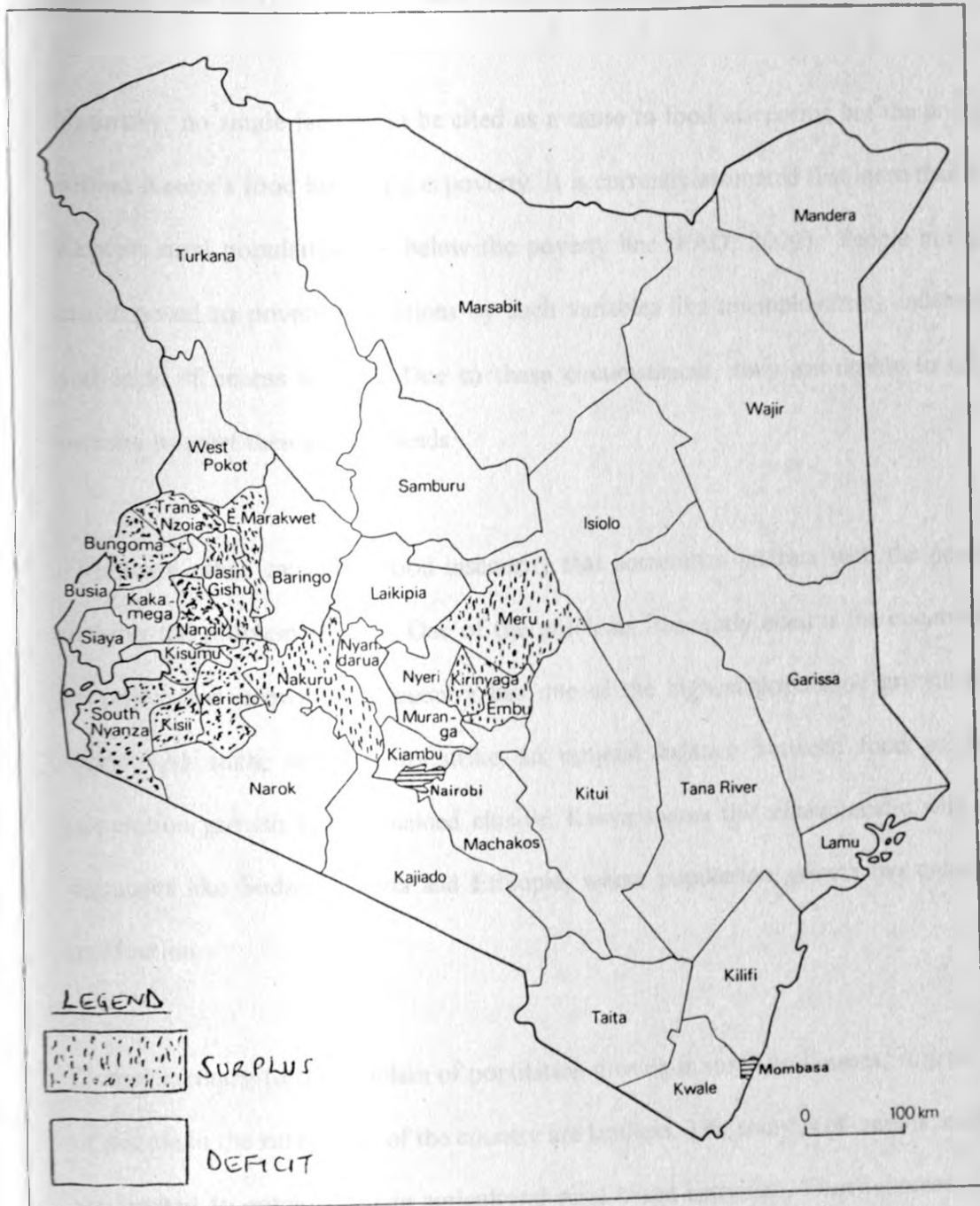
Despite the above observations, Kenya was internationally recognized as a food self-sufficient country throughout the 1960s and 1970s. This was because of its highly productive agricultural sector in the reference period. However, from the early 1980s to the present, the country has evolved to become one of the most food insecure countries in the world. In 1984/85, Kenya was recognized as one of the 21 SSA countries with exceptional food supply problems (FAO: 1984:4). This problem has persisted into the new millennium. Currently, the country is ranked thirteenth among the forty most food insecure countries in SSA (see table 2.2), thus countries with a food deficiency of more than 160 kilocalories (FAO: 2000).

Food insecurity is widespread among the rural population, namely small holder food crop producers, rural landless families, and unemployed and underemployed people who are unable to produce or purchase enough food to meet their nutritional requirements. The incidence of food insecurity is, however, high in the Arid and Semi-Arid Regions (ASALs) of the country where the population is predisposed by the adverse climatic conditions to either low production or no production at all.

In view of the importance of maize in Kenya, its production trends can be used to approximate the regional food situation in the country. Using such data, the country is divided into two distinct regions: food deficit and food surplus regions (see Map 1). Almost $\frac{3}{4}$ of the country is classified as maize deficit while the remaining $\frac{1}{4}$ is classified as maize surplus (map 1). The maize surplus areas include districts like Trans-Nzoia, Bungoma, Uasin Gishu, Nandi, Southern Nyanza, Kisii, Kisumu, Kericho, Murang'a, Nyeri, Embu and Meru.

while most parts of the North-Eastern Province, the Eastern Province and the Coastal Province, are maize-deficit areas.

Map 1: Maize Deficit and Surplus Regions



Source: GOK 1999

4.1.1 Causes of Food Insecurity in Kenya

Past studies have identified a myriad of causes of food insecurity in Kenya (see Omosa 1989). They range from natural to artificial, economic to political, and from internal to external. This study focuses on some of the causes of food insecurity in Kenya.

Naturally, no single factor can be cited as a cause to food insecurity, but the principal factor behind Kenya's food insecurity is poverty. It is currently estimated that more than 50% of the Kenyan rural population live below the poverty line (FAO: 2000). People in this category are exposed to poverty conditions by such variables like unemployment, underemployment, and lack of access to land. Due to these circumstances, they are unable to raise enough income to meet their dietary needs.

There are other causes of food insecurity that sometimes interact with the poverty factor, making the problem chronic. One of the problems frequently cited is the country's high rate of population growth. The country has one of the highest population growth rates in the world. As such, attempts to strike an optimal balance between food production and population growth have remained elusive. Kenya shares this characteristic with other SSA countries like Sudan, Nigeria and Ethiopia, where population growth has outstripped food production.

Complementary to the problem of population growth is rural landlessness. A growing number of people in the rural areas of the country are landless. The sources of income to this category are limited to employment in agricultural rural based activities. Their incomes are therefore

these unstable circumstances, the food security of the rural landless is highly threatened, especially during the seasons when demand for their labour is low (Mbatia: 1990).

Like in many SSA countries, the cash-crop syndrome has adversely affected Kenya. It was noted (see Kliet: 1985), especially in the first two decades of independence that priorities of most farmers leaned towards the production of cash crops at the expense of food crops. Though it can be argued that money earned through the sale of cash crops was used to purchase food (World Bank: 1989), this was not the case. First, the price instability of cash crops like tea and coffee has made farmers' incomes unreliable as a source of food. Also, the frequent delays in the payment of cash crops like tea and coffee tends to magnify the food problems in Kenya.

Government policies that affect agriculture either directly or indirectly have also contributed to food insecurity in Kenya. Like in many SSA countries, the government has over the years allocated meager parts of its expenditures to the agricultural sector. For example, in 1995/96, the agricultural sector was allocated K£ 220.15 million compared to K£ 451.95 allocated to defence (MOA: 1996). Therefore, the government has denied the agricultural sector the priority it deserves. Under such conditions, Kenya's infrastructure has been dilapidating at such an alarming rate that there has been a breakdown in the food distribution channels. As such, parts of the country, for example Turkana district is experiencing hunger when its neighbouring parts of Western Province and Rift Valley are having excessive food supplies.

In addition to neglecting the agricultural sector, the Kenyan government has fallen victim of criticism for its tight controls on food production. For example, before liberalization of the maize market, the government gave the National Cereals and Produce Board monopoly powers in the marketing, distribution and storage of the cereals. As shall be clear in the ensuing sections of this chapter, the Board failed in its responsibilities and even went further to create disincentives to cereal producers. Apart from the Board's poor performance, many studies (see Ikiara et. al.: 1993) blame the country's food insecurity on the distribution constraints that emanated from inter-district restrictions on movement of grain in the period of controls. Such policies cut off food deficit areas from food surplus areas almost completely, thus creating food insecurity in the deficit areas.

The government has also been blamed for lacking foresight and for contending inept policies. For example, the country could have not suffered food shortages of the 1984 magnitude had it not exported most of the bumper harvest of maize for the years 1982 to 1983. Due to lack of foresight, the government exported over 100,000 tons of maize in January 1984 and thus subjected the country to food shortages in the later part of 1984 (Pinckeney: 1988).

By and large, natural hazards have been major causes of food insecurity in Kenya. Droughts, hails, diseases and pests have been frequently cited (see Thorbecke and Greer: 1986). As argued by Odada (1988) "the famine of 1980s was one of the single most serious calamities to have occurred in Kenya. It resulted to loss of lives, loss of livestock, physical dislocation and losses of welfare, livelihood and opportunity" (Odada: 1988:12). Oniag'o (1982:243) supports this observation when she reckons that the crisis of 1980 was an eye-opener to the

Kenyan government which realized that it could no longer take food security for granted, hence the formulation of the food policy of 1981

4.1.2 Attempts by the Government to Address the Issue of Food Insecurity

In recognition of the country's food insecurity, the Kenyan government has over the years initiated programmes and activities that have been aimed at alleviating food insecurity in the country. For example, in 1979, the Food and Nutrition Planning Unit (FNPU) was formed to coordinate policy formulation for all ministries and government departments. The unit ensures that every ministry participates in the formulation and implementation of policies geared towards the alleviation of food insecurity.

