PERFORMANCE OF THE AGRICULTURAL SECTOR IN MALAWI

PAPER PRESENTED TO MALAWI AGRICULTURAL SECTOR INVESTMENT PROGRAMME (MASIP) SECRETARIAT ON PRIORITY SETTING

BY

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<tbody>
<tr>
<td>ADD</td>
<td>Agricultural Development Division</td>
</tr>
<tr>
<td>ADMARC</td>
<td>Agricultural Development and Marketing Corporation</td>
</tr>
<tr>
<td>AG OA</td>
<td>African Growth Options Act</td>
</tr>
<tr>
<td>APRU</td>
<td>Agricultural Policy Research Unit</td>
</tr>
<tr>
<td>C.I.F</td>
<td>Cost Insurance and Freight</td>
</tr>
<tr>
<td>COMESA</td>
<td>Common Market for East and Southern Africa</td>
</tr>
<tr>
<td>DRC</td>
<td>Domestic Resource Cost</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GOM</td>
<td>Government of Malawi</td>
</tr>
<tr>
<td>Ha</td>
<td>Hectares</td>
</tr>
<tr>
<td>IDA</td>
<td>International Development Agency</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>MASIP</td>
<td>Malawi Agricultural Sector Investment Programme</td>
</tr>
<tr>
<td>MoAI</td>
<td>Ministry of Agriculture and Irrigation</td>
</tr>
<tr>
<td>Mt</td>
<td>Metric Tonnes</td>
</tr>
<tr>
<td>NGOs</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>NLDMP-</td>
<td>National Livestock Development Master Plan</td>
</tr>
<tr>
<td>SADC</td>
<td>Southern African Development Community</td>
</tr>
<tr>
<td>SARRNET</td>
<td>Southern African Root Crops Research Network</td>
</tr>
<tr>
<td>SDR</td>
<td>Special Drawings Right</td>
</tr>
<tr>
<td>TIP</td>
<td>Targeted Inputs Programme</td>
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<tr>
<td>UNDP</td>
<td>United nations Development Programme</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

Malawi is a small land-locked country surrounded by Mozambique to the South, East and West, Tanzania to the North and East and Zambia to the West. It has a territorial area of about 119,140 square kilometers of which agriculture accounts for about 61 per cent while forests occupy 38 per cent of the total area. The agricultural sector is the backbone of the Malawi economy supporting about 85 per cent of the population in terms of employment (Appendix 1), accounting for 35 per cent of Gross Domestic Product (GDP), and accounting for 90 per cent of foreign exchange earnings. The agricultural production is heavily concentrated on crop production, predominantly maize and tobacco. Crop yields remain below potential and agricultural production and marketing have remained inefficient.

1.1 Poverty

Poverty in the country is considered to be significant, wide spread, prevalent in both rural and urban areas, and encompasses more than half the population. It is estimated that about 60 per cent of the smallholder population are living below the poverty line while in the estate sector, about two thirds of the population consisting of estate tenants and estate workers is described as living below the poverty line. The extent of poverty amongst female headed households is significant as they constitute 30 per cent of the poor within the smallholder sub-sector. In addition to the rural poverty, urban poverty is also a growing phenomenon affecting about 65 per cent of the urban dwellers.

Poverty is taken as a condition characterized by serious deprivation of basic needs in terms of food, water, health, shelter, education and a lack of means and opportunities to fulfill these basic needs. The poor are those who are not able to meet minimum nutritional requirements and essential non-food requirements equivalent to $40 per capita per annum, (UNDP/GOM, 1993). The year 2000 UND Human Development Report estimated the country’s GDP at US$523 per capita (UNDP, 2000). The most vulnerable segments of the population include: small holder farmers with less than one hectare of land, estate workers, estate tenants, the urban poor, female headed households and children. An analysis of the situation of poverty reveals that the principal coping mechanism is "ganyu" or casual labour. Because of the complexity of the issue, poverty requires examination from the perspective of all socio-economic determinants that impact on the lives of more than half the population.

1.2 Growth strategy and Structure of the Agriculture Sector

For several decades, the growth strategy in the agricultural sector was built upon a dualistic structure with a class of estate owners/leaseholders on one side and the smallholder sub-sector on the other hand. These groups have been differentiated in terms of a variety of socio-economic conditions as well as by regulations concerning production, marketing, pricing and land tenure. Estates are defined as those occupying leasehold or freehold land and the minimum requirement to register as an estate is 10 hectares. On the other hand, smallholders have customary rights to the land they cultivate. An estimated 2.8 million smallholder farm families farm under customary tenure cultivating about 4.4 million hectares and producing about 80 per cent of Malawi’s total food and 10 per cent of its exports. About 25 per cent of the smallholder households cultivate less than 0.5 hectares, 55 per cent less than 1 hectare; 31 per cent between 1 and 2 hectares and 14 per cent more than 2 hectares. The estate sub-sector has enjoyed preferred access to land, finance and markets. While government's investment in support services for smallholder farmers was overburdened by a set of discriminatory agricultural and labour policies and marketing arrangements which contributed to a deepening of rural poverty and to a squeezing of a rapidly growing rural population onto a shrinking land base. Smallholders were denied the opportunity to grow profitable cash
crops such as burley tobacco and tea. At the same time, larger areas of customary land were allocated for estate use. This resulted in low income earning opportunities and increased land pressure in smallholder agriculture. It also resulted in availability of cheap labour for estates and little incentive to invest to improve smallholder labour productivity. This also weakened demand for consumer goods, thus restricting the domestic market for manufacturers.

