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MALAWI

COUNTRY DEVELOPMENT STRATEGY STATEMENT

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COUNTRY DEVELOPMENT STRATEGY STATEMENT 1983-1987

MALAWI

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MALAWI

COUNTRY DEVELOPMENT STRATEGY STATEMENT

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INTRODUCTION

Malawi's economic performance contrasts with its status as a landlocked RLDC. Malawi is an extremely poor economy by international standards with most of the expected characteristics of a poor country relating to health, education, physical infrastructure and economic structure. The country and the economy are small and dependent on imports for virtually all manufactures and petroleum. Malawi has one marked advantage in the form of its natural resource endowment--soils and agro-climate--which is favorable to relatively productive and diversified agriculrural production. Malawi's geographical location is a marked disadvantage. It is landlocked; its overland transportation routes to less than efficient ports are limited, long and costly. Situated in south central Africa, the distances between Malawi's northern hemisphere markets and suppliers could not be much longer than they are. Malawi represents a classic case of a small, landlocked, RLDC which must depend on earnings from agricultural exports to obtain critical manufactured and energy inputs. Because of its geographic location, exports must be sold at a substantial discount and imports purchased at a premium.

In spite of Malawi's development impediments a review reveals a favorable economic performance in a pragmatic approach to economic development. In terms of aggregate economic performance, between 1964 and 1979 real income per capita has grown at an average annual rate of 3.8%, average annual real GDP grew at 7.4% between 1964 and 1970 (equivalent to a 6.7% annual compound rate) and 7.9% between 1970-1979. The share of annual gross fixed capital formation in GDP has steadily increased from 8.6% in 1964 to 22.4% in 1979. The proportion of gross domestic savings in gross fixed capital formation has increased from 5.3% in 1964 to 60.2% in 1979. Inflation rates have essentially reflected international rates. The GDP

deflator was 2.2% per annum during the period 1964-1969, 8% during the 1969-1974 period and 9.9% between 1975-1979. Exports have steadily increased, recording an average annual growth rate of 13.9% between 1975 and 1979.

The Malawian approach to development can be characterized as outward-looking, market-oriented, export-led growth. Furthermore, the development approach is balanced. Agriculture is the leading economic sector; structural transformation of agriculture is being actively pursued and there is an explicit policy to maintain rural incomes on a par with the level of urban incomes.

The resilience of the Malawian economy and the soundness of Malawi's economic development approach are presently being subjected to a severe test. After two consecutive years of poor weather and harvests, rising import prices and falling export prices and a virtually total two-month trade stoppage in 1979, Malawi is experiencing rapid inflation (about 20% in 1980), a deteriorating balance of payments position and severe budgetary strains. Weaknesses in specific aspects of agricultural pricing, investment allocation and the tax structure have been highlighted as a result. Extraordinary financing arrangements are being discussed with the World Bank and the IMF and reforms designed to address some of the weaknesses are being planned.

In spite of Malawi's current straits there is a large body of evidence which suggests that the basic structure of the economy and development policy are sound. Malawi is in a state of economic disequilibirium but the condition is temporary, not chronic. Given adequate support, the economy will return to its established long-term growth path.

Aside from serious transitory problems,Malawi is confronted with an interrelated complex of various economic problems in the form of rapid population growth, rising fuel prices and a continuing heavy reliance on agriculture. But there is a growing awareness by the Government of the first problem and a firm comprehension of the others. Malawi's demonstrated ability to perceive, formulate and implement sound and equitable economic development policies indicate that the prospects are far above average for external resources to be productively employed in supporting balance economic growth.

II. ANALYSIS

A. Overview

The Physical Setting and the Economic Resource Endowment

Independent Malawi was created from the Federation of Rhodesia and Nyasaland in 1964. Dr. H. Kamuzu Banda, leader of the Malawi Congress Party (MPC) since 1959, was then the Prime Minister. In 1966, the Republic of Malawi was constituted with Dr. Banda as its first President and the MPC as the dominant political organization. In 1970, Dr. Banda was named President for Life.

Landlocked Malawi is bordered on the East, South and Southwest by Mozambique, on the West by Zambia, and the North by Tanzania. It extends north to south for 520 miles with width varying from 50 to 100 miles. Its total area is 45,747 sq. miles of which 9,300 sq. miles are lakes and 36,447 sq. miles are land area.

Lake Malawi, occupying the eastern side of the country, is an important geographic and economic feature. The lake, approximately 400 miles long and, on average, 50 miles wide, lies mostly within Malawian territorial limits. The land area consists of three topographically different regions which also correspond to the administrative divisions: The northern mountainous region; the central plateau and the southern highlands. Approximately 36% or 13,121 sq. miles of the total land area is currently under cultivation. Table 1 provides a comprehensive listing of land use. Using current agricultural technology, about 38% of the land area is suitable for cultivation. Essentially Malawi has reached the extensive margin of cultivation. In the northern region about 50% of the arable land is under cultivation whereas in the central and southern regions all arable land is being cultivated, fallow periods have become shorter and cultivation has been extended to less suitable land. As

Table 1: LAND USE

	'000 Acres	Percent
Total Land Area	23,240	100
Customary Land under Cultivation	7,105	31
Estates	1,159	5
Land Not Arable [1]	7,764	33
National Parks	2,559	11
Urban Areas and Infrastructure	2,559	11
Forest Reserves	2,094	9

1 Includes grazing areas and restricted drainage valleys permanent swamps, steep rugged country.

Source: World Bank

a result soil degradation is becoming an increasingly prevalent problem.

Malawi's economic resource endowment consists of moderately fertile soils, substantial water resources, a climate favorable to crop production, and an industrious and economically responsive population. Malawi has a minimal adequate food supply and a varied range of exports crops, several of which are suited to smallholder production.

Other than deposits of limestone and brick clays, the commercial viability of Malawi's known mineral deposits has not yet been determined. A glass sand deposit is being investigated. Malawi has some bauxite, and its uranium potential is being examined. Malawi has limited forest resources which are the major source of smallholder fuel and an important source for construction materials. Construction of a small pulp mill is being considered.

A 1977 population survey showed a total population of 5.6 million, an increase of 1.5 million from the 1966 survey. This represents an annual compound growth rate of 2.9%. At the 2.9% rate, the 1981 population can be expected to be 6.3 million. According to the 1977 survey, 8% of the population was urban. Blantyre, the commercial center, accounts for almost 50% of the urban population. Lilongwe, the newly established capital, has emerged as the other major urban concentration with 20%. Rural-urban migration has not been a significant factor in Malawi.

Overall population density is among the highest in Africa. In 1981 average density will reach approximately 65.2 persons per square km with an average rural population density of 154 persons per square km of arable land. About 85 to 90% of the population is engaged in agriculture, most of which is engaged in smallholder farming.

Basic Human Needs: Policy and Performance[1]

The main emphasis of Malawi's development strategy since independence in 1964 has been on economic growth and efficiency. Nonetheless, an important element of the strategy has been the alleviation of rural poverty with primary emphasis on projects to raise agricultural productivity and secondary emphasis on education and more recently health. This orientation has succeeded in giving Malawi perhaps the highest economic growth rate in Africa, while meeting the basic needs of its population at least as well as most other countries in the region.

Direct government provision of basic needs consists mostly of expenditures on education and health. Together, education and to a lesser degree health, account for 80% of government outlays for basic needs, with water supply, sanitation and housing accounting for the remainder. Government spent an equivalent of 19% of budgeted expenditures or 6% of GDP on basic needs-type activities in 1977/78; expenditures on education and health have expanded during the past three years. The level of capital and recurrent expenditures allocated to the social sectors has not been high relative to many other LDCs, however, the effectiveness with which Government and private (foreign) organizations' resources have been applied has tended to be relatively effective.

The strong organizational structure linking the Central Government to district and village levels and major efforts by private groups such as Public Hospitals' Association of Malawi may explain Malawi's relative success in improving basic needs satisfaction. A high degree of efficiency and effectiveness in the use of resources has characterized the system, and there has been a considerable reduction in the capital costs of basic needs program through the use of self-help labor for construction purposes. In addition, the approach

1 The material on basic needs is taken largely from a recent World Bank report on the subject. We feel this material presents a balanced overview of basic needs policy and performance in Malawi.

emphasizes extensive goal-oriented cooperation between government ministries and units in the field and between program and policy planning levels.

The Central Government undertakes major infrastructure investment in basic needs-related sectors, such as secondary schools, universities, and central hospitals. Implementation of some smaller-scale activities such as the construction of primary schools, health clinics, teacher and health worker housing, wells and gravity-fed piped water systems is the responsibility of the self-help District Development Committees (DDCs). Self-help labor, provided by project beneficiaries, is an important component of these projects. Each DDC is decentralized downward to area action groups and Village Headmen. The decentralized structure ensures extensive local participation in the selection and planning of projects.

Malawi has an adult literacy rate of 25%, which is above the income-predicted level for sub-saharan countries.[1] In 1976, the primary school enrollment ratio was 63%, the female primary school enrollment ratio was 4%. The primary school enrollment and female primary school enrollment ratios were above the income-predicted levels for African countries. The secondary school enrollment ratio is below the income-predicted level for African countries. Primary school enrollments more than doubled (from 332,000 to 675,000) between 1962 and 1978; over the same time period, secondary enrollment increased five-fold (from 3,000 to 15,000 students).

After independence in 1964, the Central Government entered the education sector at all levels. Local governments were given major responsibilities in primary education except for the burden of primary schoolteachers salaries

1 The 25% figure is from the World Development Report, 1980.

(90% of the recurrent primary school budget). Central Government programs concentrated on the development of the middle- and high-level workforce: secondary education was expanded and improved and the University of Malawi was established. Capital expenditures on secondary education and the university have absorbed about three-quarters of the Ministry of Education's capital budget during the 1970s (as high as 90% in the early 1970s).

A major expansion of primary teacher education is in progress, and the Central Government is now launching a program to finance primary school mathematics, English and Chichewa textbooks. The Government also accords high priority to increasing the numbers of qualified secondary schoolteachers witnessed by the in-service teacher training center recently established at Domasi.

Both the primary and secondary school curricula have been broadened to include instruction in health, nutrition, and agriculture-related subjects. Efforts to expand non-formal education by the Health, Community, Development and Agricultural Ministries are reaching large numbers of adults, particularly mothers of young children. Courses cover homecraft, nutrition, health and child care, sanitation, crop and animal husbandry.

Steps are being taken to reduce regional inequalities in eduation. There is an increase in the intake of students from districts and regions with the weakest educational systems into national secondary schools and the University of Malawi.

A rather inclusive formal and informal education system is now in place, but the informal education system needs to be improved. There is

Government commitment to improvement of health standards in Malawi has grown in the last several years, with increased budget allocations and plans for considerable expansion in training of health personnel. The use of health facilities is also increasing. As many as three-fourths of those suffering from illnesses now go to a health facility for treatment. About 7.5% of government recurrent expendiutres were allocated to health since 1975/76. While the health effort has been relatively effective, Malawi is an RLDC, and on a national scale, the health care sector is extremely small.

The Government is taking action in the areas of health environment and control of communicable diseases and is in the process of expanding the Primary Health Program to provide health facilities to the entire population, including considerable health education and preventive work(e.g., under-five clinices for immunization and health monitoring), nutrition education and rehabilitation units, prenatal and maternal-child health clinics.

The high incidence of communicable diseases has recently led to increased emphasis on preventive health measures--particularly mass immunization, health education vector control and water, sanitation and housing improvement programs. A national action program for malaria control is now being formed. Antimalarial suppressive drugs are being distributed to children and pregnant women at under-five and prenatal clinics. Diseases of childhood and infancy are being attacked mainly through the under-five clinics and prenatal clinics which provide immunization, primary health care, health and nutrition education, and distribution of foods, vitamins and iron. Children now receive seven immunizations at under-five clinics: smallpox, polio, dyptheria, whooping cough, tetanus, tuberculosis, and measles. Immunization

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rates in mid-1979 are estimated at 40-50% of the under-five population and the target rate is 80%.

