ReSAKSS SA Southern Africa

Regional Strategic Analysis and Knowledge Support System

**ReSAKSS Working Paper No.8**

October, 2008

# Agricultural Growth and Poverty Reduction in Malawi: Past Performance and Recent Trends

Ephraim W. Chirwa, Ian Kumwenda, Charles Jumbe, Pius Chilonda and Isaac Minde

**Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA)**

**ReSAKSS Working Paper No.8**

October, 2008

# Agricultural Growth and Poverty Reduction in Malawi: Past Performance and Recent Trends

Ephraim W. Chirwa, Ian Kumwenda, Charles Jumbe,
Pius Chilonda and Isaac Minde

**About ReSAKSS**

The Regional Strategic Analysis and Knowledge Support System (ReSAKSS) is an Africa-wide network that provides analysis, data, and tools to promote evidence-based decision making, improve awareness of the role of agriculture for development in Africa, fill knowledge gaps, promote dialogue and facilitate the benchmarking and review processes associated with the AU/NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) and other regional agricultural development initiatives in Africa.

**About the Working Paper series**

The goal of the ReSAKSS Working Paper series is to provide timely access to preliminary research and data analysis results that relate directly to strengthening ongoing discussions and critical commentaries on the future direction of African agriculture and rural development. The series undergoes a standard peer review process involving at least one reviewer from within the ReSAKSS network of partners and at least one external reviewer. It is expected that most of the working papers will eventually be published in some other form and that their content may be revised further.

For more information, contact:
Coordinator
Regional Strategic Analysis and Knowledge Support System in Southern Africa (ReSAKSS-SA)
International Water Management Institute (IWMI)
Private Bag X813
Silverton 0127
Pretoria, South Africa
Telephone: +27 (0)12 845 9100
Facsimile: +27 (0)12 845 9110
E-mail: resakss-sa@cgiar.org
Website: www.sa.resakss.org

**The authors**

Ephraim W. Chirwa is Associate Professor at the University of Malawi and Managing Consultant for Wadonda Consult, Malawi; Ian Kumwenda is Coordinator for the Malawi Agriculture Sector Investment Programme (MASIP), Malawi Government; Charles Jumbe is a Research Fellow at the Centre for Agricultural Research and Development, Bunda College of Agriculture, Malawi; Pius Chilonda is Regional SAKSS Coordinator for Southern Africa based in Pretoria, South Africa; and Isaac Minde is Principal Scientist (Economics), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Bulawayo, Zimbabwe.

Chirwa, E.W.; I. Kumwenda; C. Jumbe; P. Chilonda; I. Minde, 2008. *Agricultural growth and poverty reduction in Malawi: Past performance and recent trends.* ReSAKSS Working Paper No. 8. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), International Food policy Research Institute (IFPRI) and International Water Management Institute (IWMI).

# CONTENTS


Tables and Figures ..... vi

Acronyms and Abbreviations ..... vii

Abstract ..... viii

Introduction ..... 1

Agricultural Development Policies in Malawi: Historical Overview ..... 2

The Pre-Reform Period (1964-1980) ..... 4

The Reform Period (1981-1994) ..... 5

The Post-Reform Period (1995-2007) ..... 8

Agricultural Performance and Trends in Poverty ..... 9

The Structure of the Agricultural Sector ..... 9

The Role of the Agricultural Sector ..... 11

Trends in Agricultural Performance ..... 11

Agricultural Output and Per Capita Output ..... 11

Food Production and Food Security ..... 13

Livestock Production and Trends ..... 14

Agricultural Trade Performance ..... 15

Agricultural Growth and Poverty Outcomes ..... 17

Malnutrition Rates ..... 17

Poverty Levels ..... 18

Explaining Agricultural Performance in Malawi ..... 19

Productivity ..... 19

Weather Conditions and Agricultural Performance ..... 20

Landholding Sizes and Fragmentation ..... 22

Markets and Value Addition ..... 23

Policy Environment and Supply Responses ..... 24

Trends in Public Investments in Agriculture ..... 24

Conclusions ..... 27

References ..... 29

# TABLES AND FIGURES


Table 1. Major economic policy actions under different policy regimes, 1964-2007. ..... 3

Table 2. Malawi: Share of the agriculture sector, 1970-2005. ..... 11

Table 3. Malawi: Trends in agriculture sector output, 1970-2005. ..... 12

Table 4. Malawi: Composition of export earnings by main commodity (%), 1970-2005. ..... 15

Table 5. Malawi: Trends in the malnutrition and growth of children under-five, 1992-2005. ..... 18

Table 6. Malawi: Poverty and agricultural growth, 1998-2005. ..... 18

Table 7. Malawi: Productivity growth by main commodity (%), 1970-2005. ..... 20

Table 8. Weather conditions affecting agricultural production, 1980-2005. ..... 21

Table 9. Malawi: Trends in agriculture sector government spending, 1970-2005. ..... 25

Figure 1. Malawi: Structure of agricultural output, 1973-2005. ..... 10

Figure 2. Malawi: Trends in agricultural output per capita growth rates, 1974-2005. ..... 12

Figure 3. Malawi: Trends in main food staples per capita, 1974-2005. ..... 13

Figure 4. Malawi: Livestock production trends, 1970-2005. ..... 15

Figure 5. Malawi: Growth in agricultural exports, 1971-2005. ..... 16

Figure 6. Malawi: Productivity trends in main agricultural crops, 1970-2005. ..... 20

Figure 7. Malawi: Rainfall and maize production, 1970-2005. ..... 21

Figure 8. Malawi: Trends in per capita cultivatable land, 1970-2005. ..... 22

Figure 9. Malawi: Trends in agricultural sector expenditure, 1970-2005. ..... 25

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ADMARC | Agricultural Development and Marketing Corporation |
| AU | African Union |
| CAADP | Comprehensive Africa Agriculture Development Programme |
| COMESA | Common Market for Eastern and Southern Africa |
| EPZ | Export Processing Zones |
| GDP | Gross Domestic Product |
| IMF | International Monetary Fund |
| MEGS | Malawi Economic Growth Strategy |
| MGDS | Malawi Growth and Development Strategy |
| MDG | Millennium Development Goals |
| MPRS | Malawi Poverty Reduction Strategy |
| NEPAD | New Partnership for Africa's Development |
| PAP | Poverty Alleviation Programme |
| SSA | Sub-Saharan Africa |

# ABSTRACT

This paper reviews the link between agricultural growth and poverty reduction in Malawi. The contribution of the agriculture sector in Malawi has been fairly stable over time, accounting for more than one-third of gross domestic product. However, the performance has been mixed in terms of growth rates, with more growth witnessed in the 1960s and 1970s and erratic growth rates in subsequent periods. The analysis also shows no significant link between the growth in the agricultural sector and indicators of poverty such as malnutrition rates and poverty head count ratio. The disappointing performance of the agriculture sector can be attributed to many factors including declining farm productivity, rain-fed nature of cultivation and associated exogenous shocks, thin agricultural markets, policy reversals and associated uncertainties, and declining public investments in the agricultural sector. In order to revive the agricultural sector, the study recommends policies towards greater commercialization, revitalization of extension services and increased investments in marketing systems, rural infrastructure and irrigation development.

# AGRICULTURAL GROWTH AND POVERTY REDUCTION IN MALAWI: PAST PERFORMANCE AND RECENT TRENDS

## INTRODUCTION

The agricultural sector continues to be the most important sector in the Malawian economy. It accounts for 39% of gross domestic product (GDP), 85% of the labor force and generates about 83% of foreign exchange earnings. National surveys estimate that crop production accounts for 74% of all rural incomes. The agricultural sector has two main sub-sectors - the smallholder sub-sector that contributes more than 70% and the estate sub-sector that contributes less than 30% to gross domestic product - originating from the agricultural sector. The smallholder agricultural sector in Malawi cultivates mainly maize, the main staple grain, to meet subsistence requirements. The landholding sizes among smallholder farmers are generally small. It is noted that owing to population pressure, resulting in the fragmentation of land, the national mean landholding size has fallen from 1.53 hectares per household in 1968 to 0.80 hectares per household in 2000 (GoM 2001). The principal crops grown in Malawi are maize, tea, sugarcane, groundnuts, cotton, wheat, coffee, rice and pulses. The major exports include tobacco, tea and sugar. Except for tobacco, tea and sugar are mainly grown on commercial estates by multinational companies, with the smallholder sector producing less that 15% of total tea and sugar production.

The performance of the economy has been highly driven by the agricultural sector. Since independence in 1964, substantial resources have been devoted to the agricultural sector for the development of estate and smallholder agriculture. These investments in the agricultural sector have included the establishment of state-owned enterprises directly engaged in agricultural production and marketing of smallholder agricultural produce, state provision of extension services, and provision of subsidized credit and inputs. The agricultural sector-led development strategy paid dividends in the early years of independence and Malawi was self-sufficient in food production particularly in the 1970s. The economy grew at an average rate of 6% per annum. Malawi was, however, in an economic crisis between 1979 and 1981. The crisis was triggered by a combination of factors including the oil-shock of 1979, the international transport bottleneck due to the intensification of the Mozambican War and other structural rigidities of the economy. The real growth rate of GDP fell from 8.3% in 1978 to 3.9% in 1979 and for the first time, negative growth rates of -1.1% in 1980 and -4.7% in 1981 were registered. The burst between 1979 and 1980 drove Malawi into the adoption of World Bank structural adjustment programmes and IMF stabilization measures (Harrigan 1991).

Since 1982, the Government of Malawi has introduced several policies in a phased and sometimes indecisive manner, some of which were directly targeted at reforming the agricultural sector. However, the growth of the agricultural sector and the economy has been erratic and poverty remains high. Recent estimates of poverty show that about 52.4% of the population lives below the poverty line (MK44 per person per day) with 22.4% barely surviving (NSO 2005). Most of the socioeconomic indicators illustrate the depth and intractability of poverty. For example, the levels of malnutrition remain high, with 43.2% of children under-five being stunted and 22% being underweight in 2004 (NSO 2005). The infant mortality rate and morbidity rate remain high. According to NSO and ORC Macro (2001), the infant mortality rate declined from 153 deaths per 1,000 live births in 1987 to

104 deaths per 1,000 live births in 2004/2005. The maternal mortality rate has increased from 250 deaths per 100,000 births in 1987 to 984 deaths per 100,000 births in 2004 (NSO 2006). There is also a high prevalence of HIV and AIDS, estimated at 14%.

The main objective of this paper is to analyze the trends in agricultural growth and food security and to establish the linkages between agricultural growth, investment and poverty reduction. The paper aims to achieve this objective in four ways. First, it establishes baseline statistics for monitoring agricultural growth and poverty levels and gives a consistent picture on how well Malawi is performing in meeting the MDG target of halving poverty by 2015. Second, it assesses and diagnoses trends in agricultural growth and poverty alleviation in order to understand why agricultural growth (or decline) is occurring in Malawi. Third, it tracks commitment to increased public spending by the Malawi Government and determines whether the levels of current funding in the agricultural sector meet the AU/NEPAD and MDG targets. Finally, the paper examines the sources of growth and whether the growth occurring is pro-poor. The rest of the paper is organized as follows. The next section, *Agricultural Development Policies in Malawi: Historical Overview*, provides a review of agricultural sector policies in Malawi, providing the context in which agricultural growth has occurred. Section 3, *Agricultural Performance and Trends in Poverty*, analyzes the changing role and the performance of the agricultural sector using various performance measures. Section 4, *Explaining Agricultural Performance in Malawi,* analyzes the sources of agricultural growth and assesses the link between agricultural growth and poverty in Malawi. Section 5, *Conclusions*, reports the results and discusses the factors that have affected agricultural growth in Malawi.

## AGRICULTURAL DEVELOPMENT POLICIES IN MALAWI: HISTORICAL OVERVIEW

With more than 80% of the population in Malawi being rural and agricultural activities forming the bulk of the livelihood strategies of households, agricultural development policies have dominated the policy arena since independence in 1964. The potential for agricultural development to increase welfare in low-income countries, like Malawi, derives from the fact that large proportions of the population engage in farming for subsistence needs and to generate cash incomes (Mellor 1966). Therefore, it is not surprising that economic policies in Malawi have been dominated by agricultural policy. Agricultural development in Malawi has been based on a dual strategy. First, the promotion of estate agriculture on leasehold land from unused customary land has expanded rapidly since independence. Lele (1989) argues that the rapid expansion of estate agriculture, particularly for the production of tobacco, has resulted in a more unequal distribution of land in rural Malawi. Most estates grow high value cash crops, and it is not surprising that estate-led agricultural development was the main economic strategy in Malawi. Second, the promotion of smallholder agriculture on customary land, on which rights to cultivate and transfer land are conferred by traditional chiefs. In 1997/1998 it was estimated that one-third of smallholder households were cultivating between 0.5 and 1 hectares of land (GOM 2001). The economic and agricultural policy regimes in Malawi can be divided into three phases as represented in Table 1: pre-reform, reform and post-reform periods.