After realizing that children were at most risk to food insecurity, the government began the school milk programme. The purpose of the programme was to overcome Protein Energy Malnutrition (PEM) among the children. It is however, unfortunate that the government's resources have over the years failed to sustain this programme.

The formulation of a national food policy in 1981 was also a major attempt by the government to address the country's food insecurity. The effects of the policy over the years have been far reaching, for example, it contended the enlargement of the government's food reserves, which has been relatively successful. There has been progress in the enlargement of the food reserves though the maize target of 4 million tonnes has not been achieved (Nyangito: 1999). According to government policy, strategic reserves are necessary due to seasonal shortages in food supplies caused by vagaries of weather (GOK: 1999.114). To

maintain stable reserves, the Ministry of Planning and National Development coordinates the efforts of government departments in the collection, processing and dissemination of information on the food reserves and the factors likely to affect the adequacy and distribution of the food stocks. The ministry also oversees the management of strategic food reserves for purposes of market stabilization. When appropriate or optimum levels are threatened, signals are sent to the government for appropriate action (GOK: 1994:115).

Since arable land is scarce in Kenya, the government has attempted to reduce its scarcity through irrigation. The overall aim of irrigation has been to provide settlement for the unemployed and landless. Unlike the other settlement schemes, tenants on irrigated schemes do not have titles to the land, rather, they operate on the basis of an annual temporary occupation license (Adholla: 1990)

Most of the irrigation schemes are under the NIB, which was established by an Act of Parliament in 1966 to supersede the department of agriculture in the management of the schemes. A total of 6 irrigation schemes are under the NIB (table 4.1), on which rice, sugarcane, cotton, chilies and onions are grown. Overall, irrigation has realized its aim of bringing more unused land to use. Since 1965, the government managed to increase land under irrigation from 25,520 hectares to 39,650 hectares in 1985 (MOA. 1999). Unfortunately, the irrigation schemes have not rapidly expanded because of the lack of funds required for expansion. By settling landless families (though temporary) and by enabling them to access cultivatable land, irrigation has played a big role in improving Kenya's food security.

Table 4.1: NIB Irrigation Schemes by Number of Tenants and Crops, 1985

Scheme	Area	No. of tenants	Crops
Mwea	6,299	3,151	Rice
Ahero	840	519	Rice
Bunyala	213	131	Rice
West Kano	780	553	Rice/Sugarcane
Hola	870	347	Cotton
Perkerra	200	342	Chilies/Onions

Source: Ruigu and Migot - Adholla: 1990

On an international level, the country has joined hands with the rest of the 7 IGAD members in a programme to reduce hunger in the Horn of Africa (Daily Nation: July: 2001). The programme will be regional, but strongly country focused. The IGAD secretariat is expected to play a key role in the regional aspects of food security, especially those concerned with cross-border issues.

4.2 The Role of Agriculture in Kenya's Food Security

Despite significant industrialization in the past three decades, Kenya is still an agricultural economy with overwhelming majority of its people living in rural areas and depending on agriculture, either directly or indirectly for their incomes. The agricultural sector remains the engine for growth of the economy and will remain so in the foreseeable future. The dominance of the sector is shown by such important indicators as: (1) contribution of 25 % of GDP (2) generation of over 60% of foreign exchange earnings, (3) provision of employment to over 70% of the total population, (4) provision of raw materials for agro-industries in Kenya, and (5) provision of almost all the food consumed in the domestic market (Chemingich: 1996).

Prior to independence, commercial agriculture was in the hands of large-scale farms, mostly white settlers, but one of the major achievements of the Kenyan government in the last three decades has been the development of one of the most successful and robust small-scale agriculture in SSA. Currently, smallholder agriculture predominates Kenya's agricultural sector. There are about three million smallholder farms of which 80% are less than two hectares (Muthee: 1996). Despite their small sizes, smallholders account for over 75% of total production. They also account for the production of over 70% of maize; over 65% of coffee; over 50% of tea; over 80% of milk; over 70% of beef and other meat, and production of all pyrethrum, cotton and most of the other food crops. (Chemigich: 1996) From the above observation, therefore, agriculture is the backbone of the country's economy as well as its food security

The agricultural system in Kenya exists in three interconnected stages of development: traditional – subsistence system, transitional system, and the market – oriented system. The traditional system is characterized by the traditional subsistence crop farming found in most small holdings and pastoral areas of the country. The transitional system is found in most high potential areas where farmers practice both cash enterprise farming and subsistence food crop production. Market oriented agricultural systems are only found in large-scale farms where farmers produce mostly for the market.

Besides the agricultural systems, Kenya's agriculture exists in 9 agro-regional zones (Nyoro et.al: 2001). The zones and their administrative divisions are summarized in Table 4.2.

Table 4.2 Agro-regional Zones and Administrative Divisions in Kenya

Northern Arid	Costal Lowlands	Eastern Lowlands	Western Lowlands	Western Transitional	High potential Maize Zone	Western Highlands	Central Highlands	Marginal Rain Shadow
Garissa	Kilifi	Taita	Kisumu	Bungoma (Kanduyi)	Bungoma (Kimili) Tongaren	Vihiga	Muranga	Lakipia
Turkana	Kwale	Taveta	Siaya	Kakamega Kabras Mumias	Kakamega Lugari	Kisii	Nyeri	
		Kitui			Bomet		Meru	
		Machakos			Nakuru Narok			
		Makueni			Trans Nzoia			
		Mwingi			Uasin Gishu			

Sources: Togemeo Institute Database

4.2.1 Production of major crops

Crop production in Kenya can be classified in three broad categories: food, industrial and horticultural crops. The major food crops are the cereals (maize, wheat, rice, sorghum, millet), the pulses and root crops. The industrial crops include coffee, tea, sugar cane, sisal, pyrethrum and oil crops, while fruits, vegetables and flowers constitute the horticultural crops. At least each of the crops has its contribution to the country's food security. However, this section cannot sufficiently discuss each of them. As such, the main focus of the following section will be on maize production and its value in Kenya's food security.

4.2.2 Maize Farming and its Contribution to Kenya's Food Security

Maize is the most prominent staple food in Kenyan agriculture. Since 1989, maize area has stabilized at 1.4 million hectares, 90% of which is on small-scale holdings. The stabilization in the area under maize reflects the trade-off between the sub-division of large farms for settlement purposes and the expansion into the arid areas of country.

In Kenya, maize is produced in almost all agro-regional zones. It is estimated that 90% of Kenya's farmers participate in its production. The high potential maize zones encompass mainly the Northern Rift districts of Nakuru, Uasin Gishu, Trans Nzoia, Kapenguria and Nandi, where maize yields during favourable weather conditions vary from 10-27 bags per acre (2.0 and 5.4 tons per hectare) (Nyoro et al: 2001).

Production levels and structure of production costs differ between the large and small-scale production systems (Table 4.3). Large-scale production systems have higher yields than the small-scale systems because of various reasons. In Trans Nzoia for example, large-scale maize production systems use about 39% more intermediate inputs (fertilizers and agrochemical) than the small-scale systems. Similarly, the large-scale systems have higher mechanization costs than the small-scale systems. On the other hand, small scale systems depend on manual labour for some operations, hence incurring higher labour costs. Although the large-scale systems in Tranz-Nzoia is about 47% higher than that of the small scale systems, the costs of production is about the same, at about Ksh. 780 per bag because the large-scale systems incur on average a higher cost per acre (Nyoro: 2001).

In terms of its consumption value, maize provides for more than 50% of calorie intake of the average Kenyan household. It is utilized in different forms, though three of these forms are the most common: (i) whole meal where germ are not removed (ii) granulated meal with partial degerming and bran removal, and (iii) sifted maize flour, which is fully degermed and all bran removed. In some parts of the country, maize is also utilized as animal feed. Data is not available on the proportions of the utilized forms. However, a large proportion of

Kenya's maize produce (over 60%) is utilized in the flour form for making Kenya's most popular dish, ugali.

Table 4.3 Costs and Returns for Large and Small-Scale Maize Systems (1999)

	Trans Nzoia Small-scale	Trans Nzoia Large-scale	Uasin Gishu Small-scale	Uasin Gishu Large-scale
Yield	17	25	13	17
Price Ksh/bag	1,000	1,250	1,300	1,000
Revenue	17,000	27,500	13,000	17,000
Fixed cost/acre	750	3,750	250	1,250
Total labour inputs	2,520	1,685	2,385	1,662
Mechanization costs	3,400	5,200	2,782	4,325
Other non-labour input	6,45	9,085	5,855	6,330
Total costs	13,215	19,720	11,272	13,567
Total profit	3,785	7,780	1,729	3,433
Cost per bag	777	789	867	798
Profit per bag	223	311	133	202
	22%	31%	13%	20%

Source: Tegemeo Institute's Data Base

4.3 The Maize Marketing System Before Reforms

It is widely acknowledged that an efficient food marketing system should create incentives for producers, allow private sector participation, operate at the lowest cost possible, and have an orderly management structure. This description explains the very opposite of Kenya's maize market during the period of controls. Due to the inefficiency of the maize market, the Maize Commissions of Inquiry of 1966 and 1983 vehemently criticized the NCPB for its

inefficiency and for creating disincentives for producers, hence lowering the country's food security.

