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Assessing the Impact of Structural Adjustment on the Poor: The Case of Malawi

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Abstract

This paper applies, through a case study on Malawi, a simple methodology indicating the first-round (i.e., price) effects of macroeconomic policies on real earnings of the poor. As the economic program in Malawi has not involved substantial exchange rate action or cuts in subsidies, the real incomes of the poor have been most clearly affected by the pricing policies of the agricultural parastatal and the overall anti-inflationary measures incorporated in the program; developments in minimum wages have also been important. The study suggests that, on balance, these various factors have led to an increase in real incomes of the poor over the program period.

JEL Classification Numbers:
E64, I32, I38, O15

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Summary

Malawi has one of the lowest per capita incomes in the world, estimated at the equivalent of about $180 in 1989, and about one half of its population--mainly in the rural areas--lives below the poverty line. The program of macroeconomic stabilization and economic reform initiated in 1987, and subsequently supported by the Fund under the enhanced structural adjustment facility, has been aimed at improving the incomes of all population groups--particularly the poor--through the resumption of a high rate of economic growth in the context of price stability and external viability. Structural policies have been focused on improving efficiency and growth potential, so as to benefit all population groups. The potentially adverse short-run effects of certain program policies on the poor have been recognized, and attention given to eliminating or minimizing them.

This paper focuses on the first-round impact on prices and incomes of program policies that affect the poor. The analysis shows that the incomes of the poor have been most significantly affected under the program by the pricing policies of the agricultural parastatal and the overall anti-inflationary measures, as well as by the increase in minimum wages. Although the real incomes of poor groups declined in the initial stage of the program, they have subsequently increased strongly. All poor groups, particularly the urban poor and estate workers, appear to have improved their real earnings.

I. Introduction

The purpose of this paper is to illustrate, through a case study on Malawi, a practical approach toward assessing the impact of structural adjustment policies on poverty.

Malawi initiated a structural adjustment program in 1987, which since mid-1988 has been supported by the Fund through an arrangement under the enhanced structural adjustment facility (ESAF). This was the first program with a member country under the new facility, which provides resources on concessional terms and is designed to support countries undertaking strong structural and macroeconomic adjustment policies to achieve sustained economic growth, as a basis for improving living conditions and alleviating poverty.

When formulating the program supported by the ESAF, the pervasive nature of poverty in Malawi was recognized. The policy framework paper outlining the objectives and policies of the program acknowledged five principal factors as responsible for poverty in Malawi: (i) limited employment opportunities, (ii) low physical productivity of land and labor, leading in turn to low agricultural output, (iii) poor health and educational services, which undermined the development of efficient and productive human capital, (iv) rapid population growth, which created severe pressure on land resources, and (v) minimal income transfers. The macroeconomic objectives of the adjustment program--the resumption of high rates of economic growth, the maintenance of a viable external position, and price stability--were aimed at providing impetus to improved economic welfare, which would benefit all groups in the economy, including the poor. Similarly, the structural policies--most notably import liberalization, tax reform, and reforms of the agricultural and financial sectors--would improve efficiency and longer-term economic growth across a wide spectrum of the economy. This program of macroeconomic adjustment and structural reforms was also designed to provide stimulus to employment, including jobs for the poor. At the same time, it was recognized that the process of economic adjustment and structural change could have short-run adverse effects across the economy, including ramifications for the poor and disadvantaged who were less able to cope. Such concerns required that attention be directed to ways in which the application of policy instruments be modified, or perhaps specific remedial measures taken, to ease the burden of adjustment for certain groups.

Against this background, this paper is aimed at illustrating in the case of Malawi the scope for the Fund staff, as it helped formulate an economic adjustment program, in assessing major short-term implications of economic reform measures on low-income groups. Such an assessment is necessarily constrained by the limited availability of economic data in an area that is removed from the Fund's typical macroeconomic focus. However, it is nonetheless envisaged as an important consideration in program design, particularly since per capita incomes in ESAF-eligible countries--including Malawi--are among the lowest in the world. For the present, while improved capacity is being developed within the Fund, heavy reliance needs to be placed on the expertise of other organizations, including the World Bank, that have engaged in more extensive work in this area.

The paper emphasizes the short-run effects of program policies and therefore its objective is quite limited. The principal focus is to ascertain the short-run impact of program policies on prices and incomes affecting the poor. The impact on the poor of changing social expenditures is not ignored in this review, but its impact on low income groups is typically more transparent than the impact through price and income mechanisms. In the longer run, of course, sound economic reform provides the basis for sustainable economic growth and poverty reduction, including steps toward improving agricultural productivity of smallholders, promotion of small-scale industry, emphasis on labor-intensive production, and increased social expenditures to strengthen human resource development. It should be kept in mind that while economic reform measures could affect some of the poor adversely, the same measures may result in immediate benefits for other poor groups; that the poor may in the longer run suffer more in the absence of reform measures; and that, on the basis of an analysis such as the one outlined in this paper, an important task is to integrate the various economic policy measures to alleviate possible short-run adverse effects of the macroeconomic and reform measures on poor groups.