*Table 1. Major economic policy actions under different policy regimes, 1964–2007.*

| Period | Period | Domestic Policy Actions | International Trade Policy Actions |
|---|---|---|---|
| Pre-Reform Period | 1964–1980 | • Active government involvement in economic activities (Malawi Development Corporation (MDC) and ADMARC investments).<br>• Provision of extension services and active research in agricultural technologies, maize seeds and other crops.<br>• Macroeconomic stability - low and stable inflation, low and stable interest rates.<br>• Preferential lending to agricultural sector. | • Malawi–Botswana reciprocal trade agreement in 1968.<br>• Overvalued exchange rate system - fixed peg.<br>• Limited tariff protection.<br>• Non-tariff barriers to trade such as import licensing and implicit foreign exchange rationing. |
| Reform Period | 1981–1986 | • Periodic increases in interest rates and agricultural prices.<br>• Restructuring of state-owned enterprises.<br>• Liberalization of industrial output prices. | • Periodic devaluation of the Malawi Kwacha.<br>• Increases in trade taxes and foreign exchange rationing. |
| | 1987–1994 | • Liberalization of the financial sector and interest rates between 1987 and 1989.<br>• Removal of preferential lending to agricultural sector in 1990.<br>• Liberalization of agricultural marketing services (output in 1987 and inputs in 1990).<br>• Liberalization of the prices of some agricultural produce in 1988.<br>• Removal of fertilizer subsidies by 1991.<br>• Privatization of state-owned enterprises.<br>• Liberalization of entry into manufacturing in 1991. | • Periodic devaluation of the Malawi Kwacha and eventual floatation in February 1994.<br>• Elimination of quantitative trade restrictions and foreign exchange rationing.<br>• Introduction of duty drawback system in 1988.<br>• Introduction of surtax credit scheme in 1989.<br>• Bilateral trade agreement with South Africa in 1991.<br>• Reductions in tariffs leading to a maximum of 75% in 1994. |
| Post-Reform Period | 1995–2007 | • Removal of restrictions that prevented smallholder farmers from producing and marketing high value crops in 1995.<br>• Reduction in base surtax to 20% in 1996.<br>• Liberalization of prices for all crops except maize and introduction of a maize price band in 1996.<br>• Privatization of state-owned enterprises since 1996.<br>• Elimination of the maize price band in 2000.<br>• Agricultural input support programs for smallholder farmers. | • Introduction of EPZ incentives in 1995.<br>• Export levy on tobacco and sugar in 1995 and eventual removal in 1999.<br>• Bilateral trade agreement with Zimbabwe in 1995.<br>• Removal of import and export licensing in 1997.<br>• Elimination of import duty on raw materials for manufacturing in 1997.<br>• Devaluation of the Malawi Kwacha in 1998.<br>• Reduction of maximum tariff to 40% in 1996; to 35% in 1997; and to 25% in 1999.<br>• COMESA Free Trade Area by 2000. |

*Source*: Chirwa and Zakeyo (2003)

**The Pre-Reform Period (1964–1980)**

This phase spans the first 15 years after independence and was characterized by active government involvement in the economy and agricultural sector. The main objective of policies during this period was to diversify the economy away from the agricultural sector through increased import-substitution and industrialization, thereby generating sustainable employment opportunities (GOM 1971). Agricultural development policies in this phase were guided by three development strategies: the First Development Plans (1961–1964), the Second Development Plans (1965–1969) and the first Statement of Development Policies (1971–1979). At independence it was recognized that the economy had an abundant labor force and fertile agricultural soils. It became apparent that the nature of the natural resource was the basis for economic policy. As is stipulated in the first statement of development policies:

> The choice of strategy which gives top priority to raising agricultural activity is dictated not only by the present pattern of economic activities among the population but also by the nature and distribution of Malawi's economic resources (GOM 1971: 1).

The government identified capital and skilled labor as factors of production in scarce supply. Land and unskilled labor were factors of production in which Malawi was endowed. The policymakers capitalized on these two factor endowments by emphasizing on agricultural innovation and the export of unskilled labor to mineral-rich countries such as Zambia, South Africa and Zimbabwe. Agriculture was the mainstay of the economy and about 60% of gross domestic product in 1964 originated from the agriculture sector. At the time of independence in 1964, the non-agricultural sector of the economy was almost entirely controlled by foreign firms or individuals with the manufacturing and transport sectors dominated by the Europeans (British) and commerce dominated by Asians. The dominance of the colonial masters in farm and non-farm activities was reduced by emphasizing on the role of the peasants in agricultural production as a vehicle for the development of the domestic bourgeoisie. This was achieved by purchasing a number of private estates in the central region for resettlement by Malawians in the first six years of independence (GOM 1971). The priority accorded to agriculture reflected the large role played by the sector in creating employment and income for about 85% of the population, but it also made maximum use of the abundant labor resource.

Direct government involvement in economic activities also manifested through investments in state-owned enterprises and state-holding corporations that in turn invested in various sectors of the economy including agriculture, manufacturing and financial sectors. The Agricultural Development and Marketing Corporation (ADMARC), a state marketing agency, played a major role in the agricultural development strategy as a monopsony buyer of smallholder produce and a supplier of agricultural inputs, besides investments in estate agriculture and other commercial investments. The government's strategy in the smallholder agricultural sector aimed at increasing output and productivity to meet the food security needs and the cash requirements of the population. As such the smallholder agricultural development strategy focused mainly on increasing the productivity of maize. Several policies were implemented to support the strategy including the promotion of technology adoption among smallholder farmers particularly hybrid maize and application of fertilizers supported by a government administered credit scheme, provision of extension services through a network of extension offices across the country, subsidies on inputs and a system of guaranteed pan-territorial and pan-seasonal prices for agricultural produce through ADMARC.

However, Kydd and Christiansen (1982) argue that government policy facilitated the rapid expansion of estate agriculture at the expense of smallholder agriculture through easy acquisition of customary land;[1] implicit taxation of smallholder agriculture through the smallholder produce pricing policy implemented by the state marketing agency whose proceeds were used to develop estates by the state marketing agency; and control of the commercial banks by the state marketing agency, ADMARC. As a result there was remarkable growth in estate agriculture particularly in burley tobacco production, with the ratio of the value of estate production to the value of officially marketed smallholder production increasing from 0.79 in 1964 to 1.93 in 1979 based on three-year moving averages (Kydd and Christiansen 1982). Most of this estate-led agricultural development has not benefited the majority of the smallholder population, whose return to labor was significantly squeezed by the produce pricing policy.

**The Reform Period (1981–1994)**

The country experienced an economic crisis in 1979 and 1980 that led the government to adopt structural adjustment programmes under the auspices of the International Monetary Fund (IMF) and the World Bank in 1981. The diagnostic analysis for the first structural adjustment loan revealed several structural weaknesses in the economy including slow growth of smallholder exports, narrow export base and increasing reliance on tobacco exports, deteriorating financial position of state enterprises including ADMARC and inflexibility in prices and wages due to government control (Harrigan 1991). A series of structural adjustment and sectoral loans and standby facilities have been obtained by the government to support structural adjustment reforms. Several of these reforms were targeted at the agricultural sector and aimed at improving the performance of the smallholder agricultural sector. Some of the objectives of structural adjustment policies in agriculture included diversification of the export base, ensuring appropriate price and incomes policy to offer adequate incentives to smallholder farmers, expanding the role of the private sector in the marketing of agricultural produce, and increasing the efficiency and incomes of smallholder farmers.

These developments led to the formulation of the second Statement of Development Policies (1987-1996), whose focus articulated the various reforms embodied in structural adjustment programmes (GOM 1987). The adoption of structural adjustment programs in 1981 initiated reforms in agricultural production, marketing and produce pricing policy. Within the economic reform programme the government liberalized agricultural produce pricing and marketing in various major ways.

- There were periodic adjustments to the pan-territorial and pan-seasonal prices for agricultural products that were introduced between 1982 and 1986, particularly for maize. In 1982, the government adopted the parity pricing approach and the producer price of maize was consequently increased by 68%. The pricing approach led to annual adjustments in the price of maize in the 1980s. As Harrigan (1988) notes, considerable price increases for a majority of smallholder export crops were announced in 1983/4 and 1984/5 growing seasons such that by 1985/6 prices were close to parity levels. By 1988, the prices of most crops were liberalized with the state marketing agency acting as a buyer of last resort at minimum guaranteed pan-territorial and pan-seasonal prices. Private traders were, therefore, free to

[1] Most estate owners informally bought customary land from chiefs and converted it into leasehold estate land. This was particularly the case in the central region, although the practice also existed in the southern and northern regions of Malawi. This, combined with the growing population pressure, has resulted in unequal distribution of land and chiefs no longer have customary land at their disposal for distribution to new families.

determine their own prices for the purchase of crops from smallholder farmers, and by 1995 prices of all other crops, except for maize, were fully liberalized and ADMARC was given flexibility in determining the prices of other crops (Chirwa 1998).

- The government introduced a price band for maize which ADMARC was expected to defend. ADMARC was free to determine the producer price of maize within a fixed band while the consumer price of maize remained pan-territorial and pan-seasonal. However, due to increased marketing of maize by private traders, it had become rather difficult for ADMARC to defend the price band, and, consequently, the policy was abandoned in 2000 and the price of maize significantly increased (Chirwa and Zakeyo 2006). However, the government has always intervened in the pricing of maize by setting the price for the sale of maize particularly during the lean season and during times of food crises.

- There was a reduction in the scope of export licensing except for maize and cassava in 1989/90 and subsequent removal of import and export licensing requirements on all crops. However, the government has continued to impose export bans on maize periodically, particularly during periods of food shortages. This has sent mixed signals to the private sector and has led to the unpredictability of government policy.

- The government abolished the monopsony power of ADMARC and liberalized the marketing of smallholder agricultural produce.[2] The marketing of smallholder agricultural crops was deregulated in 1987 through the Agriculture (General Purpose) Act of 1987 which eliminated ADMARC's monopsony power in produce marketing in the domestic market. The Act required private traders to obtain licenses to engage in the marketing of crops. Nonetheless, the requirement for obtaining a license to participate in the trading of smallholder crops was relaxed over time and private traders were increasingly trading without licenses unofficially. In 1996, licensing was no longer required for marketing of smallholder agricultural crops. The competition from private traders and the increasing financial constraints experienced by ADMARC has resulted in the diminishing role of the state in maize marketing during the food crisis.[3] FSG (1991) observe that ADMARC's purchases as a proportion of production stabilized at 15% of production in the early 1990s, levels which were broadly in line with those prevailing in the early 1980s (see also Harrigan 2003). However, this role diminished to zero in the past five years. Actually, ADMARC did not purchase any maize in the years 2000 and 2001 (Mvula et al. 2003). Although the gains and losses are not clear cut, the losers from these reforms have been net food buyers and the poor that are buying maize at high and volatile prices while net sellers of maize have benefited from high prices and private traders have achieved higher profit margins due to the weakening position of state marketing activities.

- Other policies that had direct and indirect effects on agricultural development included the phased removal of fertilizer subsidies in 1984; deregulation of fertilizer marketing in 1990; liberalization of burley tobacco production by smallholder farmers in 1990; liberalization

[2] Others have argued that the liberalization of agricultural marketing was hastened by the growing inefficiency of ADMARC and its broadened mandate that extended to investments in profitable enterprises, exacerbated by the inadequate funding to government state-owned enterprises.

[3] The weak financial base of ADMARC has been attributed to cross-subsidization of its non-performing investment portfolio, inability for the government to subsidize loss making parastatals and inefficient management.

of financial markets; liberalization of international trade; and devaluation of currency and eventual floatation in 1994 (Chirwa and Zakeyo 2006). The liberalization of burley tobacco has led to an increase in the number of smallholder farmers growing burley tobacco and smallholder farmers have rapidly become the main producers of burley tobacco accounting for about 70% of national production (World Bank 2003).[4]

The expectation from the market reforms was that private traders would take up the role of state marketing agencies even in remote areas. However, the empirical results on the effect of food marketing liberalization are mixed. Jayne et al. (2002) argue that these mixed results have been due to the variations in the implementation of reforms, with reforms largely remaining unimplemented particularly in sensitive products such as maize. In Tanzania, one of the countries that have been decisive in food marketing liberalization, Baulch (2001) notes that increased competition in the marketing of food produce led to declining profit margins among private traders. Fairhead and Leach (2005) note that marketing liberalization ignored the way that markets are controlled, and socially and politically embedded. Studies in Malawi have cast doubt on the capacity of private traders to reach the very remote areas that are deemed unprofitable by a state marketing agency. In earlier studies on the performance of private traders in Malawi, Mkwezalamba (1989) and Kaluwa (1992) reveal that most private traders are small-scale entrepreneurs with rural-based enterprises and usually face such constraints as transport facilities, storage facilities, processing facilities, financing and credit facilities. Fafchamps and Gabre-Madhin (2001), using case studies from Benin and Malawi, also find evidence that the efficiency of private traders is constrained by the high transaction costs in the form of search and transport costs. Other studies have shown that while private traders have expanded their activities in agricultural produce since 1987, they are heavily concentrated in the southern region and, to some extent, in the central region while the northern region is generally un-served due to the problem of inaccessibility (Mthindi et al. 1999).

Although ADMARC market power has been weakened over the years, there may still be concerns about the effect of its continued involvement in the marketing of food crops. For example, Abbott and Poulin (1996) argue that the continued existence of ADMARC as a state marketing agency is hindering the development of the private marketing system. Nonetheless, others identify ADMARC as a very important institution during crisis situations and that the closure of ADMARC markets has the potential to affect the livelihood systems of the poor (Khaila et al. 1999). Dorward et al. (2004) note that those that argue for complete withdrawal of the state, fear the policy reversals and price controls and the competitive advantages of the state marketing agencies that depress returns and increase risks to private sector investments. There has been no evidence in Malawi, however, to suggest that ADMARC with its financial constraints is an impediment to private sector trade.[5] Mvula et al. (2003) and Nthara (2002) find that ADMARC plays an important role in crop marketing where it has resources, particularly in the sale of maize to maize deficit households.

