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Economic Development in Malawi -
Implications for U.S. Assistance
Strategy

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I. Overview of the Structure and Performance of the Malawian Economy

A. Prospects at Independence

On July 16, 1964, Nyasaland became the independent state of Malawi. While there was a great deal of fanfare to celebrate this achievement, Malawians had little else to rejoice in on their first day of independence. During the final years of its colonial history the country had experienced a major depression and was by every measure insolvent. The general concensus of colonial officialdom was that the country not only lacked sufficient resources to embark upon a new and prosperous future, but would have difficulty in maintaining its already low standard of living. At best Malawi seemed likely to remain an agricultural backwater supplying labor to its more developed neighbors in Zambia, Rhodesia and South Africa.

To be sure, Malawi did face a series of obstacles that made its future prospects bleak. Malawi is a landlocked country -- a fact which has a number of insidious effects, including raising import costs, lowering export revenues and increasing the uncertainty of supply of key imports. It was also thought to be resource poor, lacking any minerals which could economically be exploited. Standards of living were also very low with a population of 4.5 million people having a per-capita income of 117 U.S. dollars in 1982 prices. Finally, Malawi's

capital stock, both physical and human, was woefully underdeveloped. There were but 200 kilometers of paved roads (single lane at that) and 33 university graduates in the country in 1964.

Bleak though the outlook was, Malawi was not without important advantages at independence. First, it had, by African standards, a relatively homogenous tribal/linguistic structure such that over the years since, frictions have been minimal. Secondly, while much of the country is mountainous, the remainder is fertile with a wide range of climatic and soil conditions such that a variety of crops and forest products can be grown. Third, the country's first and only president, Hastings Kamuzu Banda, was a powerful personage who has provided both political stability and an economic policy framework which has maximized Malawi's prospects for economic success.

B. Government of Malawi Development Strategy

The development strategy adopted by the Government of Malawi (GOM) at independence was highly pragmatic and highly appropriate to the country's geographic location and resource endowment. First, economic growth was to be accelerated as rapidly as possible. This was to be accomplished by accelerating agricultural production for export while maintaining food self-sufficiency and by efficient import substitution and agricultural processing for export (for which

there was ample scope due to the country's landlocked location and high transport costs.) Foreign capital, both financial and human, was encouraged to participate fully in this process.

Secondly, economic growth was to be efficient in that it would reflect the true cost of resources and respond to market forces. Historically, exchange rates have been kept realistic (and exchange controls accordingly limited), real interest rates positive and wages low--reflecting the abundance of unskilled labor. The GOM has not been involved in the economy in the command sense that characterizes much of sub-Saharan Africa. Indeed, it has largely confined itself to providing infrastructure and services which could not be efficiently or optimally provided by the private sector. At the same time, however, it has ensured Malawian control, and indeed GOM control, through a system of statutory bodies which owns large portions of the economy. In short, the "private sector" in Malawi is largely government owned but yet fully responsive to market forces which in turn are supported and encouraged by the GOM. As a result, the distortions and

inefficiencies which characterize all too many of the economies of sub-Sahara Africa are largely absent in Malawi.^{1/}

C. Economic Performance: Independence to the Present

(1) Trends in Gross Domestic Product.

Table I clearly reveals that Malawi has achieved striking success in the face of difficult odds. From 1973 to 1979, before the onset of economic difficulties, discussed more fully below, Real Gross Domestic Product grew at 6.1 percent per annum, a rate well in excess of population growth-estimated at 2.9 percent per annum. More importantly these gains have been distributed in such a way that all income groups, including the poorest, have benefitted absolutely, if not relatively.

The data in Table I dealing with the relative share of GDP originating within various sectors of the Malawian economy does not, beyond a growing role for estate agriculture, reveal any significant change in the structure of the Malawian economy between 1973 and 1982. It is interesting to note however that the share accounted for by government services has remained fairly constant over time - an indicator that the GOM

^{1/} For a full discussion of GOM/Private Sector Relationships see "The Private Sector and the Economic Development of Malawi", A.I.D. Evaluation Special Study No. 11, March, 1983.

is not expanding relative to the economy as a whole. The structure of the economy in 1983 however is a far cry from that which prevailed in 1964. In 1964 agriculture accounted for 58 percent of GDP - with the bulk of this being non-monetized production - as opposed to the 40 percent of GDP accounted for by the sector today.

Table II provides additional insight into the transformation of the Malawian economy over the period 1964 to 1980. It reveals considerable improvements in investment/savings performance, in the levels of available infrastructure and in the stock of human resources. Clearly, even considering the reverses of the past few years, Malawi is better off today than it was at independence in 1964, a claim that can be made by all too few of its contemporaries in sub-Saharan Africa.