The dualistic structure, though inherited from the colonial era, was deliberately enforced in the post independent period through a number of policy or legislative frameworks governing production and marketing of agricultural produce. Some of the more pronounced regulatory frameworks included the Special Crops Act which gave the monopoly of producing high value cash crops to the estate sub-sector as a government central policy strategy for managing its export oriented economic growth. As a result, Malawi’s agricultural sector saw the growth of tobacco, sugar and tea in the estate sub-sector. Mataya and Tsonga (1999) demonstrated the dominance of these three commodities in the national economy, by examining their share of the national export earnings between 1993 and 1996, estimated as follows: tobacco (65 per cent), tea (8 per cent), and sugar (6.4 per cent).

Equally important policy direction in the agriculture sector has been the Agricultural and Livestock Marketing Act which restricted the marketing of smallholder agricultural produce, which comprised of low value cash crops such as cotton and food crops such as maize, rice, beans, etc. In essence, this gave undue monopolistic marketing opportunities to the government marketing body-the Agricultural Development and Marketing Corporation (ADMARC), which also had exclusive marketing rights of agricultural inputs at subsidized prices. These restrictive production and marketing policies have now been removed under the current liberalization process. With respect to agricultural inputs, the restrictive legislative frameworks that governed the sector were the Fertilizer, Farm Feeds and Remedies Act and the Seed Act. Both of these have now been reviewed to allow for easy private sector involvement in the importation, packaging and distribution of all the agricultural inputs. Previous government policies that restricted the rights of each sector have had a strong influence on the performance of each sector, for example the restriction on smallholders production of tobacco that was in effect up to the early 1990s.

1.2.3 The Estate sub-sector

The estate sector contributes a larger proportion of the country’s exports. This sector has easier access to fertilizer and credit and has security of tenure which motivates higher levels of investment than in the smallholder sector. The estate sub-sector is the second largest employer after the smallholder sub-sector. Major changes which have occurred within the estate sub-sector and contributed to the growth of this sub-sector have included:

- An increase in the number of leasehold farms. The number of estates increased from an estimate of 229 in 1970 to about 23,000 in 1993. This increase in number of estates was attributed to the real increases in world prices for burley tobacco. Currently there are about 26,000 farms in the estate sector occupying a land area of about 1.2 million ha of which about 25 per cent is cultivated.

- Expansion of estate employment: The transfer of land into the estate sub-sector resulted in a shift of labour resources between the estate and smallholder sub-
sectors. Estate employment grew at the rate of 8 per cent per annum while that of the smallholder sub-sector grew at a rate of 2.3 per cent.

The estate sector produces largely flue-cured and burley tobacco (about 40 per cent of the cultivated area and about 42 per cent of the area devoted to maize). Other important crops grown by the estate sector include tea, sugar, coffee and tree crops.

With an increased focus on tobacco production within the estate sub-sector, tobacco production increased from 43,000 tonnes in the 1980s to over 143,000 tonnes in the 1990s. The increased tobacco production in the early 1990s combined with increased relative burley prices for the same period meant an increase in the estate sector's contribution to total export earnings from about 30 per cent in the 1980s to about 45 per cent in the 1990s.

Throughout the 1990s to early 1990s, growth in smallholder sub-sector has on average been greater than that of the estate sector, Table 1. The 1991/92 season experienced negative growth rate in both sectors, this is attributed to the drought that occurred in that season. On the other hand, the 1993/94 show very high nominal growths in both sector. This can be explained to the changes in the exchange rate regime whereby the Malawi Kwacha exchange rate was floated resulting in depreciation of the Malawi Kwacha against the United States Dollar.

<table>
<thead>
<tr>
<th>Table 1: Annual Agricultural Growth Rates (%)</th>
<th>Between 1990 and 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>12.80</td>
</tr>
<tr>
<td>Estate</td>
<td>9.20</td>
</tr>
<tr>
<td>Smallholder</td>
<td>14.18</td>
</tr>
</tbody>
</table>

Source: Computed from Table 3.

Overall production in both sectors has however been characterized by low yields, low rates of return to capital, low rates of labour remuneration and a heavy dependence on one crop—tobacco. Furthermore, despite leading the agricultural growth, the estate sub-sector has depended heavily on an expansion of area and buoyant world market tobacco prices, this renders growth for the sub-sector unsustainable. Worse still, given that world tobacco prospects are no longer optimistic and that there is little room for increased area expansion due to increasing land pressure, these two sources of growth are unlikely to continue hence necessitating the need for the estate sub-sector to become more diversified and productive.

1.2.4 Smallholder Sub-sector

For several decades, the smallholder sub-sector has been the major producer of food crops especially maize, cassava and sweet potatoes. A number of important changes have taken place within the smallholder sub-sector. Under the first structural adjustment program, there was an emphasis on increasing smallholder production of export crops. As a result of this, government pricing policy which taxed smallholder export crop production and subsidized maize production and consumption shifted in favor of export crops and away from food crops.
The changes within the smallholder sub-sector are attributed to several causes including: *shifts in government's pricing, marketing and tobacco production policies; technological developments and public extension efforts to disseminate new technologies; increased land pressure and increased supplies of fertilizer and credit.* The increasing land pressure within the smallholder sub-sector is partly attributed to population growth, while in some parts of the country, the influx of Mozambican refugees in the 1980s also contributed to the land pressure. Most important also was the transfer of land from customary to the leasehold in estate sub-sector and also to the public sector for game and forest reserves. The area under customary land tenure therefore declined from an estimated 8.2 million hectares in 1964 to about 7.1 million hectares in 1988, a further 440,600 hectares are believed to have been transferred to leasehold estate sub-sector since 1988. All these factors have led to a decline in average landholding size. Furthermore, the smallholder farmers are sometimes categorized into three groups:

i. Larger smallholders (about 14 per cent) with enough land to produce surplus;

ii. Smallholders (31 per cent) with enough land to produce enough to meet their food requirements and those who could potentially become surplus producers and

iii. Chronically or sporadically food deficit households (about 55 per cent) for whom improved policies and technologies could enhance food security, although the majority would still need to supplement their incomes off-farm, Table 2.