The approach of this paper is, on the basis of available information, to (i) identify the poor; (ii) analyze their sources of income; (iii) determine their expenditure patterns; and (iv) discuss the impact of program policies on their real incomes. Consistent with this approach, the paper is organized as follows: Section II deals with the classification of the poor in Malawi, their sources of income, and their expenditure patterns; Section III gives a general overview of the main elements of the ESAF program, discusses the impact on prices of specific policy measures, and gives some rough estimates of the effects on real earnings for the poor; and Section IV draws some conclusions with regard to the methodology used in the paper, as well as the impact that the ESAF program has had on the poor in Malawi. Social and demographic indicators for Malawi are shown in Table 1.

II. Characteristics of the Poor in Malawi

1. Classification

The definition and classification of the poor in Malawi have recently been discussed in the World Bank's report: "Malawi: Growth through Poverty Reduction" (March 1990). In this Country Economic Memorandum, the Bank identifies three groups of poor--poor smallholders, poor estate workers, and urban poor--and draws on various surveys to analyze the poverty incidence within these groups. These surveys are rather outdated and narrow in coverage, but the findings may nonetheless be indicative. The 1987 Census provides disaggregated data for the various population groups in the rural and urban sectors, with the former category divided further into the

Table 1. Malawi: Social and Demographic Indicators 1/

Area:	118,428 square kilometers
Population:	8.2 million
Rate of growth	3.3 percent per annum
Density:	69 persons per square kilometer
Population characteristics:	
Life expectancy	47 years
Share of population under 15 years	47 percent
Infant mortality	148 per thousand
Crude birth rate	54 per thousand
Crude death rate	19 per thousand
Urban population	14 percent
Labor force:	
Total labor force	3.4 million
Women in labor force	1.4 million
Overall participation rate	43 percent
Health:	
Population per physician	11,334
Population per nurse	3,106
Access to piped safe water:	
Rural population	50 percent
Urban population	97 percent
Nutrition:	
Daily caloric supply per capita	2,009
Protein intake per capita	57 grams per day
Education:	
Adult literacy	41 percent
Primary school enrollment	66 percent
Secondary school enrollment	4 percent

Source: World Bank, Social Indicators of Development, 1990.

1/ Data presented are the most recent available.

smallholder and estate components. The absence of expenditure and revenue classifications in the various surveys requires assumptions about the criteria to be used for determining poverty in Malawi. The World Bank report identifies two categories, the "poor" and the "core poor," with the poverty line based on minimum nutritional requirements. According to this criterion, about one half of the population is classified as below the poverty line, with the core poor--or the poorest group--approaching 20 percent of the population (Table 2).

The World Bank's classification of smallholder households, which account for almost three fourths of total employment and for the large majority of the poor in Malawi, is based on the size of a household's agricultural plot. Based on the nutritional criterion, the smallholder "poor" are categorized as one half of those households farming 1.0-1.5 hectares, and all households cultivating less than 1.0 hectare, which is considered the smallest size compatible with satisfying basic nutritional needs without relying on income transfers. The smallholder "core poor" are defined as those households farming less than 0.5 hectare. These criteria are recognized by the World Bank staff as imperfect proxies for rural poverty, but available data allow no other reasonable alternative. Data in Table 2 indicate that two thirds of smallholder households--according to the above criteria--could be considered poor, with about one fourth of smallholder households comprising "core poor." These poor farmers generally concentrate on producing traditional maize, which is the staple in their diets, and root crops. Improved varieties of maize and cash crops, such as groundnuts, are cultivated to a limited extent.

Agricultural production of estate workers, accounting for about 10 percent of employment, differs markedly from that of smallholders. The primary products of estate agriculture are tobacco, tea, and sugar. The World Bank estimates that about one half of the estate worker households are poor, when judged against satisfaction of basic nutritional requirements. The incidence of poverty is higher among tenant estate households (47 percent). In contrast to smallholder and estate worker households, only 7 percent of urban households could be considered poor.

While no statistical information is available regarding informal sector activity in Malawi, it is not believed to be large in the urban areas, partly because formal marketing activity is relatively efficient for a wide range of goods and services. In the rural areas, informal sector activity is thought to be significant among the self-employed and part-time workers, with a distinct seasonal pattern.