(2) Balance of Payments

Table III provides an overview of Malawi's balance of payments performance over the period 1964 to 1980. It reveals that while exports expanded quite rapidly - at an annual rate of 15.1 percent over the period 1964-1980 - imports expanded at slightly higher rate - 15.3 percent - such that Malawi experienced a growing deficit on balance of trade over the period. Of even greater concern, there was a growing deficit on current account, a deficit that was increasingly met by high cost commercial borrowing from 1978 onwards.

As can also be seen, however, Malawi also received net capital inflows that were large in relation to export earnings over the period. In the initial years following independence these were very largely made available on concessional terms. Beginning in 1978, however, Malawi began to borrow extensively on commercial terms (at variable interest rates) for urban and infrastructural projects as well as for investment in agricultural projects. The urban and infrastructural projects all had low financial returns, while the agricultural projects, particularly in the case of sugar, were adversely affected by low international commodity prices. The result was a growing debt service problem such that Malawi was forced to approach its creditors regarding debt rescheduling. The relief that was granted as a result of subsequent negotiations, reduced the debt service ratio (debt service as a percent of exports of goods and services) from 50 to 43 percent in 1982 and from 40 to 23 percent in 1983.

Malawi's growing balance of payments problems are also reflected in declining gross official reserves. By late 1982 these had declined to only .6 of a month's worth of imports. With low reserves, rising debt service, uncertain export prospects and rising import costs, Malawi faces a difficult balance of payments situation over the next few years.

3. Exports and Imports

Table IV provides a historical overview of Malawi's export performance since independence. It indicates that while total exports have expanded considerably, Malawi has achieved only modest success in diversifying its exports base.^{1/} In the case of sugar, which emerged as a new export in 1969, difficulties have been encountered since 1980 due to the imposition of U.S. sugar quotas, downward trends in prices and rising transport costs. "Other" exports, however, expanded modestly over the period 1964-1980, largely in the form of textile exports to neighboring countries. With the near doubling of maize prices during the 1980/81 crop year, Malawi's farmers have significantly expanded their production and as a result, Malawi has had a maize surplus to export to neighboring African countries as well.

^{1/} Most of this export growth was fueled by the estate sector. From 1967 to 1978 - in current prices - estate exports grew by 20 percent each year while small-holder exports grew by 8 percent. In the future, however, shortages of land, fuelwood, credit and management skills are likely to retard the expansion of the estate sector. Accordingly, Malawi will have to increasingly rely on less capital and management intensive smallholders to expand and diversify its export base.

Table V examines the structure of Malawi's imports between 1964 and 1980. It reveals that since independence Malawi has devoted an increasingly larger share of its total import bill to capital goods and intermediate materials - though petroleum costs have continued to consume an ever larger share.^{1/} Reflecting Malawi's successful import substitution strategy, consumer goods have accounted for a continually declining share of the total import bill. More importantly, food imports have accounted for a declining share of consumer non-durable goods. Malawi is, in fact, one of the few countries in Africa in which food production is rising more rapidly than population.

4. Factors in Poor Performance 1979 - Present.

Since 1979 a combination of events has caused a marked deterioration in Malawi's economic situation. Droughts in two successive years led to the temporary importation of maize in 1981. Periodic interruptions, resulting from insurgent activity and poor maintenance of the rail routes through Mozambique have impeded the movement of imports and exports, raised their transport costs and led to shortages of

^{1/} Physical consumption of petroleum has grown very, very slowly (1.4% per annum from 1975-1980) as the GOM has allowed consumer prices to rise, reflecting economic costs.

fuel, fertilizer and other critical imports. Increased petroleum costs in 1979, coupled with declining international prices for Malawi's major exports, resulted in a substantial decline in the terms of trade in the face of a growing debt service problem. Government deficits and domestic bank borrowing by government also rose significantly over the period 1979 to 1982 as the GOM rapidly accelerated its recurrent and development expenditures. As a result of these factors, inflation accelerated to some 16 percent per annum and real growth in Gross Domestic Product declined significantly.

Under the auspices of the IMF, however, the Government of Malawi has attempted to come to grips with its problems. Under the terms of a one year stand-by arrangement (April 1982 - March 1983) it devalued its currency by 15 percent, increased several producer prices for the 1982/83 growing season and accepted ceilings on non-concessional foreign borrowing and net (domestic) bank credit to the government. An IMF team visited Malawi in the late spring of this year and pronounced itself well pleased with Malawi's performance. It is expected that Malawi and the IMF will shortly agree to a \$100 million three year extended fund facility - a sure sign of IMF confidence in Malawi.

Because of its resource endowments and the small size of its domestic market, Malawi has opted for an outward -

looking, export oriented strategy based on small farmer and estate agriculture. While import substitution has formed a part of overall strategy, it has been based upon considerations of economic efficiency as opposed to political and ideological considerations. While the GOM has maintained a large measure of "control", either directly or through statutory bodies, decision making in the economy has been largely allowed to respond to economic prices and market forces.