**Table 2: Typology of Smallholders by Level of Food Security**

<table>
<thead>
<tr>
<th>Household Characteristic</th>
<th>Karonga</th>
<th>Mzuzu</th>
<th>Kasungu</th>
<th>Lilongwe</th>
<th>Salima</th>
<th>Liwonde</th>
<th>Blantyre</th>
<th>Ngabu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging surplus smallholders (14%)</td>
<td>&gt;1.50</td>
<td>&gt;1.00</td>
<td>&gt;1.00</td>
<td>&gt;1.50</td>
<td>&gt;2.00</td>
<td>&gt;2.00</td>
<td>&gt;1.50</td>
<td>&gt;3.00</td>
</tr>
<tr>
<td>Self-sufficient Smallholders (31%)</td>
<td>0.75-1.50</td>
<td>0.75-1.00</td>
<td>0.75-1.00</td>
<td>0.75-1.50</td>
<td>1.00-2.00</td>
<td>1.25-2.00</td>
<td>0.75-1.50</td>
<td>1.75-3.00</td>
</tr>
<tr>
<td>Food Deficit Households (55%)</td>
<td>0.50-0.75</td>
<td>0.25-0.75</td>
<td>0.50-0.75</td>
<td>0.50-1.00</td>
<td>0.50-1.00</td>
<td>0.50-1.50</td>
<td>0.50-1.50</td>
<td>1.00-1.75</td>
</tr>
<tr>
<td>Chronic Food Deficit Households</td>
<td>&lt;0.50</td>
<td>&lt;0.25</td>
<td>&lt;0.50</td>
<td>&lt;0.50</td>
<td>&lt;0.50</td>
<td>&lt;0.50</td>
<td>&lt;0.50</td>
<td>&lt;1.00</td>
</tr>
</tbody>
</table>

Source: World Bank, 1990
2.0 Crop and Livestock sector Performance under Policy Reforms

The most significant resultant structural change has been the massive participation of smallholder farmers in burley tobacco production and marketing. Developments in other crops range from consistent increased production as in the case of cassava and potatoes to a relatively stagnant growth for commodities such as maize, and production fluctuations in crops such as cotton, groundnuts, Soya beans, etc. Little emphasis has however been put on the livestock sector which equally, has the potential to grow and contribute to the country’s economic growth and peoples livelihoods in terms of food security and nutrition. The following section presents some trends in both livestock and crop enterprises and Appendix 2 presents some production statistics on different crops.

2.1 Livestock

The livestock industry contributes about 7 per cent of the national GDP and about 12 percent of the total value of the agricultural productivity. Cattle, goats, pigs and poultry constitute the largest proportion of Malawi’s livestock industry.

Over the years, the livestock sector has seen a general decline in production due to a number of reasons including:

a) inadequate improved breeds;

b) prevalence of disease and parasites;

c) high costs of manufactured feeds;

d) high incidents of livestock thefts, etc.

These factors have among other issues contributed to a very low cattle to human population ratio which is as low as 1:17. It is also noted that cattle ownership is confined to about 10 percent of the farming families.

In 1997, the national dairy cattle population was estimated to be around 12,000 animals and the average national milk consumption was estimated to be 4.5 kg/capita/year, which is quite low when compared to the Food and Agriculture Organization (FAO) recommendation of 200 kg/capita/year. Meat consumption is estimated at 6.3 kg per capita per year compared to 13 kg per capita per year for other African states, (Banda, et.al, 2000).

The low livestock production has compelled the country to meet the demand by imports. It is estimated that the country imports

- 7.3 per cent of poultry meat,
- 15 per cent of egg and
- 38 per cent of milk and milk product consumption.

It is further estimated that in the 1999/2000 season, Malawi imported about

- 1,573.4 tons of chicken meat,
• 1,619.5 tons of red meat,
• 1,016.3 tons of milk and milk products,
• 16,747 tons of table eggs,
• 20,213 tons of cheese and butter, and
• 313,620 day old chickens.

Most of these imports have come from the Southern Africa Development Community (SADC) member states especially Zimbabwe and South Africa (NLDMP).

2.2 Crop Enterprises

Crop production accounts for about 91 per cent of the value of agricultural output. Exports primarily consist of tobacco, tea, sugar and coffee. The estate sector contributes about 90 per cent of total value of exports. Maize, the dominant crop and staple food, occupies about 80 per cent of cultivated land in the smallholder sector. Other import crops include cassava, groundnuts, cotton, rice, sorghum, millet, legumes and tree crops (World Bank, 1994).

2.2.1 Tobacco

The tobacco industry is the largest in the country and main foreign exchange earner. Tobacco production and sales at the auction floors have been declining since 1997 with a total production of 133,887 tonnes for burley and 14,899.1 tonnes for flue cured tobacco. Burley tobacco declined to 113,786.7 tonnes while flue cured tobacco declined to 13,854.3 tonnes in 1998. In 1999, production of burley tobacco plunged further to 11,391.8 tonnes while flue cured tobacco slightly increased to 14,255.7 tonnes.

Smallholder tobacco production increased by 4.9 per cent from 84,555 tonnes in the 1999 season to 88,739 tonnes in the 2000 season. Despite the late onset of the rains, hectarage under the crop increased by 2.3 per cent.