In summary, available information indicates that almost 50 percent of the total population in Malawi is composed of poor smallholders; another 4 percent, poor estate workers; and about 1 percent, urban poor. In these circumstances, poverty in Malawi is essentially rural, pertaining mostly to smallholders and, to a much lesser extent, to estate workers. Based on minimum nutritional requirements, the incidence of urban poverty is of far less importance. The high incidence of extreme poverty suggested by these

Table 2. Malawi: Poverty Incidence 1/

	Population			Households		
	Total Poor	Core Poor	Other Poor	Total Poor	Core Poor	Other Poor
	(Proportion of subsector, in percent)					
Smallholders 2/	60	22	38	66	26	40
Estates						
Laborers	67	34	34	47	20	26
Tenants	64	41	23	53	30	23
Urban	9	--	9	7	--	7
	(Proportion of total population, excluding refugees, in percent)					
Smallholders 2/	48	18	31	46	18	28
Estates						
Laborers	4	2	2	4	2	2
Tenants	1	1	--	1	1	--
Urban	1	--	1	1	--	1
Total	55	20	34	51	20	31

Sources: Smallholders, Annual Sample Survey of Agriculture, 1987/88. Estates, Estate Household Survey 1989. Urban, Urban Household Expenditure Survey, 1979/80. Population, 1987 Census. As reported in World Bank, Country Economic Memorandum: Growth Through Poverty Reduction, March 1990.

1/ Poverty definition based on indicators for nutritional intake.
2/ Smallholder poor defined as households cultivating less than 1.0 hectare; smallholder core poor defined as households cultivating less than 0.5 hectare.

data is reflected in social indicators such as low life expectancy (47 years), high infant mortality (148 per thousand), low adult literacy (41 percent), and low productivity in the smallholder agricultural sector.

2. Sources of income

Table 3 provides details relating to the sources of income of poor smallholders. Own-farm (subsistence) agricultural production provides a little over 70 percent of income of smallholders in the core poor category, rising to about 90 percent for those households with higher incomes and larger plots. Off-farm activities--self-employment, paid agricultural labor, and other labor--constitute about 10-20 percent of income for these smallholders. The poorest segment of the population supplements its income to a larger extent than other groups by paid employment and other off-farm activities, as well as food and cash transfers from household members who migrate to other sectors of the economy because of the low productivity on the smaller farm plots.

For estate workers (both laborers and tenants), the World Bank estimates that some three fourths of their income is derived from permanent labor income (almost 80 percent in the case of the core poor in the estates, and just over 70 percent in the case of the other poor). 1/ The remainder of their income is from other wage income, with income from own-farm agriculture--in contrast to smallholders--being minimal.

For urban households, wages are the principal income source, including income from self-employment, household enterprises, and other informal activities, with nonwage incomes making up the remainder. A comprehensive breakdown of income data is not available.

In sum, subsistence agricultural production of traditional maize and root crops is the predominant source of income for the poor in Malawi. Wage income is the main source of income for the poor estate workers and also for the much smaller poor group in the urban sector.

3. Expenditure patterns

The information available with regard to spending patterns of the poor in Malawi is limited. The majority of the poor reside in rural areas, while comprehensive household expenditure surveys have covered urban areas only. 2/ Broad-based surveys of expenditure patterns for estate workers and smallholder farmers do not exist, although a survey is under preparation in the context of the World Bank Social Dimensions of Adjustment project. Some very limited information exists with regard to smallholders and estate workers. A 1988 study of the effects of agricultural commercialization in

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1/ World Bank (1989).

2/ Malawi National Statistical Office (1983) and University of Malawi Centre for Social Research (1989).

Table 3. Malawi: Smallholder Composition of Income

(*In percent*)

	Core Poor	Other Poor	Nonpoor
Own-farm agricultural production	72.6	86.7	93.7
Food remittances	3.6	0.9	} 1.8
Cash remittances	4.2	1.8	}
Paid other off-farm activities	9.3	6.5	--
Paid agricultural employment	6.3	2.4	--
Self employment	4.0	1.7	4.5
Total	100.0	100.0	100.0

Source: World Bank, Malawi: Growth Through Poverty Reduction, March 1990.

Malawi on expenditure patterns included a small sample survey of smallholders in the district of Zomba South. 1/ The World Bank provided the results of a sample survey of estate households in its report on poverty issued in March 1990, emphasizing in particular the split between food and nonfood expenditure among such households. In the urban sector, sample surveys conducted in 1979/80 and in 1988/89 provided expenditure breakdowns which, although restricted to specific locations, would seem to provide reasonably indicative guides to the composition of spending of this group.

a. Smallholders and estate workers

The limited survey of smallholder expenditure in Zomba South (Peters and Herrara, op. cit.) endeavored to identify the relative importance of food consumption in smallholder expenditure. The survey shows that expenditure on food accounts for more than 50 percent of total spending of the poorer smallholders in that area (Table 4). The proportion spent on food declined to some 40 percent in the higher income groups. Spending on household goods and services, including clothing, accounts for most of other expenditures for all income groups. For estate households, food is again the principal spending component, constituting--as estimated by the World Bank--about 65 percent of total spending for both poor estate laborers and tenants. However, transfer payments to their households in home villages amount to an estimated 6 percent of expenditure for poor estate households, whereas such payments are negligible for smallholders.