Malawi's record of growth and development, against formidable odds, from 1964 to 1979 offers incontrovertible empirical proof that this is the correct development strategy for Malawi. Accordingly, the economic decline of 1979 - 1982 can best be seen as an aberration brought about by an unfortunate coincidence of poor decision making and adverse circumstances beyond Malawi's control. Unquestionably, Malawi has learned from the experience and has acted quickly and pragmatically to put its house in order. At the same time, however, there are difficulties on the economic horizon that could darken the prospects of even the best development strategy. It is to the nature of these difficulties, and to how A.I.D. can best relate to their amelioration, that the discussion must now turn.

D. Constraints to Future Development

(1) Food Self-Sufficiency

As has already been noted, Malawi is one of the few countries in sub-Saharan Africa in which food production has historically expanded more rapidly than population. This has had a considerable impact upon Malawi's development success to date: resources that, in all too many countries of sub-Sahara Africa, have been used to sustain food imports in the face of declining domestic food production and changing consumer tastes, have been available in Malawi to finance the importation of capital and intermediate goods in support of economic development.

In its agricultural sector assessment undertaken in 1981, the IBRD was less than sanguine that this favorable situation could be continued into the future as the performance of the food producing smallholder sector is already weakening. Also, Malawi's population is growing at 2.9 percent per annum, a rate which will double population every 24 years, and this growth rate is likely to accelerate unless fertility can be reduced. In the past, Malawi has fed its growing population by expanding the area under cultivation but given its resource base, Malawi is rapidly reaching the limits of such a strategy. The IBRD has estimated that the supply of new arable land will be exhausted by the mid-1980's. At this point, in

the absence of technical change, Malawi will be forced, in some combination, to expand into increasingly marginal areas, reduce fallow periods, reduce the area of land devoted to export crops or to import food.

None of the options are acceptable from the point of view of Malawi's long term economic development. Expansion into marginal areas and reduced fallow periods will entail high costs in terms of fertilizer imports and long term degradation of the resource base. Reduction in the amount of land devoted to export crops and increased food imports would be very costly in terms of foreign exchange which could otherwise be devoted to increasing the economy's capital stock.^{1/} Accordingly, what is required is the development of effective systems of agricultural research and extension directed toward the small farmers which can facilitate and support higher yields of food crops, particularly maize, and higher value/low bulk (and labor intensive) export crops.

^{1/} Particularity if it is necessary to increase food imports in the face of Malawi's high transport costs. For Malawi to become a high cost food importer - relying on agricultural exports with fluctuating prices and high transport costs - would be to put itself in a perilous position indeed and is to be avoided if at all possible.

(2) Transport Costs

Malawi's development efforts since independence have unquestionably been complicated by its landlocked status. While its location no doubt benefitted the country's import substitution/agricultural processing efforts (with high transport costs from outside providing protection against the higher production costs inherent in Malawi's limited domestic market) this was no doubt offset by the higher costs of essential imports and the reduced foreign exchange available from exports. As the growth record from 1964 to 1979 clearly demonstrates, however, these costs did not constitute an insuperable barrier to Malawian development - though the increasing deficit on non-factor services (see Table III) clearly indicates that they have constituted a growing problem over time.

From Independence to 1979, Malawi relied upon rail linkages to the Mozambique ports of Beira and Nacala for shipments of its imports and exports. Collectively, these two ports and their associated rail links handled 90-95 percent (by weight) of Malawi's external trade, with the Beira port alone accounting for 70 percent. Though these routes were not without their problems over the period, they were largely adequate to Malawi's needs. In 1979, however, the capabilities of both links began to weaken as a result of management weaknesses, inadequate equipment maintenance, and deteriorating

track conditions. In addition, a growing insurgency problem hampered operations of the Beira route until, in the fall of 1982, it effectively ceased to operate. As a result, Malawi was forced to utilize alternative road and rail links through Zimbabwe and Zambia (to South African ports) for the bulk of its foreign trade.

Utilization of these alternative routes has come at a very high cost to Malawi. The UNDP has estimated that utilization of these routes had an economic cost of \$12 million in 1982 alone and that in 1983 these costs may amount to between \$25-30 million or between 10 percent and 12 percent of projected export earnings.

These estimates are conservative, however, in that they appear to take no account of extra transport costs for maize (a new, important export) nor of output losses that will result from the transport crisis.^{1/} The GOM paper dealing with the need for donor assistance to cope with emergency

^{1/} The estimate includes procurement of replacement supplies, excess transport costs (some), port storage costs, interest on tied up capital and other costs due to delayed sugar sales, loss of revenue by Malawi Railways and general loss and deterioration.

fertilizer procurement this year estimates that a failure to finance the procurement exercise would cost \$11 million from lost tobacco, maize and rice production alone. Clearly the cost of the transport crisis, though difficult to measure in precise terms, is very high indeed.