[4] Prior to liberalization, burley tobacco was only grown on estates and exported directly by estate owners.

[5] In other countries, where state marketing agencies continue to play a role in the post-liberalization era, such as Kenya, the evidence suggests that private traders do not perceive state marketing agencies as stifling private trade (Karugia et al. 2004).

**The Post-Reform Period (1995–2007)**

The period from 1995 is regarded as the period after major structural reforms under the structural adjustment period were completed in most sectors of the economy. Nonetheless, there have been several policy changes during this period with some of the abandoned policies in the previous phase being re-introduced particularly in the agricultural sector. The post-reform phase has also witnessed the highest number of policy documents that have been produced by the government to guide the development path of the economy.

- In 1995, the government published the Policy Framework for the Poverty Alleviation Programme (PAP) which identified the poverty groups and outlined the broad policies for fighting poverty in Malawi.

- In 1998, the government engaged in a consultative process which resulted in the publication of the Malawi Vision 2020 document which captured the long-term aspirations of Malawians. With respect to agriculture, the main objectives in Vision 2020 were to increase food crop production particularly maize, promoting livestock development, reducing post-harvest losses in food crops and improving efficiency of markets (NEC 2000).

- In 2002, the government published the Malawi Poverty Reduction Strategy (MPRS) whose strategies were expected to be implemented over three years. The agricultural sector is identified as the main sector for achieving pro-poor growth. The main agricultural objective in the MPRS is to increase agricultural incomes through access to inputs; technology and extension services; access to domestic and international markets; promotion of irrigation; promoting crop diversification; and livestock development.

- In 2003, the government started developing another strategy which culminated into the Malawi Economic Growth Strategy (MEGS) published in 2004. In the latter half of 2004, the MEGS was receiving more public attention than the MPRS, a development that created uncertainty about the development strategy the country is pursuing. While the MPRS focuses on both economic and social sectors, the MEGS only focuses on the economic sectors and private sector driven growth with very little articulation of distribution.

- By mid-2005 the government started the process of developing another strategy intended to address issues raised in both the MPRS and MEGS so as to come up with a coherent development strategy. This led to the publication of the Malawi Growth and Development Strategy (MGDS) in 2006. The emphasis on agriculture is to increase the contribution of the agricultural sector to economic growth through production of food crops and value addition for domestic and export markets. The focus of the agricultural sector is increasing productivity, value addition, market facilitation and irrigation development (GOM 2006).

The emphasis in these documents has shifted from poverty alleviation to growth with poverty reduction. In addition, agricultural development has been at the center of recent development strategies – driven by the belief that pro-poor growth can be achieved by growth in the sectors where a large proportion of the poor participate. There have been several safety net activities designed to protect the poor from the perils of market reforms, particularly smallholder agriculture input support programs. The government with the support of bilateral donors introduced a series of safety net programmes for resource poor smallholder farmers to minimize the cost of adjustment in the late 1990s. These agriculture-based safety net programmes include a ‘starter pack’ program which

provided free inputs to resource poor farmers from 1998/1999–1999/2000; the Agricultural Productivity Improvement Programme (APIP) which provides inputs on credit to resource poor farmers in 1998; and the Targeted Input Programme in 2000 which provides free inputs to resource poor farmers including cereal seeds, legume seeds and fertilizer. In the 2001/2002 season, the number of beneficiaries of the APIP was reduced to 41,800 from 160,000 in the 2000/2001 season due to the high default rate among smallholder farmers (NEC 2002). In the targeted input program, community-based targeting was used through village task forces using administrative criteria – widows/widowers with no source of income, the aged without any support and families keeping orphans without support. Chinsinga (2005) finds that this sort of targeting failed to reach intended beneficiaries efficiently due to the spirit of egalitarianism given the high levels of poverty and limited quantities of inputs allocated to each area.

In 1996, under the Malawi Social Action Fund (MASAF) project the government started implementing the public works programme (cash-for-work) in areas that were food insecure throughout the country as a safety net. More recently, since the 2005/2006 agricultural season, the government has been implementing a nationwide Agricultural Input Subsidy Programme targeting 2.8 million smallholder farmers. Under this programme, the government is providing more than 67% subsidy on the purchase of fertilizers and seeds for smallholder farmers with subsidy coupons (ICL et al. 2007). The initial evaluations reveal that the policy has contributed significantly to the increase in maize production, reducing the need for expensive maize imports. In the 2005/2006 season, the private sector was largely excluded from the subsidy program and this negatively affected the sales volume of the private sector especially small-scale agro-dealers. However, the inclusion of the private sector in the 2006/2007 subsidy program has increased private sector sales of fertilizers although they still remain below the levels between 2000 and 2005 (ICL et al. 2007).

## AGRICULTURAL PERFORMANCE AND TRENDS IN POVERTY

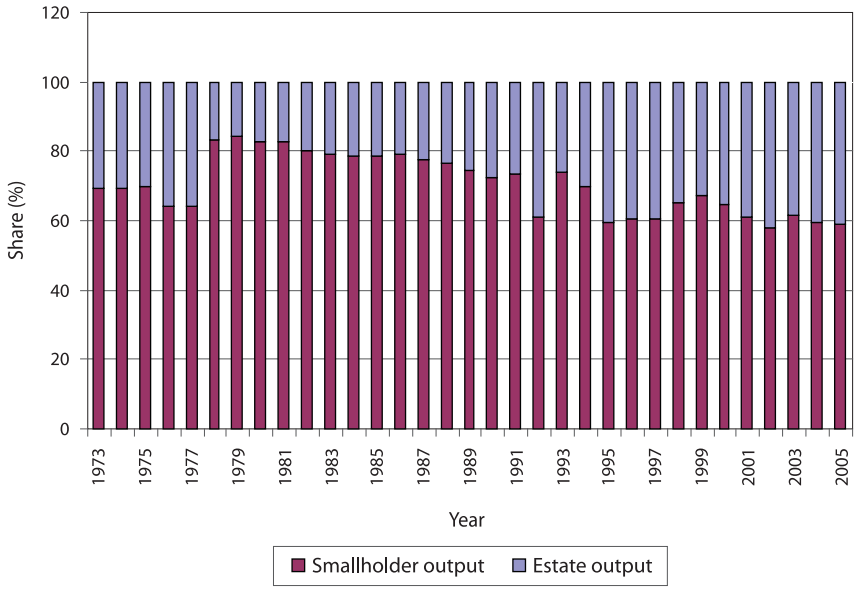
### The Structure of the Agricultural Sector

The agricultural-led development strategy has resulted in a dual agricultural system comprising estate (large-scale) production mainly for cash (export) crops and smallholder agricultural production mainly to support the food security needs of the population. This has emerged from the pursuance of four agricultural development objectives: to raise agricultural productivity and accelerate growth and export performance; to diversify the export base from the dominance of tea exports; indigenize estate (large-scale) agriculture; and to encourage production by smallholder farmers (Kaluwa et al. 1992). It has been noted that there was remarkable growth in estate agriculture particularly in burley tobacco production, with the ratio of the value of estate production to the value of officially marketed smallholder production increasing from 0.79 in 1964 to 1.93 in 1979 based on three-year moving averages (Kydd and Christiansen 1982).

Smallholder agriculture remains an important source of livelihoods for a majority of the rural population and approximately 84% of agriculture value-added comes from 1.8 to 2 million smallholder farmers who, on average, cultivate on less than 1 hectare of land (World Bank 2003). Others such as Alwang and Siegel (1999) estimate that 70% of Malawian smallholder farmers cultivate 1.0 hectare with the median area cultivated being 0.6 hectares, and devote 70% of the

land to maize, the main staple food.[6] Maize is the dominant crop, grown mainly to meet subsistence food needs, among smallholder farmers. Other studies have estimated that about 15% of the total maize production is marketed by smallholder farmers (Jayne et al. 2006). Other crops cultivated by smallholder farmers include cotton, groundnuts, beans, sorghum, burley tobacco, paprika, rice and cassava. World Bank (2003) notes that food crops account for 70% of agricultural value added. Figure 1 shows the dominance of smallholder output in total agricultural output between 1973 and 2005. The dual agricultural strategy of the 1960s and 1970s, which emphasized more on estate agriculture, led to increases in the share accounted for estates in 1975 and 1977. The share of estate agriculture fell in 1978, but there is an increasing trend thereafter until 2005, reaching the level witnessed in the mid-1970s.

*Figure 1. Malawi: Structure of agricultural output, 1973–2005.*




*Source* Computed from the Reserve Bank of Malawi (various) **Financial and Economic Review**

The estate sector on average accounts for about 30% of agricultural GDP and is dominated by major export crops – tea, sugar, tobacco and coffee. The estate sector generates most of the output in tea and sugar, with the smallholder sector contributing less than 20% of the output. Until the early 1990s, the estate sector was also a major producer of tobacco. The liberalization of burley tobacco production by the smallholder sector in the early 1990s has led to a structural shift in burley production. There has been a large shift into smallholder burley tobacco production with smallholder farmers accounting for more than 70% of production (MTPSD 2004). Others have noted that since the liberalization of burley tobacco growing by smallholder farmers, estate cultivation has become less profitable (World Bank 2003). Nonetheless, there has been a general decline in the share of smallholder agricultural output particularly since the late 1980s. This period also coincided with the period of structural adjustment reforms, revealing poor response of

[6] Kydd and Christiansen (1982) and Lele (1989) note that per capita maize output from smallholder farmers stagnated and the output of other crops either declined or showed no trend and small farms were getting smaller.

smallholder farmers to market-oriented policies. Some of the policies implemented imposed constraints on smallholder agricultural production, including the removal of fertilizer subsidies, removal of government administered credit system and the reduction in state marketing activities (particularly for cotton farmers). In addition, the period has also been characterized by adverse weather conditions, negatively affecting smallholder production.

## The Role of the Agricultural Sector

Table 2 presents the trends in the contribution of the agricultural sector to the Malawian economy. It is evident that the structure of the economy has remained largely unchanged since the 1970s, in terms of the contribution of the agricultural sector towards total output, total employment and total earnings. The average share of the agricultural sector in the 1970s is similar to the share of agriculture in GDP in the post-reform period, during which agriculture accounts for 39% of national output. The sectoral shift in national output marginally occurred during the reform period when the share of agriculture fell to 33% in the early 1990s. Similarly, the agricultural sector accounts for nearly 40% of total formal sector employment and it remains an important source of formal employment.

*Table 2. Malawi: Share of the agriculture sector, 1970–2005.*

| Indicator | Pre-Reform | Reform Period | | | Post-Reform | |
|---|---|---|---|---|---|---|
| | 1970-79 | 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-05 |
| Share of agricultural GDP | 39.63 | 37.23 | 35.88 | 33.36 | 38.60 | 38.49 |
| Share of total employment | 39.84 | 48.79 | 45.88 | 49.96 | 69.17 | 39.50 |
| Share of total earnings | 14.57 | 19.42 | 17.28 | 18.51 | 18.53 | - |

*Source* Computed by author from Reserve Bank of Malawi (various) **Financial and Economic Review**, GOM (various) **Economic Report**

## Trends in Agricultural Performance

The performance of the agricultural sector can be measured in various ways including the growth rate of agricultural output; growth in agricultural value added per capita; the growth rate of agricultural GDP accounted for by smallholder farmers; trends in food production of adequate food crops (food security); and export earnings.

### *Agricultural Output and Per Capita Output*

Table 3 presents the trends in the levels and growth in per capita output. GDP per capita shows a declining trend from MK122 per capita in the 1970s to MK113 per capita in the 2000s. The trend in agricultural GDP per capita is similar to that of GDP per capita, only that in the former the declining trend is reversed in the period after major policy reforms were completed. The smallholder sector which mainly produce food crops, also show a declining performance up to the early 1990s but production per capita increases in the late 1990s to reach levels recorded in the 1970s in the 2000s.