b. Urban poor

The most detailed information on expenditure patterns for low-income groups in Malawi can be found in the Urban Household Expenditure Survey, which is a sample survey conducted in the period June 1979 to July 1980 covering 3,000 households in the cities of Blantyre, Lilongwe, Zomba, and Mzuzu. Expenditure patterns for low-income households, as defined by the survey, are shown in Table 5. 2/

The survey indicates that food is the main expenditure group (approaching one half of total expenditure on average), while clothing and housing are of next importance (about 20 percent of the total); fuel, power, and transport account for a considerably smaller proportion, although these categories are more significant in the larger cities. As the survey was conducted a decade ago, the figures may not now be fully appropriate. In 1988/89, a small income and expenditure survey was carried out among the

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1/ P. Peters and G. Herrera: Cash Cropping, Food Security and Nutrition: The Effects of Agricultural Commercialization Among Smallholders in Malawi. Harvard Institute for International Development (1989).

2/ A low-income household for the purpose of this 1979/80 survey is defined as a household with average monthly expenditures below MK 100 during the survey period; the World Bank's 1990 study adopts a much narrower definition of poverty.

Table 4. Malawi: Expenditure Patterns of Smallholder Households

(In percent of total household cash expenditure)

Income quartile	All	First	Second	Third	Fourth
Food	45.5	52.0	56.9	43.0	38.8
Grains and cereals	19.9	25.1	22.6	18.5	13.4
Other	25.6	26.9	34.3	24.5	25.4
Transportation	1.3	1.0	1.8	0.9	1.6
Entertainment	3.2	1.9	3.4	3.5	4.0
Agricultural inputs	2.7	1.6	0.8	2.9	5.3
Medical	2.0	2.2	2.5	1.6	1.9
Education	0.4	0.2	0.6	0.5	0.3
Household goods and services	44.9	41.1	34.0	47.6	48.1
Memorandum item:					
Household expenditure (Malawi kwacha)	291.1	167.2	214.7	306.3	477.5

Source: Peters and Herrera (op. cit.) (1989): Cash Cropping, Food Security and Nutrition: The Effects of Agricultural Commercialization Among Smallholders in Malawi.

Table 5. Malawi: Expenditure Patterns of Low Income Urban Households, 1979/80 1/

(In percent of total cash expenditure)

	Blantyre	Lilongwe	Zomba	Mzuzu
Food	43.5	38.1	47.9	47.7
Of which: sugar	(4.5)	(3.9)	(4.8)	(4.7)
maize	(8.6)	(6.4)	(7.0)	(11.1)
Fuel and power	5.0	3.9	2.8	2.3
Of which: paraffin	(1.9)	(1.1)	(0.7)	(1.0)
Transport	4.0	3.2	2.4	2.2
Of which: gasoline	(0.2)	(...)	(...)	(...)
bus fares	(1.7)	(1.5)	(1.3)	(0.6)
Housing	9.9	10.1	7.0	4.7
Clothing	13.1	12.8	15.8	14.7
Other	24.5	31.9	24.1	28.4
Total	100.0	100.0	100.0	100.0

Source: National Statistical Office (1983): Urban Household Expenditure Survey 1979/80.

1/ Low-income households defined as those with monthly cash expenditure below MK 100.

low-income groups in the traditional housing areas in Lilongwe and Blantyre (University of Malawi, op. cit.). While the classification of expenditure items in this survey was much less detailed than in the 1979/80 survey, a comparison can nonetheless give some indication of the extent to which expenditure patterns may have changed over the 1980s. Table 6 shows data from the 1988/89 survey. Food expenditure constituted about 45 percent of total household spending in both Blantyre and Lilongwe in 1988/89. In each city, fuel and transportation expenditures seem to have increased their importance over the decade, while the share of clothing expenditure declined. It is unclear, however, to what extent these developments reflect changes in the number and composition of low-income households rather than adjustments to overall expenditure patterns of these households. Neither is it clear to what extent this reflects changes in spending habits or relative prices.

III. The ESAF Program and Implications for the Poor

1. Elements of the program

The Malawi ESAF program, covering the fiscal years 1988/89-1991/92 (April-March), has sought to establish conditions for a resumption of economic growth in the context of low inflation and a viable external position. Consistent with these objectives, the macroeconomic framework focused on a sustained reduction in the budget deficit, and monetary restraint through a slowdown in aggregate credit expansion and establishment of positive real interest rates. However, the policy of overall credit restraint was consistent with a sizable and growing expansion of credit to the private sector, with the Government making net repayments to the banking system over the period. Structural policies included import liberalization, parastatal and financial sector reforms, and pricing policies aimed at improving economic efficiency and productivity. Table 7 contains indicators for economic policies and developments during the ESAF program period, while Table 8 describes structural policies under the program.