These additional costs have come at a time when Malawi is particularly vulnerable. As has already been noted, gross foreign exchange reserves are extremely low, thus allowing no flexibility to absorb these increased costs even for a short period. Malawi also has a serious debt service problem and, though considerable immediate relief was provided for 1983 by the recent rescheduling, debt service will consume 34, 40, 35 and 31 percent of Malawi's exports of goods and services in the years 1984-1987. A further element of instability is added by the fact that the prices Malawi receives for its exports are largely beyond its control.^{1/}

^{1/} In 1983, a 21 percent increase in the production of tobacco will result in earnings that are 14-17 percent less due to lower tobacco prices - and these earnings will be further reduced by higher transport costs. In a similar vein, f.o.b. sugar exports would have financed 21 percent of Malawi's c.i.f. imports in 1981 but this percentage declined to 12 percent in 1982 due to problems with transport and low world sugar prices.

When coupled with high transport costs, this can quickly prove fatal to a crops export profitability as is already the case for sugar produced at the Dwanga estate in North-Central Malawi. Here, given low world sugar prices, the value of a ton delivered to Durban would just cover the transport costs.^{1/} Clearly Malawi cannot continue to absorb such additional transport costs, on top of transport costs that are already inherently high as a result of its location, and continue to grow and develop as it did over the period 1964-1979. Indeed, without some reduction in these transport costs its outward looking-export oriented development strategy - while the best strategy for Malawi - has every chance of being overwhelmed.

^{1/} The Dwanga scheme is now using lake transport to move its production while output at the SUCOMA (Southern) scheme is piling up awaiting transport. Whether continued production of sugar for export makes sense - transportation costs and sugar prices being what they are - even as a loss minimization case, (particularly in view of the opportunity costs involved) needs to be quickly and carefully reviewed. It may well make more sense to mothball the refineries and shift into the production of other crops until the cost/price picture improves with respect to sugar.

3. Inter-relationships Between Constraints

Malawi's problems are compounded by the inter-relationships which exist between food self-sufficiency and the impact of transport costs on an export oriented development strategy. Here the linkage is provided by imports of fertilizer in the years since 1970 (Table VI). Though the precise use to which these imports are put are not precisely known, they have without question, been critical to the maintenance of food self-sufficiency and expanding agricultural exports. As a low value/high bulk import, fertilizers final price to the consumer (be it the individual farmer or the nation as a whole) is extremely sensitive to transport costs. As a result, with the increased costs of transport, fertilizer imports will become increasingly difficult for Malawi to afford.^{1/} (Not to mention any costs associated with delays

^{1/} Malawi now faces a commodity and freight cost of K330-405 per ton of fertilizer as opposed to commodity, insurance and freight costs of K185 per ton in 1980. Accordingly, fertilizer imports in 1983-1984 may consume 11-13 percent of f.o.b. export earnings as opposed to the 6 percent they would have consumed had costs remained at 1980 levels. The rising cost of fertilizer also enhances the importance of agricultural research and extension in order to make sure that it is combined with the right varieties, techniques and complementary inputs such that its impact upon production is maximized (or alternatively such that fertilizer use is held to minimal levels).

and uncertainty). Yet the costs of failing to make such imports would be extremely high. Food production and agricultural exports would both suffer, further reducing the capacity of the country to afford such fertilizer imports. The result would be cumulative downward spiral from which the country would find it increasingly difficult to recover.^{1/}

II. Implications for U.S. Assistance Strategy in Malawi

A. Balance of Payments Assistance

The above review of Malawi's economic performance since independence, and the constraints to its future development highlights the importance of balance of payments support, transport, food self-sufficiency and a number of other activities as appropriate areas of A.I.D. concern in Malawi.

With an extremely low level of foreign exchange reserves, a large debt service burden and an uncertain future with respect to export prices and import costs, Malawi faces a difficult balance of payments picture over the next few years. If

^{1/} Such a downward spiral would have implications beyond food, fertilizer and agricultural exports. Once caught up in a foreign exchange crunch, Malawi would be unable to sustain the free remittances of profits and dividends, a considerable factor in its ability to attract the foreign investments which have contributed so much to its growth.

Malawi's economy is to grow at 4-5 percent per annum over the remainder of the decade, it is estimated by the GOM that \$1.64 billion in external assistance will be required. While a portion of this could appropriately be provided in a project related form, a significant portion will have to take the form of balance of payments support in order to fill the gap brought on by rising transport costs and declining terms of trade.

A strong case can be made for the U.S. providing a portion of this balance of payments assistance. Not only does Malawi clearly need such assistance: Its record of pragmatic policy and strategy, high reputation for honest and capable management, and demonstrated productively oriented import priorities all argue that good use would be made of such assistance. The impact of providing such assistance could be further strengthened by tying its provision to a number of policy reforms related to agricultural output and input pricing and to changes in certain import duties and licensing practices which tend to impose excessive costs on the economy. Importantly from the A.I.D. management perspective, such assistance could be provided in significant amounts with minimal demands in terms of direct hire staff.