Malnutrition in Malawi reportedly is concentrated on young children and at certain seasons of the year. Since average annual calorie and protein availability appear to be adequate, the major causes of the observed cases of malnutrition appear to be "lean season" shortages, lack of adequate breast feeding supplements and weaning foods, and poor food distribution within the family. Much of Malawi's malnutrition problem appears amenable to relief through education and government preventive health programs. The Government is now giving greater priority to such programs. There is some evidence that malnutrition may be more widespread and chronic than indicated.

Housing is a "basic need" problem in Malawi primarily for the 9% of the population who live in urban areas. In the rural areas and small towns, families manage to construct adequate housing with their own labor and freely available local materials; the "basic needs" considerations are largely those of safe water supplies, safe disposal of human wastes and education about health requirements. While the problem of shelter is not an acute basic needs problem in the rural sector, it is a potential problem in the urban sector. While only 9% of the country is urban, the urban population is expanding at about 8% per annum. Blantyre, together with Lilongwe represent about 70% of the urban population with a network of six other towns recording populations over 10,000. Population growth rates for the smaller urban centers range between 6% and 23%.

From an overall point of view, Malawi's approach to provision of basic human needs appears to be founded first on providing opportunities to earn or increase individual income. Second, the method and rate of expansion

of services is conservative but this property also tends to make those BHN efforts which have been undertaken sustainable, finally the BHN effort is relatively well balanced. No particular area--health, education, housing--is either unduly emphasized or neglected. Malawian BHN policy is pragmatic. It recognizes the needs but it only addresses them to the extent the effort can reasonably be expected to be sustainable.

Methodology of the FY-83 CDSS

The relationship of macroeconomic aspects of the economy--policies and changes in aggregate stocks and flows--to the poorer segments of the population has been a critical issue in CDSS preparation[1]. A specific concern within this overall issue has been are the poor poor for inherent reasons beyond government influence such as because of a meager natural resource endowment, because of a rudimentary stage of economy development or because the economy is especially subject to adverse exogeneous factors such as an unfavorable climate or falling terms of trade. Or, on the other hand, are the poor poor for reasons which can feasibly be addressed by government policy, i.e., asset distribution, investment allocation, pricing and marketing policies which are such that either the economy does not grow or the poor do not receive a reasonable share of the increments from growth. It is not always a simple matter to determine the root causes for poverty and more significantly the continuation of poverty, because government announcements on economic growth and participation of the poor do not always provide a sufficient basis to make a judgement. Actual results can differ for a number of reasons.

1 See Thomas Morrison, "A.I.D. Macroeconomic Analysis at the Country Level; Implications of the 1982 - 86 CDSS Review; June 2, 1980, Washington, D.C.

Thus, judgement on the role of the poor in a developing economy frequently calls for an independent, analytical assessment of policy and performance. The analysis requires a systematic examination which must combine data on actual performance with a set of qualitative evidence. Furthermore, a thorough basis for judgement requires that there be an understanding of interrelationships between macroeconomic elements and the poor.

Malawi presents one of the easier cases to examine. There is a reasonable amount of evidence which suggests that the poor are poor because of one primary, organic cause, i.e., Malawi's rudimentary economic development stage. In addition, growth and development are actively impeded by three exogeneous factors--adverse movements in international prices, the country's landlocked location and weather[1].

As noted in the preceding section, the agricultural resource endowment provides a sufficient engine for growth. Thus, it is reasonable at this point to offer the hypothesis that the poor in Malawi are not in this status as a result of Malawian economic policy, rather the poor are beginning to realize gains because of sound economic management and development policies.

Examination of this hypothesis is essentially a pre-requisite to formulation of an assistance strategy. If the general policy stance and actual results indicate Malawi's development effort efficiently and equitably encompasses, the poor, then the next logical question is how can the development effort be supported and are there opportunities for improvement.

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1 Whereas these factors cannot be controlled per se, they are subject to long-term policies which can lessen their impact. The factors are therefore not entirely immutable.

First we can describe the poor as an economic group and how the group relates to income generation in the context of the economy. In terms of general characteristics the largest single class of poor are smallholder farmers whose main asset is land[1]. Land holdings are relatively evenly distributed and there is no substantial landless labor group in the Asian sense. Smallholder incomes originate from a combination of subsistence food cultivation, residual food sales, cash crop cultivation (usually for export) and from working on estates for wages or a share of sales. The incidence of labor as a source of income is greatest in the southern and central regions and virtually nonexistent in the northern region.

Some important macroeconomic elements through which smallholder cash incomes tend to be influenced are: price levels, credit, crop pricing and marketing, wage levels and demand for wage labor. Over the longer term, investment allocation is an important determinant. The following section on economic structure and performance offers an outline of major macroeconomic sub-areas and their relationships to smallholders. The economic structure and performance section is followed by a more narrowly focused review of the agriculture sector.

B. Economic Structure and Performance

Sectoral Comparisons

Since independence, real Malawian GDP has consistently grown at a rate in excess of population growth. The average annual rate of growth for the 1967-79 period was 6.7%. Adjusted for the existing rate of population

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1 See page 6 of the Malawi FY-82 CDSS for land distribution data.

growth, real GDP per capita has grown on the average of about 4% per year. If growth is maintained at that rate in the future, real per capita GDP will double by the year 2000. The growth rate in GDP accelerated after 1970 and was especially high in 1976 and 1977. Real growth in 1978 was estimated to have declined to 5.4%, recovering slightly to 6.2% in 1979. Little or no growth in real income is expected for 1980.

Table 2 provides a broad picture of the major division of Malawian gross deomestic product. Agriculture is the single largest sector constituting about 45% of economic activity. The four key producing sectors (agriculture manufacturing, construction and transportation) have tended to maintain reasonably constant shares relative to one another over the last few years. Two points in Table 2 are particularly noteworthy. First, the share of monetary GDP (at constant prices) has been gradually increasing over time. This is one indicator that economic development is taking place. Second, note that the sum of the shares of the four productive sectors has remained relatively constant (75% in 1975, 74% in 1979) indicating that the government sector is not expanding disproportionately.

Table 2 is particularly useful because it indicates agricultural GDP by estate and smallholder subsectors. The predominant proportion of agriculture is the smallholder subsector which accounts for about 40% of total GDP with estates producing 6 to 7%[1].

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1 Growth in the non monetized portion of smallholder agriculture is reported to have expanded at a rate equal to that of population expansion. This is probably a conservative estimate because the country has been able to remain self-sufficient in food during the period and it has been able to absorb and feed a growing urban population, a rapidly expanding estate work-force and an influx of returning migrant workers from South Africa.

Table 2: GROSS DOMESTIC PRODUCT BY ECONOMIC ACTIVITY, 1975-79

(In Millions of Malawi Kwacha; One Kwacha = $1.20 U.S.)

	1975	1976	1977	1978	1979 Est.	1976	1977	1978	1979	1978	1979
	At 1973 prices					Growth Rates in %				% Share of Total GDP at Current Factor Cost	
Agriculture, forestry & Fishing	186.8	201.2	216.3	224.4	230.2	7.7	7.5	3.7	2.8	46.2	45.5
Smallholder	166.0	176.3	187.8	194.2	196.9	6.2	6.5	3.4	1.4	40.0	38.8
Monetary	(33.9)	(40.8)	(48.8)	(51.6)	(50.6)	(20.4)	(19.6)	(5.7)	(-2.0)	(10.6)	(10.0)
Nonmonetary	(132.1)	(135.5)	(139.0)	(142.6)	(146.3)	(2.6)	(2.6)	(2.6)	(2.6)	(29.4)	(28.8)
Estate	20.8	24.9	28.5	30.2	33.8	19.7	14.5	6.0	11.9	6.2	6.7
Manufacturing	53.8	52.6	58.2	63.1	67.2	-2.2	10.6	8.4	6.5	13.0	13.3
Monetary	45.8	44.4	49.8	54.5	58.4	-3.1	12.2	9.4	7.2	11.2	11.6
Nonmonetary	8.0	8.2	8.4	8.6	8.8	2.6	2.6	2.6	2.6	1.8	1.7
Building and Construction	20.9	20.8	21.7	28.1	30.0	-0.5	4.3	29.5	6.8	5.8	5.9
Monetary	16.9	16.7	17.5	23.8	25.6	-1.2	4.8	36.0	7.6	4.9	5.0
Nonmonetary	4.0	4.1	4.2	4.3	4.3	2.6	2.6	2.6	2.6	0.9	0.9
Electricity and Water	6.0	6.4	6.7	7.0	7.8	6.7	4.7	4.5	11.4	1.1	1.5
Wholesale & Retail trade	51.4	55.0	57.8	64.5	68.1	7.0	5.1	11.6	5.6	13.3	13.4
Financial Services and Real Est.	28.2	29.9	31.3	35.1	38.4	6.0	4.7	12.1	9.4	7.2	7.6
Transport and Communications	24.4	24.6	25.9	26.2	28.4	0.8	5.3	1.2	8.4	5.4	5.6
Subtotal: Nongovernment factor cost at 1973 prices	371.5	390.5	417.9	448.4	470.6	5.1	7.0	7.3	5.0	91.8	92.8
Monetary	227.4	242.7	266.3	292.9	311.1	6.7	9.7	10.0	6.2	60.0	61.3
Non Government	144.1	147.8	151.6	155.5	159.5	2.6	2.6	2.6	2.6	31.8	31.5
Public Administration and defense (current prices)	25.9	26.7	28.7	35.5	42.5	3.1	7.5	23.7	19.8	4.4	4.3
Education, Health & other services (current prices)	19.1	21.0	29.9	31.7	35.5	9.9	42.4	6.0	12.0	4.0	3.6
GDP at current factor cost	532.8	610.4	718.9	793.2	987.2	14.6	17.8	10.3	24.5	100.0	100.0
Net indirect taxes	32.9	30.0	43.2	60.2	78.5	-8.8	44.0	39.4	30.4		
GDP at current market prices	565.7	640.4	762.1	853.4	1065.7	13.2	19.0	12.0	24.9		
Monetary	365.5	412.5	516.5	601.6	786.8	12.9	25.2	16.5	30.8		
Nonmonetary	200.2	227.9	245.6	251.8	278.9	13.8	7.8	2.5	10.8		

Source: IMF

Although the time series in Table 2 is relatively short it reveals some interesting features about the monetized smallholder subsector. First the share of monetized smallholder production is relatively large comprising one-fifth (22% in 1979) of total agricultural outputs. Estate agriculture accounts for about 15% of output. The shares of both subsectors have increased in recent years except for 1979 when monetized smallholder growth was -2%. In 1976 and 1977 when agricultural production was expanding at a rapid pace, monetized smallholder expansion led the way followed closely by estate output. The shift from subsistence to monetized agriculture plus the pressure of high growth rates in monetized smallholder output suggest that smallholders are active participants in the economic growth process.

Monetized smallholder output levels, however, appear to be especially sensitive to adverse weather and external transport conditions. Poor growing conditions in 1978 and 1979 combined with a two-month halt in overland transportation caused monetized smallholder growth to drop from 20% in 1977 to 6% in 1978 and to decline to negative 2% in 1979. Growth on estate production matched smallholder gains in 1978 but estate output increased again in 1979. It is anticipated that data for 1980 will show a modest positive growth rate for smallholders in 1980.

Government Economic Role

Government plays a key role in the economy but it is not involved in detailed control. Prices are predominately market-determined and statutory corporations' input and output prices reflect economic values. Government does not employ large and widespread price distortions to pursue its policy objectives.

Government policy has been one of fiscal and monetary restraint, a deliberately slow process of replacing expatriates with Malawians, investment to favor growth, avoidance of capital-intensive and industrial projects, and provision of incentives for private investment and economic activity, including foreign capital.

Industrial policy is designed to promote the processing of local raw materials by labor-intensive techniques and firms are required to pay export-parity prices for their primary inputs. Capital-intensive industry has no priority unless it fulfills an essential function and there is not choice of a feasible technique using more labor. There has been limited creation of import substitution industries (e.g., portland cement, textiles and metal fabrication) and two new enterprises--fertilizer and glass-- are currently under consideration. A 4.9 million litre capacity ethanol plant is nearing completion. Import substitute industries are subject to competitive market pricing, satisfactory utilization rate and profitability criteria.