2. Financial policies and price developments

The most pervasive influence of the ESAF program on prices and incomes has stemmed from the tighter financial policies implemented over the period. The Government's overall budget deficit, excluding grants, was reduced from 12 percent of GDP in 1986/87 to a little over 6 percent on average in 1989/90 and 1990/91. This reduction in the deficit was due importantly to restraint in recurrent expenditures, including wages and salaries, which were essentially unaffected by the increase in the minimum wage in 1989, mentioned below. The share of recurrent social services expenditures (principally on education and health) to total recurrent spending edged up over the program period from 20 percent in 1987/88 to 22 percent in 1990/91; recurrent social services spending remained on average at almost 4.5 percent of GDP from 1987/88 to 1990/91. The tax reform was responsible in part for an easing of the revenue/GDP ratio, with tax reductions having a stronger

Table 6. Malawi: Monthly Expenditures and Expenditure Shares of Low-Income Urban Households, 1988/89

	Blantyre		Lilongwe	
	Malawi kwacha	Percent	Malawi kwacha	Percent
Food	59	44.7	61	46.6
Fuel	18	13.6	15	11.5
Water	3	2.3	5	3.8
Rent	15	11.4	15	11.5
Transport	20	15.2	18	13.7
Health	3	2.3	3	2.3
Clothing	10	7.6	10	7.6
Transfers home	4	3.0	4	3.1
Total	132	100.0	131	100.0

Source: University of Malawi (1989): A Profile of Low Income Urban Households in Malawi.

Table 7. Malawi: Selected Economic and Financial Indicators, 1986-90

	1986	1987	1988	1989	1990
		(Annual percentage change, unless otherwise specified)			
GDP and prices					
GDP at constant factor cost	1.1	0.5	3.3	4.1	4.8
Consumer prices (annual average)	14.8	26.8	31.4	15.7	11.5
External sector					
Exports, f.o.b. (millions of SDRs)	211.6	215.4	218.4	209.8	309.9
Imports, c.i.f. (millions of SDRs) 1/	218.9	225.3	269.8	310.5	354.7
Export volume	3.0	-0.9	-2.7	-14.2 2/	50.4 2/
Import volume 1/	-14.7	-1.3	25.0	7.7	8.2
Terms of trade (deterioration -)	-8.2	-1.5	8.7	4.8	-7.0
Nominal effective exchange rate, annual average (depreciation -)	-14.5	-20.6	-9.0	7.4	8.2
Real effective exchange rate, annual average (depreciation -)	-10.2	-7.0	6.2	6.4	0.3
Government budget 3/					
Revenue (excluding grants)	11.5	18.4	33.4	27.7	1.0
Total expenditure 4/	25.2	7.5	22.5	24.3	-0.5
Money and credit 3/					
Net domestic assets 5/	-4.7	-4.8	-18.3	16.8	6.6
Credit to Government 5/	18.7 6/	11.6	-19.7	-8.1	-5.7
Money and quasi-money (M2) 5/	8.8	30.3	27.4	3.2	12.0
Velocity (ratio of nominal GDP to M2)	5.6	5.2	5.5	6.1	6.4
Interest rate (annual rate, 12-month time deposits)	14.25	17.25	13.25	13.25	13.75
			(In percent of GDP)		
Central Government 2/					
Overall deficit					
Excluding official transfers	-13.1	-9.7	-7.4	-6.8	-5.6
Including official transfers	-9.6	-7.0	-1.7	-2.2	-3.5
Domestic bank financing (net)	2.1	4.2	-1.6	-0.9	-0.4
Foreign financing (net)	4.9	2.8	3.2	2.9	4.2
Gross investment	12.2	15.4	18.7	21.2	18.2
Private fixed investment	4.2	7.7	9.7	10.7	11.7
Public fixed investment	7.8	5.8	5.6	5.2	4.5
Stockbuilding	0.2	1.9	3.4	5.3	2.0
National saving 7/	6.5	10.3	9.6	8.3	9.6
External current account					
Excluding official transfers	-5.8	-5.1	-9.1	-12.9	-8.6
Including official transfers	-3.3	-2.6	-2.2	-8.2	-4.2
External debt	66.2	73.5	81.9	85.2	75.2
Debt service ratio 8/	57.3	46.9	47.3	43.7	25.4
Interest payments 8/	19.3	16.8	16.1	16.4	10.0
		(In millions of SDRs, unless otherwise specified)			
Overall balance of payments	-67.0	44.0	62.4	-30.8	12.9
Gross official reserves (months of nonmaize imports, c.i.f.)	0.9	1.8	4.8	2.9	3.3
External debt (disbursed and outstanding, end of period)	666.3	804.1	810.8	1,055.5	1,031.1
External payments arrears (end of period)	43.8	34.1	--	--	--

Sources: Data provided by the Malawian authorities; and staff estimates.