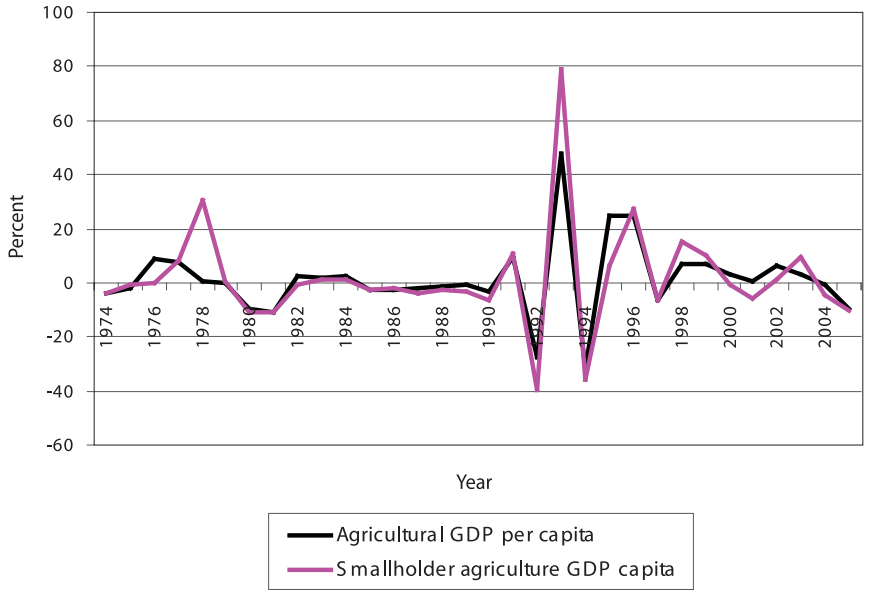
*Table 3. Malawi: Trends in agriculture sector output, 1970–2005.*

| Indicator | Pre-Reform | Reform Period | | | Post-Reform | |
|---|---|---|---|---|---|---|
| | 1970-79 | 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-05 |
| *Levels (MK 1978 prices)* | | | | | | |
| GDP per capita | 122.12 | 118.44 | 116.89 | 113.87 | 113.20 | 113.31 |
| Agricultural GDP per capita | 48.41 | 44.10 | 41.94 | 38.16 | 46.94 | 56.17 |
| Smallholder agriculture GDP/capita | 34.97 | 35.59 | 32.41 | 26.97 | 29.50 | 34.03 |
| *Growth Rates (%)* | | | | | | |
| GDP per capita | 2.40 | -2.08 | -0.20 | -2.66 | 3.17 | -0.28 |
| Agricultural GDP per capita | 1.90 | -2.70 | -1.89 | -1.19 | 11.55 | 0.36 |
| Smallholder agriculture GDP/capita | 5.80 | -4.07 | -2.88 | 1.52 | 10.57 | -1.78 |

*Source* Computed by author from Reserve Bank of Malawi (various) **Financial and Economic Review**, GOM (various) **Economic Report**

The growth rates in GDP per capita and agricultural GDP per capita were generally negative during the period of economic reform, with some improvements in the period after reforms particularly in the late 1990s. The late 1990s actually registered higher growth rates in GDP per capita and agricultural GDP per capita than the positive growth rates witnessed in the 1970s. The performance of the agricultural sector is also depicted in Figure 2, with respect to the growth rates in agricultural GDP and the smallholder agricultural GDP. The figure shows that the growth rates in agricultural GDP have been erratic and inconsistent over time; with similar trends in total agricultural GDP and smallholder agricultural GDP per capita. The first episode of a decline of agricultural GDP was witnessed in the late 1970s following an economic crisis that led to the adoption of structural adjustment programs. The longest episode of agricultural GDP per capita decline occurred during the period of economic reforms, with sustained declines from 1984 to 1989. Thereafter, the performance has been erratic, with the major declines in 1992 and 1994 of -27% and -32%, respectively. The recent trends show a disappointing performance of the agricultural sector. For example, the data show some stagnation of agricultural output recently, particularly since 2000.

*Figure 2. Malawi: Trends in agricultural output per capita growth rates, 1974–2005.*




*Source* Computed from the Reserve Bank of Malawi (various) **Financial and Economic Review**

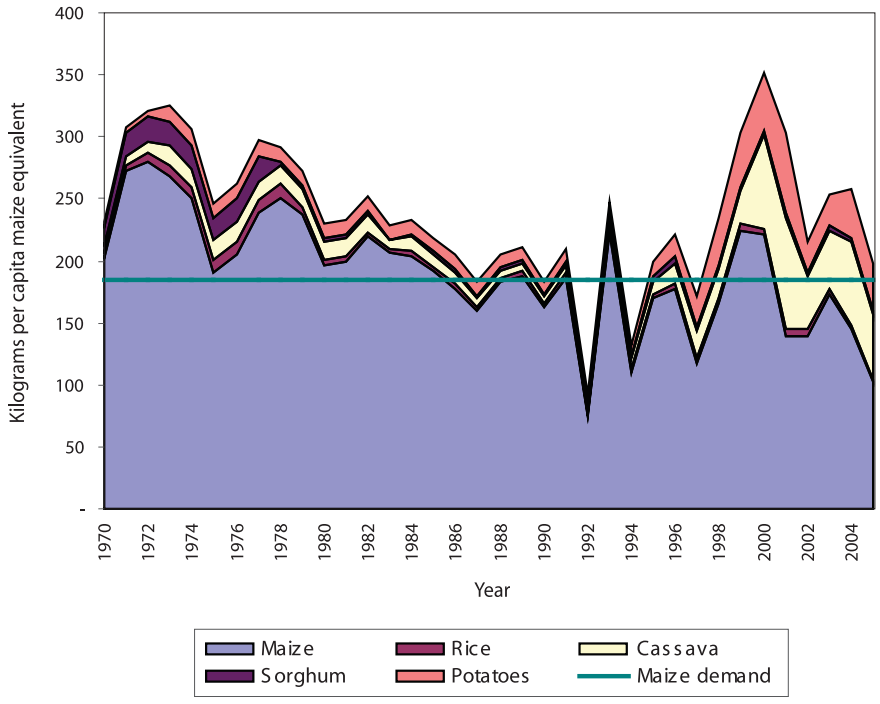
Generally, the performance of the agricultural sector, as was the performance of many sectors in the economy, was impressive in the 1960s and early 1970s, but stagnated in the late 1970s and early 1980s through to the early 1990s with marginal improvements since 1995.

### *Food Production and Food Security*

Achieving national food security has been one of the objectives of agricultural strategies since independence. In Malawi, national food security is mainly defined by the government in terms of people's access to maize, the main staple food. Thus, even if the total food production is above the minimum food requirement but maize supply is below the minimum food requirement, the nation is deemed to be food insecure (Chirwa and Zakeyo 2003). The nation, therefore, faces a food crisis if the production and supply of maize falls below the minimum required levels. Other food crops such as rice and cassava are alternatives to maize in some parts of the country. Maize has remained the main staple food for Malawians, in spite of government policy to promote other crops such as cassava and rice as alternatives to maize. In a study of recipients of the free inputs in the 1999/2000 season, 96.4% reported that maize was the staple food for the household, while cassava is a staple food only for 2.8% and rice for 0.5% of the sampled households (NSO 2000).

Measured against the minimum maize requirement of 185 kilograms per capita, Malawi had been self-sufficient in maize production in the 1960s and 1970s during which domestic production has been above the minimum requirement (Figure 3). During these periods, records in Malawi indicate that no maize imports were required to augment domestic supply. Msukwa (1994) notes that with an increase in the population since the mid-1980s, Malawi moved from a situation of national self-sufficiency in food production to recurring food deficits. The period of economic reforms has been characterized by increased imports of maize to satisfy domestic demand, partly due to the poor weather conditions, low maize productivity and high population growth. In some cases, other food

*Figure 3. Malawi: Trends in main food staples per capita, 1974–2005.*




*Source* Computed from FAOSTAT data

crops such as rice, cassava, sorghum and potatoes are bridging the national shortages in maize production and supply. Cassava production has substantial increases in the late 1990s, but only a few households produce cassava.[7]

According to World Bank (2003), per capita maize production since the early 1990s has fluctuated between 170 and 220 kilograms, with sharp declines in 1992 (67 kilograms) and 1994 (105 kilograms). At household level, recent surveys indicate that the average months of food security for rural households from own production in a normal year is between 6 and 7 months. For instance, World Bank (2003) notes that food supplies in Malawi fluctuated between 1.6 and 1.7 kilocalories (kcal) per capita per day during the 1996-1999 period compared to the minimum requirement of 2.2 kcal per capita per day. The increase in food production in 1999 and 2000 has been largely attributed to good weather and the implementation of the agricultural safety net programmes including the free 'starter pack' and targeted input program. In addition, it has been observed that there was an increase in input credit facilities under the agricultural productivity and improvement programme and from the Malawi Rural Finance Company (World Bank 2003).

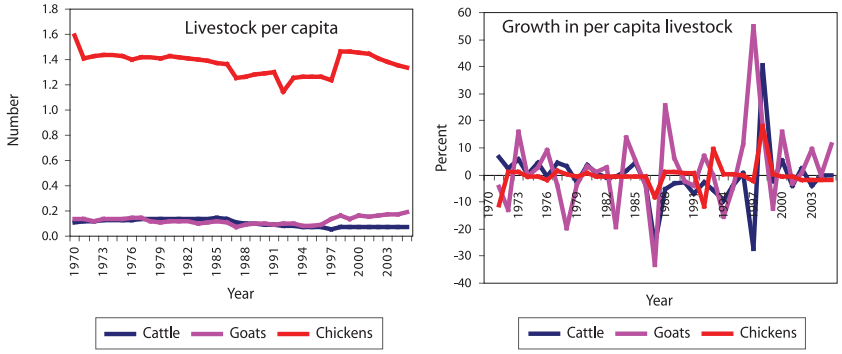
The decline in maize production began in the late 1970s and the first national maize deficit was witnessed in 1987 and the worst situation occurred in 1992. Nonetheless, it is evident from Figure 3 that maize production in the past two decades has fallen below the minimum national food requirement for a staple. Recent trends in maize production show declining production. These maize shortages have led to surges in the importation of maize to meet the maize demand (Chirwa and Ngalawa 2006). According to ADE (2000) imports of maize have typically been between 100,000 and 150,000 metric tonnes during the years of shortages since 1987. The situation is worst at household level, with a significant number of households experiencing food shortages, and relying on food relief. NSO (2005) finds that about 57% of households reported having inadequate food consumption in 2004/2005. GOM (2006) notes that Malawi continues to suffer from chronic food insecurity with many of the problems being structural and economic in nature, and the aggregate food production failing to keep pace with population growth. Most households, particularly in the rural areas, experienced agricultural related shocks between 2000 and 2005; the most significant shocks being lower crop yield and large increases in the price of food affecting 69 and 79% of rural households, respectively (NSO 2005).

### *Livestock Production and Trends*

The performance of the livestock sector has not been encouraging. Figure 4 presents the trends in levels and growth of livestock per capita. The per capita number of chickens and cattle has been declining, with the average in the past five years being lower than that recorded in the early 1970s. The per capita number of goats, however, has increased marginally. The growth rates in the stock of livestock, however, show unstable trends, with gains in the one year being almost wiped out the following year. The poor performance of the livestock sector is partially a reflection of the lack of emphasis in the agricultural strategies and policies towards the sector. For instance, the dairy farming sector in Malawi is just being developed. Chirwa and Ngalawa (2006) note several capacity constraints experienced by the dairy farming sector including lack of financial resources to purchase cows, poor farm management, inadequate local capacity to champion dairy business development, outdated machinery in some dairy processing plants and lack of competition in the dairy processing sector.

[7] World Bank (2003) notes the estimates for root crops (cassava and sweet potatoes) tend to be overstated and understate the potential food shortages.

*Figure 4. Malawi: Livestock production trends, 1970–2005.*




*Source* Computed from FAOSTAT data

### *Agricultural Trade Performance*

The agricultural sector contributes more than 90% of foreign exchange earnings but the export basket is dominated by the traditional exports of tobacco, tea and sugar (Table 4). Tobacco is the major export crop in Malawi accounting for about 71% of total exports in the 1995-1999 period from 47.7% in the 1970s, although its share in exports dropped to approximately 55% more recently due to declining prices. Tea has traditionally been the second foreign exchange earner but its significance has been declining from 21.2% in the 1970s to 8.8% in the late 2000s. The recent trends show that sugar has traditionally been the third most important export commodity and is becoming the second from tobacco accounting for 11.4% of export earnings in the 2000-2005 period. With the liberalization of burley tobacco production and marketing, smallholder farmers account for about 70% of the total national output. Tea and sugar remain export crops that are largely grown by estates, and domestic and multinational corporations, while groundnuts are solely grown by smallholder farmers.