Price controls exist for 45 items including certain basic food products and beverages, some houshold goods and some industrial inputs. No controls are placed on increases in the prices of imported goods although retail mark-ups are monitored. A local producer can raise his price if he can establish higher production costs (other than labor costs which the Government attempts to hold to 5% annual increase). The Government uses a 10-12% after tax return on capital as a guide.

The public sector (Central Government, local authorities and public enterprises) is moderate in size constituting about 20-23% of gross domestic expenditure, most of which is investment, and a declining proportion of gross domestic consumption, presently at 13%. In the late 1970s the public investment/expenditure ratio had risen to 57% based on consistent increases in saving by public enterprises and by Central Government. The private sector accounts for

more than three-fourths of gross domestic expenditure and over 85% of gross domestic consumption.

Savings and Investment

The bulk of domestic savings are initially generated in the agriculture sector from estate net income and from net profits made by the Agricultural Development and Marketing Corporation (ADMARC) on its sale of export commodities purchased from smallholders. Information on direct saving by smallholders is not available but it is probable that informal saving by some smallholders is significant. The other main source of savings is foreign--either donor assistance or private investment.

Investment can be divided into two parts. Investment in the estate subsector is made by estates themselves either from earnings or from bank borrowing. Investment in the smallholder sector, in physical and social infrastructure is made by the Government or by statutory corporations. Investment in manufacuring/agro-processing tends to be done by statutory corporations and private investors.

The higher rates of economic growth achieved in the 70s were preceded by marked increases in total investment (as a percent of GDP) from 1967 onwards. While erratic from year to year, the overall investment rate has exceeded 20% in most years and 25% in three of the last five years. Public investment accounted for about half of total investment in 1978 and 1979, down from 60-68% in earlier years.

Table 3 contains an overview of national aggregate savings and investment levels for 1975-79. Domestic savings have varied between 10 to 20% of GDP in the 70s. Since net factor income has been negative in most years, domestic savings available to finance investment have been lower. The net result has been

TAB:E 3: SAVINGS AND INVESTMENT, 1967-79 (K Million)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
1. Total Investment, of which	29.4	36.7	45.5	69.6	65.0	88.8	91.1	116.7	161.6	107.0	168.5	318.0	306.2
Fixed Investment	(25.4)	(37.4)	(47.7)	(61.1)	(54.4)	(72.4)	(76.7)	(115.9)	(145.6)	(135.0)	(158.4)	(265.8)	(238.4)
2. Domestic Savings	9.5	6.2	13.1	35.6	31.3	43.9	54.9	66.3	57.4	69.9	135.4	178.5	143.4
3. Resource Gap (1)-(2)	19.9	30.5	32.4	34.0	33.7	44.9	36.2	50.4	104.2	37.1	33.1	139.5	162.8
4. Net Factor Income	-7.7	-7.0	-5.7	-6.1	-3.2	-3.7	0.8	12.4	8.0	-18.0	-23.0	-4.0	-30.8
5. Natl. Savings (2)+(4)	1.8	-0.8	7.4	29.5	28.1	40.2	55.7	78.7	65.4	51.9	112.4	174.5	112.6
6. Net Foreign Financing	27.6	37.5	38.1	40.1	36.9	48.6	35.4	38.0	96.0	55.1	56.1	143.5	193.8
Ratios													
Percent of GDP at Market Prices													
Total Investment	13.6	16.3	18.6	26.1	19.4	24.7	22.7	24.0	28.4	16.4	21.9	37.3	28.7
Fixed Investment	11.8	16.6	19.5	22.9	16.2	20.2	19.1	21.7	25.7	20.7	20.6	31.2	22.4
Domestic Savings	4.5	2.8	5.4	13.3	9.3	12.2	13.7	13.6	10.1	10.7	17.6	20.9	13.5
Resource Gap	9.4	13.5	13.3	12.7	10.1	12.5	9.0	10.3	18.4	5.7	4.3	16.4	15.3
Net Foreign Financing as % of Total Investment	93.9	102.0	83.7	57.6	56.7	54.7	38.5	32.6	59.4	51.5	33.3	45.1	63.3
Resource Gap as % of Total Investment	67.7	83.1	71.2	48.8	51.8	50.6	39.7	43.2	64.5	34.7	19.6	43.9	53.2

Source: IMF

that domestic financing as a proportion of total investment is reduced, varying between 40 and 66%. The difference between national savings and total investment is made up by foreign sources shown in Table 3. The proportion of total investment expenditures financed from foreign sources has averaged around 50% annually. In 1979 the external share was 63%.

Investment by the public sector (which includes donor assistance) has been increasing as a proportion of gross domestic investment, rising from about 50% to over 60% during the twelve years 1967-1978; the increase in investment has been mostly by the Central Government. In contrast, the public sector's share of gross domestic consumption has declined from 15% to 13%. These trends in the sector's contribution to domestic consumption and investment are reflected in the sector's investment/expenditure ratio, which has risen sharply from 35% in the late 1960's to 57% in the late 1970's. This indicates that presently over one-half of public sector expenditure (in the national accounts sense) takes the form of investment.

The increase in the public sector's share of gross domestic investment has been matched by improved savings performance. Indeed, the sector's contribution to Malawi's gross domestic savings (GDS) has risen sharply during this period and presently accounts for about 40% of gross domestic savings, up from 27% in the early 1970's. This strong performance is due to consistent savings by public enterprises, equal to about one-quarter of GDS, and to changed fiscal performance by the Central Government, which has moved from a position of negative savings to a position of contributing 15% of GDS. This development is reflected in the public sector's savings/investment ratio, which has risen in tandem with the sector's contribution to domestic savings. The fact that the ratio of public savings to GDS is equal to the ratio of

public savings to public investment reveals that, on balance, the government's absolute level of investment has equaled the gross savings of the domestic economy. In other words, the public sector invests as much as the economy saves.

The improvement in public sector savings has not been at the expense of private sector savings, however. Indeed, the private sector has also increased its ratio of savings to investment and presently saves almost as much as it invests. The combined improvement in savings performance by both the public and private sectors has increased the proportion of domestic investment which is financed by domestic savings from one-quarter to more than 50% in recent years. Since the private sector is nearly self-sufficient in the financing of its investment, the one-to-one relationship between public sector investment and gross domestic savings emphasizes the much greater importance to the public sector of Malawi's continued access to foreign finance, without which the momentum of public investment would absorb an increasingly larger share of domestic savings and leave less domestic finance available for private investment.

Monetary Policy and Performance

The status of the balance of payments with respect to the direction of flow of net foreign assets is the primary determinant of the money supply in Malawi[1]. Thus, in 1977 a K20 million increase in net foreign asset holdings was accompanied by a sharp increase in the money supply. In 1978 and 1979 net foreign assets declined by K20 million and K65 million respectively. Growth in the money supply also slowed.

Monetary policy in Malawi is most notable for what has not happened. Because the Government has not incurred large or chronic budget deficits there has been no need to create money. Thus there has been negligible domestically-generated inflation.

Malawi is somewhat unusual among RLDCs where monetary instruments are usually few and weak. In Malawi money and credit can be influenced by control of bank reserve ratios, changes in the central bank discount rate, changes in the structure of commercial interest rates and by directives to commercial banks.

During the late 70s most central bank actions have been directed toward control of credit on imports. Because the Government budget has been in balance there has been no significant pressure to increase the money supply to cover budget deficits.

The relationship of the money supply to the smallholder is indirect but it is pervasive. Insofar as the smallholder is a subsistence farmer there is little relationship. But virutally all smallholders in Malawi are in monetized activities as well--cash crops or wage labor--and, significantly, they are becoming increasingly integrated into the monetized sector. Monetary policy can exert a major affect on the rate of transition from non-monetized to monetized agriculture

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1 The money supply is defined as cash, demand deposits and short-term savings accounts.

and on smallholders' decisions, who are already using money as money supply effects are transmitted through changes in price levels and changes in private investment.

The balance of payments is the primary determinant of changes in the money supply but this relationship is attenuated for the smallholder by means of the commodity export mechanism. When world tobacco prices rise substantially above the price paid to smallholders ADMARC makes a bonus payment, but the payment is 40% of the increment thereby holding back 60% of the price increment. Similarly a decline in export commodity prices may not be transmitted through ADMARC thereby attenuating the decline in prices paid to smallholders. Commodity prices, however, are one of several determinants in the balance of payments and, although there is some dampening effect for smallholders, the modern sector is much more open to changing money supply influences and effects in that subsector are partially passed on to smallholders via investment and employement effects.

Central Government Revenue and Expenditure

A recent World Bank report notes that Central Government receipts are noteworthy in two respects: (a) the stability in sources and (b) the strong performance of tax revenue. Ordinary revenue (tax and non-tax) derived from the domestic economy has consistently comprised about 60% of total receipts throughout the period 1967-78, while domestic borrowing contributed a consistent 8% and external finance made up the balance. Ordinary revenue also remained constant as a % of GDP, about 15%, thus growing in pace with the domestic economy. Within this constant proportion, tax revenue grew in importance, from about 9% to 12% of GDP, while the share of non-tax revenue declined correspondingly. The strong performance of tax revenue may be attributed, in part, to the relatively light total revenue burden on the economy, as well as to the strong incentives for investment and, to a lesser

extent, for import substitution which are incorporated in the tax structure. These two factors have enhanced the opportunities for investment, stimulated production and sales, widened the tax base and contributed to the growth in tax revenue. There exists considerable scope for improving revenue performance through changes in the tax and non-tax revenue structures. Nevertheless, the existing revenue structures have served Malawi well, and on balance, are conducive to development.

The revenue burden in Malawi, about 15% of GDP, is among the lowest in Africa. Direct taxes constitute 39% of revenue, a high proportion for an RLDC. This proportion has increased significantly over the period, indicating that the direct tax system has been effectively tapping the rapid increase in personal and corporate income. Although the share of non-tax revenue in Malawi has declined substantially over the period and could contribute more to total revenue than it does, non-tax revenue is still higher than in most developing countries. This indicates that the Central Government has been more successful than other countries in raising revenue through the sale of services and from the surpluses of its operating departments and public enterprises.

Tax revenue has grown at 18.5% per annum in nominal terms over the period 1967-78, and has increased as a percentage of GDP from 8.5 to 11.9%. This bouyant performance, however, is mostly the result of the introduction of a surtax and changes in various tax rates, rather than due to an implicitly elastic overall tax structure which would automatically generate increasing proportions of revenue to GDP as output and prices increase. Net of surtax, tax revenue remained virtually stagnant as a percentage of GDP, rising only from 8.5 to 8.8%.

There is appreciable scope for improving tax performance overtime such as modifying the system so there is a more regularized flow of tax payments during the years in which it is earned, taxing the economic rent of land and changing excise taxes and customs duties to an ad valorem basis instead of a quantity basis. In the opinion of the World Bank income tax administration appears to be efficient, although a change in the method of tax collection could speed up revenue collections and raise the percentage of tax collected to tax assessed. The objective is to increase tax-generated revenues in order to enable the Government to decrease domestic borrowing.

Table 4 presents an overview of the Central Government expenditure pattern. The data indicate that the shares of the economic and adminsitrative sectors grew proportionately larger between 1967 and 1978.

Table 4: DISTRIBUTION OF CONSOLIDATED EXPENDITURE
(period averages, percent)

	1967-69	1970-72	1973-75	1976-78
Economic	36	43	42	46
Social	24	20	20	18
Administrative	28	26	31	29
Interest and Pensions	12	11	7	7
Total	100	100	100	100
Of Which:				
Recurrent	75	63	58	54
Capital	25	37	42	46

Source: World Bank

The proportion of capital expenditure nearly doubled between 1967 and 1978. Allocation of development expenditure will be discussed in the section

on Government development plans.