Total production from the 2000 growing season was estimated at 142,100 tonnes which was 19.3 per cent higher than the 19998 season. Despite the increase in production, auction prices continued to be depressed. The prices have of late been the lowest since 1994. Contrary to normal market behaviour where prices are expected to rise with declining supply, the tobacco industry has seen ever decreasing and fluctuating prices. The average prices declined from an average of US$1.53 per kilogramme for burley and US$1.91 per kilogramme for flue cured in 1997 to US$1.30 per kilograms and US$1.41 per kilogramme in 1998. Average prices were expected to remain lower for the 2000 market season due to carryover stocks at the world market. Some of the reasons to the low prices have included:

• uncommitted closing stocks (10,000 tonnes as of 31 December, 1999);
• Mixed qualities, poor grading and poor presentation of tobacco presented at the auction floors.
• Merchant companies in Malawi have taken advantage of liberalisation by buying cheaply, ship it across the boarders and mix with their tobacco bought in neighbouring countries to satisfy their orders;

• The discontinuity of tobacco importation for blending purposes which has resulted in retaliatory measures of price discounting; and

• The negative impacts of antismoking campaigns coupled with law suits against cigarette manufacturers.

2.2.2 Maize

The Maize industry has seen production fluctuations between 1990 and 2000. In 1990, production was estimated at 1.34 million mt and increased by 18.4 per cent to 1.59 million mt the following year. In 1992, due to drought, maize industry declined to 657,000 mt tones while hectarage and yield declined by 1.7 per cent and 58.0 per cent, respectively. The situation improved in 1993 when production went up to 2.03 million followed by downward trend the following year 1994, to 818,99 mt representing a 59.7 per cent decline over 1993. The fluctuations continued with 1995 and 1996 registering 1.33 million mt and 1.79 million mt respectively. The country experienced a record harvest of 2.478 million metric tonnes in 1999. Production was expected to remain high, estimated at 2.479 million tones for the 1999/2000 season. Smallholder maize production for the year 2000 was expected to be as good as the 1999 output. It was estimated to increase very slightly by 1.0 per cent from 2,245,824 tonnes in 1999 to 2,268,752 tonnes. This stable trend was expected to improve the national food security situation. The estate maize production was estimated at 210,369 tonnes in 2000 season. This put the total maize production at 2,479,121 tonnes in 2000 season. Year 2001 production estimates maize production at 2,132,764 tonnes, (National Crop Estimates Round 1).

The marginal increase in maize production is attributed to Government intervention programmes such as the Agricultural Productivity Investment Programme(APIP), the Starter Pack Scheme and the Targeted Inputs Programme (TIP). In any case, actual maize yields have remained below the potential yields. For instance, average actual hybrid maize yields are between 2 tons and 3 tons per hectare while the potential yields are 8 tons per hectare.

Although the total land area for maize has not decreased over the same period, its share over the total land used for crop production has been decreasing. For instance, in 1990, land area for maize production alone was 70.2 per cent and has since been declining reaching 41.0 per cent in 1999. In 2000, it is estimated to have increased to 50 per cent and in 2001 estimates indicate that maize occupied a total area of 1,484,531 hectares. This development is attributed to the agricultural diversification process with more enterprises claiming the unused arable land.

2.2.3 Cassava

Cassava production has improved significantly between 1990 and 2000. The government continued promotion of the production of drought resistant food crops has resulted in increased production of the cassava crop. Since 1996, production has been increasing. The year 2000 production was estimated at 917,430 tonnes of wet weight. Hectarage in the same year increased by 9.1 per cent from 166,125 hectares in 1999.

As a drought resistant crop, the Government and Non Governmental Organisations (NGOs) such as the Southern African Root Crops Research Network (SARNNET) have intensified an extension campaign for its increased production to counter the intermittent droughts of the 1990s namely, 1992, 1994 and 1997. Besides this, the increase in input prices for the staple food crop, maize has compelled farmers to diversify into cassava production. Cassava production trends in the decade has been as follows: In 1990, production was estimated at 144,760 mt and took an
impressive upward swing in the mid 1990s such that by 1999/2000, it reached about 2.8 million mt and 3,142,666 in 2001. Its average annual growth rate between the same period was 0.52 per cent. This increase in cassava production has also been reflected in an impressive growth rates in hectarage and yields estimated at 12.2 per cent and 29.6 per cent, respectively. This development could mainly be attributed to rise in input prices for maize in the mid 1990s due to complete fertilizer price subsidy removal and the Kwacha devaluation and occurrence of intermittent droughts.

2.2.4 Rice

An analysis of rice production trends shows that the commodity has undergone significant production fluctuations over the past decade. Unlike cassava, rice production has suffered declines in production levels in four years within the decade, the most pronounced being a 62.3 per cent decline in 1992. However, in terms of hectarage, rice has seen an average 100 per cent growth in the decade, which is possibly the highest. However, average yield increases are poor estimated at 5.1 per cent compared to other crops such as groundnuts (24.5 per cent), cassava (29.6 per cent), cotton (19.8 per cent) beans (7.8 per cent) and soya beans (7.8 per cent), just to mention but a few.

Rice production was estimated to decline by 23.5 per cent from 92,859 tonnes in 1999 growing season to 71,056 tonnes in 2000 season. This was a result of the slight decline in hectarage under the crop of 3.1 per cent coupled with a decline of 19.1 per cent in yield from 2,209 kilogrammes 1999 season to 1,787 kilogrammes in the 2000 season. This was a result of the late onset of the rains, inadequate use of fertilizers and use of over recycled seed. The country’s rice output for 1999 was 92,859 tonnes, 27.0 per cent higher than the 1998 record. Production was expected to be lower in the 1999/2000 season estimated at about 71,088 tonnes. Malawi rice continues to face dwindling market because of economic crisis in Zimbabwe and cheap imports from Asia.

2.2.5 Groundnuts

Production of groundnuts has equally suffered some declines over the 1990s namely in 1992 (-61.1 per cent), 1994 (-3.6 per cent) and 2000 (-7.1 per cent). This notwithstanding, these declines have been offset by impressive production levels in 1991, 1993, and 1997 registering 67.2 per cent, 16.6 per cent and 70.4 per cent respectively. Hectarage has seen a modest average annual growth of 16.8 per cent despite major setbacks suffered in five years in the decade. With respect to yields, an average yield increase of 24.5 per cent was registered. Output of groundnuts was expected to increase marginally by 1.4 per cent from 124,604 tonnes in 1999 to 126,317 tonnes in the 2000 season. The national groundnut output for 1999 was 124,604 tonnes, about 1.40 per cent lower than the estimated production of 126,317 tonnes for 1999/2000 season. Exports for groundnuts for 1999 amounted to 664.7 tonnes at an average price of K16,684.86 per tonnes.