Like in other parts of the world, Kenya's farm level income and productivity has been intimately tied to productivity growth in marketing systems (North: 1985). Existing worldwide evidences shows that the incentives and ability of farmers to make investments in productivity-enhancing inputs and production methods depends on reducing the transaction costs and risks of exchange across inputs, credit and output. Throughout the world, the major share of staple food costs to the consumer is typically accounted for by marketing costs. In most countries in Eastern and Southern Africa, maize marketing costs account for about 40% to 60% of the total retail price of maize meal paid by consumers (Nyoro: 1999). Therefore, cost reduction represents a major opportunity to improve farm production incentives and simultaneously make food affordable to low-income consumers.

Despite this observation, Kenya's past strategies pointed less in this direction. For most of the period since independence, Kenya's stated policy was simple: all maize that was not sold directly from a producer to a consumer was to be sold to the National Cereals and Produce Board (NCPB). This was in line with subsection 1 of section 15 of the Maize Marketing Act, which stated thus:

"All maize grown in Kenya shall, subject to the provision of this Act, be purchased by and sold to the board, and shall, without prejudice to the Board's liability for the price payable in accordance with section 18 of this Act, rest in the Board as soon as it has been harvested."

The NCPB was thus instructed to buy all the maize that is was offered at a price set by the government, and to sell all the maize that was demanded at a higher price, also set by the

government. Maize and maize meal prices were set at pan-seasonal and pan-territorial^{*} levels. Besides, the purchase price was set before commencement of planting.

Although the pan-seasonal/pan-territorial maize price policy provided farmers with an easily referenced price, seasonal fluctuations in market driven prices and variations in price across regions made the costs of establishing and marketing a single maize grain price prohibitive. Consequently, the NCPB incurred huge debts while attempting to maintain the announced price, thereby, requiring subventions from the Treasury. In most years, the NCPB's budget was so high that it could not maintain the announced price.

In view of the fiscal difficulties in maintaining this policy, the NCPB responded in surplus years by delaying payments to farmers, and by rejecting significant amounts of the crop in the name of quality control (Pinckeney: 1988). In deficit years, millers were able to buy as much as they desired at the set price. The result was the rising dependence of a large percentage of farmers and consumers on the parallel informal market and large fluctuations in the market price. Another policy related to the monopolistic position of the NCPB was the tight restrictions or controls on inter-districts movement of maize in the country. The movement was so restricted that it was viewed by many as a ploy by the government to achieve its political goals. Only the NCPB was allowed to buy and make bulky transfers of maize stocks from surplus districts to deficit districts. However, few individuals obtained the coveted licenses as a reward for being "politically correct" (Toye: 1992:117).

*The price remained constant throughout the season applied in all regions of the country

Certainly, such restrictions provided an enormous bottleneck to residents of deficit areas since they could not access the surplus markets especially in times of short supply, threatening their food security.

4.4 The Cereal Sector Reform Program and its Effects on Maize Marketing and Distribution

Since the early 1980s, donors and the international lending agencies have promoted the reform of agricultural marketing in southern and eastern Africa as a central component of the structural adjustment programmes in the region. The basic theory underlying donor advocacy of market reforms was neatly summarized by Barrett and Carter (1994):

"Once governments free market channels and prices, private merchants will automatically bid up formerly depressed agricultural prices. By virtue of a positive price elasticity of supply, higher prices induce greater production, which further stimulates demand for purchased inputs, including hired labour. Larger agricultural incomes are expected to have significant multiplier effects due to the relatively high marginal propensity to consume for the poor families. Thus a liberalized agricultural sector is expected to propagate propensity across all sectors of the economy in a progressive manner" (Barrett and Carter: 85).

Indeed, if all those expected outcomes are to be achieved through liberalizing the maize market, this could be a step ahead in the improvement of Kenya's food security.

In Kenya, maize market reforms began around the same time as other countries in the region when it embarked on the Cereal Sector Reform Programme (CSRP), that is in 1987/88. The European Union supported the programme as part of the country's structural adjustment policies. The CSRP comprised a number of components. First, it advocated changes in trading rules, including removal of controls in the movement of grain by the private sector and removal of controls on millers, which required them to purchase maize from the NCPB.

Another of its components was a gradual reduction of the government's role in price setting. NCPB was also to incorporate cost-reducing measures and adjust to competition. Finally, the CRSP anticipated the gradual reduction of the NCPB and a re-organization and financial restructuring of the Board.

Initially, the government was not willing to adopt this programme due to its possible adverse political repercussions, especially from powerful political groups that benefited from the controls. As a result, the maize market liberalization process (since 1988) followed a stop-and-go pattern during which the upper limit on grain movement without permits was gradually raised, first to 10, then to 44, and later to 88 bags of maize. Most of the efforts to liberalize the maize market were made as part of a "window dressing" exercise with the motive of attracting donor funding. This is consistent with the fact that efforts toward liberalization were often timed to occur just before a World Bank or IMF mission was to visit Nairobi for negotiations and reviews of performance associated with the release of quick disbursing balance-of-payments support (PAM: 1994).

The liberalization process hit a snag in October 1992, when in the lead to multiparty elections, full controls were reinstated. The reason given by the government was that it was concerned about the effects of removing grain movement controls on the viability of the NCPB and, by extension, on national food security. However, it was clear that the move reflected concerns about the loss of a powerful political and economic tool (control of staple food supplies) that was used to solicit votes.

A two-year suspension in donor aid followed the government's failure to meet aid-related conditionality, of which liberalized maize marketing was a key component. This increased the perceived costs of not liberalizing the market. The economic problems following the inflationary pre-election increase in money supply and suspension of donor aid forced the government to free the maize market in December 1993. In essence, the move allowed the maize sub-sector to operate under free market-determined prices, free movement of maize within the country and importation of maize subject to payment of the relevant tariffs (GOK, IMF, World Bank: 1994: Policy Framework Paper for 1994-1996).

Some studies however suggest that the grain market was not and has never been free. Muthee (1996) argues that:

"Although the maize market could be termed as free, it did not and has never conformed with the classical economic model for perfect competition. Some market constraints still exist. Taking the example of Kitale (a surplus area) and Machakos (a deficit area), separated by about 500 km, several points can be noted. First sellers are individual farmers in Kitale and buyers are consumers at trading centres of Machakos. Sellers can possibly influence prices, as they are large-scale farmers with clout, while buyers cannot influence prices. Second, there exist barriers into the maize market. The main barrier is the initial capital requirement to enter the maize business. A survey (MOA: 1995) showed that of the 88% of those interviewed, inadequate capital was the main constraints. Lastly, buyers and sellers do not have perfect market information as they are separated by 500km" (Muthee: 1996).

The government also agreed that the NCPB be limited to managing a strategic reserve of a maximum of 3 million bags and an allowance to purchase maize at no more than export parity and sell it at no less than import parity. Besides, the government decided to fully commercialize the NCPB in September 1995 to enhance the participation of the private

sector in the marketing of cereals. All these steps implied a severe reduction in the NCPB's role

Some observers have argued that the commercialization of the NCBP and the liberalization of the maize sub-sector have gone a long way in improving the food security of many Kenyans. For example, Ikiara argued that "after liberalization of the marketing of cereals in the country, especially around 1993-95, the price of maize fell by 2/3, making this staple food item more affordable for the poor" (Ikiara: 1995). On the same line of argument, Nyoro (1999) asserts that the commercialization of the NCBP enabled maize producers to access alternative markets that paid them in good time and thus motivated them to produce more maize. Apart from the prices of maize, there is need to focus on the effects of liberalization on the distribution channels and the consumption of this staple item.

4.4.1. The Distributional Effects of Liberalization

Prior to liberalization of the maize market, there were strict controls on the movement of maize from one district of the country to another, reducing private sector participation in maize marketing and distribution. However, after liberalization, the movement of maize by private trade improved, despite the erratic enforcement of movement controls, which hampered the dissemination of market incentives across regions (Argwings Kodhek et al. 1998). Commodity dealers and millers emerged to compete with the NCPB in performing maize distribution and storage functions.

From 1993, maize deficit areas received frequent supplies of maize from maize surplus areas. For example, in 1994, Machakos district received an average of 5,200 bags of maize from

Trans Nzoia district, while Kitui district received about 4,800 bags of maize from Nakuru district (Nyoro: 1999). Since many residents in food deficit regions were able to access the maize stocks that they were unable to access in the period of controls, the liberalization of the maize market resulted in an improvement in Kenya's food security. Nyoro (2001) estimates that the liberalized maize market bolstered the food security situation of about 8 million people living in maize deficit regions of the country.

A comparison of the proportion of consumption of domestically produced maize before and after liberalization of the local market shows an increase in consumption in the deficit provinces. Results show that the relationship between maize production and consumption took on a new trend after the liberalization of the domestic market (Table 4.4). The deficit provinces gained access to surplus markets leading to considerable improvement in the country's food security.

Table 4.4: Relationship between Maize Production and Maize Consumption per Province (Before and after Liberalization).