*Table 4. Malawi: Composition of export earnings by main commodity (%), 1970–2005.*

| Commodity | Pre-Reform | Reform Period | | | Post-Reform | |
|---|---|---|---|---|---|---|
| | 1970-79 | 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-05 |
| Tobacco | 47.7 | 50.4 | 57.7 | 69.9 | 70.5 | 54.6 |
| Tea | 21.2 | 18.2 | 14.4 | 9.7 | 9.0 | 8.8 |
| Sugar | 7.1 | 13.3 | 10.0 | 6.7 | 7.0 | 11.4 |
| Nuts | 7.7 | 3.0 | 2.0 | - | - | 1.9 |
| Cotton | 2.9 | 0.7 | 1.2 | 1.1 | 1.7 | 2.1 |
| Rice | - | 0.4 | 0.3 | 0.2 | 0.5 | 0.2 |
| Coffee | - | 0.7 | 3.4 | 2.3 | 2.7 | 0.8 |
| Pulses | - | 1.6 | 2.0 | 0.5 | 1.7 | 0.8 |
| Maize | - | - | - | 0.1 | 0.3 | - |
| Other (non-agric) | 13.4 | 11.6 | 8.9 | 9.5 | 6.6 | 19.4 |

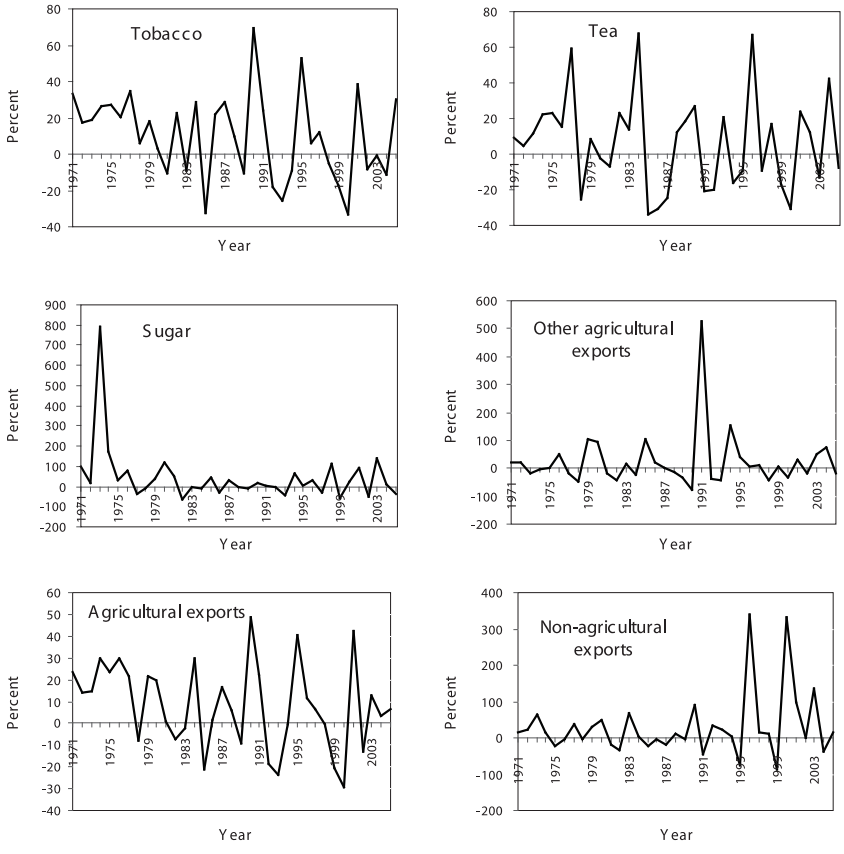
*Source* Computed based on NSO (various) **Statistical Yearbook** and Reserve Bank of Malawi (various) **Financial and Economic Review**

The trends in export composition also show that the post-reform period is associated with the emergence of new export crops such as coffee, pulses and rice and the re-emergence of the nuts (ground, cashew and macadamia) market, and the increase in the share of non-agricultural exports. The traditional exports of tobacco, tea and sugar remain the dominant exports for Malawi. Apart from tobacco, production of tea and sugar is dominated by estate agriculture; the participation of smallholder farmers

in production is marginal. Paprika is another emerging crop that is substituting tobacco in the central region, but contributes insignificantly to export earnings. Groundnuts, traditionally one of the smallholder cash crops, used to be one of the major export crops until the late 1980s when the export market collapsed between 1990 and 1999. One likely reason for the collapse of the export market is that prior to liberalization of agricultural marketing services, groundnuts bought from smallholder farmers were being exported by ADMARC, but after liberalization ADMARC's role in the marketing of groundnuts has diminished substantially. Domestic trade in groundnuts is dominated by small private traders who eventually sell to Malawian manufacturers. More recently, the cultivation of groundnuts has been promoted by the National Smallholder Farmers' Association of Malawi (NASFAM), resulting in its re-emergence in export earnings.

Overall, while export earnings in dollar terms have been increasing from an average of US$134 million in the 1970s to US$467 million in the late 1990s, exports fell to US$444 million in the 2000s. The recent decline in export earnings has been attributed to the declining international prices of exports, declining profitability in smallholder agriculture resulting from disproportionate increases in prices of inputs, high transport costs and a poor macroeconomic environment (World Bank 2003). The disappointing trade performance of the agricultural sector is reflected in erratic growth rates in export earnings from major agricultural exports (Figure 5). Most negative growth rates of major export crops have been witnessed in the reform and post-reform periods, with growth rates mostly reverting to a zero mean. While growth rates have been high for tobacco and tea, the reform and post-reform periods have also experienced substantial negative growth rates, almost wiping out the gains made in the high growth years.

*Figure 5. Malawi: Growth in agricultural exports, 1971–2005.*




*Source* Computed based on NSO (various) **Statistical Year book** and Reserve Bank of Malawi (various) **Financial and Economic Review**

A similar picture emerges with respect to total agricultural exports, but less so for non-agricultural exports. Malawi witnessed high, positive and consistent positive growth rates in total agricultural exports in the 1970s. These positive outcomes were due to policy consistencies and the active state intervention in agricultural production and marketing systems. For instance, ADMARC marketing activities facilitated the coordination of smallholder agricultural exports through its national purchase of small quantities from smallholder farmers, grading and processing for exports. The situation changed to swings in the growth rate since the adoption of structural adjustment programs, with the average annual growth of agricultural exports declining from 19% per annum in the 1970s to 5% per annum between 1980 and 2005. On the other hand, the performance of non-agricultural exports, though not consistent, has generally improved over the past decade.

### *Agricultural Growth and Poverty Outcomes*

The difficulties that arise in linking growth to poverty reduction are well-known in the literature. World Bank (2001), for instance, notes that the patterns of growth, the changes in the distribution of income and resulting opportunities and the rates of poverty distribution are a result of a complex interaction among the policies, institutions, history and geography of countries. Hence, the extent to which a given rate of growth that translates into poverty reduction will depend on how distribution of income changes with growth and on initial inequalities in incomes, assets and access to opportunities that allow poor people to participate in generating growth.

Recent debates in the growth-poverty nexus point to the fact that the poor are likely to benefit from growth if such growth occurs in sectors in which a large proportion of the poor actively participate and derive their livelihoods (Hoekman et al. 2001), such as the agricultural sector in Malawi. There are several ways through which agricultural growth and development will affect the welfare of the population, particularly the poor. First, the landless or near landless may benefit from agricultural development through paid employment opportunities in off-farm activities created by technological change. Second, those who have land may benefit from higher productivity brought about by technological changes. The extent to which agricultural development can have greater impact on poverty also depends on the availability of land. However, Bigsten and Shimeles (2003) assert that the direction of causality of the growth-income distribution-poverty relationship is still very unclear in theory as well as in empirical studies.

The link between agricultural growth and poverty can be assessed through malnutrition levels and the extent of poverty. However, it is difficult to empirically link agricultural growth to poverty and food security (such as malnutrition rates) indicators. Although time-series data exists on agricultural performance indicators, there is a lack of comparable data on poverty and malnutrition. Apart from the problem of limited available data, there are differences in the methodologies used in collecting data for the same indicator over time. The limited available data is used in assessing the link between agricultural growth and poverty indicators but the analysis should be interpreted with some caution.

#### *Malnutrition Rates*

The agricultural strategy in Malawi focuses on food production and food security with the ultimate objective of uplifting the nutritional status of her population. Several studies have been conducted since the early 1990s to determine the trend in the nutritional status of the population. One indicator of the food and agricultural policy and nutrition education programmes that the government has pursued over the years is the nutritional status of children under five years of age. Table 5 presents the trends in the nutritional status of the under-fives and growth in

*Table 5. Malawi: Trends in the malnutrition and growth of children under-five, 1992–2005.*

| Malnutrition (%) | 1992 (DHS) | 1998 (IHS) | 2000 (DHS) | 2004/05 (IHS) |
|---|---|---|---|---|
| Stunting | 48.7 | 59.1 | 49.0 | 43.2 |
| Wasting | 5.4 | 9.3 | 5.5 | 4.6 |
| Underweight | 27.2 | 29.6 | 25.4 | 22.0 |
| Agricultural growth (%) | 1990-94 | 1995-99 | 2000-2005 | |
| Agricultural value-added per capita growth | -1.19 | 11.35 | 0.36 | |

*Notes* DHS = Demographic and Health Survey, IHS = Integrated Household Survey
*Sources* NSO (2002); NSO and ORC Macro (1994, 2001); GOM et al. (2005)

agricultural value added per capita between 1992 and 2005. Three protein-energy malnutrition indicators have been used in Malawi: stunting (low height-for-age) representing chronic malnutrition, wasting (low weight-for-height) representing acute malnutrition and underweight (low weight-for-age) describing the overall measure of malnutrition. The baseline malnutrition indicator for monitoring the Millennium Development Goals is the proportion of children underweight, recorded at 30% in 2000 (GOM 2006).

The progress in the three indicators of nutritional status has been mixed. Comparing the Demographic and Health Survey (DHS) data, stunting increased marginally from 48.7% in 1992 to 49% in 2000. It is also apparent that stunting has remained relatively stable despite the many economic reforms implemented by the authorities that might have uplifted the status of the population. Similarly, the indicator of acute malnutrition (wasting) shows a similar trend increasing marginally between 1992 and 2000. The overall measure of malnutrition improved marginally from 27.2% in 1992 to 25.4% in 2000. Using the Integrated Household Survey (IHS) methodology, the proportion of underweight children decreased from 29.6% in 1998 to 22% in 2004/05. Similarly, there are substantial decreases in stunting and wasting between 1998 and 2004/05. The data suggests a weak link between indicators of malnutrition and agricultural growth. For instance, while underweight improved using the IHS methodology, the average annual growth rate of agricultural value added per capita substantially fell from approximately 11% to less than 1%. Similarly, using the DHS methodology, the malnutrition indicators increased marginally, yet the growth rate in agricultural value added per capita increased from approximately -1.2% to 0.4% per annum.

*Poverty Levels*

There is also weak evidence to suggest a positive link between poverty and agricultural growth in Malawi (Table 6). Within a seven-year period between 1998 and 2005, there has been very little or statistically no change in the poverty levels. Using comparable methodologies, the proportion of

*Table 6. Malawi: Poverty and agricultural growth, 1998–2005.*

| Poverty head count (%) | 1998 | 2004/05 |
|---|---|---|
| Poor | 54.1 | 52.4 |
| Ultra-poor | 23.6 | 22.4 |
| Agricultural growth (%) | 1995-99 | 2000-05 |
| Agricultural value-added per capita growth | 11.35 | 0.36 |

*Sources* GOM (2006)

the poor fell from 54.1% in 1998 to 52.4% in 2005. During the same period, growth in agricultural value-added per capita fell from approximately 11.4% to 0.4% per annum.

Although Malawi had almost completed economic policy reforms towards a market economy and marginal growth in agricultural output, the qualitative poverty monitoring study conducted in 2000 revealed that the poverty situation was worsening (GOM 2002). With the policy of agricultural input subsidization, leading to increase in maize production and sustained low consumer prices for maize, it is likely that poverty will fall. Since most of the households have adequate food, more are likely to engage in productive activities and lower maize prices will increase the real incomes of the poor and will facilitate diversification into cash cropping by some farmers – if the relative prices of maize remain low.

## EXPLAINING AGRICULTURAL PERFORMANCE IN MALAWI

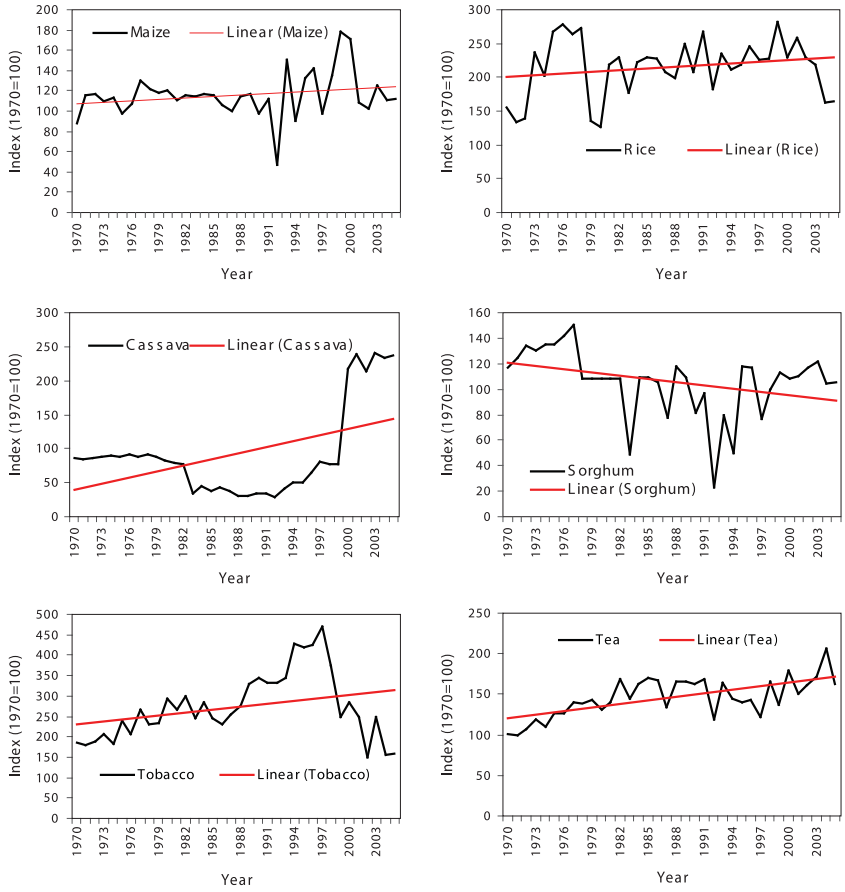
Generally, the performance of the agricultural sector in Malawi has been disappointing, in spite of the many policy reforms that have been implemented in the sector. GOM (2006) notes that agriculture in Malawi is characterized by low and stagnant yields, over-dependence on rain-fed farming which increases vulnerability to weather related shocks, low level of irrigation development, and low uptake of improved farm inputs. In addition, there is low profitability of smallholder agriculture which has been influenced by weak links to markets, high transport costs, few farmer organizations, poor quality control and lack of market information. The interplay of these various factors has negatively affected agricultural development and growth, with implications on the contribution of agriculture towards poverty reduction.