2.2.7 Pulses

The local production of pulses has been rising over the recent past. It rose by 11.9 per cent over 1998 production to 233,811 tonnes in 1999. In 2000, it was expected to increase to 268,689 tonnes. This has been a result of farmers switching to crops of low input use. The 2000 year production was estimated at 266,150 tonnes which is 13.8 per cent higher than the 1999 production. Hectarage increased by 10.6 per cent while yield increased modestly by 1.9 per cent. Hectarage was estimated at 481,386 hectares and yield at 584 kilogrammes. The general increase in pulses is attributed to availability of seed through programs such as Proscarp, and seed multiplication programmes combined with good weather.
A total amount of 14,100 tonnes of pulses were exported in 1998 at an average price of K9,510 per tonne. There has been an improvement in the prices of pulses, especially emanating from the depreciation of the kwacha. Pulses were also exported in form of dhalls to the extent that a total of 1,250 tonnes of dhall was exported in 1999 at an average price of US$720 per tonne.

Bean production has increased from 27,638 mt in 1990 to 74,909 mt in 2000, representing a 171 percent increase. The 2001 bean production is estimated at 101,317 tonnes. This is mainly due to significant increase in hectarage and yields. For instance hectarage is estimated to have grown by 78 per cent from 96,499 hectares in 1990 to 171,775 hectares in 2000 and 207,301 hectares in 2001, while yields grew by 52.4 per cent from 286 kg/ha in 1990 to 436 kg/ha in 2000 and 488.7 kg/ha in 2001. Average annual growth rate of the industry between 1990 and 2000 shows that beans registered an 85.0 per cent increase over the decade which is possibly the highest.

2.2.7 Soya beans

Soya bean production has become significant in the 1990s with production increasing from 3,284 mt in 1990 to 48,699 mt in 2000 and 38,103 mt in 2001. Much of this has been due to increases in hectarage from 5,901 ha in 1990 to 76,166 ha in 2000. Producer price changes due to demand and supply conditions in the market have significantly affected the production of soya beans.

2.2.8 Cotton

Malawi's cotton industry has been one of the agricultural enterprises that witnessed serious production fluctuations. Besides the poor performance during the drought years of 1992, 1994 and 1997, the industry has seen stagnant production levels on average. For instance, in 1989/90 season, national production was estimated at 33,026 mt, it increased to 83,591 mt in 1995/96 and then dropped to 36,527 mt in the 1999/2000 season and estimated at 43,042 mt in 2001. Similar trends can be observed for hectarage covered and yields. Cotton production just like soya bean production, has been subjected to producer price variations which also largely affect their production.

The 2000 cotton production was expected to register a decline of 32.9 per cent over the 1999 season. The year 2000 drop was mainly a result of reduced hectarage of 24.1 per cent over the 1999 hectarage of 53,191 hectarage due to poor producer prices in the previous season. Yields also dropped by 8.9 per cent from 951 kilogram's in 1999 following the erratic and late onset of rains. Cotton production has been declining in the past largely due to price stagnation. Following this, farmers have been shifting from cotton to production of other crops like burley tobacco. The local production level for 1999 was around 50,589 tonnes and 1999/2000 production was expected to be further reduced to 35,566 tonnes.

Most of Malawi cotton is used by the local cloth manufacturer, David Whitehead and Sons, and is exported as cloth to United Kingdom, South Africa, Zambia and Botswana, A total of 578,024 metres were exported tat a value of K29.8 million (C.I.F). Small quantities of cotton were exported to South Africa and Zimbabwe.

3.0 Department of Irrigation

The occurrence of droughts and their effect on agricultural production have resulted in increased emphasis on irrigation development. In view of this, broad policy objectives for the irrigation sector were formulated and these include:
i. Contribute to poverty alleviation by targeting resource poor small holder farmers for irrigation development to enhance farm income and by supplementing the recommended strategies for rain fed agriculture outlined in Malawi's The Agricultural and Livestock Development Strategy and Action Plan.

ii. Increase agriculture production and enhance food security through irrigation, which will ensure some production during droughts, and the dry season, and this will supplement rain fed agriculture.
Extend cropping opportunities and provide a wider variety of crops in both wet and dry seasons to improve nutritional status, especially of children and women.

iv. Create an enabling environment for irrigated agriculture; by facilitating and encouraging the private sector to invest in irrigation development, and encourage rural communities to manage irrigation projects in order to fully utilize irrigable land in Malawi.

v. Optimize government investment in irrigation development by applying principles of cost sharing and cost recovery.

vi. Enhance human capacity for irrigated agriculture in the public, parastatal and private sector in order to facilitate effective research in irrigation technology and marketing of irrigated produce.

vii. Create the spirit of business culture in the small scale irrigated agriculture sector, to promote and provide competitive financing of irrigation projects and improve the marketing system at national and international levels.

As of 1994, the total area under irrigation was 26,100 hectares. The actual area being irrigated currently is however larger than this figure in view of the fact that additional smallholder irrigation schemes have been developed after 1994. The country has several gardens in the wetlands where simple irrigation is employed for vegetable and rice production.

The Irrigation Department is therefore mandated to facilitate, the increase and stabilization of agricultural production, through mobilization of small and large scale irrigation projects with human and financial resources provision from beneficiaries, the private sector, NGOs and the public sector; with full participation of the beneficiaries and ample observance of environmental aspects to ensure sustained productivity and, equitable involvement across all gender lines, for food security, effective poverty alleviation, and national economic development.