Province	Share of National Maize Production (%)	Approximate share of National Maize Consumption Before liberalization (%)	Approximate share of National Maize Consumption After liberalization (%)
Central	8	13	15
Coast	2	9	12
Eastern	9	10	16
Nyanza	13	14	15
Riftvalley	55	42	30
Western	13	12	12
Nairobi	N/A	N/A	N/A
North Eastern	N/A	N/A	N/A

* Source: C.B.S Crop Forecast Surveys, Population Census Oxford Food Studies Groups (several issues).

The data confirms the fact that the maize deficit provinces increased their share of maize consumption after liberalization. The Eastern province's share increased from 10% to 16%,

while that of Coastal Province increased from 9% to 12%. This was an improvement in the food security of the food deficit areas of the country.

The free market also encouraged the participation of many private actors. Nyoro (1999) identifies a host of marketing agents that spurred, including assemblers, wholesalers, retailers and dis-assemblers, posho-millers and large scale millers (see fig 4.1). Muthce (1996) identifies smallscale producers/sellers, large-scale producers, localized and inter-regional traders, localized and inter-regional transporters, cooperatives, farmer organizations, posho millers and sifted maize-millers. There is lack of data on the number of private actors in the maize market. However, Nyoro (1999) estimates that the private sector accounts for over 70% of the market, compared to almost 12% in pre-reforms period. The increase in the share of the private sector has had some implications on Kenya's food security. First, it reduced the constraint of accessing market information. Second, it enabled farmers to access fast paying markets. Thus, instead of the farmers abandoning maize farming, the new markets encouraged them to keep on producing maize. This was especially the case in Nakuru district where almost 90% of the farmers continued producing maize (GOK: 1999). By maintaining maize production, the farmers kept the country's food security at stable levels.

Although the number of private actors rapidly increased after reforms, the reform process was slow and marked with a series of advances and reversals regarding the amount of freedom the private sector was to be permitted in maize marketing. Some government interventions such as trade controls on maize imports and exports through use of tariffs and bans affected the extent of cereal market reform and the response by the private sector. For

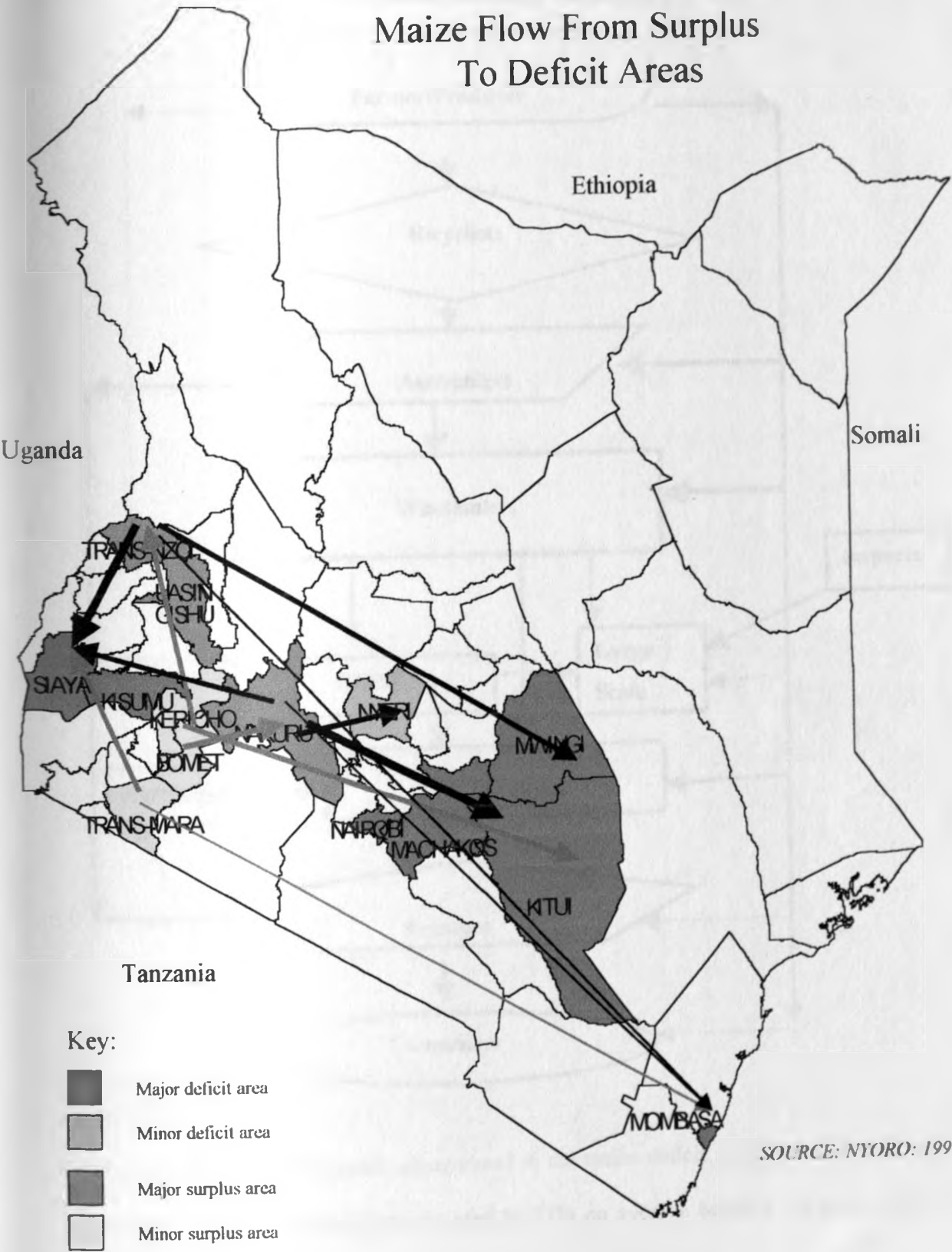
example, in 1994, the government introduced a variable import duty following substantial imports by the private traders that were blamed for a slump in the price of domestically produced maize (Nyoro: 1999).

4.4.2. The Response of Maize Prices to Liberalization

In order to understand the real effect of liberalization on maize prices and the regional price spreads, three periods are identified for analysis. The first period is the Control Period (from 1985 until the inception of the CSRP in 1988). The second period is the Phase 1 Reform Period (between 1989 and 1993), characterized by partial lifting of the inter-district controls on private maize trade, the continued dominance of the NCPB in maize purchase and sales, and the continuation of controls on producer and consumer maize prices through the formal sector marketing channel. The last period is the phase 2 Reform Period (1994-1995), characterized by complete decontrol of domestic maize movement and maize meal prices and a highly reduced role of the NCPB in maize purchases.

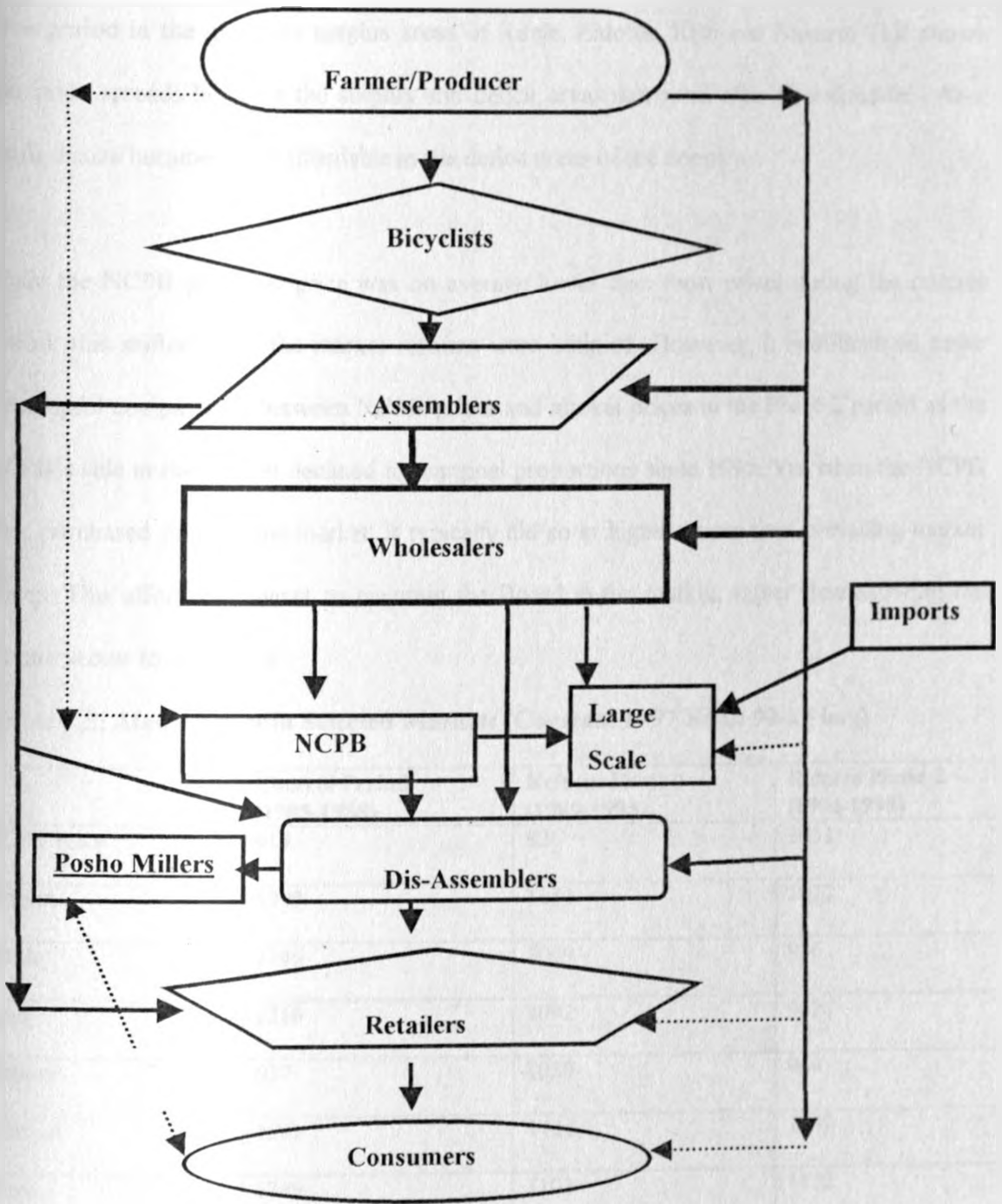
Table 4.5 presents descriptive data on the levels and variability of maize prices in various markets over the sample period. For most markets, there was a progressive decline in the inflation-adjusted maize prices between the control period and the Phase 2 period of liberalization.