### Productivity

The poor performance of the agricultural sector in Malawi is partly attributed to the low levels and growth rates in productivity. Figure 6 presents trends in productivity of main agricultural crops in Malawi between 1970 and 2005. Productivity is measured as output per area of land cultivated in hectares, but has been indexed to base 1970. The red line is the trend line. The figure shows that productivity in most of the agricultural crops has not substantially improved beyond the levels witnessed in the 1970s, except for a few crops.

With respect to the main food crops, the trend lines show marginal increases in maize and rice productivity, a substantial increase in cassava productivity and a decline in sorghum productivity. For instance, in maize production, the trend line shows that productivity has increased marginally over time, although with several swings in the period after 1990. Within the period 1990 to 2005, maize productivity slumped by 53 units in 1991 below the 1970 level but was above the 1970 level by 78 units in 1999. The gains in productivity have been substantial in cassava production particularly since 1999, although just a small proportion of smallholder farmers cultivate cassava. Until the early 1990s, when burley tobacco production was liberalized, tobacco farming registered steady improvements in productivity with a modest positive trend line, although there has been a reversal more recently. Tea is the only crop that has witnessed steady improvements in productivity since 1970. There has, however, been a declining productivity in the past six years in both maize and rice production. In fact, most of the crops show negative rates of productivity growth in the 2000-2005 period, with the exception of beans and tea (Table 7).

*Figure 6. Malawi: Productivity trends in main agricultural crops, 1970–2005.*




*Source* Computed based on FAOSTAT data

*Table 7. Malawi: Productivity growth by main commodity (%), 1970–2005*

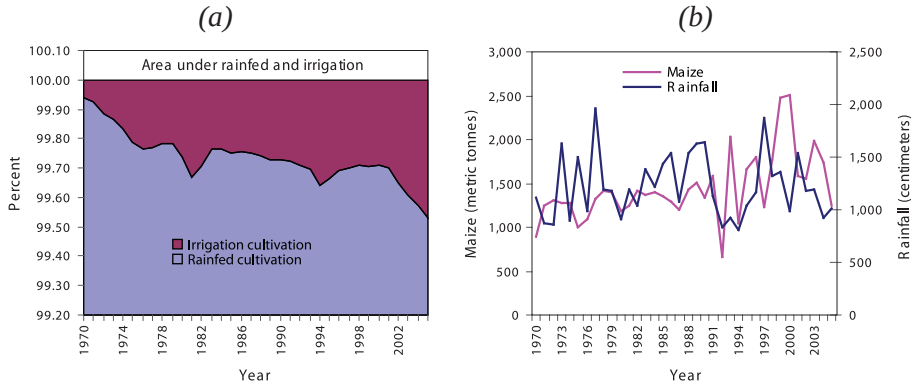
| Commodity | Pre-Reform | Reform Period | | | Post-Reform | |
|---|---|---|---|---|---|---|
| | 1970-79 | 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-05 |
| Maize | 2.74 | -0.06 | 0.27 | 23.94 | 18.48 | -5.67 |
| Rice | 3.43 | 14.67 | 2.97 | -0.08 | 6.47 | -7.79 |
| Cassava | 0.37 | -7.32 | -6.97 | 11.92 | 10.19 | 32.21 |
| Sorghum | 0.08 | 13.47 | 3.06 | 24.80 | 29.17 | -0.93 |
| Groundnuts | -0.82 | 1.02 | -5.69 | 18.18 | 19.46 | -4.53 |
| Beans | 0.01 | 0.09 | 0.43 | -0.49 | -6.08 | 1.54 |
| Pulses | -0.05 | -0.38 | -0.65 | -0.92 | -0.99 | -0.49 |
| Cereals | 2.57 | 0.16 | 0.32 | 22.15 | 18.14 | -5.99 |
| Tobacco | 7.86 | 5.51 | 3.64 | 5.88 | -8.84 | -1.41 |
| Tea | 5.45 | 3.32 | 1.35 | -0.24 | 0.70 | 4.50 |
| *Average* | *2.16* | *3.05* | *-0.13* | *10.51* | *8.67* | *1.14* |

*Source* Computed based on FAOSTAT data.

## Weather Conditions and Agricultural Performance

The agricultural sector is heavily dependent on rain-fed cultivation. Although the potential for irrigation farming exists, there has been a marginal increase in the area under irrigation cultivation (Figure 7a). In 1970, only 0.06% of agricultural cultivatable land was under irrigation, but this has increased

*Figure 7. Malawi: Rainfall and maize production, 1970–2005.*




*Source* Computed based on NSO data

marginally to 0.47% in 2005. More recently, the government and non-governmental organizations have been promoting winter cropping using low cost irrigation equipment such as treadle pumps.

Of the 3 million hectares of agricultural cultivatable land, more than 99% of agricultural land remains under rain-fed cultivation. This makes agricultural production highly prone to adverse weather conditions such as droughts and floods. It is, therefore, not surprising that agricultural production is highly correlated with good rainfall. Most of the bumper harvest in maize, the main crop produced by smallholder farmers, has been witnessed in years that Malawi has had good rainfall. ICL et al. (2007) notes that the relationship between agricultural production and rainfall is a complex one, as too little rainfall or too much rainfall both have adverse effects. This complex relationship is also demonstrated in Figure 7(b), which shows no clear relationship between rainfall and maize production. Malawi, like many Southern African countries, has recently experienced adverse weather conditions that have affected production of both food and cash crops. Table 8 shows the years that have been affected by adverse weather conditions and the resulting agricultural performance between 1980 and 2005. It is evident that in years of poor weather conditions agricultural growth and growth in maize output has been largely negative.

*Table 8. Weather conditions affecting agricultural production, 1980–2005.*

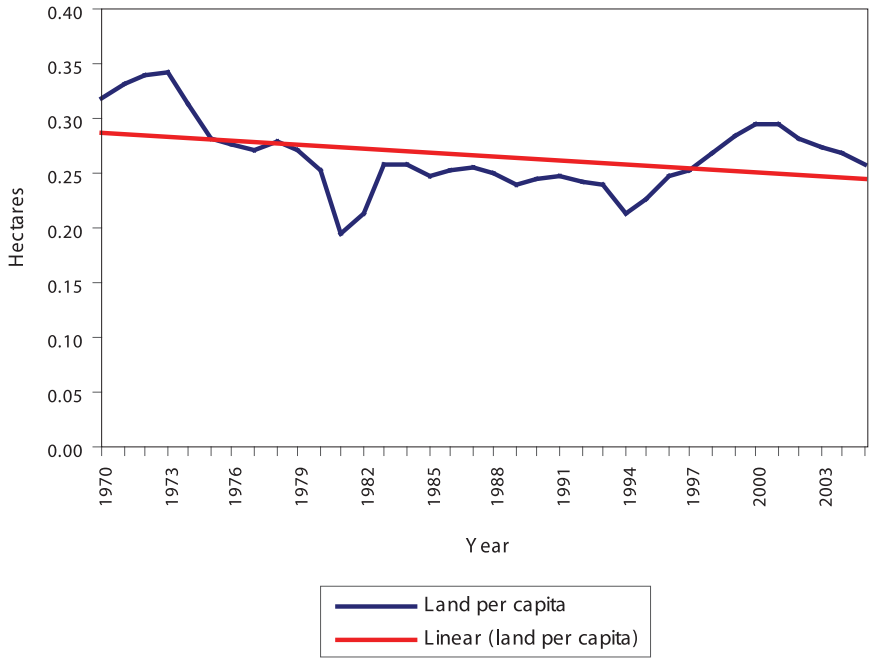
| Year | Adverse weather conditions | Growth in agricultural value added (%) | Growth in maize production (%) |
|---|---|---|---|
| 1980 | 1979/1980 season: drought affecting many districts particularly in the southern region | -9.5 | -14.9 |
| 1981 | Variable rainfall in some parts of the country | -10.8 | 5.0 |
| 1992 | 1991/1992 season: drought | -27.4 | -58.7 |
| 1993 | 1993/1994 drought conditions, low uptake of hybrid seeds | -32.2 | -48.9 |
| 1998 | 1997/1998 drought in Karonga Agricultural Development Division and floods in Shire Valley in the 1997/1998 season | -6.2 | 44.5 |
| 2001 | 2001 dry spells and floods in some areas, low input uptake | 0.3 | -36.5 |
| 2002 | 2001/2002 season: early rains, late rains, dry spell in February and floods in the escarpment and lakeshore exacerbated by low input use – scaling down of Starter Pack program and lack of credit (14% decrease in maize production) | 6.3 | -2.0 |
| 2005 | 2004/2005 season: poor rains | -9.7 | -27.7 |

*Source* Chirwa and Ngalawa (2006)

## Landholding Sizes and Fragmentation

The promotion of smallholder agriculture has been on customary land, land in which rights to cultivate and transfer land are conferred by traditional chiefs. With the growing population, customary land has become more fragmented and the landholding sizes have declined over time. GOM and World Bank (2006) find that the average landholding size per household in Malawi is 1.2 hectares while the average land per capita is 0.33 hectares. In addition, per capita landholdings are highly skewed, with the poor holding only 0.23 hectares per capita compared to the non-poor that hold 0.42 hectares per capita. The small landholding sizes are reflected in Figure 8, which shows the trends in per capita cultivatable land in Malawi. The trend line shows that per capita landholdings have been declining since the 1970s, partly due to the increasing population that has been growing at an average rate of 3% per annum. The peak between 1998 and 2005 is due to declining estimated population growth and increases in cultivatable land. The increase in cultivatable land may be due to the cultivation of marginal and less productive land.

*Figure 8. Malawi: Trends in per capita cultivatable land, 1970–2005.*




*Source* Computed based on FAOSTAT data

The methods of cultivation on these small landholdings among smallholder farmers remain traditional and non-mechanized. The diminishing land sizes have implications for technology adoption and farm mechanization. There have been several government efforts promoting the adoption of fertilizers, hybrid seeds and modern methods of farming, and the provision of price incentives through progressive market reforms, but due to diminishing landholdings the supply response has remained weak. National survey data show that less than 50% of smallholder farmers use hybrid or improved maize seeds and less than 35% of farming households use fertilizers. Without the input support system the uptake of fertilizers among smallholder farmers is quite low. Several studies show evidence that adoption of agricultural productivity-enhancing technologies in Malawi is positively associated with the size of cultivatable land (Green and Ng'ong'ola 1993; Zeller et al. 1998; Chirwa 2005). Dorward (1999) finds a significant positive relationship between output per capita and farm size

while Chirwa (2002) finds farmers with small landholdings to be technically inefficient in maize production. Other studies, however, find an inverse relationship between maize productivity and land while there is a positive relationship between land and tobacco productivity.

**Markets and Value Addition**

Since the adoption of structural adjustment programs, there has been a progressive liberalization of markets, with the state withdrawing its direct interventions in various markets including input markets, output markets and financial/capital markets. However, the liberalization of markets has had little impact on agricultural development in Malawi. The period during which Malawi was implementing structural adjustment reforms, which mainly focused on the agricultural sector, has also registered lower average growth in the economy and the agricultural sector, while the poverty situation has worsened. The failure of economic liberalization in agriculture has been attributed to many factors (Dorward et al. 2005). Those that advocate economic liberalization attribute the failure of liberalization to partial liberalization and the many policy reversals and policy uncertainties witnessed during the period. For instance, the withdrawal of fertilizer subsidies that started in 1987 was reversed in 1992 after a significant drop in the uptake of fertilizers by smallholder farmers, although eventually subsidies were finally removed in 1996. Another cited example of liberalization is the liberalization of agricultural markets which has not been fully implemented, with the state marketing agency continuing to play a significant role in the marketing of smallholder agricultural produce (Chirwa 1998). These uncertainties have created disincentives for the development of the private sector. Others such as Dorward et al. (2005) note that liberalization ignored the importance of market coordination and the positive role the state plays in 'kick starting' agricultural development in economies with thin markets. For instance, the collapse of the government administered credit scheme in Malawi in 1992 adversely affected fertilizer use among smallholder farmers leading to declining productivity.

Product markets and input markets for agricultural growth are functioning imperfectly. Many smallholder farmers are not integrated into the market system. Most smallholder farmers are poorly organized and, therefore, lack bargaining power over pricing of agricultural produce. Transaction costs remain high due to low economic activities, low traded volumes of agricultural produce, inputs and agricultural finance (Dorward and Kydd 2004). There is variable access to input markets and output markets are less favorable to smallholder farmers. Access to agricultural finance is also limited among smallholder farmers, particularly since the collapse of the smallholder credit scheme within the coordinated structure of ADMARC. Commercial banks and microfinance institutions consider lending to the agricultural sector as a risky investment due to the seasonality of the income stream and the unpredictability of the natural environment particularly for rain-fed agriculture that is practiced in Malawi. Thus, most financial institutions are willing to lend to non-farm activities. The major challenges are how to coordinate the complementary services for the promotion of agricultural growth in a liberalized market in which most markets are still thin and working imperfectly; how to develop the private sector and ensure that it operates efficiently; how to achieve scale in the product markets for export crops; and the role of the state in the market. The other challenge is how to restore agricultural credit given the past repayment problems.