In spite of Malawi's generally strong fiscal performance it has become evident that the country is not exempt from recurrent cost financing problems. Over recent years there has been a tendency to short change recurrent cost budgets to release more resources for counterpart funding and thereby enable the maintenance of a high level of concessionary investment assistance. For example it is estimated that in 1978 recurrent expenditure was underfunded by K8.4 to 13.5 million. This is equivalent to 6 to 10% of the 1978 recurrent expenditure budget.[1]

Public Enterprise

Public enterprises serve a key role in the Malawian economy and its development. The principal sector is made up of twelve enterprises ranging from ADMARC, the largest entity with 20,000 employees and a broad range of business and financial activities relating to agriculture, to more circumscribed enterprises, such as the Blantyre Water Board or Malawi Railways[2]. Employement of eight public corporations was 19,343 employees in 1973 and 28,922 in 1978, an increase of 50% in five years.

Public corporation wage levels are comparable to civil service wage scales. ADMARC pays higher wages. Except for ADMARC, all public companies have tended to lose some middle and higher level employees to private enter prise. Employment, per se, is not an objective as indicated by the fact that,

1 See Peter Hansen, "Malawi: Recurrent Expenditure Study", World Bank 1978 and Malawi: Baxic Economic Report, Annex No. 3, World Bank, 1980.

2 The 12 are: The agriculrural Development and Marketing Corporation (ADMARC), Air Malawi, Blantyre Water Board (BWB), Capital City Development Corporation (CCDC), Electricity Supply Commission of Malawi (ESCOM), Kasungu Flue-Cured Tobacco Authority (KFCTA), Malawi Broadcasting Corp. (MBC), Malawi Book Service (MBS), Malawi Development Corp. (MDC), Malawi Housing Corp. (MHC), Malawi Railways (MR), and Smallholder Tea Authority (STA). (ADMARC, CCDC and MDC own majority or full interest in many subsidiary companies, as well as minority interest in many "associate" companies.)

except for Air Malawi, as of 1979, public enterprises have at least covered their operating costs. In countries where employment generation is an objective of state companies labor costs frequently overwhelm revenues. As a group public companies between 1970-78 were moderately profitable (a 5.5% return on total assets) and maintained a sound financial structure (a debt to equity ratio of 1.6). The financial performance of three companies--the Malawi Housing Corporation, Malawi Railways and Air Malawi--is hampered by Government pricing policies. The public companies have served a useful developmental function by mobilizing domestic resources in the form of profits and depreciation reserves which on an average annual basis has enabled them to finance two-thirds of investment in their own fixed capital assets, over 20% of gross national investment and 25% of gross domestic savings between 1970-78.

ADMARC is the largest public enterprise, the most profitable and the public company of most direct concern to agriculture sector development. Its average profit ratio between 1970-1978 was 18% compared to 1% for the other eleven companies. Among public companies,ADMARC has provided 65% of total savings and 13% of investment (the Electricity Supply Commission of Malawi, ESCOM, provides 31% of investment). As the companies are constituted, ADMARC is also the most profit-oriented of the 12 companies.

Overall, public enterprises in Malawi have turned in a credible performance. They have tended not to exploit their positions in counter-productive or wasteful ways. Problems of mismanagement or corruption are not institutionalized and perpetrators of isolated incidents are reprimanded. The Government is taking measures to monitor more closely public enterprise financial management. Enterprises have made a net contribution to the development effort in the form of delivery of goods and services, generation of savings and investment and, in the case of ADMARC, provision of an appreciable entrepreneurial element[1].

1 Press Holdings Limited is not a public enterprise, however, it controls or has substantial financial interest in about 40% of the private business sector.

Employment, Wages and Prices

The Malawi FY-82 CDSS provided an outline of employment policy and performance but the issue is so vital in Malawi, and Malawi's employment performance sufficiently dynamic that the topic warrants a second review. Table 5 provides an overview showing employment by sector and the proportional change in employment by sector between 1978 and 1979 when employment expanded by 9%. (Note that economic growth was below trend in Malawi in 1979). Employment increased by 10% in 1978.

Table 5: STRUCTURE OF EMPLOYMENT 1977-1979

	1977		1978		1979		% Change 1979 on 1978
	Number	%	Number	%	Number	%	
Agriculture, Forestry & Fishing	154,696	50.1	169,008	49.9	185,000	50.1	9.5
Mining and Quarrying	588	0.2	564	0.2	600	0.2	6.4
Manufacturing	33,479	10.8	35,629	10.5	36,400	9.9	2.2
Electricity and Water	2,751	0.9	2,922	0.9	3,500	0.9	20.7
Building and Construction	23,250	7.5	31,529	9.3	37,500	10.2	19.0
Wholesale and Retail Trade, Hotels and Restaurants	25,226	8.2	27,497	8.1	29,800	8.1	8.4
Transport, Storage and Communications	16,597	5.4	17,522	5.2	20,700	5.6	18.3
Financing, Insurance and Business Services	6,718	2.2	6,817	2.0	7,900	2.1	16.2
Community, Social and Personal Services	45,571	14.8	47,395	14.0	47,700	12.9	0.6
TOTAL	308,876	100.0	338,883	100.0	369,100	100.0	8.9

Source: Malawi Government, Economic Report 1980, p. 49

The creation of an economic climate which maximizes employment generation has been a cornerstone of Malawian economic policy for the last ten years. The primary policy instrument has been wage restraint whereby wage claims in the private sector in excess of 5% a year must be submitted to the Wages and Salaries Restraint Committee for approval, and are only granted when justified by productivity increases. The policy is also aimed at maintaining a more

equitable balance between urban and rural income levels[1]. Public sector wages are kept on a par with the private sector.

The result has been an 88% expansion in wage employment between 1969 and 1977 relative to a 30% expansion in the workforce as a whole. Agricultural employment grew by 177%; manufacturing and the private service sector grew by 79%; and Government employment grew by 8.6%.

Some insight into the aggregate changes in employment can be gained by looking at the proportional change in employment relative to the proportional change in output, i.e., the elasticity of employment (% change in employment divided by the % change in GDP). Table 6 provides elasticity estimates for 1978-79.

Table 6: ELASTICITY OF EMPLOYMENT 1978-79

	(a) % Change of Monetary GDP	(b) % Change of Number Employed	Elasticity of Employment (a ÷ b)
Agriculture, Forestry and Fishing	3.2	9.5	2.97
Manufacturing	7.1	2.2	0.31
Building and Construction	7.7	19.0	2.47
Electricity and Water	10.8	20.7	1.92
Distribution	5.6	8.4	1.50
Transport, Storage and Communications	8.9	18.3	2.06
Banking and Finance	10.5	16.2	1.54
Community, Social and Personal Services	16.1	0.6	0.04
TOTAL	7.9	8.9	1.13

Source: Malawi Government, Economic Report 1980, p. 49

The employment generation characteristics of the Malawian economy are particularly significant for smallholders because they constitute the national

1 See Malawi, CDSS FY-82, p. 4 for Government of Malawi statement of policy on wages and urban rural incomes.

labor pool. The policy has an immediate impact on agricultural labor where estates (primarily) have a marked propensity to use labor. More detail can be found in the discussion of estate smallholder employment in the section on agriculture.

Urban sector wages fell between 1968 and 1978 from $417 per year to $288 per year. During the same period real per capita incomes in the rural sector grew in excess of 1% per year. Information on estate wages can be found in the section on agriculture.

The organized recruitment of migrant labor from Malawi to work in neighboring countries was resumed in July 1977, but on a much smaller scale than in earlier years. Since then the number of workers seeking work abroad has declined, and in total it was estimated that in 1979 fewer than 20,000 workers were employed abroad. This decline is primarily attributable to a weakening in demand for migrant labor in neighboring countries. International emmigration or immigration does not appear to be a significant factor.

Although the number of skilled workers has been increasing with an intensification of government spending on technical and vocational training, Malawi continues to experience a shortage of well-qualified personnel in certain sectors of the economy. A new manpower survey is being completed and will allow the authorities to identify more accurately the supply and requirements of trained personnel.

Until recently, prices have remained stable in Malawi in spite of some major external shocks. The low-income retail price index for Blantyre rose by 8.5% in 1978, about double the rate of increase in the preceding two years. The increase in prices was most rapid in the first two quarters of 1978, when

it reflected increases in the prices of imported goods. The high-income index rose by 13.6% in 1978, slightly faster than in 1977.

In 1979 the low-income index rose by 11% and the high-income index by 19%, reflecting a considerable acceleration in inflation for all income earners. In both indices, the prices of transport services rose fastest, by around 20%, reflecting the rising cost of imported petroleum and the stoppage in transport services the last quarter of the year. Transport difficulties in the overland route through Mozambique raised the cost of all imported goods in 1979, but because of differences in consumption patterns, this was more heavily reflected in the high-income index[1]. During the second quarter of 1980 the low-income price index rose 21.6% (annual rate) and the high-income index rose 26% with food and transport costs leading the way.

Foreign Trade and the Balance of Payments

The Malawian economy is more integrated into the international economy than many economies at its stage of development. Exports have tended to comprise 18 to 23% of GDP in recent years. In spite of its landlocked position and adverse international price movements, Malawi's exports expanded between 1975 and 1979 at an average annual rate of 14.7% while annual import growth has proceeded at 12.8%. Nevertheless, the visible trade balance has been consistantly negative (this is typical for low income, expanding economies) ranging from a low of 4% of GDP to a high of 17% for the same time period. There appears to be an upward trend in the trade deficit in the latter 70s (expressed as a share of GDP).

There has been a gradual upward trend in export prices between 1975 and 1979 although since 1978 some commodity prices have fallen. During the latter 70s there was a tendency toward increasing concentration on tobacco exports which,

1 For a detailed presentation of the retail price index see, IMF, Malawi: Recent Economic Developments, May, 1980, p. 21

in 1979 provided 55% of total export earnings followed by tea (16.2%), sugar (11.6%) with exports of groundnuts and manufactures both at 4.7% of total exports. The share of manufactures exports has remained relatively constant between 1975 and 1979. The composition of imports has been stable with consumer goods comprising about 14% of total imports and about 85% made up of intermediate materials, equipment, parts and tools.

The international terms of trade for Malawi have been declining since 1977 when they reached a six-year high of 94.1. In 1979 the index was 76.1. The volume of Malawian imports has grown relatively slowly for a rapidly expanding economy and as the data in Table 7 indicates, import volumes have declined or remained relatively constant. The unit value of imports has more than tripled between 1970 and 79, however, the unit value of exports has increased by almost 2 1/2 times. Falling prices for tea (5% decline in 1979) and tobacco (8% decline in 1979) combined with higher petroleum and transportation costs, were instrumental in a deterioration of the terms of trade in 1979 and commodity export prices continued to fall in 1980.

With respect to the direction of trade there has been a gradual shift in recent years whereby the main market for Malawian exports has become increasingly concentrated on the UK (45% in 1979). South Africa, however, has become the primary source of Malawian imports, increasing its share of 23% in 1974 to 41% in 1979. In 1979, 8% of Malawian exports went to the United States and Malawi imported about 3% of its imports from the U.S. In 1980, the U.S. was the second largest export market.

The Government encourages foreign investment with an emphasis on agro-industry, import substitution and labor intensive industries. Firms are required to be licensed by the government which offers investment inventives including exclusive production rights and liberal depreciation allowances. Some U.S. business[es] in Malawi are Bank of America, Universal Tobacco, Burroughs, Sterling Drug, the Celenease Corporation and the Nello Teer Co. which is constructing the $100 million Kamuzu International Airport.