Maize Flow From Surplus To Deficit Areas



SOURCE: NYORO: 1999

Figure 4.2: A Generalized Maize Marketing Chain/Flow



The price decline was especially pronounced in the maize deficit areas of Nairobi, Kisumu and Nyeri, where wholesale prices declined by 34% on average between the control period

and Phase 2 liberalization period. By contrast, prices declined by an average of 17% over the same period in the generally surplus areas of Kitale, Eldoret, Kisii and Nakuru. This shows that price spreads between the surplus and deficit areas narrowed after liberalization. As a result, maize became more affordable in the deficit areas of the country.

While the NCPB producer price was on average lower than most prices during the control period, this shifted since the market reforms were initiated. However, it is difficult to make meaningful comparisons between NCPB prices and market prices in the Phase 2 period as the NCPB's role in the market declined to marginal proportions since 1995. Yet when the NCPB later purchased grain in the market, it typically did so at higher prices than prevailing market prices. This effort was meant to maintain the Board in the market, rather than allowing the private sector to displace it.

Table 4.5: Maize Prices in Selected Markets (Constant 1997 Kshs/ 90-kg bag)

	Control Period (1985-1988)	Reform Phase I (1989-1993)	Reform Phase 2 (1994-1998)
NCPB Price	919	826	1051
Eldoret	1399	1181	1022
Kitale	1140	1069	956
Kisii	1219	1092	942
Nakuru	937	1030	964
Kisumu	1581	1424	1149
Meru	1349	1102	1122
Nyeri	1730	1280	1094
Nairobi	1593	1346	1164

Sources: Market Information Bureau, Ministry of Agriculture, Consumer price inflation data from IMF Financial Statistics.

Table 4.6 presents data on the effects of maize liberalization on wholesale price spreads between major regional markets. The data reveals that the spatial price spreads between surplus and deficit regions of the country declined, reflecting the fact that prices in the deficit consumer areas generally declined more so than in the surplus areas during the liberalization period. The decline in spatial price spreads is consistent with prior expectations that the removal of restrictions on inter-district grain movement would reduce the marketing margin between surplus and deficit regions. The decline in spatial prices therefore contributed to the improvement of Kenya's food security because it improved the affordability of maize in the maize deficit areas.

The market reform was also associated with more variable prices than the NCPB's pan-seasonal, pan-territorial prices during the control period. While unconditional price variances in local markets generally increased, some of the variability was predictable and in fact necessary to induce useful marketing functions for the private sector. For instance, seasonal price increases were necessary to encourage on-farm and off-farm storage during the season, an area that was neglected and even found unnecessary during the control period.

Table 4.6: Effects of Maize Market Liberalization Phase 1 (1989-1993) and Phase 2 (1994-1998) on Regional Markets.

Market Pair	Change in Price Spreads (kshs. Per Bag)	
	PHASE 1	PHASE 2
Kitale – Nairobi	-27	-59
Kitale – Kisumu	-89	-144
Kitale – Meru	-9	-68
Eldoret – Nairobi	+79	+56
Eldoret – Kisumu	+13	-34
Eldoret – Meru	+66	+183
Kisumu – Nairobi	-186	-225
Nakuru – Nyeri	-128	-112
Nakuru – Meru	-195	-98

* Source: Nyoro (1999)

A focus on the domestic and border prices for maize in the two periods gives a clear picture of the difference in maize prices brought about by liberalization. As table 4.7 suggests, the producer prices for maize increased rapidly in 1993 as a result of liberalization of the maize market. This move improved Kenya's food situation because it boosted the production of the crop in 1994 (see table 3.3). However, the producer prices dropped sharply in 1995 only to rise again in 1996. The rise in 1996 was a deliberate government effort to raise prices after a slump in the market in 1995, occasioned by glut production and complete liberalization of the maize market (Nyangito: 1998).

The consumer prices show a similar trend although they were higher than producer prices. The import parity prices per bag of maize increased rapidly from Kshs. 550.54 in 1992 to Kshs. 1189.85 in 1993. This increase also contributed to the high yields in 1994. The prices decreased between 1994 and 1995 due to the large supplies in the world market (Meinink: 1999). The major source of imported maize at the time was South Africa. In 1996, the import parity price rose again to Kshs. 1375.84 per bag. This was a result of the low supplies in the world market and the change in the source of supply from South Africa to Zimbabwe (GOK: 1999). The latter is landlocked and therefore freight (by road/railway) costs were higher when compared with South Africa.

Table 4.7: Domestic and border prices for maize in Kenya (Kshs/90kg bag) 1992 – 1996

Year	Producer Price ¹	Consumer Price ²	Border Price ³
1992	470	742	550.64
1993	810	877	1189.85
1994	950	1231	1141.14
1995	600	690	795.54
1996	1200	810	1375.84

¹NCPB buying price. ²NCPB selling price. ³Import parity price calculated for Nairobi

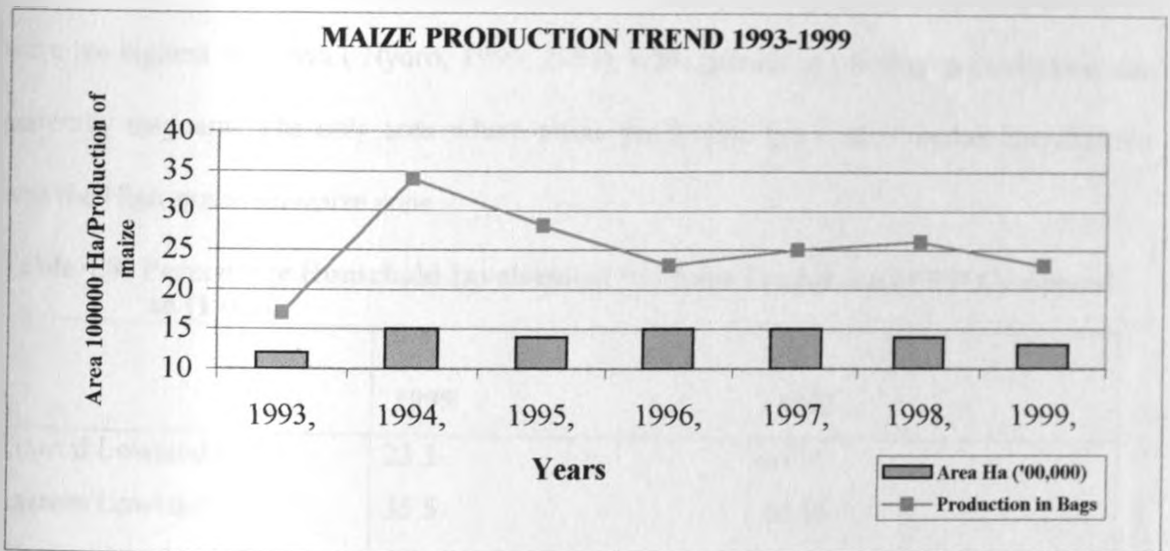
Source: Nyangito 1998

Responses to liberalization were most noticeable in the maize milling sector. Since 1993, investment in small-scale milling increased dramatically in urban areas. Unconstrained movement of maize grain into these areas provided small-scale millers with ready supplies. With posho mills' lower costs and competitive maize meal prices, the posho mills' share of the urban maize market increased substantially. This competition forced sifted maize millers to lower their prices from Ksh. 51 per packet immediately after reforms were implemented to around Ksh. 35 by early 1995 (PAM: 1995). With reduced prices, consumers were able to purchase more maize meal than they did in the pre-reform era. The move to liberalize the maize market therefore improved Kenya's food security, especially in the urban areas where most people depend on sifted maize meal.

4.4.3 Production and Household Level Responses to Liberalization.

The trends in the area under maize (before and after market liberalization) suggest no significant effects of the market reforms. The area under maize was almost constant, at an average of 1.4 million hectares (figure 4.3). On average, though, maize yields during the reform period fell. Part of this decline is linked to a poor weather, but other policy-induced causes can be identified. Between 1990 and 1993, the use of purchased intermediate inputs declined sharply as farmers reduced application rates or substituted manure for fertilizer and animal draft power and human labour for tractors (Omamo: 1995). These shifts in farming technology were related to a disjointed market liberalization process in which fertilizer prices rose sharply (Meilink: 1999). There is no data to suggest the effects of the decline in maize yields, although it definitely had an overall negative impact on the country's food security.

Figure 4 .3



Source: MAO Several Issues and Author's Own Computation.