A more limited role with respect to the balance of payments crisis (and agricultural productivity in general) could be played by A.I.D. in the area of fertilizer procurement. The

World Bank and IFAD have provided Malawi with technical and financial assistance to rationalize Malawi's smallholder fertilizer supply. This system has broken down in this, the first year of its operation, as a result of the failure of the assumption that it would be possible to transfer fertilizer stranded at Beira into Malawi in time for the 1983/84 crop season. As a result, Malawi will very likely require an additional \$5.8 million in external assistance (to fund emergency fertilizer procurement from South Africa) if crop losses in the range of \$11 million are to be avoided.

While time constraints and U.S. procurement regulations will preclude U.S. assistance with respect to this emergency exercise, A.I.D. might wish to consider funding an inventory of (and storage facilities for) fertilizer additional to Malawi's annual requirements.^{1/} Given Malawi's landlocked location and fluid transport system - coupled with Malawi's limited foreign exchange reserves - some level of inventory in excess of normal consumption each year would appear to be a requisite if emergency procurements and their higher associated costs, are to be avoided at least for the next few years.

^{1/} The IBRD/IFAD project is directed toward meeting annual requirements on a more rational basis but no provision has been made for inventory to meet shortfalls due to factors beyond Malawi's control.

B. Assistance with Respect to the Transport Crisis

In the case of easing the present transport crisis, the most important AID interventions over the short to medium term would be directed toward transport planning and the creation of an indigenous international trucking capability.

Assistance to Malawi with respect to transport planning directed toward improved utilization of existing routes and existing plant (truck) supply could result in considerable savings through better coordination of imports and exports to reduce empty running, the smoothing out peaks in demand (and their associated higher costs) and by providing long term contractual arrangements with truckers to reduce the premiums associated with risk and uncertainty. More importantly, it could reduce the extra costs associated with the highly fluid status of Malawi's network of access routes to the sea. These routes vary by distance and modes that are fixed in the short run but they are nonetheless highly fluid from day to day in that, at any moment in time, they may be open or closed - underutilized or congested. The ability to take the best possible advantage of the existing situation (good or bad though it may be) to minimize costs, losses and delays, and to respond promptly to changing circumstances, could thus offer

considerable savings, both tangible and intangible. Such an ability, however, is dependent upon a comprehensive public and private transport planning capability which Malawi does not have at the present time.

Another appropriate AID intervention could be directed toward increasing Malawi's indigenous international trucking capability. The vast bulk of Malawi's own trucking capacity is directed toward (and suitable only to) the domestic market. As a result, the country is dependent upon South African, Zimbabwean and Zambian trucking firms to provide its heavy, long haul international transport. These foreign firms must, of course, be paid with scarce foreign exchange and their even partial replacement with indigenous capacity thus may offer a considerable potential for savings of this all too scarce resource. Importantly also, the creation of such an indigenous capacity would reduce Malawi's dependence upon countries and firms that may not always be willing, or able, to respond to Malawi's transport requirements. In short, it would increase Malawi's independence of action in a highly fluid and uncertain situation.

Over the longer term A.I.D. could also assist in providing Malawi with an additional, more certain, access route to the sea. With the Beira route closed by insurgent activity and the Nacala route functioning well below capacity due to a lack of

maintenance, Malawi must ship the bulk of its imports and exports through a minimum of two countries (Mozambique-Zimbabwe/Zambia-Zimbabwe) to reach the ports of a third (South Africa). The potential for instability in these countries is already evident in Mozambique, highly probable in South Africa, and uncertain in Zimbabwe and Zambia. Clearly, as things now stand, Malawi could easily be cut off from its seaports with catastrophic results.

At the present time the best way to provide this additional link would appear to be to construct a road from Karonga in Northern Malawi to Ibanda in Tanzania, thus providing a link to the Tanzam Highway/Tazara Railway and the port of Dar Es Salaam. This route is short (50.0 kilometers), and it is estimated that it could be built for approximately \$15-20 million. The cost/location of this road is such that it most likely could be economically justified on the basis of its benefits to the surrounding area alone, an important consideration given the fact that an improvement in the functioning of the routes to Mozambique would wipe out a large portion of any projected national economic benefits. The EEC has agreed to fund the final design study for this road but lacks the funds for its construction. Accordingly, the

possibility of financing this road represents an opportunity for increased U.S. assistance to Malawi in a way that requires minimal direct hire staff while simultaneously meeting a critical regional and national need.