1/ Excluding emergency imports for displaced persons.
2/ Affected by substantial stocks carried over at the end of 1989 and, to a lesser extent, at the end of 1990.
3/ Fiscal year beginning April 1 of the year indicated.
4/ Excludes foreign loan-financed development expenditures for a Post Office microwave facility in 1988/89, expenditures related to special relending operations for the electricity parastatal (ESCOM) in 1990/91, and expenditures on infrastructure in Tanzania related to the Northern Transport Corridor Project in 1990/91.
5/ Change in percent of money and quasi-money at the beginning of the period.
6/ Excludes transfers to the Reserve Bank of Malawi in the form of non-interest-bearing promissory notes to cover central bank revaluation losses on net foreign liabilities.
7/ Calculated as gross investment minus current account deficit (excluding official transfers).
8/ Before debt relief; as percent of exports of goods and nonfactor services.

Table 8. Malawi: Principal Structural Policies Under the Program Supported by the Enhanced Structural Adjustment Facility

Measures	Timing
Implementation of import liberalization program.	Completed on January 10, 1991.
Formulation of plan for sugar pricing, domestic allocation, and production capacity to meet domestic and export markets.	Completed in December 1990.
Introduction of further measures to improve monetary control, including the introduction of treasury bill auctions, and the discontinuation of direct credit controls on banks.	Introduction of reserve requirements in mid-1989; revisions to the Reserve Bank of Malawi Act and the Banking Act, auction of the Reserve Bank of Malawi bills to commercial banks introduced in November 1990; and direct credit controls on banks removed on January 1, 1991.
Reach understandings with the Fund and the World Bank on reform program for Post Office Savings Bank.	Consultants selected and their terms of reference established in December 1990.
Agreement between the Government and ADMARC 1/ --in consultation with the Fund and World Bank--on the development functions to be transferred to the government budget or discontinued.	The formula on development expenditures undertaken by ADMARC to be reimbursed by the Government was agreed in December 1990.

1/ The Agricultural Development and Marketing Corporation, the agricultural parastatal.

impact than base-broadening; the impact on the poor of the introduction of a value-added tax was eased by zero-rating of unprocessed food for purposes of the tax. The tighter financial policies also led to a marked decline in broad money growth from an end-year rate of 30 percent in March 1988 to 12 percent in March 1991. With the fiscal stance permitting net repayments by the Government to the banking system over the period, credit to the private sector expanded strongly, consistent with the promotion of growth through the private sector. The tighter financial policies were reflected in a switch from negative to positive real rates of interest.

Against this background, the annual average inflation rate, as measured by the composite consumer price index, declined from 31 percent in 1988 to 12 percent in 1990 (Table 9). More significant in relation to the poorest population groups, consumer prices as measured by the Blantyre and Lilongwe low-income indices declined over the same period from 33 percent to 10 percent, and 34 percent to 12 percent, respectively.

Details of the price outcomes according to the various commodity components of the composite consumer price index (CPI) are shown in Table 10. These data indicate that the price deceleration was considerably more pronounced in certain categories than in others; for food, which has a larger weight in the low-income indices, the rate of price increase declined a little faster than the overall average, dropping from 37 percent in April 1988 to 9 percent in April 1991.

Apart from the broader impact of financial policies on price performance as indicated above, the specific fiscal measures adopted appear to have had only a moderate direct effect in assisting the poorest segments of the population. Individual tax measures have had a modest direct impact on consumer prices, as the focus of tax changes has tended to be on imported or luxury goods not weighing significantly in the consumption of the poor. The effect of the increase in social expenditures on the poor seems to have been positive, but the extent of the impact is not certain. Fiscal and monetary policies have therefore had their favorable impact mainly through broader macroeconomic responses, reflected most notably in the pronounced slowdown in inflation.

3. Pricing policies

With important progress toward deregulation of prices already achieved before the ESAF program commenced, the program has focused on the periodic review and adjustment of prices of the few goods on which controls remain. Prices of the two main consumer items involved--petroleum and sugar--were kept unchanged during the first two years of the program. However, in keeping with their commitment to provide for an appropriate domestic pass-through of changes in world petroleum prices and to ensure that cost developments are adequately mirrored in domestic prices, the authorities increased the domestic price of petroleum by 5 percent in April 1990 and 12 percent in October 1990. The domestic price of sugar was increased by 7 percent in April 1990, and by a further 19 percent in January 1991,