Data from the Policy Analysis Matrix (PAM) of Egerton University presents household responses to liberalization (table 4.8). Changes in cropping patterns, while not necessarily driven by liberalization reflected the changes in incentives that took place with the changes in relative crop prices due to the reforms. Consistent with national level figures reported by the Ministry of Agriculture, which show a decline in grain production since the mid 1980s, households reduced their involvement in maize production over time. The largest shift out of maize production was along the Coast, in the Marginal Rain Shadow Zone, Western Lowlands, and Eastern Lowlands.

Formerly, with controls on the inter-district movement of maize, there were heightened incentives to achieve cereal self-sufficiency, which encouraged maize production in these grain-deficit areas. But since these agro-ecological areas are generally not well suited to maize production, the decline in maize production reflects a shift in cropping patterns more

in line with comparative advantage, and a shift to higher valued crops. This is consistent with aggregate production figures showing that growth rates for crops such as horticultural ones were the highest in Kenya (Nyoro: 1999: 2001), while growth in cereal crop production was generally stagnant. The only area where maize production grew since market liberalization was the High-potential maize zone.

Table 4.8: Percentage Household Involvement in Maize Production (1999) Compared to (1993).

	1999	1993
Coastal Lowlands	23.1	67.9
Eastern Lowlands	35.5	60.86
Western Lowlands	19.3	63.16
Western Transitional	14.0	55.8
High Potential Maize Zone	47.8	29.0
Western Highlands	24.4	56.4
Central Highlands	34.8	48.3
Marginal Rain Shadow	11.9	29.7

** Source: Egerton University KARI/MSU Rural Household Survey, 1996/99 Season.*

Generally then, the Cereal Sector Reform Programme played a big role in improving the food security status of many Kenyans, especially those in maize deficit areas. Unfortunately, and despite the fact that the liberalization process is 11 years old, discussions of grain marketing policy in the post-liberalization period has often taken place in an information vacuum. There is little up-to-date empirical knowledge of the market structure, the behaviour of the various actors in the marketing system and the constraints they face that impede further innovation. It is the challenge of future research to focus on such issues and provide to the public the missing information.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The central purpose of this study has been to analyze the effects of structural adjustment on food security using Kenya as a case study. By focusing on the food situation in Sub-Saharan Africa, several findings were established. It was found out that SSA is a net food insecure region, afflicted by both chronic and acute food crises. Of the sub-regions of the African continent, the Horn of Africa is the most food insecure.

Droughts and conflicts were pointed out as the main factors curtailing food production, distribution and access. Together with high rates of production, and high poverty levels, these factors form a major threat, not only to Africa's food security but also to human life. It is evident that the opportunities for dramatic improvements in the livelihoods of people living in the low potential areas of SSA region are limited, since it is a harsh environment where mere survival is an achievement. However, there are opportunities for reducing the risk of famine and food insecurity in these areas, presented by modern technology and the adoption of a comprehensive approach that is more sensitive to the needs and potential of the low potential areas. Deriving synergies between restoring the natural resource base and enhancing agricultural productivity can attain this virtue.

In tracing Kenya's food policy since independence, the study observes that the Kenyan government drew a lot from the policies formulated in the colonial era. It also observes that Kenya had a food policy even before the publication of Sessional Paper No. 4 of 1981 on National Food Policy. However, the Kenyan food policy was incorporated in the broad

framework of policies that addressed the agricultural sector and the philosophy of African Socialism.

The central objective of the study is realized in chapter IV which presents data that depicts the fact that the Cereal Sector Reform Programme had an overall positive impact on food security, especially to the residents of maize- deficit areas of the country.

5.2 Conclusions

Like the conflicting views of internalists and externalists on the causes of food insecurity in Africa, the debate on the impact of SAPs on the vulnerable groups is likely to continue, at least in the foreseeable future. Being the most food insecure continent of the world, Africa can only achieve meaningful progress in its food security by focusing on internal rather than external causes of food security. The internal constraints mostly emanate from inept government policies. This is not peculiar to Africa. The rest of the Third World suffers from food insecurity because its governments have over the years employed policies that either neglect the role of agriculture in maintaining stable food systems or constrain food production and distribution systems. For this reason, the policies of Third World Countries can be termed as “exploitative,” since unlike the “integrative” policies of the developed countries that regard the agricultural sector as an equal partner with the other sectors of the economy, the Third World policies regard the agricultural sector as subservient, thus subject to exploitation for urban industrialization and the development of other sectors. Indeed, it is quite paradoxical that Africa’s engine of growth (agriculture) has been assigned such a

subordinate role. The best solution to Africa's food crisis thus lies in the efforts to address internal, rather than external causes of food insecurity.

With regard to the solution to Africa's food crisis, the alleviation of poverty will go a long way in reducing the problem. The overriding cause of Africa's food crisis is the lack of entitlements among the African populace. Thus, food crises occur in SSA because many people in the region are extremely poor and have little or no "insurance" in the form of food reserves or disposable assets

Comparing Africa and Asia's food security is a bit intricate. In terms of the numbers of people who are hungry, Asia has a higher number than Africa. However, food insecurity is not measured in terms of the numbers of people who are hungry. On this basis, Africa is more food insecure than Asia because 46% of its countries have a nutritional deficiency of more than 300 kilocalories per person, per day, compared to Asia's 16%.

Some African countries have for a long time operated with weak or no food policies at all. In Kenya, the government's food policy was not specific to food security until 1981 when Sessional Paper No. 4 of 1981 was published. This, however, does not suggest that the country operated for two decades without a food policy. The development policies enshrined in Sessional Paper No. 1 of 1965 and the early development plans advocated social development through African Socialism. These, together with the land reforms were policies that helped in improving Kenya's food security in the early decades of independence. Indeed,

it is for these policies that the country was internationally recognized as a food self-sufficient economy in the first two decades of independence.

Not all policies, however, were of positive effects to the country's food security. Some government policies like the restrictions on inter-district movement of cereals were a major bottleneck to the efficiency of the maize market. The government's vesting of monopolistic powers in the National Cereals and Produce Board was also a major constraint to the country's food security. Consequently, the liberalization of domestic maize marketing and distribution created incentives for more private sector participation. Many private individuals entered into the maize marketing and distribution business, making it more efficient and convenient. Also, the liberalized maize market enabled the free movements of maize from maize surplus to maize deficit areas. These activities did Kenya good in terms of food security because they allowed for easier access to alternative maize markets, unlike in the era of controls when the NCPB had monopoly powers. In particular, the free movement of maize resulted in easier access by the maize deficit areas to the maize surplus markets. This explains the infrequency of food shortages of the 1992 magnitude in the food deficit Eastern Province of Kenya.

With the liberalization of maize marketing, inflation-adjusted maize prices throughout the country declined considerably. The decline was especially pronounced in the maize deficit regions of the country. In addition, price spreads between surplus and deficit areas narrowed after liberalization, making maize more affordable to the food deficit populace. A rise in producer prices was also realized in the reform period. This gave an incentive to maize

producers to produce more. Overall then, the liberalization of Kenya's maize market improved Kenya's food security.

5.3 Policy recommendations

It is clear that the problem of food insecurity in Africa cannot be solved within the agricultural sector alone. It is a complex and multifaceted task in which knowledge systems, education, health, energy and infrastructure development provide a framework that will allow people to broaden their economic activities and increase their incomes. For this reason, it is essential that the U.N agencies with different responsibilities take concerted action targeted at assisting governments and other partners in eliminating food insecurity.

In Kenya and other SSA countries, there is need for a political will that will forego political interests for the sake of national food security. For example, African governments should aim at giving incentives to food producers, rather than favouring urban consumers by way of keeping consumer prices low for the fear of urban uprisings. Since agriculture is the engine of growth for Kenya and most SSA countries, governments should allocate the larger parts of their budgets to the sector. In the Kenyan case, a 60% share of the national budget will be more realistic.

In Kenya, the private sector has responded to maize liberalization by investing in various channels in the marketing channel. However, the response has been constrained due to lack of an enabling environment, thus limiting their investment to areas with low capital requirements and minimal risks. The high and unstable interest rates, high transport costs

caused by poor infrastructure, lack of market information caused by underdeveloped communication systems and uncertain government policy environment have also worked in the same direction. The role of the state thus remains critical in stimulating further private sector investment in the maize market. The following are important steps that governments should take to enhance the competitiveness of maize marketing and thus promote more entry in the market, reduce transaction costs and thus raise productivity and stability of the food systems in the country:

1. Investments in the road network to reduce transportation costs between the surplus and deficit areas and enhance farm gate input prices and thus stimulate crop productivity. Further infrastructure development between countries will facilitate incentives for regional trade thereby reducing the need for large national maize stockpiles that impose additional costs on the marketing system.
2. Improve access to public market information systems to accelerate both the private and public response to supply gluts and shortages. In this connection, it is imperative that the communication systems be improved by enabling the private sector to play a larger role in the print and electronic media by way of investment.
3. Modify the NCPB's pricing and trading policies by having the Board announce why and at what price, it intends to intervene in the market to create certainty and reduce risks.
4. Put in place policies that could nurture the political and legal foundations of marketing systems such as those which strengthen mechanisms of specifying and enforcing contracts, raising the costs of contract non-compliance, and more pluralistic procedures for developing the rules governing market activity. A well functioning legal and political framework for market activity will reduce the risks and transaction costs of private trade.

These measures are important adjuncts to developing reliable markets, and inherently involve strengthening the regulatory abilities of the state rather than “getting the state out of market regulation”. In general, this means a reorientation of the state from “control” activities to “facilitation” activities designed to reduce transaction costs of inputs, credit, and commodities faced by farmers and traders.