### 3.1 Potential for Irrigation

Several studies on irrigation have indicated that the country has an irrigation potential of about 200,000 hectares of which only slightly over 26,100 ha have been exploited. One of the studies identified 57 potential irrigation projects in the country of which 7 are in the northern region, 12 in the Central region and 38 in the Southern region. Out of the 38 potential irrigation projects in the Southern region, 25 are situated in the lower Shire. This indicates the extent of irrigation potential that the lower Shire has compared to the other areas. A similar study in 1992 established that the potential for small-scale irrigation development was about 100,000 ha out of which 3,319 ha were identified to be suitable for immediate development. These statistics seem to indicate that there is great potential for the development of irrigation in the country which would contribute significantly to the economic performance of the country through increased agricultural production for both domestic and export markets. In order to achieve this, there is need for careful coordination with other disciplines to ensure that proposals for development are not contradictory or overlapping, but are mutually supporting and form a coherent policy framework. Irrigation policy therefore needs to be linked with policies covering other sectors.

### 5.0 Macro-Economic Performance and Structure of the Economy

Since independence, growth in agricultural GDP has varied, averaging about 5 per cent during the 1970s, 1 per cent during the early 1980s, and 4.1 per cent during 1987-91. Over the past two
decades, 1980-2000, the Government of Malawi in collaboration with donor agencies introduced and implemented a range of policy reforms and investment projects with the aim of transforming the agricultural sector and the rural economy by stimulating sustainable economic growth and reduce poverty. As a result of these policy changes (market liberalization and other economic reform programmes), the dualistic structure of the agricultural sector has been broken down. However, the economy is characterised by very high levels of consumption with commensurately low levels of savings and therefore investment. Although other crops such as cassava and sweet potatoes are picking up in production, maize remains the dominant crop amongst the smallholder farmers while tobacco remains the major export crop for foreign exchange earnings amounting to 70 per cent of the country’s foreign exchange.

In 1981, in attempt to restore macroeconomic stability and growth, Malawi embarked on a package of structural adjustment reforms, supported by successive International Monetary Fund (IMF) stand-by operations and International Development Agency (IDA) structural and sector adjustment loans. Between 1982 and 1985, the economy grew at a rate of 4.1 percent, resulting in a positive trade balance and reduction in the current account and budget deficits. However, in 1986, further economic setbacks were experienced following an increase in external transport costs, a large influx of refugees from Mozambique and continued deterioration in the terms of trade. This led to further adjustment measures based on the strategy of growth through poverty reduction that aimed at removing constraints to sustained growth, while simultaneously addressing the roots of pervasive poverty. The liberalization process of the economy comprised reforms to redress the policy bias against smallholders, removing constraints on private sector participation in all areas and liberalizing external sector.

From 1989, economic performance began to improve. In per capita terms, GDP for the first time since several years showed an improvement of more than one per cent. The major contributing sectors to improved performance were Agriculture, manufacturing and Distribution. The agricultural sector with a share of 35 per cent in 1991 grew by 7.7 per cent after a disappointing performance in 1989 and 1990 (Vision 2020, 2000).

In the first half of the adjustment period, while devaluations were being implemented, the trade regime became more restrictive as exchange controls on imports were introduced to ration the limited foreign exchange. However, between 1988 and 1991, under the Industrial and Trade Policy Adjustment Programme, imports were liberalized. Prior approval by the Reserve Bank for use of foreign exchange for imports was eliminated in early 1994; at the same time, the exchange rate was liberalised further under a new, largely market based system. It was expected that this flexible, new exchange rate system would help to increase the supply response in the agricultural sector in the following ways: (i) by increasing the supply and improving the allocation of foreign exchange to the most efficient users, the import of inputs would be facilitated; and (ii) by raising or maintaining real prices and the real effective exchange rates, and by enhancing incentives for the agricultural exports and products.

For a second year since 1998, the pattern of economic performance in Malawi remained mixed. Economic performance in 1999 was mainly driven by the small—scale agriculture sector as a result of good weather and the starter pack initiative. In addition to this, exchange rate stability helped to contain prices. Real GDP increased by 4.2 per cent, which was slightly higher than the 1998 growth rate of 3.3 per cent. The 12 month inflation rate increased from 29. 8 Per cent in 1998 to 44.9 per cent in 1999., reflecting price adjustments to the increases in fuel prices and tariffs rates in the utilities sector. The external sector also deteriorated due to the decline in the tobacco export earnings.
Agricultural sector performance in 1999 improved further by 9.9 per cent compared to 10.5 per cent recorded in 1998. The agricultural sector was expected to grow by 4.6 per cent with the stagnation being pronounced in the small scale agriculture sub-sector. The dry spell in 1999 which resulted in planting twice, partly explained the marginal increase in maize production. The small-scale agriculture sector grew by 13.0 per cent while that of the large scale agriculture sector declined by 1.4 per cent. The good weather and the starter pack initiative contributed to the good performance in the small-scale agricultural sub-sector. All crops in the small-scale sub-sector registered increases except for tobacco and sorghum, which declined by 10.1 per cent and 0.2 per cent, respectively. Large scale agriculture sub-sector remained depressed. The decline in the large scale agriculture sub-sector was mainly due to lower level of production for burley tobacco, tea and sugar. Burley tobacco fell by 2.1 per cent from 113.8 million kilogrammes in 1998. Tea and sugar declined by 4.7 per cent and 4.6 per cent in 1999 from 40.4 million kilogrammes and 209.7 million kilogrammes in 1998, respectively. The vagaries of weather and declining world market prices contributed to the decline in tea production.