Table 9. Malawi: Composite and Low-Income Consumer Price Indices, 1988-91

(Twelve-month changes in percent)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
Composite index													
1988	37.3	...	...	31.3	...	...	28.3	...	...	29.6	...	...	31.4
1989	26.2	...	...	17.8	...	...	12.9	...	...	7.9	...	...	15.7
1990	9.2	...	...	10.4	...	...	12.1	...	...	14.7	...	...	11.6
1991	12.0	...	...	10.8	...	...	...	...	...	...	...	...	...
Lilongwe low-income index													
1988	33.4	36.2	38.9	31.4	35.7	34.1	31.5	36.1	34.1	32.0	29.4	27.7	33.2
1989	24.0	24.1	20.8	20.7	16.9	15.3	12.4	11.3	11.7	8.3	8.2	10.3	15.0
1990	14.0	7.5	4.3	10.4	10.0	10.9	14.8	10.4	7.7	11.1	8.6	9.6	9.9
1991	8.3	8.9	5.5	...	...	...	...	...	...	...	...	...	...
Blantyre low-income index													
1988	45.0	46.3	39.6	42.1	38.4	29.5	33.4	32.1	28.2	28.0	26.2	26.4	33.9
1989	20.7	19.3	22.1	16.3	17.4	17.9	11.5	11.7	7.6	6.5	1.9	-1.0	12.3
1990	8.8	10.7	9.9	7.4	7.3	8.2	11.7	8.4	15.2	15.2	18.8	23.2	12.0
1991	9.5	6.6	3.6	...	...	...	...	...	...	...	...	...	...

Source: Data provided by the Malawian authorities.

Table 10. Malawi: Composite Retail Price Index by Commodity, 1988-91

(Twelve-month and annual changes in percent) 1/

	CPI	Food	Beverages and tobacco	Clothing and footwear	Housing	Household operations	Transportation	Miscellaneous
Weights in composite index (percent)	100.0	32.9	6.4	10.7	13.3	9.6	17.6	9.5
1988	31.4	32.9	32.0	35.2	34.6	22.3	30.3	27.5
January	37.3	45.8	26.6	26.9	30.8	32.8	41.1	29.1
April	31.3	36.9	34.6	34.9	35.2	23.2	22.6	29.9
July	28.3	27.4	35.4	40.3	31.7	17.8	26.3	25.4
October	29.6	24.7	30.6	37.6	40.0	17.6	33.9	25.9
1989	15.7	14.5	7.6	19.6	19.0	6.6	22.2	8.7
January	26.2	12.2	29.7	41.8	35.6	15.4	44.0	20.3
April	17.8	19.6	2.6	26.4	19.9	4.7	22.4	9.9
July	12.9	14.7	0.4	12.7	18.3	3.5	17.5	4.2
October	7.9	11.7	2.7	3.8	6.6	3.4	9.8	2.1
1990	11.6	18.0	11.1	8.2	8.1	16.8	6.3	4.5
January	9.2	23.3	4.2	1.9	5.1	14.0	-1.8	-0.5
April	10.4	13.1	10.9	7.4	9.1	17.1	7.5	5.0
July	12.1	18.1	15.2	9.3	10.1	18.7	4.5	6.4
October	14.7	18.1	14.2	14.4	8.0	17.5	15.2	7.2
1991								
January	12.0	9.8	15.1	11.1	12.6	3.7	18.2	12.0
April	10.8	8.9	8.7	7.0	21.5	3.3	12.6	11.9

Source: Data provided by the Malawian authorities.

1/ Annual averages are averages of quarterly figures.

reflecting their concern about the sustained increase in sugar prices in the southern African region, the high rate of domestic consumption, and the decline in Malawi's sugar export volume. The market for sugar in Malawi is characterized by distortions and periodic shortages. The artificially low domestic price of sugar generated not only supply shortages, but also informal trade with neighboring countries; the higher prices were therefore aimed at enhancing production incentives and export potential.

The impact of the increases in the prices of petroleum and sugar on poor households has been relatively small. With fuel and power combined accounting for 2-5 percent of the various low-income urban CPI baskets, the price increases in April and October 1990 for petroleum products has implied only a modest direct impact on the low-income CPI. For smallholders and estate workers, the effect most likely was even less. Similarly, with the weight of 4-5 percent for sugar in the urban low-income basket, the increases in the price of sugar in April 1990 and January 1991 have also had a relatively small effect.

The ESAF program has also focused on establishing appropriate producer prices to help ensure adequate financial incentives for agricultural development and diversification among smallholders. These producer prices, reviewed each year in consultation with the World Bank, are announced at the beginning of the crop year. These administered prices apply to purchases by the major agricultural parastatal--the Agricultural Development and Marketing Corporation (ADMARC)--from smallholders. The main commodities involved are maize, tobacco, groundnuts, and cotton. As noted earlier, maize is grown by almost all smallholders, mostly for their own consumption, accounting on average for about three fourths of their total cultivated area. Private sector traders are free to offer higher prices for maize, and ADMARC prices for this crop typically constitute a lower limit; private trading activity does not make up a particularly important share of total trade in the commodity, in part reflecting the general tendency of producers to prefer the convenience of ADMARC marketing outlets. The administered price of maize was almost doubled in 1988-89, and was increased by a further 40 percent in 1990, principally to help stimulate production after a period of adverse growing conditions, particularly drought. These increases in the administered price of maize, together with higher production, have clearly had a positive effect on the real earnings of net maize producers, but a negative effect on net maize consumers. On balance, the poorest sectors of the population who are more dependent on labor and food markets because of the low productivity on smaller plots are likely to have experienced a decline in real incomes, given the higher food prices that stemmed from producer price incentives.