5. Increase support for the formation of local farmer organizations to sell and buy commodities on behalf of their membership. The groups could also be used to lend, hence reducing traders’ transaction costs and relieve other aspects of market failure that have impeded the functioning of rural farm finance systems.

The preceding discussion suggests that a number of critical issues remain unsolved. Further research in the following areas will be necessary:

1. There is need for research on the impact of other SAP measures on food security. This is in view of the fact that each SAP measure is unique in form, magnitude, and results. Specific studies should therefore focus SAP measures like retrenchment, privatization and cost sharing, among others.
2. Militarization has been identified as one of those areas given higher priority by African governments at the expense of food security. A clear study on the role of militarization in Africa’s food security could be handy in the development of government policies that could strike an optimum balance between militarization and food security.
3. There is lack of data on the actors in the present cereal market. Future research should focus on the issue of coming up with a strong database on the number of actors in the cereal market, their characteristics and the constraints that exist in the market

BIBLIOGRAPHY

- Addison, T. & Demery, L. "The Impact of Macroeconomic Adjustment on Poverty in the Presence of Wage Rigidities". Journal of Development Economics No. 40 (1993).
- Argwings Kodhek, G., Mukumbu, G.M and Monke, E. (1993). "Impacts of Maize Market Liberalization in Kenya." Food Research Institute Studies, 22: 331-348.
- Argwings Kodhek, G., "Private Sector Maize Marketing in Kenya." In: Proceedings of Conference on Maize Supply and Marketing under Market Liberalization. Egerton University, 1992.
- Barret, C. and Carter, M. (1994). "Microeconomically Coherent Agricultural Policy Reform in Africa." Paper Prepared for World Bank Research Program on Reforms in Socialist Economies in Africa. Madison: University in Wisconsin.
- Bates, R. H. (1986). "The Regulation of Rural Markets in Africa." In: Commins, S.K., Lofchie, M.F., and Payne, R. (eds). Africa's Agrarian Crisis. Boulder, Colorado: Lynne Rienner Publishers, Inc.
- _____ (1981). Markets and States in Tropical Africa: The Political Basis of Agricultural Policies. Berkeley, California: University of California Press.
- Bevan, D. et al. "Peasant supply in Rational Economics", World Development, vol. 15, No.4 (1987).
- Booker International. (1983). Grain Marketing Study. Prepared for the World Bank and the Ministry of Agriculture and Livestock Development. Nairobi.
- Campbell, H. & Howard, S. (1992) Tanzania and the IMF: The Dynamics of Liberalization. Boulder: Westview Press.
- Cassen, R., (1994). "Structural Adjustments in Sub-Saharan Africa". In: Van Dar Geest, W. (ed), Negotiating Structural Adjustments in Africa. London James Curvey.
- C.B.S. (1977). National Nutritional Survey. Nairobi: Government Printer.
- _____ (1978). National Nutritional Survey. Nairobi: Government Printer
- Chemengich, M.K. (1996). "Agricultural sector performance in Kenya, its Institutional Settings and Constraints". In: Occasional Paper No. 63, IDS, University of Nairobi, June 1996.
- Chhibber, A. (1991) "Africa: Exchange Reforms, Supply Response and Inflation". In: Goldnsin, I. & Winters, L. A (eds). Open Economies: Structural Adjustment and Agriculture. Centre for Economic Policy Research & OECD Development Centre.
- Clute, R.E. "The Role of Agriculture in African Development." African Studies Review (1982) 25.4:1 – 120.
- Cornia, G.A. Jolley, R. & Stewart, F. (eds) (1987). Adjustment with a Human Face. Oxford: Clarendon.
- Cromwell, E. (1992) "Malawi". In: Duncan & Howell (eds). Structural Adjustment and the African Farmer. London. James Curvey.
- Daily Nation: 12 July 2001
- de Coninck, J. & Tinguiri, K.L (1992). "Niger". In: Duncan and Howell (eds) (above)
- Ditch, S. "Green Revolution or Evolution: The Case of Independent African Countries." Africa Development (1981), 6:130 – 105.

- Duncan, A. & Howell, J., (1992) "Introduction" In: Duncan and Howell (eds) (above)
- ECA. (1984). Apparent Discrepancy between Increasing Resource Allocation to Food and Agriculture in Africa and the Declining Performance of the Sector. Addis Ababa: ECA, Council of Ministers. (E/ECA/CM) 10/21.
- _____ (1989). African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transportation (AAF-SAP). Addis Ababa: ECA.
- Eicher, C.K. "Facing up To Africa's Food Crisis." Foreign Affairs (1982). 61:1:151 – 174.
- Ernst, D.L & Garniatos, T., (1994). Export Performance and Technological Capabilities: Lessons from South East Asia. Geneva: UNCTAD.
- FAO. (1984). Food and Nutrition Strategies in National Development. Rome: FAO.
- FAO. Food Crops and Shortages". Global Information and Early Warning System on Food and Agriculture. Special Report No. 5 September 1994.
- _____ (2000) Food Insecurity in the Horn of Africa. Rome: FAO.
- _____ ". Food Supply Situation and Crop Prospects in Sub-Saharan Africa". Global Information and Early Warning System on Food and Agriculture, Special Report No. 5, September 1994.
- _____ The State of Food Insecurity in the World. Rome: FAO.
- Gibbon, P., (1993). "Introduction". In: Gibbon, P. (ed). Solid Change and Economic Reform in Africa. Uppsala: The Scandinavian Institute of African states.
- Global Coalition for Africa. (1993). "African Social and Economic Trends". Annual Report. Washington DC.
- GOK/IMF/World Bank. Policy Framework Paper for 1994-1996.
- GOK (1970). Development Plan. 1970-74
- _____ (1970) Development Plan. 1979-83
- _____ (1997) Development Plan. 1997-2001
- GOK (1999). Economic Survey. Nairobi: CBS
- GOK (1994). National Development Plan. 1994-96.
- Gordon, H and Spooner, N. (1992). "Grain Marketing in Kenya: Principle and Practice". In: Proceedings of Conference on "Maize Supply and Marketing Under Market Liberalization". Nairobi: Egerton University PAM.
- Heyer, J. and Waweru (1976). "The Development of the Small Farm Arcas". In Heyer, Maitha and Senga (eds). Agricultural Development in Kenya: An Economic Assessment. Nairobi: Oxford University Press
- Hinderink, J. and Sterkenberg, J.J "Agricultural Policy and Production in Africa: The Aims, the Methods and Means." The Journal of Modern African Studies. (1983). 21:1:1- 23.
- Hines, C. and Dinham, B. (1984). Agri-business in Africa. Trenton, New Jersey: Africa World Press.
- Hopkins, R. F. "Food Aid. Solution, Palliative, or Danger for Africa's Food Crisis." In: Commins, S. K., Lofchie, M.F. and Payne, R (eds)(Above).
- Ikiara, G.K (1995). "Economic Restructuring and Poverty in Kenya." In: Ngethe, N. and Owino, W. Towards Indigenizing the Policy Debate. Nairobi: IPAR.

- Ikiara, G.K. Jama, M.A. & Amadi, J.O. (1993). "Agricultural Decline, Politics and Structural Adjustment. In: Gibbon, P. (ed) (above).
- Jackson, T. (1982). Against the Grain. London: Oxfam.
- Jazairy, I. (1992). "Foreword". In: Duncan & Howell (eds). (above).
- Jolly, R. (1989). "Poverty and Adjustment in the 1990s". In Lewis J.P (ed). Strengthening the Poor: What Have We Learnt? Oxford: Transaction Books.
- Kabiecon Consultants & C B S. (1995). Economic Policy Reforms and Technology: The case of maize. (Unpublished)
- Lall, S. (1992). "Structural Problems of African Industry". In: F. Stewart, S. Lall and S.M Wangure (eds). Alternative Development Strategies in Sub-Saharan Africa. London: Zed Books.
- Lappe, F.M. et al (1980). Aid as obstacle. San Francisco: Institute for food and Development Policy.
- Lele, U. "Modernization, Equity, and Long-Term Development." In: Carl K. Eicher and John M. Staatz (eds). Agricultural Development in the Third World. Baltimore: Johns Hopkins University Press.
- Lele, U. "Structural Adjustment, Agricultural Development and the Poor: Some Lessons from the Malawian Experience". World Development Vol. No. 9, 1991.
- Levin, J. (1998). "Structural Adjustment and Poverty: The Case of Kenya: Ph.D Thesis, Goteborg, Sweden.
- Lofchie, M.F. (1986). "Africa's Agricultural Crisis: An Overview". In: Commins, S.K, Lofchie, M.F and Payne, R. (above).
- Mabele, R.B. & Lugusha, E.A. (1998). "Issues in Food Security". In: Tibaijuka (ed). The Social Services Crisis of the 1990s: Strategies for Sustainable Systems in Tanzania. Sydney: Ashgate
- Mbatia, P.N. (1990). "Socio-Economic Factors Affecting Food Nutrition and Health in the Rural Sector of Kenya" (Unpublished).
- McMillan, D.F. and Homsen, D. "Overview: Food in Sub-Saharan Africa." In: McMillan and Hansen (1986). Food in Sub-Saharan Africa. Boulder, Colorado: Lynne Rienner.
- Meilink, H. (1999). "Maize Marketing in Kenya, 1976 – 1996". In: Dijkstra L.H. et al (eds) Agricultural Marketing in Tropical Africa: Aldershot: Ashgate.
- Mlambo, A.S. "Towards an Analysis of IMF Structural Adjustment Programmes in Sub-Saharan Africa (SSA): The case of Zimbabwe 1990-94". Africa Development. Vol xx No. 2. 1995.
- MOA. (1988). "Household Food Security and Nutrition Policy". Nairobi: Ministry of Agriculture.
- Morgenthau, H.J. (1995). Politics Among Nations: The Struggle for Power and Peace. New Delhi: Kalyani.
- Murage, F.G. (1989). Agricultural Yields Production and Monitoring Methods of the National Cereals and Produce Board. London: Zed Books.