Associated with the problem of market liberalization is the lack of value addition in agricultural products. There is very little agro-processing that is taking place and most smallholder farmers sell raw agricultural produce without adding value. This has implied that the returns to agriculture have been lower than otherwise. For the main cash crops, such as tobacco and cotton, which is mainly

grown by smallholder farmers, there is no value addition by smallholder farmers. This has, in most cases, affected the prices at which smallholder farmers sell these commodities to the large-scale processors. However, there are efforts to promote value addition in agriculture. According to GOM (2006) one of the key areas of agricultural development policy is to promote value addition to agricultural products by smallholder farmers. There are several initiatives that are promoting value addition, including the One Village One Product (OVOP) project in which rural farmers are assisted with in procuring milling and processing facilities.

**Policy Environment and Supply Responses**

Since 1980 there have been policy reforms that have mainly targeted the agricultural sector. However, such policy reforms have not been effective in changing the structure and the performance of the agricultural sector in Malawi. Although structural adjustment programs have resulted in removing policy linked distortions in the agricultural sector to a large extent (Chirwa and Zakeyo 2006), the agricultural sector still experiences problems of physical access to domestic markets, access to rural credit facilities, low productivity and inequitable distribution of land. Kaluwa et al. (1992) also notes that although the reforms were necessary to halt the further deterioration in the economy, they were not sufficient for increasing the incomes and growth potential for a majority of the Malawian population. Smallholder production, especially in maize yields, and expansion of acreage has been devoted to food production rather than diversification into high value or export crops. The disappointing performance of the agricultural sector is at variance with intentions of the many economic reforms and policies aimed at enhancing the productivity of smallholder agriculture that have been implemented by the government.

One characteristic feature of development planning in the past two decades has been policy incoherence and policy overlaps. Since 1994, Malawi has developed at least five policy documents with focus on the agricultural sector to guide economic development. However, there have been too many overlaps of these documents more recently, partly due to bilateral and multilateral donors that tend to influence economic reforms and development agenda. For instance, the Malawi Poverty Reduction Strategy (MPRS) launched in 2002 was expected to run up to 2005, but was superseded by the Malawi Economic Growth Strategy (MEGS) in 2004, which was superseded by the Malawi Growth and Development Strategy (MGDS) in 2006. While smallholder agriculture took center stage in driving pro-poor growth in the MPRS, large farmers and private businesses take center stage in the MEGS and MGDS. In contrast, in the 1970s, policy coherence and consistence was achieved through the development of well-thought strategies that existed within their planning horizon, with no overlaps between the strategies.

**Trends in Public Investments in Agriculture**

There has been a general concern that funding, including donor funding, towards the agricultural sector in sub-Saharan African (SSA) countries has been declining (Eicher 2003). Some have attributed this declining support towards agriculture as one cause of underperformance of SSA agriculture. Africa has not devoted adequate resources to the agricultural sector, and funding towards agricultural research and development has been declining (AU and NEPAD 2003). The share of the agricultural budget in SSA has fallen to around 5% of national budgets. In 2003, the African Union Assembly committed to implement the Comprehensive Africa Agriculture Development Programme (CAADP) jointly formulated with the New Partnership for Africa's Development

(NEPAD) and declared their commitment to increase spending in agriculture to 10% of the national budget. Table 9 shows budget allocation trends in Malawi between 1970 and 2005. It is evident that government expenditure on the agricultural sector has been declining, particularly since the 1980s when Malawi started implementing structural adjustment programs.

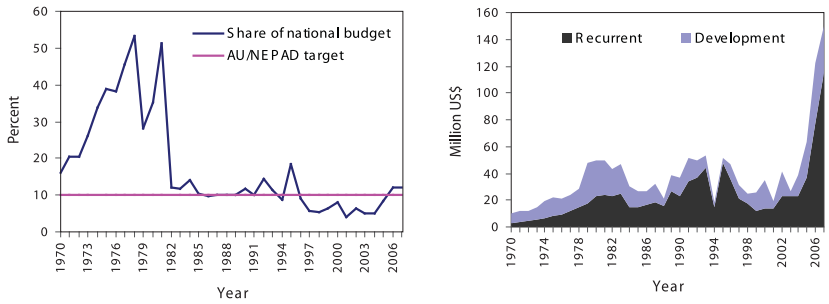
*Table 9. Malawi: Trends in agriculture sector government spending, 1970–2005.*

| Commodity | Pre-Reform | Reform Period | | | Post-Reform | |
|---|---|---|---|---|---|---|
| | 1970-79 | 1980-84 | 1985-89 | 1990-94 | 1995-99 | 2000-05 |
| Agriculture share in budget (%) | 32.15 | 24.83 | 10.08 | 11.17 | 8.98 | 6.13 |
| Agriculture budget ($m) | 21.30 | 43.98 | 29.05 | 41.90 | 36.12 | 37.48 |
| Recurrent budget ($m) | 8.39 | 21.69 | 18.52 | 30.56 | 26.66 | 22.17 |
| Development budget ($m) | 12.91 | 22.29 | 10.54 | 11.34 | 9.46 | 15.31 |
| Agriculture spending/capita ($) | 4.03 | 6.88 | 3.85 | 4.77 | 3.51 | 3.21 |

*Source* Computed based on NSO data

Government budget allocation to the agricultural sector declined from approximately 32.2% of the fiscal budget in the 1970s to 6.1% in the past six years. This is also reflected in Figure 9(a), in which the share of agriculture in the national budget increased from 16% in 1970 to the highest ever recorded level of 53% in 1978, but fell in 1979 due to the economic crisis that was triggered by the oil shock in 1979. However, agricultural expenditure rose to 51% in 1981 before falling to 12% in 1982, and the declining trend has continued thereafter. The share of agriculture in the fiscal budget had been above the 10% that has been declared by the AU as necessary to achieve sustainable agricultural development. This is also the period during which Malawi witnessed high agricultural growth rates and high growth rates in GDP. In the past decade, budget allocation to the agricultural sector has fallen well below the AU/NEPAD target of 10%. The reduction in the share of agricultural budget is a direct reflection of the government's withdrawal of services in the sector under structural adjustment programs. Since 1981, the government has been reducing its direct intervention in the agricultural sector including reduction in extension staff through a policy of non-replacement of vacant positions, reduced funding to extension training institutions, withdrawal of input subsidies, withdrawal of credit provision and reduction in funding agricultural research and development.

*Figure 9. Malawi: Trends in agricultural sector expenditure, 1970–2005.*




*Source* Computed based on NSO data.

In terms of the allocation of agricultural spending, Figure 9(b) shows that both recurrent and development expenditure had been increasing in the 1970s, but a substantial decline in development

expenditure is noticeable in the late 1990s. This is the period in which under structural adjustment programs, the government was withdrawing its active participation in the agricultural sector through the liberalization of agricultural marketing activities, agriculture research and development, withdrawal of the government administered credit system and removal of input (fertilizer) subsidies. Development expenditure in agriculture reached its lowest level between 1993 and 1995. Most of the resources in the development budget in Malawi are financed by donors, and the dramatic fall between 1993 and 1995 is a result of the freeze in donor funding pending democratic political reforms from a one-party state to multi-party democracy. Similarly, in 2001 and 2004, the withdrawal of donor aid adversely affected the agriculture budget, particularly the development budget. The declining share of agriculture in the government budget has led to the erosion of core services to smallholder farmers such as extension services. Only 13% of agricultural households got advice from an agricultural adviser on crop and input management (NSO 2005). There has also been a decline in funding for research and development in agriculture. Most state institutions that developed capabilities in agricultural research and development have either been closed or remain underfunded and are being asked to commercialize.

However, with the introduction of the agricultural input subsidy programme since the 2005/2006 agricultural season, the share of agriculture in the total budget is bound to increase in the short and medium term. The agricultural input subsidy is about 43% of the agricultural sector budget and donors are increasing their support to agriculture through the subsidy (ICL et al. 2007). In the 2006/2007 fiscal budget, the allocation to the agricultural sector was US$121 million, almost double the level in the 2005/2006 budget, of which US$44.8 million was the development budget. The share of the agricultural sector rose to 12% of the total 2006/2007 budget and the development expenditure allocation increased by more than double and constituted 13% of the development budget (GOM 2006). One activity that was singled out as a major contributor to the increase in the recurrent expenditure in agriculture was the rebuilding of extension services that had virtually collapsed following structural adjustment programs. Nonetheless, very little has been done so far to rebuild extension services. Most of the rural areas remain uncovered by agricultural extension services.

For the first time since 1995 and following the AU Maputo Declaration in 2003, Malawi achieved more than the target of 10% in both its recurrent and development budget for the agricultural sector in the 2006/2007 budget. The impact of the agricultural input subsidy has been positive. Maize production is projected to have reached the highest level in the 2006/2007 season, following another good year in 2005/2006 that was also supported by the input subsidy (ICL et al. 2007). The surplus in maize production has resulted in sharp reductions in maize prices, making it easier for the poor net buyers of maize to purchase maize. The expectation is that continued subsidization of agricultural inputs will have a positive impact on household welfare. The cost of the subsidy program, given the participation of the private sector, are outweighed by the benefits that result in increased real incomes for the poor due to falling and stable prices for maize.

## CONCLUSIONS

The agricultural sector remains the most important sector in the economy and the dominant source of livelihood among rural households in Malawi. The paper set out to review the performance of the agricultural sector over time and the recent trends in agricultural growth and food security. In the past two and half decades, the economy has been undergoing economic reforms that have mainly affected the agricultural sector. However, despite these reforms, the agricultural sector has poorly performed, and a large proportion of the population that depend on the agricultural sector remain in poverty. Thus, while some positive agricultural growth has occurred this has somehow been wiped out by subsequent negative agricultural growth.

The study finds that the contribution of agriculture to national output has remained fairly stable over time. However, the performance of the agricultural sector has been mixed. The analysis shows that the performance of the agricultural sector was much better in the 1970s compared with subsequent periods, with agricultural value-added per capita growing at an average rate of around 2% per annum in the 1970s compared with 0.4% per annum in the last six years. This poor performance has also been reflected in the inability of the economy to produce adequate food to feed its population. While in the 1970s maize production was always above the minimum required for a staple, this has not been the case since the mid-1980s in which for a number of years maize production has been below the minimum required for a staple. Livestock production has not performed well, in per capita terms – with recent trends showing a decline in per capita chicken and cattle production. In terms of agricultural trade, a similar picture of mixed performance emerges. The export composition of agricultural products has remained stable, and agricultural exports remain dominated by tobacco which accounts for 55% of total export (agricultural and non-agricultural) earnings.

Using the limited data series on outcome indicators of poverty and malnutrition, the analysis shows no significant links between agricultural sector performance and poverty indicators. During the period that agricultural value-added per capita grew at 11.5%, poverty was 54.1%. In the period in which growth of agricultural value added per capita was 0.4%, the poverty rate was 52.4%. Similarly, there is no clear link between growth in value added per capita and the malnutrition rates.

There are many factors that can be attributed to the disappointing performance of the agricultural sector. First, productivity in major food and cash crops has been declining, coupled with land fragmentation. The poor productivity is also associated with poor fertilizer uptake and low adoption of improved farming techniques. Second, due to the rain-fed nature of cultivation, the exogenous weather shocks have led to poor production, resulting in surges in imports of maize. In years of bad weather, growth rates in agriculture value added per capita and growth in maize production have been low or negative. Third, there have been market failures and agricultural markets remain thin. With structural adjustment programs, the state withdrew from agricultural services which have led to coordination failures. Value addition has been limited in the agricultural sector, particularly among smallholder farmers. Fourth, the policy environment has not provided the necessary incentives. It has been characterized by policy reversals, policy uncertainties and policy incoherencies. Finally, government support towards the agricultural sector has been declining and below the level that is expected to lead to substantial agricultural development. For instance, the share of the agricultural sector in the fiscal budget has been below the 10% target set by the AU/NEPAD since 1996 except in the 2006/2007 budget when it rose to 12%. The decline in funding to the agricultural sector has eroded vital services including research and development, extension services and other coordinating services by the state. The introduction of the agricultural input subsidy programme since the 2005/

2006 season has led to greater allocation of government resources to the agricultural sector. In the short and medium term, Malawi will be on course in achieving the AU target of at least 10% of the budget resources going to the agricultural sector.

The analysis of past and current trends in agricultural performance in Malawi shows that the policy regime that was characterized by heavy state interventions in the 1970s was more conducive to agricultural development. This suggests that the market oriented approach in the agricultural systems, in which agricultural production largely remains subsistent, may not be appropriate for Malawi. The drastic changes from interventionist policies to the market mechanism that involved withdrawal of vital state services in the agricultural sector have not yielded positive results. As Poulton et al. (2006) conclude there is need for proactive state intervention that goes beyond provision of public goods in order to 'kick start' agricultural markets that are pro-poor in sub-Saharan Africa. The analysis of agricultural performance in Malawi leads to the following recommendations:

- There is a need for state intervention in the agricultural sector in order to change the subsistent nature of production to commercial production. This will require a long period of stable low prices for maize, the main staple crop; hence, lower maize price/cash crop price ratios. The stability in maize prices will encourage subsistence farmers to switch to cash crops. The current agricultural input subsidy, if continued in the medium term, will lead to an excess supply of maize and lower prices, providing incentives for smallholder farmers to switch from subsistence farming to commercial farming.