Table 7: INDICES OF VOLUME AND UNIT VALUES OF IMPORTS AND DOMESTIC EXPORTS, 1967 - 79
(1970 = 100)

Period	Imports Volume	Imports Unit Value	Domestic Exports Volume	Export Unit Value	Terms of Trade
1967	106.70	93.20	107.32	80.74	86.63
1968	110.83	99.73	107.76	89.74	89.98
1969	96.83	101.27	99.27	94.07	92.89
1970	100.00	100.00	100.00	100.00	100.00
1971	107.37	106.38	111.14	108.58	102.07
1972	118.76	110.93	127.50	103.62	93.41
1973	112.39	129.07	135.40	115.78	89.70
1974	115.18	174.43	134.29	146.93	83.23
1975	130.89	212.02	138.28	172.20	81.22
1976	95.73	242.60	146.43	192.43	79.32
1977	111.51	269.77	164.79	253.74	94.06
1978	146.52	271.00	156.96	229.47	84.68
1979	147.11	315.28	179.17	240.00	76.12

Source: World Bank

As noted earlier, the trade balance has been consistently negative during the 1970s. This result is compounded by the negative balance on service account which combines with the negative visible trade balance to yield a chronic deficit on current account (see Table 8). The current account deficit is offset by a positive balance on capital account and inflows of donor capital. The final resource gap is filled by changes in official foreign reserves. For four of the five years, 1975 through 1979, official reserves were utilized averaging about K35 million per annum. It is understood that official foreign reserves were also drawn down in 1980. The most significant item in the deterioration of the balance of payments

Table 8

SUMMARY BALANCE OF PAYMENTS, 1975-79

(K million)

	1975	1976	1977	1978	1979 Prov.
Goods and Services	-77.5	-60.3	-56.4	-143.5	-193.8
Trade Balance	-71.0	-13.5	- 1.5	- 64.5	- 66.0
Exports, f.o.b.	(122.1)	(146.4)	(180.6)	(157.4)	(189.8)
Imports, f.o.b.	(-193.1)	(-159.9)	(-182.1)	(-221.9)	(-255.8)
Services (net)	-6.5	-46.8	-54.9	-79.0	-127.8
Factor	(10.3)	(-18.0)	(-23.0)	(-4.0)	(-30.8)
Nonfactor	(-16.8)	(-28.8)	(-31.9)	(-75.0)	(-97.0)
Unrequited Transfers (net)	12.3	16.0	23.0	37.8	29.0
Private	4.9	5.0	5.0	5.0	6.0
Government	7.4	11.0	18.0	32.8	23.0
Current account balance	-65.2	-44.3	-33.4	-105.7	-164.8
Capital (net)	24.4	9.0	77.8	81.2	127.1
Official	33.3	28.0	59.1	58.2	80.7
Private (including net errors and omission)	-8.9	-19.0	-18.7	-23.0	-46.4
Overall balance	-40.8	-35.3	44.4	-24.5	-37.7
Changes in net official reserves (increase in assets -)	40.8	35.3	-44.4	24.5	37.7

Source: IMF

accounts is the factor and nonfactor services account. The non factor services deficit resulted from an increase in transport costs, and the increase in factor services deficit was due to higher dividend payments to foreign firms, higher interest payments on external debts and lower workers' remittance inflows. At the end of December 1979, gross official international reserves amounted to SDR 54.1 million which was equivalent to two months of 1979 imports. The debt service ratio was 11.8%.

Regional Trade

Malawi's trade with its neighbors is a mixed picture. With respect to Mozambique, Tanzania and Zambia there is limited scope for trade expansion because of their similar resource endowments, stages of development and high trade barriers (most of them natural i.e., lack of transportation)[1]. All three countries, however, offer potential markets for Malawian exports of maize and other foods. Malawi already exports fish to Zambia, South Africa and Zimbabwe. The amount has varied between one and two thousand metric tons per year (1,942 tons in 1976). Malawi has exported maize to Zambia on several occasions. South Africa is an important trading partner but it is most important as a low-cost source of imports. The potential for expanding exports to South Africa is also limited.

Zimbabwe remains a question in several respects. There may be some potential for expanding exports to Zimbabwe but some time will be required. There may be appreciable potential for importing manufactures from Zimbabwe, perhaps displacing some South African exports. The last area of uncertainty is Zimbabwe's impact on the international tobacco market. With Zimbabwe's reentry as a producer, Malawian foreign exchange earnings from tobacco may be subjected to further downward pressure.

Given the great distances between Malawi and most of its trading partners it is clearly in Malawi's long-term interest to cultivate regional markets and supply sources whenever possible. This is an extremely long-term process, but it is appropriate that attention continue to be given to ways to increase regional trade. In this regard three regionally-oriented entities, the Southern Africa

1 "Limited scope for trade expansion" refers to the chances for any of the three countries becoming major trading partners with Malawi within, say the next 10-12 years. Trade with any one country could conceivably double or triple, however, as a proportion of total Malawian trade the share would still be negligible.

Regional Fund, the Southern Africa Development Coordination Committee and Concerted Action for Development in Africa, have designated improvement in regional transportation infrastructure as a prinme activity to increase regional trade. Malawi has much to gain by being an active participant in improving the regional transportation network.

Recent Developments

The Malawian balance of payments in 1979 and 1980 was severely affected by two consecutive years of unfavorable weather. The problem was further compounded by adverse changes in prices for both exports and imports. The confluence of these unfavorable events exerted a powerful negative impact on the Malawian economy but because of its resource endowment and a pragmatic development-cum-growth policy approach, the economy has demonstrated appreciable resilience. Donor assistance and extraordinary help from the international financial institutions in conjunction with adjustments in some domestic policies are, however, considered to be critical to recovery from the 1979-80 economic setback.

In 1980, conversations were started between the World Bank and the Government for a structural adjustment loan. The tentative understanding now is that the Bank will make $90 million available over the next two and a half years. In addition there is a possibility the Government may negotiate a credit with the IMF for about SDR 60 million ($72 million) which, if it materializes, will increase IMF holding of the Malawi Kwacha to the maximum limit.

Domestic adjustments will probably include a reduction in the rate of growth of Government recurrent expenditures and a reduction in the capital development budget, focusing particularly on non directly productive capital projects. The Government is being encouraged to slow the pace implied by its

development plan, presently in the process of preparation, and to design the plan to incorporate more undertakings which can be supported by bilateral and multilateral donors. Issuance of credit will tend to favor directly productive activities, especially those which generate foreign exchange.

It is also reasonable to expect that some of the statutory corporations will be reformed with the possibility that non profitable operations will be discontinued or radically modified. ADMARC is being encouraged to revamp its pricing structure to increase the return to farmers to export crops, particularly rice and cotton (ADMARC has already doubled groundnut producer prices). Press Holdings, the largest private firm in Malawi with about 20,000 employees, is also expected to undergo modification in order to divest itself of some of its unprofitable enterprises. The Government has been imposing austerity measures on government operations since mid 1980. It is expected austerity efforts will continue for some time along with a continuing policy to restrict imports.

It is not clear if import quotas or devaluation will be employed to address Malawi's current problem. In 1978 and 79 there was a growing concern by the Government about the increasing degree of concentration on tobacco production. Starting in the 1979/80 season, a concerted effort was made to encourage farmers to plant more groundnuts and maize in place of tobacco. Tobacco acreage quotas were reduced by 32%. Tobacco exports for 1980 were in excess of $130 million. Sugar output may reach 141,000 mt for 1980 and by 1983 it is anticipated that sugar will be the second largest foreign exchange earner (replacing tea) with exports of 99,000 mt. Between 1978 and 1979 ADMARC groundnut purchases doubled to 24,400 mt and export earnings reached $11 million. Drought adversely affected maize, rice and cotton production in 1979. In 1979 maize reserves were drawn down and maize was imported to make up for an estimated 140,000 mt shortfall.

The general outlook for export earnings in 1981 is good. Halfway through the growing season, bumper agricultural production is expected. Although the world price of tobacco is still below its former level some improvement can be expected in export earnings from high groundnut and sugar prices and higher output levels of those commodities.

C. Agriculture

Sector Perspective

Agriculture is the core of the Malawian economy. The sector employs about 85% of the Malawian population and provides approximately 90% of exports and 45% of GDP. Between 1970 and 1979 the real annual growth rate was equivalent to a compound rate of 4.9% per annum. In addition to providing agricultural commodity exports the sector provides the basis for most manufacturing activity.

Except for 1980 the agriculture sector has produced virtually all of Malawi's food requirements. However, the combination of expanding population and the stresses such expansion places on limited soil resources has given rise to the projection that slowly declining yields will lead to a maize deficit of 120,000 short tons by 1990.[1]

While the projected maize deficit should not be interpreted as a prediction, per se, the estimate is a strong indicator of the importance and urgency of increasing maize yields. Otherwise Malawi will soon be confronted with a series of undesirable alternatives, i.e., decrease export crop production, increase the risk of soil degradation, decrease per capita food consumptions or rely more heavily on food imports.

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1 World Bank, "Malawi: Key Issues in Agricultural Development", 1980, pp. 47-48.

Nevertheless, the potential for yield increases is impressive. It was further estimated that self sufficiency in maize production in 1990 will require average national yields of 1,044 lbs per acre. Based on yields already achieved this is not an ambitious target. In 1980 the national average yield was 960 lbs per acre, however, farmers in the Lilongwe area, in the 1977/78 season achieved 2,000 lbs per acre growing local maize with fertilizer and as much as 2,831 lbs per acre growing hybrid maize with fertilizer. Exploitation of this potential is at the core of Malawian agricultural development policy and the National Rural Development Plan.

Malawi's agricultural production derives from two subsectors, smallholder agriculture and estate agriculture[1]. The smallholder subsector accounts for over 85 % of all agricultural production and meets the country's demand for food staples (maize, beans, groundnuts, sweet potatoes and rice) while providing agricultural raw materials for domestic industry (cotton and fire-cured tobacco) and some export surplus. The export surplus from this subsector accounted for 31% of all agricultural exports in 1977. It is estimated by the World Bank that smallholder output has been increasing at about 3% per annum in real terms in recent years. On the other hand, the estate subsector has performed well with an aggregate expansion rate of about 17% per annum in real terms since 1968. Overall, the estates contribute 15% of the total agricultural production in the country but account for nearly 70% of all agricultural exports. Estate production is mainly centered on flue-cured tobacco, burley tobacco, tea and sugar.

Agricultural Pricing and Marketing

The Ministry of Agriculture and Natural Resources' major activity is the provision of services to the agricultural sector. The Ministry also exercises limited supervision over the activities of the Agricultural Development and

1 The following discussion of smallholder and estate agriculture is drawn primarily from recent international financial institution documents.

Marketing Corporation (ADMARC). Established in April 1969, ADMARC is charged with the task of marketing smallholder crops and, until recently, was understood to have a monopoly on the purchase of all cotton and tobacco grown by smallholders[1]. Smallholders can dispose of their surplus food crops through local district markets or sales to private buyers at the farmgate. There are not legal restrictions on private food trading operations although export of food through private channels is prohibited. ADMARC acts as a residual buyer of basic food crops then resells them in urban or deficit rural areas. Quantities of food crops and export crops are shown in Tables 9 and 10. ADMARC maintains 52 main storage depots/markets supplemented by over 700 produce-buying "bush" markets throughout the country.

Producer prices which are uniform throughout the country are fixed by ADMARC in consultation with the Government and announced prior to planting. ADMARC is also responsible for delivery of certain agricultural inputs, which are also subject to uniform pricing.

ADMARC has been critized for retarding growth in smallholder marketed output of cotton and groundnuts because of insufficiently remunerative [illegible]

while subsidizing maize and rice cultivation. Except for groundnuts, ADMARC producer prices have not been increased for about 10 years. It has been further noted that uniform crop and input prices involve cross-subsidization of producers in geographically inaccessible areas by producers in accessible regions on the amount of the internal transportation cost.

One of the overall effects of ADMARC pricing has been a tendency to tax smallholder [illegible]

were paying an implicit tax of 140%. Fertilizer buyers were receiving an average subsidy of 26% which tends to offset implicit producer taxes and increase producer subsidies. The degree to which these distortions exist, however, is constantly changing because they are highly sensitive to international prices and there is some question as to whether or not the average price of maize is actually at a subsidy level[1]. Since 1977 world market prices for most of Malawi's export crops have declined. ADMARC, however, has not reduced the level of smallholder producer prices although no bonus prices were paid on tobacco in 1979.

ADMARC has been under increasing pressure to modify its pricing policies. Recently. groundnut producer prices were nearly doubled and there are undoubtedly other price adjustments to be made which would improve resource allocation. Overall, however, ADMARC appears to have established a commendable performance record for a large and complex parastatal marketing agency. Since its second year of operation ADMARC has had a net loss only in 1966 of K3.6 million. Since that time its net annual profits increased to a high of K30 million in 1978 and dropped to 4.1 million in 1979. Annual profits as a percentage of average net assets averaged 37.5% between 1970 and 1979. ADMARC has been turning over 40% of its net profits to the Government development budget.