Prospects for the year 2000 remained uncertain with the agriculture sector slowing down despite recovery in the large scale sub-sector. Economic performance in year 2000 was expected to increase by less than a percentage point from the 1999 level. This was a result of a number of factors, which included poor tobacco auction prices, dis-investment in the industrial sector, high production losses in the utilities sector and high inflation. In terms of GDP growth, prospects for 2000 indicated a marginal increase by a percentage point from 4.2 per cent in 1999 to 5.1. Stagnation was expected in most sectors of the economy. A more pessimistic picture could emerge if the exchange rate turbulence continued in South Africa and Zimbabwe. Government therefore ought to be committed to stabilizing the economy through prudent fiscal and monetary policies. On the evolution the exchange rate policy, the Malawi Kwacha was initially pegged to the British pound. In 1973 the peg was redefined on the basis of a weighted average of the United States dollar and the pound. In 1975, the kwacha was pegged to the Special Drawings Right (SDR), an arrangement that was in place when the country initiated its stabilization and structural adjustment programmes in 1981. Although Malawi managed to bring about a real depreciation of the Kwacha between 1981 to 1987, the kwacha appreciated in real terms from 1987 to 1991, although not back to its pre-adjustment level. From 1992 to 1998, the nominal exchange rate has been depreciating while the real exchange rate has been appreciating for the most part of the period. As of first week of September 2000, the US dollar was trading at MK60.0 compared to around MK2.7 in 1990. This represents a two thousand two hundred and twenty percent depreciation in a ten-year period, Appendix 3. Currently (March, 2001), the Malawi kwacha has been trading at trading at US$1 = MK79.00.

Table 3: Gross Domestic Product By Sector Of Origin At 1994 Factor Cost (K’ Million)

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<td>1624.2</td>
<td>2321.6</td>
<td>3070.4</td>
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<tr>
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<td>67.3</td>
<td>626.7</td>
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17
While the overall process of reform has not led to sustained progress towards the long term development goals for the vast majority of ordinary Malawians whose average annual GNP per capita still fluctuates around $200, there has been limited progress in some of the sectors. In agriculture, there has been an on-going liberalization programme that has achieved positive results in opening up opportunities for smallholders and entrepreneurs, stimulating competition and creating business opportunities. The removal of restrictions on the production and marketing of tobacco and other crops, the liberalization of importing and marketing of seeds and fertilizers and removal of price controls and the removal of ADMARC’s purchasing monopoly have contributed to the breakdown of the dualistic nature of agricultural production enabling smallholders to diversify. However, the challenges of diversifying away from tobacco still remain and the fundamental problem has also been the central government’s fiscal indiscipline primarily excessive expenditures.
and uncontrolled deficits that have inevitably led to high levels of inflation and interest rates. The effects of these two have been detrimental to the poor and to investment in the private sector.

4.1 Budget Allocation and Expenditure Pattern for the Ministry of Agriculture and Irrigation

The MoAl has experienced a decline in resource allocation as a proportion of the total budget. Generally, there has been a decline in the recurrent allocation associated with the shift in government policy towards the social sectors in 1994. This move may be questionable given the importance of agriculture in sustaining the economy and hence the government revenue.

The current structure of MoAl is composed of seven programmes namely;

1. Administration and Support Services;
2. Agricultural Extension services;
3. Crop Production;
4. Animal Production and Veterinary Services;
5. Agricultural Research and Technical Services;
6. Land resources Conservation; and
7. Irrigation and Land Resources

As a result of this complex structure, budgeting in the MoAl has become very difficult; the budget document is cumbersome due to too many cost centres, programmes and sub-programmes; prioritization has been undermined resulting in resources being thinly spread across too many sub-programmes and there are much duplication (Malawi Gvt/World Bank, October 2000).

Analysis of expenditure trends in the MoAl is complicated by inconsistencies and frequent changes in expenditure classifications. However, a number of important findings are relevant:

1. Wages and salaries account for an increasing majority of recurrent expenditure accounting for an average of 67 per cent of recurrent expenditure from 1991/92 to 1997/98;

2. Ministry headquarters receives the largest proportion of resources, accounting for 42 per cent of recurrent expenditure between 1995/96 and 2000/2001;

3. The 8 ADDs have each been receiving less than 10 per cent of the recurrent expenditure in the same period;

4. Administration and Support Programmes have received between 38 and 52 per cent of total approved funding between 1998/99 and 1999/2000 due to the
huge operational costs it finances including the bulk of internal travel office and public utilities;

5. Extension and Research Services have been receiving 10-23 per cent and 7-11 per cent, respectively;

6. In terms of expenditure for 200/2001, the MoAl allocated 51 per cent for its approved budget to internal travel, 12 per cent to office supplies and expenses and 9 per cent to public utilities excluding starter Pack;

Based on the above, the agricultural sector needs to make a headway towards improving both financial planning, management and forecasting at sectoral level.

With salaries and overhead costs dominating the Ministry's allocations the generation and dissemination of technologies has been curtailed as resources for conducting research and extension are not adequate for the desired service delivery. A crucial decision that needs to be made therefore, is whether the Ministry should continue maintaining a large workforce which is being paid and at the same time with very little resources to actually do the work under its mandated terms of reference.

• In general, the Ministry needs to allocate resources to priority areas that are well targeted and have some direct impact to production including increased funding for technical and field operations. In return, the sector should receive adequate resources for the implementation of the various activities under its portfolio. In addition, the Ministry should only accept grants that have limited future financial requirements and avoid loans that are donor-driven or have components that demand massive donor supervision missions drawing huge sums of money for supervision staff and leaving very limited resources and even time for implementation of activities (Malawi Government and the World Bank, 2000).

5.0 Competitiveness of Malawi's Agriculture Sector

Several Studies have been conducted to examine the competitiveness of the Malawi's agriculture sector to determine crops and livestock commodities that have comparative advantage in production. Some of the studies indicate that both estate and smallholder farmers have high comparative advantage in production of burley tobacco, soya beans, cotton, groundnuts, with Domestic resource Cost (DRC) ratios of less than 0.5.