- There is a need for revitalization of extension services to go hand in hand with the agricultural input subsidy programme. This will require renewed investments in training of extension officers and their deployment in the rural areas.

- There is also a need for market support towards the smallholder sector, particularly in remote rural areas in which the private marketing system is not fully developed particularly due to poor infrastructure. This requires withdrawal of state marketing activities in more accessible areas and maintaining state marketing activities in remote areas.

- There is a need for continued investments in irrigation technologies or irrigation farming through utilization of available water resources or investing in rainwater harvesting structures.

## REFERENCES


Abbott, R. D.; Poulin, R. J. 1996. The Future of ADMARC: A Policy Analysis, Agricultural Policy Analysis Project (APAP) Research Report No. 1012 (USAID).

ADE (Aide a la Decision Economique). 2000. Malawi: Inception Technical Assistance to the National Food Reserve Agency. Report submitted to the National Food Reserve Agency, Lilongwe.

Alwang, J.; Siegel, P. B. 1999. Labour Shortages on Small Land Holdings in Malawi: Implications for Policy Reforms. *World Development* 27: 1461-1475.

AU (African Union) and NEPAD (New Partnership for Africa's Development). 2003. Comprehensive Africa Agriculture Development Programme, Pretoria: NEPAD.

Baulch, B. 2001. Food Marketing. In: Devereux, S.; Maxwell, S. (eds.), *Food Security in Sub-Saharan Africa*. London and Pietermaritzburg: ITDG Publishing and University of Natal Press.

Bigsten, A.; Shimeles, A. 2003. Prospects for 'Pro-poor' Growth in Africa. Paper presented at the WIDER Conference on "Inequality, Poverty and Human Well-Being", Helsinki, Finland, May 30-31, 2003.

Chinsinga, B. 2005. Practical and Policy Dilemmas of Targeting Free Inputs, in Levy, S. (ed.) *Starter Packs: A Strategy to Fight Hunger in Developing Countries?* Oxfordshire: CABI Publishing.

Chirwa, E. W. 1998. Fostering Private Food Marketing and Food Policies after Liberalisation – The Case of Malawi, in Seppala, P. (ed.) *Liberalized and Neglected? Food Marketing Policies in Eastern Africa*, Helsinki: United Nations University/WIDER.

Chirwa, E. W. 2002. Sources of Technical Efficiency among Smallholder Maize Farmers in Southern Malawi. Work in Progress Report presented at the Biannual Research Workshop organized by the African Economic Research Consortium, Durban, South Africa, December.

Chirwa, E. W. 2005. Adoption of Fertilizer and Hybrid Seeds by Smallholder Maize Farmers in Southern Malawi. *Development Southern Africa* 22(1): 1-12.

Chirwa, E. W.; Ngalawa, H. 2006. The Extent and Impact of Import Surges in Malawi: The Case of Maize, Sugar and Milk. Paper prepared for Food and Agricultural Organisation, Rome.

Chirwa, E. W.; Zakeyo, C. 2003. Impact of Economic and Trade Policy Reforms on Food Security in Malawi. Report submitted to the Food and Agriculture Organization of the United Nations (FAO) and the African Economic Research Consortium (AERC).

Chirwa, E. W.; Zakeyo, C. 2006. Malawi. In: Thomas, H. (ed.), *Trade Reforms and Food Security: Country Case Studies and Synthesis*. Rome: Food and Agriculture Organization of the United Nations.

Dorward, A. 1999. Farm Size and Productivity in Malawian Smallholder Agriculture. *Journal of Development Studies 35(5)*: 141-161.

Dorward, A.; Kydd, J. 2004. The Malawi 2002 Food Crisis: the Rural Development Challenge. *Journal of Modern African Studies 42(3)*: 343-361.

Dorward, A.; Kydd, J.; Morrison, J.; Urey, I. 2004. A Policy Agenda for Pro-Poor Agricultural Growth. *World Development* 32(1): 73-89.

Dorward, A.; Kydd, J.; Poulton, C. 2005. Beyond Liberalisation "Developmental Coordination" Policies for African Smallholder Agriculture. *IDS Bulletin* 36(2): 80-85.

Eicher, C. 2003. Fifty Years of Donor Aid to African Agriculture. Paper presented at the InWEnt, IFPRI, NEPAD, CTA Conference on Successes in African Agriculture, Pretoria, December 1-3.

Fafchamps, M.; Gabre-Madhin, E. 2001. Agricultural Markets in Benin and Malawi: Operation and Performance of Traders. World Bank Working Paper Series No. 2734 (Washington, DC).

Fairhead, J.; Leach, M. 2005. The Centrality of the Social in African Farming. *IDS Bulletin* 36(2): 86-90.

FSG (Food Studies Group). 1991. The Impact of Pricing and Marketing Policies on the Development of Private Sector Trading. A Report on the Study of the Impact of the Liberalization of Smallholder Agricultural Produce Trade in Malawi, International Development Centre, University of Oxford.

GOM (Government of Malawi). 1971. Statement of Development Policies, 1971-1979. Zomba: Government Printer.

GOM. 1987. Statement of Development Policies, 1987-1996. Zomba: Government Printer.

GOM. 2001. State of Environment Report for Malawi 2001. Lilongwe: Ministry of Natural Resources and Environmental Affairs.

GOM. 2002. Qualitative Impact Monitoring (QIM) of Poverty Alleviation Policies and Programmes: Survey Findings. Lilongwe: National Economic Council.

GOM. 2006. 2006/07 Budget Statement, Lilongwe: Ministry of Finance.

GOM, NSO (National Statistical Office) and World Bank. 2005. Poverty in Malawi from the Second Integrated Household Survey 2005: An Extract of Findings. Lilongwe: Ministry of Economic Planning and Development.

GOM and World Bank. 2006. Malawi Poverty and Vulnerability Assessment: Investing in Our Future. Lilongwe: Ministry of Economic Planning and Development.

Green, D. A. G.; Ng'ong'ola, D. H. 1993. Factors Affecting Fertilizer Adoption in Less Developed Countries: An Application of Multivariate Logistic Analysis in Malawi. *Journal of Agricultural Economics* 44(1): 99-109.

Harrigan, J. 1988. Malawi: the Impact of Pricing Policy on Smallholder Agriculture, 1971-1988. *Development Policy Review* 6**:** 415-433.

Harrigan, J. 1991. Malawi. In: Mosley, P.; Harrigan, J.; Toye, J. (eds), *Aid and Power: The World Bank and Policy-based Lending, Case Studies Volume 2*. London: Routledge.

Harrigan, J. 2003. U-Turn and Full Circles: Two Decades of Agricultural Reform in Malawi 1981-2000. *World Development* 31(5): 847-863.

Hoekman, B.; Michalopoulos, C.; Schiff, M.; Tarr, D. 2001. Trade Policy and Poverty Alleviation. World Bank Working Paper No. 2733. Washington DC: World Bank.

ICL (Imperial College London), Wadonda Consult, Michigan State University and Overseas Development Institute. 2007. Evaluation of the 2006/07 Agricultural Input Supply Programme, Malawi. Report prepared for the Department for International Development and Ministry of Agriculture and Food Security.

Jayne, T. S.; Govereh, T.; Mwanaumo, A.; Nyoro, J. K.; Chapoto, A. 2002. False Promise or False Premise? The Experience of Food and Input Market Reforms in Eastern and Southern Africa. *World Development* 30(11): 1967–1985.

Jayne, T. S.; Mather, D.; Mghenyi, E.; Zulu, B.; Chirwa, E.; Tschirley, D. 2006. Maize Marketing and Trade Policy in a Pro-Poor Agricultural Growth Strategy: Insights from Household Surveys in Eastern and Southern Africa, International Development Working Paper (draft),.Department of Agricultural Economics, Michigan State University.

Kaluwa, B. M. 1992. 'Malawi Food Marketing: Private Trader Operation and State Intervention', in Wyckoff, J. B.; Rukuni, M. (eds.) *Food Security Research in Southern Africa: Policy Implications.* Proceedings of the Sixth Annual Conference on Food Security Research in Southern Africa. University of Zimbabwe/Michigan State University Food Security Research Project.

Kaluwa, B. M.; Silumbu, E.; Ngalande Banda, E.; Chilowa, W. 1992. *The Structural Adjustment Programme in Malawi: A Case for Successful Adjustment?* Monograph Series No. 3. Harare: SAPES Books.

Karugia, J. T.; Wambugu, S. K.; Oluach-Kosura, W. 2004. The Role of Infrastructure and Government Policies in Determining the Efficiency of Kenya's Maize Marketing System in the Post-Liberalisation Era. IFPRI Eastern Africa Food Policy Network. Network Paper 6. Kampala: International Food Policy Research Institute (IFPRI).

Khaila, S.; Mvula, P.; Kadzandira, J. 1999. 'Consultations with the Poor – Country Report for Malawi'. A qualitative study done on behalf of the World Bank, Poverty Reduction Group, Washington DC.

Kydd, J.; Christiansen, R. 1982. Structural Change in Malawi since Independence: Consequences of a Development Strategy Based on Large-Scale Agriculture. *World Development* 10: 355-375.

Lele, U. 1989. Sources of Growth in East African Agriculture. *World Bank Economic Review* 3: 119-144.

Mellor, J. W. 1966. *The Economics of Agricultural Development*. Ithaca and London: Cornell University Press.

Mkwezalamba, M. 1989. The Impact of Liberalisation of Smallholder Agricultural Produce Pricing and Marketing in Malawi. Report submitted to Ministry of Agriculture, Lilongwe.

Msukwa, L. A. H. 1994. Food Policy and Production: Towards Increased Household Food Security. Zomba: Centre for Social Research.

Mthindi, G. B.; Chilowa, W. R.; Milner, J. A. G.; Ntata, P. 1999. Social Policy in the Context of Economic Reforms in Malawi: The Survival and Adaptive Strategy of Vulnerable Groups, First, Second and Third Monitoring Survey Reports. Southern African Regional Institute for Policy Studies.

MTPSD (Ministry of Trade and Private Sector Development). 2004. Malawi Integrated Framework: Diagnostic Trade Integration Study. Lilongwe: Ministry of Commerce and Industry.

Mvula, P. M.; Chirwa, E. W.; Kadzandira, J. 2003. Poverty and Social Impact Assessment in Malawi: Closure of ADMARC Markets. Report submitted to World Bank and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (GTZ).

NEC (National Economic Council). 2000. Malawi Vision 2020. Lilongwe: National Economic Council.

NEC. 2002. *Economic Report 2002*. Zomba: Government Printer.

NSO (National Statistical Office). 2000. *Starter Park 1999/00 Agro-Economic Survey.* Zomba: National Statistical Office.

NSO. 2002. *Malawi: Statistical Yearbook.* Zomba: National Statistical Office.

NSO. 2005. *Integrated Household Survey 2004–2005*. Zomba: National Statistical Office.

NSO. 2006. *Statistical Yearbook 2006*. Zomba: National Statistical Office.

NSO and ORC Macro. 1994. *Malawi: Demographic and Health Survey 1992*. Zomba, Malawi and Calverton, Maryland, USA: National Statistical Office and ORC Macro.

NSO and ORC Macro. 2001. *Malawi: Demographic and Health Survey 2000.* Zomba, Malawi and Calverton, Maryland, USA: National Statistical Office and ORC Macro.

Nthara, K. 2002. What Needs to be Done to Improve the Impact of ADMARC on the Poor, Phase II Final Report prepared for the Joint Oxfam Programme in Malawi, Blantyre.

Poulton, C.; Kydd, J.; Doward, A. 2006. Overcoming Market Constraints on Pro-Poor Agricultural Growth in Sub-Saharan Africa. *Development Policy Review* 24(3): 243-277.

World Bank. 2001. *World Development Report 2000/2001: Attacking Poverty*. New York: Oxford University Press.

World Bank. 2003. *Malawi Country Economic Memorandum: Policies for Accelerating Growth*. Washington: World Bank.

Zeller, M.; Diagne, A.; Mataya, C. 1998. Market Access by Smallholder Farmers in Malawi: Implications for Technology Adoption, Agricultural Productivity and Crop Income. *Agricultural Economics* 19: 219-229.

The Regional Strategic Analysis and Knowledge Support System (ReSAKSS) is an Africa-wide network that provides analysis, data, and tools to promote evidence-based decision making, improve awareness of the role of agriculture for development in Africa, fill knowledge gaps, promote dialogue and facilitate the benchmarking and review processes associated with the AU/NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) and other regional agricultural development initiatives in Africa.

ReSAKSS SA Southern Africa

Regional Strategic Analysis and Knowledge Support System

**For more information, contact**

Subregional Coordinator
Regional Strategic Analysis and Knowledge Support System in Southern Africa (ReSAKSS-SA)
Private Bag X813
Silverton 0127
Pretoria, South Africa
Telephone: +27 (0)12 845 9100
Facsimile: +27 (0)12 845 9110
E-mail: resakss-sa@cgiar.org
Website: www.sa.resakss.org

**WWW.RESAKSS.ORG**