Smallholder Agriculture

The principal crops grown on customary land by smallholders are maize, tobacco, cotton, groundnuts, rice, pulses and cassava. Except for some irrigated rice in the north, all cultivation takes place under rainfed conditions. Farming methods are extremely labor intensive with the majority

1 The World Bank estimates that the ADMARC maize price exceeds the export parity price but the ADMARC price is less than the import parity (CIF Malawi) price. Therefore it is questionable if the ADMARC price causes an inefficient allocation of resources. Final determination of the issue would involve an analysis to see if foreign exchange earnings from foreign export crops were sufficient to offset the foreign exchange cost of importing maize and still leave a foreign exchange earnings residual. The calculation would also require incorporation of a series of risk elements.

of farmers working with simple hand tools such as hoes, knives or axes. The use of work oxen and ox carts is still rare.

ADMARC's purchases of principal crops from smallholders for 1967 to 1978 are shown in Table 9. The indices in Table 10 are based on five-year moving averages of quantities purchased by ADMARC.

Table 9: PURCHASING BY ADMARC OF CROPS FROM CUSTOMARY LAND 1970-1978 (Thousands of short tons)

Year	Tobacco	Groundnuts	Maize	Seed/Cotton	Rice(Paddy)
1970	13.1	29.5	88.9	25.2	10.3
1971	16.0	40.7	40.9	24.6	19.1
1972	19.5	43.3	70.1	24.4	21.9
1973	16.6	33.0	69.5	17.8	19.0
1974	12.8	31.7	72.2	23.6	23.5
1975	13.5	36.2	32.2	19.6	16.2
1976	16.0	35.9	71.4	19.8	27.0
1977	25.5	20.3	99.0	24.9	26.3
1978	26.2	12.3	132.6	26.7	34.0

Source: World Bank, Malawi Basic Economic Report, Annex No. 1: Key Issues in Agricultural Development, July 1980

Table 10: INDICES OF AGGREGATE DOMESTIC PURCHASES BY ADMARC

Year	Maize	Tobacco	Groundnuts	Cotton	Rice
1970	103.8	92.6	96.9	128.5	234.8
1971	97.0	102.4	101.1	134.5	297.8
1972	101.2	111.6	96.2	138.6	350.0
1973	84.4	112.2	99.8	131.7	372.0
1974	93.4	112.2	97.2	126.2	401.5
1975	102.0	120.7	80.5	126.7	417.9
1976	120.7	134.5	69.3	137.3	473.9
1977	124.1	145.2	70.6	136.4	482.6
1978	149.6	161.4	61.6	142.7	542.9

Source: World Bank, "Malawi: Key Issues In International Development:, 1980

Livestock

In 1977 the livestock population consisted of 744,000 cattle, 794,000 goats, 205,000 pigs and 86,000 sheep. The growth of the cattle herd, which contains over 2,000 dairy grade animals is estimated at 5% per annum. Most cattle are found in the less densely populated Central and Northern regions, about 85% of which are Malawi Zebu kept in village herds. The cattle population has been increasing at about 6% per annum and the slaughter off-take has been increasing at about 10% annually. The cattle are owned by about 10% of the population but poultry, goats, sheep and pigs are more evenly distributed among the population. There is increasing interest in raising rabbits as a protein source.

Cattle are being increasingly kept for sale although they also serve as security against crop failure or in instances where a substantial sum of money is needed. Cattle marketing has become more regularized in recent years and with growth in urban centers production for sale is becoming more common including various cattle feeding schemes. The Cold Storage Company acts as a residual buyer guaranteeing a market for all slaughter stock. There is also a smallholder milk production scheme whereby a smallholder can purchase two dairy cows, maintain them to prescribed standards and market the milk to one of three dairy plants serving urban areas.

Fish Production and Consumption

Although it is a landlocked country, Malawi produces a large volume of fish, especially from Lake Malawi. Other lake and river fisheries are also important so that fish production tends to occur in substantial quantities in most areas of the country. Virtually all the waters of Malawi, including small streams and seasonal rain ponds, are fished. The average annual catch from these fisheries between 1974 and 1978 was 70,000 metric tons.

Fishing in Malawi is carried out by traditional fishermen and by individual entrepreneurs and fishing companies using modern commercial fishing techniques. Traditional fishermen supply 90% of the fish output, with commercial fishing companies and privately owned commercial pair trawlers supplying the other 10%. Nearly every artisanal fishing method is used somewhere in Malawi. The dugout canoe is most commonly used as a fishing craft, but the growing scarcity of large trees is likely to make them less available and more expensive in the future. A project is beginning on Lake Malawi to make ferrous cement fishing craft which will compete with dugout canoes and plank boats.

The southern portion of the Lake Malawi (the southeast and southwest arms) is the most important part of the fishery in terms of output. There is, however, a general consensus that the harvest of the southern end of the lake has reached its maximum sustainable yield so that no incremental output should be expected from this source. Research is being proposed to enable this portion of the lake to be better managed in order to enable its sustainable yield to be increased over time.

The remaining fisheries of Malawi have also reportedly reached or nearly reached their maximum sustainable yield. Thus, any major increases in fish output from Malawi's natural fisheries will have to come mostly from the central and northern parts of Lake Malawi. The potential for expanding the catch in the other parts of the Lake are as yet unknown. There is some evidence that major expansion is not possible. If this turns out to be the case, fish farming in inland ponds may emerge as the most economical alternative for increasing fish production. Per capita annual fish consumption in 1973 amounted to 14.4 kilos, 3.6 times as much as all other meat consumed per capita.

Estates[1]

The agricultural estate subsector currently occupies about 13% of total cultivated land and is principally responsible for growing tea, flue-cured and burley tobacco and sugar whose production is restricted to this subsector. As of March 1979, the number of estates totalled 1,108. Of these, 524 raised flue-cured tobacco, 556 burley tobacco, 26 tea and two were sugar estates. Tables 11 and 12 summarize aggregate estate production and estate export earnings. Estates together contributed 15 percent of agricultural production and some 70% of agricultural exports in 1978. The output from this subsector expanded in real terms at the annual compound growth rate of 17% between 1968 and 1977. The value of exports from agricultural estates had increased from K13.0 million in 1967 to K97.0 million in 1978.

Table 11: PRODUCTION FROM AGRICULTURAL ESTATES, 1968-77
(short tons)

Year	Burley Tobacco	Flue-Cured Tobacco	Tea	Sugar	Output Growth Index for All Crops 1968 = 100
1970	6,255	5,154	18,842	-	124.3
1971	6,245	7.065	21.247	-	143.8
1972	6,220	9,533	22,647	-	162.3
1973	6,664	11,013	23,700	-	175.9
1974	5,922	11,599	26,839	71,519	284.3
1975	8,815	16,423	27,499	92,807	351.8
1976	7,275	17,824	31,581	100,906	380,8
1977	11,211	21,589	32,886	103,040	422.8

Source: World Bank, "Malawi: Agricultural Development", 1980.

1 In Malawi a farm is defined as an agricultural estate if its cultivation takes place on freehold or leasehold land and the grower markets his crops directly on the auction floor or through private contract. With the exception of expatriate-owned tea estates which date back to colonial days and which are established on freeholds, all agricultural estates cultivate their crops and land alienated from customary tenure through leases.

Table 12: CONTRIBUTION OF AGRICULTURAL ESTATES TO EXPORT EARNINGS (K Million)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Export of Estate Crops	13.0	14.6	16.2	19.7	22.9	25.7	35.5	50.9	65.2	86.8	104.9	97.0
Tobacco	3.3	4.6	6.2	8.2	10.4	13.2	18.2	24.2	31.0	36.9	47.9	55.9
Tea	9.0	9.7	9.5	10.9	11.9	12.0	13.8	17.2	21.7	26.4	41.6	29.2
Sugar	0.2	-	0.2	0.2	0.3	0.4	3.3	9.2	12.3	23.2	14.9	11.4
Others	0.5	0.3	0.3	0.4	0.3	0.1	0.2	0.3	0.2	0.3	0.5	0.5
Total Agricultural Exports	32.0	32.3	34.3	37.6	46.6	52.0	63.5	82.8	97.4	132.9	106.5	140.2
Total Domestic Exports	33.1	33.8	36.6	40.6	49.6	55.1	68.8	89.6	106.3	141.0	172.0	150.3
Estate Exports as % of Agricultural Exports	40.6	45.2	47.2	52.4	49.1	49.4	55.9	61.9	66.9	65.3	65.4	69.2
Estate Exports as % of Total Domestic Exports	39.3	43.2	44.3	48.5	46.2	46.6	51.6	56.8	61.3	61.6	61.0	64.3

Source: World Bank, "Malawi Agricultural Development", 1980

Relationship Between Smallholders and Estates

In very general terms, the Government has followed one approach for the estate sector and another for smallholders. On balance, the Government has supported the development of the estate sector without directly subsidizing either inputs or outputs. It has viewed the estates as the principal source of foreign exchange earning and, in general, has not attempted to substantially influence prices of their exports. Export commodities are not taxed, but estates income is taxed. The Government has attempted to keep estates from competing with smallholders and has exercised control over the prices of some estate products sold on the domestic market (e.g., sugar). To a large extent, the Government has relied on the estates to generate their own capital from reinvestment of earnings, borrowing from commercial banks and attracting risk capital from foreign investors. It has invested relatively little in infrastructure to support or promote estates. The estates usually are expected to finance their own educational and training activities, to fund their own land clearing and irrigation projects, and to provide a good deal of their own social services for employees. With respect to smallholders, the Government's main objective appears to be to promote the production of food crops at least to the point of national self-sufficiency. It has tried to achieve this objective through pricing policies,extension programs, credit programs, integrated rural development programs, and more recently, through the National Rural Development Program (NRDP).

There is an important connection between the smallholder and estate subsectors via employment. Employment in the agricultural estate sector expanded from 42,600 in 1969 to 148,300 in 1978 which is equivalent to an average annual growth rate of 15%. In the process of this expansion, estates absorbed a substantial portion of the returning migrant labor from South Africa. Table 13 disaggregates estate employment by commodity. All of the tea estates, the larger tobacco estates,

Table 13: EMPLOYMENT ON AGRICULTURAL ESTATES (000 Persons)

Year	Tea Estates	Tobacco Estates	Other Private Commercial Agriculture	Total
1969	30.1	8.1	4.5	42.6
1970	30.7	13.1	4.8	48.6
1971	32.6	15.9	5.2	53.7
1972	32.5	20.2	6.8	59.5
1973	35.2	24.6	11.5	71.4
1974	35.2	22.5	17.1	74.8
1975	36.8	20.5	28.8	86.1
1976	36.7	30.6	28.5	95.8
1977	39.6	71.7	21.5	132.8
1978	39.0	87.5	21.8	148.3

Source: World Bank

and the sugar estates are run by professional managers. The smaller and newer tobacco estates are generally run by Malawians. With the exception of burley tobacco estates which operate on a tenant system, all agricultural estates maintain a small core of permanent field labor and hire additional labor as needed during the peak seasons. The burley tobacco estates on the other hand are farmed by tenants who are allocated two-acre plots and sell their produce to the estate owner at a guaranteed price. In 1978, there were 11,918 tenants working on Malawi's burley estates.

No consistent set of data exists on wages paid to unskilled estate labor but there is evidence to suggest that estate wages are considerably higher than the statutory minimum of about $.36 per day (30 tambala).[1] The Tea Association reports that on average the field labor wage rate including cash benefits was $.58 per day in 1976. The average monthly cash earnings for tobacco workers in 1978 was $.52 per day. Labor is paid on an incentive basis at the sugar estate; in 1979, total compensation including meals and other benefits was reported about

[1] The minimum wage was raised January 1, 1980 from 40 tambala per day to 60 tambala ($.60) per day.

$1.20 (one Kwacha) per day.