For the smallholder sub-sector, comparative advantage extends to beans, pigeon peas while for livestock and maize, the analysis shows that Malawi does not have any competitiveness. In the case of the estate sub-sector, export taxes on tobacco and tea make the commodities less competitive. While agreeing with the earlier studies that smallholder agriculture has comparative advantage in production of tobacco, cotton, groundnuts, soya beans and horticulture (tomatoes and vegetables), Keyser and Lungu found that the estate sub-sector was more competitive in flue-cured tobacco, burley tobacco, tea and tree nuts. In case of livestock products, Keyser and Lungu (1997) concluded that in overall economic terms, it is advantageous for Malawi to produce livestock products domestically rather than simply importing from neighbouring countries. Some of the factors that render Malawi to be uncompetitive include:
i. high input prices due to Malawi Kwacha devaluation and input price subsidy removal,

ii. lack of market infrastructure,

iii. little value-adding (agro-processing),

iv. inadequate improved seed availability,

v. loss of soil fertility,

vi. lack of technical know-how on crop and livestock management, disease and pests prevalence,

These factors have led to low productivity and production levels.
6.0 Future of the Agriculture Sector

Despite the myriad of challenges in the agricultural sector, there are still prospects for the sector's growth. Comparative advantage analyses, though not taking into account the dynamic developments in the sector, point out that there is potential in the sector which need to be properly unleashed. Deliberate efforts need to be put in place to promote the production and marketing of crops and livestock produce identified to have comparative advantage.

Besides the commodities that have been empirically found to be competitive, other commodities deemed critical for national food security and economic development need to be included in the promotion and prioritization initiatives. The following crops and livestock commodities have been identified by the Ministry of Agriculture and Irrigation as targets for special promotion: cassava, soya beans, cotton, ground nuts, rice, and pigeon peas, horticulture, dairy and poultry development.

Development of these commodities hinges upon a number of factors including:

(i) The liberalization process which provides opportunities for private sector investment in the production and marketing of the competitive agricultural products.

(ii) Economic policy environment which should provide the opportunity for the private sector or farmer associations to lobby the government on policy reforms conducive for their development.

(iii) The regional integration environment under SADC or Common Market for East and Southern Africa (COMESA) and the African growth Options Act (AGOA) initiative of the US Government, all of which provide market for the country's agricultural products

(iv) Diversified agro-ecological zones capable of producing various crop and livestock enterprises in the country

Tapping the potential in the agriculture sector could improve the sector's growth rates from the current fluctuating growth rates. It is estimated that for the national economy to maintain a 6 per cent growth, the agricultural sector would need a consistent growth rate of 15 per cent or more. This could be achieved through either promotion of growth of all crops to be at 15 per cent or shifting the production structure to raise the productivity and overall production of the few commodities that have been identified by the Ministry of Agriculture and Irrigation as having potential competitiveness.
6.0 Conclusion

The economy of Malawi is heavily dominated by the agricultural sector which for several decades has had a distinct dualistic structure characterized by estate and smallholder sub-sectors. Significant differences have prevailed for a long period between the smallholder sub-sector and the estate sub-sector in terms of their production technologies, constraints and capacity to respond to opportunities and these differences highlight the need to tailor strategies and technologies accordingly. The smallholder sub-sector has been the major producer of food crops while the estate sub-sector has contributed greatly to foreign exchange earnings.

Much as the country’s economy depends on agriculture with emphasis on crop production, both crop yields and livestock production have however remained below potential and agricultural markets have also been inefficient. Government policies and investment in agricultural sector have varied over the years. Social indicators and human resource base have not improved over the last decade, these compare unfavorably with the neighbouring countries.

The socio-economic indicators show that majority of Malawian population are poor. Agriculture being a major economic activity for the country has a great role to play in reducing levels of poverty. There is potential to increase the productivity of the selected crops and livestock and also be competitive in the agricultural trade. However, current performance is constrained by a number of factors. The proposed strategies and action plan need to be implemented to overcome the constraints, which will lead to a rapid and sustainable performance of the agricultural sector thereby contribute to poverty reduction. It is, therefore, important to support the implementation of the strategies and action plans prioritised within the MoAI and also to allow and promote private sector participation.

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## Appendix 1: General Economic Indicators

Number employees by industry group

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<th>Building &amp; Construction</th>
<th>Electricity &amp; Water</th>
<th>Transport</th>
<th>Wholesale</th>
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<td>20233</td>
<td>25075</td>
<td>14723</td>
<td>66512</td>
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**APPENDIX 3: Selected Foreign Exchange Rates**

<table>
<thead>
<tr>
<th>Date</th>
<th>Pound Sterling Buying Malawi Pound</th>
<th>J.S Dollar Buying Malawi Dollar</th>
<th>German Mark Buying Malawi D.Mark</th>
<th>S.A Rand Buying Malawi Kwacha per Rand</th>
<th>Zimbabwe Dollar Buying Malawi Kwacha per Dollar</th>
<th>Zambia Kwacha Selling Malawi Kwacha per Zambia Kwacha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
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<td>569</td>
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<td>666</td>
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**Note:** The table above provides selected foreign exchange rates for Malawi Kwacha as of various dates. The rates are given in Malawi Pound per Pound Sterling, Malawi Dollar per J.S Dollar, Malawi D.Mark per German Mark, Malawi Rand per S.A Rand, Malawi Kwacha per Zimbabwe Dollar, and Malawi Kwacha per Zambia Kwacha. The rates reflect the market exchange rates during the specified periods.
Source: Reserve Bank of Malawi

1 Averages of Daily rates quoted by the Reserve Bank for dealing with commercial Banks in Malawi.
2 From 7th February, 1994 Malawi Kwacha exchange rates become market determined.