C. Assistance with Respect to Continued Food Self-Sufficiency

USAID/Malawi is already providing significant support to agricultural research and extension in Malawi and Malawi's macro-economic situation highlights the importance of continuing and expanding this activity.^{1/} Continued food self-sufficiency is critical to Malawi's future development and research/extension is vital to the effort - particularly as it concerns development of a high yielding maize which is acceptable to local tastes and assuring that varieties and husbandry practices are available to, and understood by, small

^{1/} Support for Malawian research and extension efforts is not only a matter of providing additional technical assistance, training and equipment, it is also a matter of ensuring a rational allocation of research/extension resources against the value, present and prospective, of various crops to the Malawi economy. Indications are that Malawi's past performance in this regard have not been good.

farmers such that the maximum impact can be achieved from the fertilizer which must be imported at high costs.^{1/}

D. Other Possible Areas of Assistance

In addition to direct investment in transport and continued food self-sufficiency there are a number of other areas, most of which involve reducing the vulnerability of Malawi's economy to transport costs, which seem worthy of A.I.D. investigation and possible assistance.

It has already been noted that the estate sector is reaching its limits in terms of contributing to the expansion and diversification of Malawi's export base. Future expansion/diversification efforts will have to be based on the growth and development of small-holder agriculture.

Accordingly, it is highly important that high value/low bulk exports (which can be grown on a labor intensive basis by smallholders) be identified and introduced. Macademia nuts (in

^{1/} Malawi could save on total transport and procurement costs per unit of nitrogen by increasingly switching from sulphate of ammonia to calcium ammonium nitrate and urea. Such a switch, however, requires a considerable extension effort if maximum economies are to be achieved. Malawi's current system for allocating fertilizer in the event of a shortage appears to be weak and might also be an appropriate focus of USAID concern.

which Malawi has a considerable head start as a result of plantings some years ago) spices and fruits (which can be grown on hilly land not suitable to cultivation) seem particularly promising.^{1/}

Seventy percent of the animal protein consumed in Malawi is provided by fish, the bulk of which is caught from Lake Malawi. The catch from this lake has declined from 54,000 tons in 1971 to 25,300 tons in 1982, strongly suggesting that the lake is being fished beyond its maximum sustainable yield. The problem of managing the Lake Malawi fishery resource is very complex due to the fact that it contains between 500 and 1000 different species and Malawi currently lacks the knowledge, skills and equipment to utilize it to the maximum advantage (or to prevent its decline as a resource). The cost of the loss (or less than most effective use) of this resource to the Malawi economy would be very high, involving considerable investment in alternative domestic protein sources or the importation of additional foodstuffs.

^{1/} Though not necessarily small farmer based, tea, oil, meat (if price incentives can be provided) and knocked down furniture parts also offer interesting prospects for export expansion. Malawi currently imports most of its dairy products and development of an indigenous dairy industry could also save scarce foreign exchange.

Malawi imports considerable quantities of coal from Mozambique and Zimbabwe for use in its industrial plants and in the drying of tobacco. Increasing transport costs have raised the cost of this coal considerably and, as a result, its use must be as efficient and economic as possible. Malawi finds it difficult to accomplish this as it must depend upon coal testing laboratories in South Africa.^{1/} Accordingly, Malawi's economy often pays for a higher quality coal than it actually obtains and often misallocates coal among users by inadvertently providing them with a higher quality coal than they actually require. An in-country coal testing laboratory thus offers considerable scope for economies that are badly needed in the light of the country's current economic circumstances.

Malawi also has unexploited coal deposits within its borders. These were previously thought to be uneconomic but with rising transport costs and associated delays and uncertainties, this may no longer be the case, particularly if labor intensive mining methods can be utilized. Clearly a new look at the viability of these deposits is appropriate under present circumstances.

^{1/} Coal deteriorates once it is removed from the ground and delays in testing, aside from slowing down decision making, may distort test results.

A factor complicating food self-sufficiency and economic development in general in Malawi is, of course, the country's rapid population growth (now estimated at 2.9 percent per annum and likely to climb given the age structure of the population). Clearly a reduction of this growth rate to more manageable proportions would make a considerable contribution to Malawi's future development. In the Malawian context, a family planning effort, given political and cultural sensitivities, would best be channeled through a maternal child health program. The desirability of this approach is reinforced by the fact that a high death rate (for reasons that are not fully understood) among infants and children constitutes the country's major health problem.

Assisting Malawi with respect to renewable and alternative energy constitutes yet another area of possible AID concern. Fuelwood constitutes Malawi's major energy source and is used both for cooking and for the drying/curing of tobacco. Timber is being harvested more rapidly than it is being planted and reforestation thus constitutes a key priority need.^{1/} Malawi also needs a better pricing policy for its timber resources to promote their efficient use.

^{1/} Malawi has extensive softwood plantations on the Vipha Plateau but this cannot be made into charcoal, and it is too far away from most potential users to be economic as fuelwood. In view of Malawi's high transport costs, fuelwood plantations must be located close to the consumer.