Smallholder Crop Authorities

There is a widespread effort to facilitate movement of smallholders into export crop production as a means of promoting structural transformation. One of the key instruments in this effort is smallholder crop authorities. For example, the production of good quality flue-cured tobacco for export requires exacting standardized field operations which, in turn, necessitate considerable organization and discipline on the part of growers. To integrate a group of smallholders into flue-cured tobacco production, a smallholder flue-cured scheme was started at Kasungu in 1968 under the supervision of the Kasungu Flue-Cured Tobacco Authority (KFCTA). Smallholders now produce about 760 short tons of flue-cured tobacco annually. The KFCTA sells directly to the auction floor so the farmers get the full auction price net only of small charges for transport to Lilongwe and handling. Moreover, the KFCTA manages growers closely, organizing settlement and paying settlement allowances, supervising operations, and extending credit. Consequently, yields equal those of better estates.

Tea is predominantly an estate crop but about 3,700 smallholders grow tea, almost all of them under the supervision of the Smallholder Tea Authority (STA). The STA supervises planting and operations of growers, provides credit, pays establishment allowances, makes their tea at its own factory (or arranges for processing in estate factories) and markets the tea.

Coffee is a minor crop. A few hundred smallholders presently grow coffee on about 1,300 acres in northern Malawi. Production has been declining steadily over the past two decades as a result of low producer prices and a host of institutional problems, but coffee cultivation is being revived now under the supervision of the newly-formed Smallholder Coffee Authority.

Agricultural Credit

Currently, there is no single agricultural credit institution in Malawi that serves the whole agricultural sector. Credit facilities to the smallholder subsector are provided by: (a) the ongoing agricultural projects; (b) the settlement credit schemes run by the technical services department of the Ministry of Agriculture and Natural Resources; (c) the Crop Development Authorities (Smallholder Tea, Smallholder Coffee, and Kasungu Flue-Cured Tobacco Authorities); and (d) the Government Loan Board. In the past, project area (with about 25% of farm families) farmers have had access to seasonal and medium term credit. The credit entities tend to administer seasonal loans through farmer's groups to minimize the administrative costs. The administration of smallholder credit has been characterized by strict supervision and discipline, and by its close working relationship with extension staff and ADMARC which is the input distribution agency. The estate subsector gets financing from the two commercial banks.

The Malawian Union of Savings and Credit Cooperatives (MUSCCO) has recently been created to provide low-cost, short-term credit to farmers and small businesses through local credit unions located around the country. Although still small, 54% of MUSCCO loans, averaging K43 have gone to agriculture; 19%, averaging K93, to small business and 7% have been education loans. MUSCCO expects to grow 30% each year. A.I.D. is providing seed funds, however, the credit unions's main source of funds will be Malawian citizens themselves.

Agricultural Research and Extension

Agricultural research is carried out by the Agricultural Research Deparment (ARD) of MANR, the Faculty of Agriculture of the University of Malawi, and the Tea Research Foundation (an independent organization for tea research).

The University at Bunda College of Agriculture carries out its own research or does so on behalf of MANR. The ARD is a full-time research department with national responsibilities covering all crops and livestock.

Administratively, agricultural research is organized on the basis of research stations which, in turn, are subdivided into substations and district sites. Functionally, research is organized under research projects based on crops or disciplines. The link between research and extension has so far been weak. It has been recommended that greater efforts be made to interpret and transform research findings into simple packages which extension workers can recommend to the farmers and that MANR also ensure that the time lag between the completion of research projects and publication of results is reduced.

With the launching of the National Rural Development Program (NRDP) in 1977/78, the MANR in a move to strengthen and expand its extension services restructured its organization at the field level. The Ministry instituted a geographical unit approach to rural development. One hundred and eighty of the geographical units--called extension planning areas (EPAs)-- cover the whole country. The EPAs are, in turn, grouped together for administrative purposes into development areas of which there will be about 40 in all by the time the NRDP covers the entire country.

An important feature of agricultural extension in Malawi is its emphasis on the group approach, which has been fostered by the practice of providing seasonal credit only to groups. The extension worker helps the farmers apply for credit, and then proceeds to teach the recommended practices largely by demonstrations to the entire group. This group demonstration is followed up with visits to as many of the individual plots as possible by the extension worker to make sure that his advice is being acted on. Currently, there is one extension worker to 1,400 to 2,400 farmers, the ratio depending on the location. The present ratio of extension workers to farmers is considered to be too low to maintain the expected rapid expansion pact of development activities under the NRDP.

D. Population

It was noted earlier that Malawi's population growth rate ranked among the highest in the world, that the population density was among the highest in Africa and that the country was near the extensive limit of cultivation. The fertility rate in Malawi averages seven births per woman during her reproductive years. Between 25 and 35% of Malawian children die before reaching their fifth birthday. Mortality has been declining, however, as average life expectancy rose from 33 years in 1950-55 to 45 years in 1975 while the death rate per 1,000 population fell from 30 to 21. Presently, the population growth rate is estimated to be 2.9% or slightly more, however, this can be expected to increase as mortality rates decline.

The FY-82 CDSS noted that "the official position of the Government of Malawi with respect to family planning is that family planning information is to be furnished only on request. The Government has taken the attitude that family planning is a private concern. The FY-82 CDSS also drew attention to the increasingly harmful environmental impact of increasing population.

In a 1980 draft report titled "Malawi: The Effects of Population Factors on Social and Economic Development" and a computer-prepared presentation were reviewed by a small number of high level Malawian officials[1]. The "Effects" report examines the effects by the year 2010 of three alternative fertility rates with respect to agricultural development, labor force and child dependence, GNP per capita, education and health.

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1 The report is one of several done on African countries by the Futures Group, Resources for the Awareness of Population Impacts on Development (RAPID).

The three alternative rates are: (a) continued high fertility; (b) 4-child per woman average by 2000 and 3-child per woman average by 2025; and (c) 3-child per woman average by 2000 and 2-child per woman average by 2010.

To cite one specific example, the report relates population growth to land requirements. The exercise is based on 1977 figures of 8.6 million acres of arable land, 7.4 million acres under cultivation, 4 acre average holdings with 4.6 persons per holding. Thus, in 1977 Malawi had enough arable land to accomodate an additional 293,000 smallholdings or 1.4 million people. By combining alternative growth rates (a), (b) and (c), with the above data, the simulation shows that by 2010 fertility rate (a) would require 1.5 million new smallholdings (6 million acres) more than the 290,000 smallholdings available. Fertility rate (b) would require 630,000 new smallholdings and fertility rate (c) would require 300,000 new smallholdings.

The implications of this single exercise are awesome. Since farming land for additional smallholdings beyond 290,000 is increasingly inferior, continuation of the present population growth rate means it will become necessary to multiply the intensity of land use by several factors while simultaneously increasing the productivity of labor, decreasing the damaging environmental effects and generating sufficient savings to provide the investment to finance the efforts. Given the pressure on land, agricultural production would be forced away from export crop production to food production thereby depriving Malawi of its foreign exchange earnings base.

Malawian officials will be taking a closer look at the "Effects" analysis in 1981. The Futures Group has been invited to Malawi in May. It is anticipated that the visit of the consultants will be the start to serious consideration for formulation of a population policy. Clearly the need to develop a policy and to incorporate population concerns into Malawian

development planning and into donor activities, is an increasingly significant development issue.

E. Energy and Environment

In 1979 firewood provided approximately 94% of Malawian energy requirements. Petroleum products provided 4% (about one million barrels in 1978), coal 1% and electricity 1%. Electricity is produced by a 68 MW hydroelectric complex which is presently being expanded. Electricity consumer prices are not subsidized. The consumer price of 86 cents (US)/ for gasoline (about 1.5% of total energy consumption) is approximately double the C.I.F. price Blantyre because of an added excise tax.

Petroleum is a critical component in the Malawian balance of payments and, it has no close substitutes for many purposes. Firewood, however, is the simple most significant energy source and one which will exert a steadily increasing influence on the Malawian economy[1]. The general population-firewood-environmental-agricultural interrelationship is by now familiar to most development practicioners in Africa. Malawi is not an exception to the phenomenon of converging trend lines for consumption and production of wood, i.e., the demand for firewood and poles is increasing at a faster rate than the supply is increasing. The Malawi Department of Forestry estimates that at present relative rates of growth, forest supplies will be totally exhausted in less than 25 years. The general implications of the deforestation process (soil degradation and declining fertility) for agriculture is also well known to development practicioners.

It is noteworthy that a substantial part of fuelwood consumption, about 40% of total wood consumption, is used in the process of curing tobacco. About four hectares of Malawian forest are required to process one hectare of flue-cured tobacco using a traditional design barn. The ratio is 2:1 for an efficiently designed barn.

[1] Between 1970 and 1978 the petroleum consumption increased by 20%. The petroleum import bill increased 330%.

The Malawian Government has been aware of the forestry-fuelwood problem for several years and has initiated a program to plant trees, conserve on wood consumption, experiment with new tree species (the IDRC is involved in tree species trials) and develop better fuelwood burning techniques. Recently the World Bank and the Government initiated a five-year, $16 million Wood Energy Project. The U.K. is cooperating in a smaller fuelwood and Poles Project. The firewood issue, its environmental consequences and Malawi's approach to the problem can be expected to require a wide-ranging set of economic, social and technical adjustments which have yet to be fully designed.

III. THE DEVELOPMENT PLAN

A. Malawian Development Strategy

The framework for Malawi's longer-term development planning for the period 1971-80 was provided in the "Statement of Development Policies 1971-80" (DEVPOL) which set out the basic priorities for economic developments. The Government has decided to replace the DEVPOL concept with a five-year development plan beginning 1981/82. The new plan is intended to provide greater flexibility for rephasing projects, where necessary, in that they will be implemented within a longer time frame. It will also explicitly incorporate the recurrent cost effects of development projects which were not adequately taken into account in the previous three year rolling plans.

The pattern of development investment during the 70s consistently emphasized the economic sectors (see Table 14). Transportation has been the largest single item with nearly 38% of the total development account. Agriculture has been the second largest sector, accounting for about 23% of total expenditure. Investment in adminsitrative infrastructure absorbed the third largest share of development account expenditure, due to the construction of the new capital in Lilongwe. The investments in infrastructure, especially those associated with establishment of the new capital, were set out as development objectives in DEVPOL and consciously determined the patterns of investment during the 1970s. They are, however,one time investments which will not be repeated in the 1980s. The pattern of future investment will necessarily intensify in agriculture and change in the direction of the social sectors, which received relatively little investment in the 1970s and which at present are critical constraints to Malawi's economic development.

Table 14: DEVELOPMENT ACCOUNT EXPENDITURE BY FUNCTION

(period averages, percent)

	1967-69	1970-72	1973-75	1976-78
Economic, of which:	74	75	72	81
Agriculture	28	25	26	17
Transport	29	31	35	49
Social, of which:	16	9	8	8
Education	9	7	3	5
Health	1	1	4	1
Administrative	10	16	20	11
	100	100	100	100

Source: IMF

The revised development expenditure program for 1980/81 totals K159.16 million of which 38% is allocated to transportation, 16% to government buildings, 11% to agriculture, 7% to power, 5.9% to water supplies, 5% to education, 3.8% to forestry and 3.3% to health with approximately 10% divided among surveys, fisheries, housing and other activities. The 1981/82-1985/86 development budget is presently being prepared by the Government.

It was noted above that the investment pattern can be expected to shift toward intensification of agriculture by means of the National Rural Development Program (briefly described on p. 42 of the 82 CDSS). The NRDP is intended to concentrate on increasing smallholder yields while protecting soil, watershed and forest resources.

To achieve these objectives, efforts will be made to increase the efficiency and size of delivery systems with particular emphasis on agricultural services such as extension, input supply, marketing and credit. To this end, the Ministry of Agriculture and Natural Resources has been restructured. The country has been divided into eight Agricultural Development Divisions (A.D.D.'s) and a Management Unit

assigned to administer the activities in each of these units.

The NRDP has absorbed four on-going integrated rural development programs into the national program and changed their intensity and investment priorities. The NRDP strategy is to give priority to investments expected to have an immediate impact on agriculture. Other investments which are either relatively more costly or have a less direct impact on production will be given lower priority. The NRDP is to be implemented over a 20 year period through some 40 development project areas. Funding for many of these project will be provided by international lending and development agencies.