- Musoke, K.S. (1990). "Theoretical Framework". In: ACARTSOD. Understanding Africa's Food Problems: Social Policy Perceptives. London: Hans Zell Publishers.
- Muthee, A.M. (1996). "Price Discovery Institutions in the Marketing and Processing of Agricultural Commodities in Kenya". In: Occasional Paper No. 63, IDS, University of Nairobi, June 1996.
- North, D.C. (1985). "Institutions, Transaction Costs and Economic Growth." In Economic Inquiry Pp. 419-429.
- Nyoro, J.K. (1999). "Evolution of Kenya's Maize Marketing Systems in the Post Liberalization Era". Paper Presented at the 4th Agricultural Workshop in Nairobi, Kenya (June 27th- 30th 1999).
- Nyoro et al. (2001). Increasing Kenya's Agricultural Competitiveness (Unpublished).
- Nyangito, H. O and Kimenye, L.N (1995). "Agricultural Development Policies in Kenya". In Owino and Ng'ethe, N. Towards indigenizing the policy Debate. Nairobi: IPAR.
- Nyangito, H. (1999). "Agricultural Sector Performance in a Changing Policy Environment". In: Kimuyu, P., Wagacha, M., and Abagi, O. (eds). Kenya's Strategic Policies for the 21st Century. Nairobi: IPAR.
- Ochoro, W.E.O. & Omamo, F.Z. (1989). "Food and Nutrition". In: Odada, J.E.O & Ayako, A.B. (eds) (below).
- Odada, J.E.O and Ayako, A.B (1989). The Impact of Structural Adjustment Policies on the Well Being of the Vulnerable Groups in Kenya. Nairobi: UNICEF.
- Ogbu, O.M. & Gbetibon, M. "Agricultural supply response in Sub-Saharan Africa: A critical review of literature". African Development Review. Vol. 2, No. 2, 1990.
- Okech, B.A. (1996). "Agricultural Sector Management Reform and Policy Analysis". In: Occasional Paper No. 63, IDS, University of Nairobi.
- Omamo, S.W. (1995). "Maize Production, Consumption and Storage in Kenya Under Market Reform." In: PAM. Proceedings of the Conference on Towards 2001: Improving Agricultural Performance September 1995.
- Omosa, M. (1998). Reconceptualising Food Security: Interlocking Strategies, Unfolding Choices and Rural Livelihood in Kisii District, Kenya. The Hague: Date Koninkhijke
- Onjala, J.O. (1995). "Economic Growth and Development in Kenya Since Independence". In: Ng'ethe, N. & Owino, W (eds) (above).
- Oniang'o, R. (1982). Nutrition and Food Consumption. Nairobi: National Council of Science and Technology.
- Pallangyo, E.P. & Odero - Ogwel, L.A (1985). "The Persistence of the Food and Agriculture Crisis in Africa". In: Adedeyi, A. and Shaw, T. Economic Crisis in Africa. Boulder: Lynne Rienner.
- PAM (Policy Analysis Matrix). (1995) As Above.
- _____. (1994). Proceedings of the Conference on Market Reforms. Agricultural Production and Food Security.
- Pearce, R. (1992). "Ghana". In: Duncan & Howell (eds). Structural Adjustment and the African Farmer. London: James Curvey.
- Pinckery, T. C. (1998). Storage, Trade and Price Policy under Production Instability: Maize in Kenya. International Food Policy Research Institute (IFPRI). Research Report 71.
- Raikes, P. (1988). Modernizing Hunger. London: James Curvey.
- Rau, B. (1991). From Feast to Famine. London. Zed Books.

- Reutlinger, S. (1987). Food Policy: Integrating supply, distribution and consumption. The Johns Hopkins University Press: London.
- Saha, S.K. "The Role of Industrialization in Development of Sub-Saharan Africa". Economic and Political Weekly. Nov. 30, 1991.
- Samuelson, P.A. (1995). Economics. Mexico City: Mc Graw – Hill Inc.
- Scarlet, L. (1981). "Tropical Africa: Food or Famine?" In: Balaam, D. and Carey M.J (eds). Food politics: The Regional Conflict. New Jersey: Allanheld Osum & Co.
- Schultz, T.W. (1964) Transforming Traditional Agriculture. New Haven: Yale University. Press
 "Value of U.S Farm Surpluses to Underdeveloped Countries." Journal of Farm Economics 42 (December 1960).
- Senga, W.M. (1976). "Kenya's Agricultural Sector". in: Heyer, J., Maitha, J.k and Senga, W.M (eds). Agricultural Development in Kenya: An Economic Assessment. Nairobi: Oxford.
- Serageldin, I. (1989). Poverty, Adjustment and Growth in Africa. Washington, D.C: World Bank.
- Sessional Paper No. 1 of 1986.
- Sessional Paper No. 2 of 1993.
- Sessional Paper No. 3 of 1994.
- Sessional Paper No. 4 of 1980.
- Sessional Paper No. 4 of 1981.
- Sessional Paper No. 10 of 1965.
- Singer, H. W. "Food Aid and Development" (Washington: U.S Agency for International Development. Program Evaluation Discussion Paper, Dec. 1982).
- Smith L. D. (1976). "An overview of Agricultural Development Policy". In: Heyer, Maitha and Senga (eds). Agricultural Development in Kenya: An Economic Assessment. Nairobi: Oxford University Press.
- Smith, L.D. (1976). "An Overview of Agricultural Development Policy". In: Heyer, et al (eds) (above).
- Staudt, K. (1985). Agricultural Policy Implementation: A Case Study from Western Kenya. West Harford: Kumarian Press.
- Swammy, G. (1994). "Kenya: Structural Adjustment in the 1980s". World Bank Policy Research Paper, 1238.
- Swynerton, R.J.M. (1954). A Plan to Intensity the Development of African Agriculture in Kenya. Nairobi: Government Printer.
- Tarrant, J.R. (1980). Food Policies. Chichester : John Wiley & Sons.
- Taylor, L. (ed). (1990). Socially Relevant Policy Analysis. Boston MIT Press.
- Thorbecke, E. & K. Solamane. (1994). Performance in Sub-Saharan Africa Under Adjustment. Paris: OECD.
- Thorbecke, E. and Greer, J. (1986). Food Poverty and Consumption Pattern in Kenya. Geneva: International Labour Organization.
- Tibaijuka, A.K & Cormack, A. (eds) (1998). The Social Services Crisis of the 1980s. Sydney: Ashgate.
- Timmer, C.P. et al. (1983). Food Policy Analysis. Baltimore: The Johns Hopkins University Press.

- Timmer, C.P. (1987). Price Policy and the Political Economy of markets. In: J.P Gittinger, J. Leslie and C. Hoisigton (eds). Food Policy: Integrating supply, Distribution and consumption. London: John Hopkins.
- Toye, J. (1992). "Interest Group Politics and the Implementation of Adjustment Policies in Sub-Saharan Africa." In: Gibbon, P. Y. Bangura and A. Ofsad (eds). Authoritarianism, Democracy and Adjustment. The Politics of Economic Liberalization in Africa. Scandinavian Institute of African Studies. Uppsala.
- Tsakok, I. (1990). Agricultural Price Policy: A Practitioners Guide to Partial Equilibrium Analysis. London: Corwell University press.
- U.N (United Nations). Declaration and programme of Action of the World Summit for Solid Development, Copenhagen. 6-12 March 1995.
- USDA (United States Department of Agriculture). (1981). Food Problems and Prospects in Sub-Saharan Africa. Washington D.C.: US Government Printing Office.
- Wagao, J.H. (1990). "Adjustment in Tanzania, 1981-89". Innocent Occassional Papers, No. 9. Florence: UNICEF.
- Wallerstein M. B. (1980). Food for War – Food for Peace. Cambridge: MIT Press.
- Weissman, S.R. (1990). "Structural Adjustment in Africa: Insights from Experiences of Ghana and Senegal". World Development, Vol. 18, No 2.
- Whitehead. G. (1970). Economics. New Delhi: Made Simple Books.
- World Bank (1981). Accelerated development in Sub-Saharan Africa: An Agenda for Action. Washington D.C: World Bank.
- _____. (1994). Adjustment in Africa: Results and the Road Ahead. Washington, D.C.: IBRD.
- _____. (1994). Adjustment in Africa: Lessons from country case studies; Washington, D.C.: IBRD.
- _____. "Kenya: Food and Nutrition Policy". March 15, 1991.
- _____. (1990). "Kenya: Stabilization and Adjustment: Towards Accelerated Growth", Report No. 9047 – KE, October 17, 1990.
- _____. (1990). The long Term Perspective Study of Sub-Saharan Africa. Washington D.C.: World Bank.
- _____. (1989). Sub-Saharan Africa: From Crisis to Sustainable Growth. Washington D.C.: World Bank.
- _____. (1984). Towards Sustained Development in Sub-Saharan Africa. Washington D.C.: World Bank.