As a sugar producer, Malawi has excess supplies of molasses which it is now converting into alcohol. This is being mixed with motor fuel to the maximum extent possible without technical modifications to the vehicle fleet and considerable foreign exchange economies are being achieved thereby. Excess molasses remains unutilized however (as well as sugar which cannot be economically exported) and Malawi might also wish to consider converting (over time) a portion of its vehicle fleet to run on pure alcohol and to also explore the possibility of using alcohol as a fuel to dry tobacco. The re-refining of used motor oil may also offer a potential for savings.

TABLE I.

• Real Gross Domestic Product by Economic Activity

1973 - 1982

(Millions of Kwacha)

1978 Prices

	1973	1979	1980	1981	1982 Estimate	Compound Growth 1973-1979	Growth Rate 1979-1980	Growth Rate 1980-1981	Growth Rate 1981-1982	Relative Share 1973 (Percent)	Relative Share 1982 (Percent)
Agriculture, Forestry & Fishing	223.6	308.3	291.5	302.1	313.8	5.5	-5.4	3.6	3.9	41.0	40.1
(Estimates)	(26.6)	(56.2)	(57.7)	(55.1)	(65.4)	(11.3)	(2.7)	(-4.5)	(18.7)	(5.4)	(6.4)
(Smallholders)	(194.0)	(252.1)	(233.8)	(247.0)	(248.4)	(4.5)	(-7.3)	(5.6)	(0.6)	(35.6)	(31.7)
Manufacturing	61.9	90.3	93.6	95.3	91.1	6.5	3.7	1.8	-4.4	11.3	11.6
Electricity & Water	8.4	13.7	14.8	14.9	15.3	8.5	8.0	.7	2.7	1.5	2.0
Building and Construction	28.9	48.8	45.3	36.2	33.9	9.1	-7.2	-20.1	-6.4	5.3	4.3
Distribution (Trade)	74.1	109.7	118.0	108.9	106.8	6.8	7.6	-7.7	-1.9	13.6	13.6
Transport and Commu- nication	37.2	48.7	50.7	47.3	43.2	4.6	4.1	-6.9	-8.5	6.8	5.5
Financial Services	14.5	26.1	28.3	26.3	29.0	10.3	8.4	-7.1	10.3	2.7	3.7
Ownership of Dwellings	20.4	30.9	31.7	32.3	33.1	7.2	2.6	1.9	2.5	3.7	4.2
(Sub-total - Private Sector)	(469.0)	(676.5)	(673.9)	(663.3)	(666.2)	6.3	(-4)	(-1.6)	(.4)	(86.0)	(85.1)
Government Services	76.5	100.7	106.1	110.8	116.9	4.7	5.4	4.4	5.5	14.0	14.9
GDP at Factor Cost	545.5	777.2	780.0	774.1	783.1	6.1	.4	-.8	1.2	100.0	100.0

Source: "Malawi National Accounts Report 1973-1978" and "Malawi - Recent Economic Developments" IMF, February 1983.

Table II

Malawi Indicators of Economic Transformation, 1964-1980

<u>Economic Indicator</u>	<u>1964</u>	<u>1980</u>
GDP per Capita (1980 Kwacha)	122.8	207.9
Investment/GDP (percentage) ¹	13.6 ²	25.5 ¹
Savings/GDP (percentage)	-12.1	12.6 ¹
Government Savings/GDP (percentage)	-12.5	1.8
Employment in Wage Sector (000s)	135.0 ³	348.0 ⁴
Manufacturing Output (million 1980 Kwacha)	36.0	71.0
Paved Roads (km)	200.0	1,899.0
Secondary School Enrollments	5,951.0	15,140.0 ⁴
University Graduates	33.0	2,656.0
Electricity (mnkwh)	43.0	365.5
Rail Traffic (million ton-kilometers)	85.1	228.3

¹1978-1980.

²1964-1966.

³1968.

⁴1978.

Source: "The Private Sector and the Economic Development of Malawi"
A.I.D. Evaluation Special Study No. 11, March, 1983.

Table III
Balance of Payments Summary
1964 - 1983

(Millions of Kwacha)

	1964	1970	1975	1980	1983*
1. Exports (f.o.b)	24.4	49.7	118.0	231.0	292.7
2. Imports (f.o.b)	28.6	68.4	187.0	278.6	265.3
3. Balance of Trade (1-2)	-4.2	-18.7	-69.0	-47.6	+27.4
4. Balance on non-Factor services.	-7.2	-15.4	-35.0	-96.9	-122.1
5. Balance on Factor services.	-6.2	-6.1	+8.0	-42.3	-38.1
6. Balances on Transfers.	+19.2	+12.9	+21.0	-5.2	-9.1
7. Balance on Current Account (3+4+5+6)	+1.6	-27.3	-75.0	-192.0	-141.9
8. Balance on Capital Account	+1.1	+34.1	+61.6	+185.4	+166.9
9. Errors and omissions	+7	-1	<u>1/</u>	<u>1/</u>	<u>1/</u>
10. Net Movement in Official Reserves (- = increase) (7+8+9)	-3.4	-6.7	+13.4	+6.6	-25.0

* Estimate

1/ Included in Balance on Capital Account

Source: "Malawi; Growth and Structural Change - Statistical Appendix", IBRD February 1982 and "Malawi Economic Report" (various years).