The NRDP will concentrate development activities on assisting smallholders with an emphasis on traditional smallholder crops such as maize, groundnuts, tobacco, cotton and rice. Somewhat more emphasis will be placed on a national livestock program. More attention will be given to forestry activities including pulp wood, saw timber and fuel wood projects. Fishery development activities are likely to be limited in the early stages of the NRDP. An early emphasis will be placed on extension services and credit to promote the use of new seed varieties, fertilizer and increased farm power by financing the purchase of oxen and ox-drawn equipment. It appears that the development of rural roads and markets are to be left primarily to organizations other than the Ministry of Agriculture. A few activities of the NRDP will benefit all of the A.D.D.'s or provide better information for central planners. These include an expanded national research program, a land use survey, a soils mapping project, and seed industry development activities.

The NRDP concept appears to be flexible enough to respond to changes in priorities and opportunities. At the Central headquarters level, some attention is being given to the prospects for developing small rural industries, questions of appropriate technologies, and diversification of cropping patterns.

B. Government Commitment and Absorptive Capacity

The discussion of Government commitment to pursuing an active, flexible and balanced development effort has been described in the preceding 59 pages. There is room for improvement but the data and the results of Malawian development efforts leave few doubts that the Government is fully committed to rapid and equitable economic development.

Based on past performance Malawi appears to have the capability to provide an adequate stream of domestic inputs to complement a well-designed AID program. Malawian Development administration has established a record of being relatively systematic in assuring that adequate domestic inputs will be available to make foreign investments work as intended. But Malawi is under increasing pressure to accelerate the inflow of concessionary assistance. The discussion of recurrent expenditure funding indicated that perhaps 90 to 96% of recurrent costs are being covered. This is not severe but it warrants monotoring because it suggests that financial absorptive capacity is just managing to keep pace with the inflow of foreign assistance. The existence of the cost underfunding problem indicates that allocation of some additional donor resources to cover operating costs could be highly productive (at the margin). Furthermore, Malawi's performance record--in domestic savings generation, investment rates and public corporation performance--suggests that it is reasonable to expect that foreign assistance directed toward payment of a portion of recurrent costs would be additional(ex post).

The supply of skilled manpower is also thin in Malawi relative to demand although the problem is mitigated by a flexible approach to obtaining particular skills, and Malawi does not have a severe problem with flight of skilled manpower. Nevertheless, there is increasing pressure to accelerate the rate of increase in a broad range of skills to keep pace with the continuing flow

of development assistance. The scarcity of skilled manpower will continue as the NRDP expands, but a supporting objective of the NRDP is to increase the number of required skills.

B. Other Donors

Tables 15 and 16 below, summarize total donor--UNDP, UN System and bilateral--technical assistance by function for 1979[1]. Table 3 in the analysis section also provides times series information on donor assistance levels.

Table 15: 1979 DONOR COMMITMENTS FOR TECHNICAL ASSISTANCE[a]

Sector	$000	Total
General development issue, policy and planning	3,515	10.0
Natural Resources	409	1.2
Agriculture, Forestry & Fisheries	12,681	36.2
Industry	971	2.8
Transport and Communications	891	2.6
International Trade and Development Finance	63	0.2
Population	499	1.4
Human Settlement	2,497	7.1
Health	3,961	11.3
Education	8,206	23.4
Employment	187	0.5
Humanitarian aid and relief	248	0.7
Social conditions and equity	328	0.9
Culture	517	1.5
Science and Technology	58	0.2
Total	35,031	100.0

a Data for Canada and South Africa were not available.
Source: UNDP, Office of the Resident Representative, "Development Assistance to Malawi Annual Report for 1979", Lilongwe, 1980

Using the combined data from Tables 15 and 16 the UNDP survey shows total commitments of $156.4 million for 1979. Because data on Canadian and South African assistance are not included, the $156.4 million figure is understated. Table 3 indicated $232.6 net foreign financing in 1979. Capital assistance comprised 22.4% of the UNDP total, technical assistance was 77.6%.

1 Foreign assistance loans and grants to Malawi increased from $150 million in 1973/74 to $172.6 million in 1977/78. See Table III in the FY-82 CDSS for a discription of donor commitments by functional category for 1978.

Table 16 summarizes donor grant and loan commitments for capital assistance in 1979.

Table 16 : DONOR COMMITMENTS FOR CAPITAL ASSISTANCE

Donor	Major Types of Assistance	Amount ($000)	% Share
ADF	District Water Supply Center and Road Construction	4,981	4.0
ADB	Lilongwe International Airport	9,085	7.4
British Government	General Development Grant	19,046.0	15.7
Germany	Road Construction, Hospitals, Market Centers and Electrical Power	26,956.0	22.0
CIDA	Railway Construction, Railway Equipment, Health Centers, Rural Water and NRDP	16,468,0	13.6
DANIDA	Medical Training School and Rural Water	962.4	-
IDA	Area Development, Road Construction and Education	18,556.0	15.0
Japan	Airport Buildings and Ancillary Equipment	6,250	5.0
Netherlands	Airport Equipment	1,600	1.0
OPEC Special Fund	Road Construction	1,894	1.6
SEB	Telecommunications	697	-
USAID	Road Construction	1,785	1.5
CDC	Sugar Project	4,792	3.9
CSC	Health Facilities and Rural Water	623.7	-
British Council	National Library Construction	12.5	-
EDF	Urban Water Supply, Road Construction and Rural Development	12,062.0	9.9
South Africa	National Park and Bureau of Standard	289.0	-
OSFAM	Agricultural Extension facilities	22.0	-
Be.T Trust	University of Malawi and Hospitals Construction	216.5	-
IDRC	Rural Fuelwood Research	76.8	-
	Total	121,394	

In terms of 1979 capital assistance commitments, Germany is the largest donor with a 22% share, followed by the United Kingdom with 16%, IDA at 15% and the EDF with 10%. The following exerpts from the Malawi Economic Report 1980, provides a sample of other donor activities.

> Education: Investment and consolidation in education development will continue in the 1980/81 Programme. Funds from a British Grant will be used to continue work on improvements to Day Secondary Schools, technical and vocational schools and development of a degree course in Engineering at the University of Malawi (Polytechnic). EDF funds will be used to provide a hostel at the same place. Funds from IDA will be used to continue construction of Primary Schools, Chancellor College expansion, Institute of Public Administration and Natural Resources College.
>
> Agriculture: Development work in this important sector will continue on the on-going projects. British funds will be used to continue seed technology services, smallholder tea development, crop storage research and development, housing for Agricultural Extension Staff, farm machinery research and development, Land Husbandry Development and in the NRDP, the Phalombe Project and the Blantyre Agricultural Development Division.
>
> Fisheries: British funds will continue to finance fisheries development in Karonga, and the islands of Likoma and Chizumulu. EDF funds have been allocated for Central Lake Fisheries Development while UNDP Technical Assistance helps to continue the fish research programme.
>
> Transportation: Funds have been provided to continue the bituminization of the Blantyre-Chikwawa, Chiweta-Kacheche, Benga-Nkhotakota-Nkhata Bay and John Mzumara-Ekwendeni roads. The Blantyre-Chikwawa Road is expected to be completed this year while the bituminization of the John Mzumara-Ekwendeni Road will start. Funds are also allocated for the first phase of the District Roads Improvement and Maintenance Project initially covering Karonga, Mzimba, Lilongwe, Salima and Mulanje Districts.
>
> Health: British funds have been allocated for continuation of the upgrading of Rural Hospitals Programme at Ntchisi and EEC funds have been allocated for the final touches of the Mangochi and Nsanje Hospitals. Funds from the Federal Republic of Germany have been allocated for the construction of the New Ntcheu Hospital and CIDA funds continue to finance the replacement of Rural Health Sub-Centres Project. UNDCF have also given a grant to help finance a Rural Sub-Centre Development Programme.

IV. A.I.D. DEVELOPMENT ASSISTANCE STRATEGY 1983-87

The purpose of A.I.D. assistance strategy remains the same as that indicated in the 82 CDSS: to reinforce Malawi's effort to accelerate self-sustaining growth in smallholder incomes and economic welfare. The strategy to achieve this purpose is made up of four interrelated elements. The strategy elements are:

--smallholder maize yields

--energy-environment

--rural health improvement

--U.S. private business and voluntary organization participation

Before describing the strategy elements it is noted that the preceding analysis has yielded a substantial amount of evidence which indicates a marked commitment by Malawi to development and an ability to plan an implement. These attributes suggest there may be appreciable scope for non-project assistance as well as project assistance in the course of developing the strategy elements outlined below.

Maize yields--The analysis established that maize cultivation is central to the Malawian economy. Maize is the smallholder's first priority and increasing maize productivity is a valid national economic priority. There is ample evidence that a major effort to increase maize yields is economically sound given Malawi's natural resource endowment. Malawi, by achieving a reverse in declining trends in maize yields and matching supply growth with demand growth, will be able to commit the resources (land and labor) that otherwise would have been used to produce food, to generate foreign exchange and to implement qualitative improvement such as diversification toward higher-value export crops.

Energy-Environment--The firewood-environment, element is integrally related to increasing smallholder income and productivity. The Government is concerned about the energy-environment problem. There is some donor activity in the energy field, however, the Government has not had adequate information to mount a fully coordinated energy program. As a first step in developing alternative energy sources, A.I.D./Malawi intends to colaborate with the World Bank in carrying out an indepth, nationwide energy survey. A.I.D. will be particularly interested in looking into methods which relate directly to smallholder productivity and incomes.

Rural Health/Population--The preceding analysis briefly sketched the implications of unchecked population for the future course of Malawian development. The rate of population expansion is the major structural flaw in the Malawian development scheme. If the flaw is not addressed it is virtually a mathematically certainty that the country's long-term economic goals will not be realized. As noted earlier, the Government has not viewed the population issue as a significant concern, however, this situation may be changing. It is, therefore, proposed that a basic tenant of A.I.D./Malawi development strategy be, when there is a Government initiative, to facilitate implementation of the Government initiative.

It is proposed that A.I.D. involvement in rural health be composed of three types of activities. First, support to expanding access to clean water be continued as a cost effective means to improving health conditions. Second, the involvement of development-oriented PVOs in health delivery be supported, again as a cost effective means to support widespread, low-technology delivery of health services. Third, programs which incorporate or stress maternal child health care aspects be initiated as the Government becomes willing to experiment in this area.

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U.S. Private Business and Voluntary Organization Participation--The basic conditions exist in Malawi which provide a stable and receptive business climate. These points have been outlined in the analysis. It is of particular interest to A.I.D. to encourage U.S. business involvement because this form of resource transfer is an effective way to channel resources into industry and particularly into agro-industry. Such investment can exert a substantial employment effect and possibly create new markets for smallholder production.

For example, it is anticipated that an American firm with OPIC coverage will establish a plant in Malawi to process fiber from beans which will be grown by 2000 smallholders as a new cash crop. The fiber will be exported. Therefore, given existing conditions and the potential economic benefits, a fourth element of A.I.D. strategy over the next five years will be to actively explore opportunities and to seek support for expanded U.S. private investment in Malawi. The tendency for Malawian citizens to participate in local self-help activities is highly compatible with the approach of developmental PVOs. Thus PVO involvement will be encouraged particularly in the establishment of small-scale agro-business.

V. PROPOSED ASSISTANCE LEVELS

Table presents proposed assistance levels for 1983-87.

Table : PROPOSED ASSISTANCE LEVELS

(fiscal years, millions of dollars)

Sector	1983	84	85	86	87	Total
Agriculture	12	17	25	29	29	112
Energy/Environment	2	4	4	5	5	20
Manpower	3	5	5	5	5	23
Health/ Population	3	4	4	5	5	21
Total	20	30	38	44	44	176

A.I.D./Malawi suggests that the staffing pattern set out in the FY-82 ABS be modified in the following manner:

(1) delete the addition of a USDA/PASA agricultural officer; (2) delete the addition of an energy design officer; (3) add one foreign direct hire officer and one U.S. direct hire officer to work in the program office.