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TABLE IV

Historical Overview of Export Performance

Export Indexes: 1964-80
(1979 = 100)

	Major Estate Crops			Major Smallholder Crops				Other Exports	Total Exports
	Tobacco	Tea	Sugar	Tobacco	Groundnuts	Cotton	Rice		
1964	11.4	39.2	--	37.3	115.3	300.0	18.6	99.1	36.5
1965	11.4	42.4	--	53.6	138.0	328.6	15.7	90.1	40.0
1966	11.4	42.9	--	47.2	108.0	342.9	20.0	199.1	51.7
1967	11.0	54.0	--	43.4	372.3	221.4	21.4	235.4	67.4
1968	14.9	50.8	--	43.7	219.0	178.6	12.9	204.9	57.0
1969	16.6	55.6	3.2	36.1	250.4	271.4	24.3	206.3	60.1
1970	21.8	56.9	2.1	40.3	164.2	421.4	40.0	193.7	59.0
1971	28.9	58.5	4.3	45.3	213.1	342.9	74.3	191.5	64.7
1972	36.0	61.7	5.0	51.3	260.8	342.9	102.9	188.3	71.2
1973	37.0	89.1	24.9	60.8	200.0	178.6	204.3	210.8	79.4
1974	38.6	76.5	32.0	58.6	151.1	178.6	158.6	185.2	72.7
1975	50.7	80.1	43.4	40.7	181.8	157.1	72.9	171.3	74.7
1976	56.2	94.5	58.4	62.4	189.8	142.9	62.9	130.5	79.8
1977	59.4	95.8	79.7	73.8	118.3	142.9	171.4	138.1	84.4
1978	65.3	98.1	66.3	77.6	49.6	42.9	110.0	104.0	76.3
1979	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1980	121.8	97.1	141.5	52.3	165.0	171.4	185.7	155.2	115.1

Source: "Malawi; Growth and Structural Change - Statistical Appendix", IBRD, February 1982.

TABLE V
IMPORTS BY END-USE
1964-1980
RELATIVE SHARES-PERCENT

	<u>1964</u>	<u>1970</u>	<u>1975</u>	<u>1978</u>	<u>1980</u>
<u>Consumer Goods</u>	28.0	17.6	13.9	12.6	11.6
Non-Durable	23.8	14.7	11.2	10.7	9.8
Durable	4.2	2.9	2.8	2.0	1.8
(Food)	(-)	(11.0)	(6.1)	(3.7)	(6.4)
<u>Plant, Machinery & Equipment</u>	7.0	11.9	12.5	20.5	14.0
<u>Transport Equipment</u>	12.9	14.6	16.0	13.6	17.1
<u>Materials for Building and Construction</u>	6.3	7.4	7.8	8.4	8.7
<u>Basic and Auxiliary Material for Industry</u>	19.2	30.7	33.2	26.0	29.6
<u>Parts, Tools and Miscellaneous Appliances</u>	2.1	4.1	3.3	5.0	2.9
<u>Commodities for Intermediate and Final Consumption (POL)</u>	23.4 (5.6)	12.0 (7.8)	12.9 (9.1)	13.5 (10.8)	15.8 (14.1)
<u>Miscellaneous Imports</u>	1.8	1.8	.5	.4	.3
<u>TOTAL</u>	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Malawi Statistical Yearbook (Various Years).

TABLE VI
FERTILIZER IMPORTS AND SALES TO SMALL FARMERS

	Total Imports ^{1/} (Tons) <u>1/</u>	Sales to Small Farmers ^{2/} Short-tons <u>2/</u>
1970	36,569	17,141
1971	72,087	22,845
1972	58,953	27,314
1973	43,412	26,515
1974	40,548	34,991
1975	80,504	16,539
1976	72,504	24,640
1977	78,278	33,588
1978	103,398 *	48,893
1979	81,225	48,333
1980	80,800	NA
1981	127,319 *	NA
1982	87,900 **	NA

* Reflects delays in imports the previous year
 ** Estimate

1/ Source: "Malawi; Monthly Statistical Bulletin, May, 1983" and "The Economic Consequences of Being Land-Locked" UNDP/UNCTAD. Blantyre, Malawi.

2/ Source: "Malawi; Growth and Structural Change - Statistical Appendix", IBRD February 1982.