To improve productivity in the smallholder sector and help overcome smallholders' limited access to credit, a smallholder fertilizer program has been in effect since 1983; it involves a subsidy on imported fertilizer, the high cost of which is due to the sharp rise in world fertilizer prices and the large transportation costs that stem from the use of longer-haul road routes. Most of the fertilizer used by smallholders is for maize. Against this background, the budgetary subvention for the fertilizer subsidy has risen in recent years, reaching MK 27 million, or 2 percent of total budget expenditures, in 1990/91 (equivalent to an economic subsidy level of about 30 percent).

Although fertilizer prices charged to smallholders have continued to rise in recent years despite this subsidy, the marked increase in producer prices over the period, particularly for maize, has helped restore the incentive to use fertilizer and thus sustain productivity. In the medium term, however, the Government is committed to removing the fertilizer subsidy, but in a phased manner to minimize distortions in production. This elimination of the subsidy is expected to be compensated in broad terms by lower transportation costs stemming from improvements in the traditional supply routes, expanded access to rural credits, and gains in productivity related to the adoption of high-yielding maize varieties. The program therefore links fertilizer pricing policy with the easing of structural impediments in the agricultural sector.

4. Wages

An important development affecting the poor in Malawi over the program period (and accommodated in the macroeconomic policy strategy) was related to the approximate doubling of minimum wages, effective May 1989. The most significant impact of these increases occurred in the tobacco and tea estates, where large numbers of low-paid seasonal workers are hired. The increase in minimum wages--after several years of no change--was an element of the Government's strategy directed specifically at improving conditions for the lowest-income groups. The increase in the minimum wage is reported to have had some adverse impact, although not clearly measurable, on the level of employment in the tobacco and tea estates, and hence some offsetting welfare implications.

As national accounts data in Malawi are not compiled from the income side, estimates of recent trends in nominal incomes by sector are not available. The extent to which the recent marked deceleration in inflation has benefited real incomes and purchasing power cannot therefore be determined from the national accounts. Data for average earnings in Malawi are available only after a considerable lag so that the trends in the program period are not yet known.

5. Interest and exchange rate policies

The program supported by the ESAF provided for greater flexibility in interest rates. Even though nominal interest rates still tend to change rather infrequently, real rates of interest have turned positive, reflecting the decline in the inflation rate. However, most smallholders do not have access to credit and are therefore not directly affected by changes in the cost of finance. This holds true as well for the other poor groups--estate workers and the urban poor. The broader macroeconomic response to tighter financial policies--particularly the slower pace of inflation--is therefore more significant than monetary policy as such, in terms of the impact on the poor.

As regards exchange rate policy, the Government has adopted a policy of nominal exchange rate stability for the Malawi kwacha in the context of nonaccommodating financial policies in an effort to bring down inflation. Discrete adjustments to the exchange rate have been made, most recently in March 1990, to strengthen external competitiveness. As with interest rates, the impact on the poor of exchange rate policy has been more closely related to the lower inflation associated with a stable exchange rate. This said, certain inputs--particularly fertilizer--rely heavily on imported supplies, where costs have been affected directly by exchange rate developments (see Section III.3 for details on the fertilizer subsidy policy).

6. Import liberalization

The import liberalization program, involving the removal of the system of prior approval of foreign exchange allocations for imports, was completed in January 1991. The program was carried out in stages, covering raw materials and intermediate goods at first and, in the final phases, consumer goods. The initial impact of liberalization on consumer prices came through the domestic supply response related to the increased availability of imported inputs. Later on, the liberalization with respect to consumer goods could be expected to generate greater import competition for such goods, thus depressing consumer prices.

An examination of the contribution of the different commodity groups to the overall deceleration in inflation shows that the deceleration has been particularly pronounced for commodities with a high import content in production (such as clothing and footwear, and transportation), whereas price increases for food--for which production is to a larger extent domestically based and which has a large weight in the consumption basket of the poor--have decelerated less. While import liberalization has led to an overall deceleration in prices, it may therefore have benefited the low income households less than others in the short run.

7. Estimates of real income developments for the poor

The discussion in the preceding sections shows that because of the limited data availability, only very rough estimates can be made of trends in real earnings for the poor in Malawi. This is so even if the focus is narrow, concentrating only on first-round price effects and disregarding any quantity effects. With these caveats in mind, some estimates have been made of developments in real-earnings for 1987-89 for the three poor groups identified in Section II (Table 11).

For poor smallholders, nominal earnings are assumed to have moved in line with a weighted average of ADMARC producer prices and the rural minimum wage (75 percent and 25 percent, respectively). The subindex for food in the overall CPI is taken to indicate trends in consumer prices, reflecting

Table 11. Malawi: Estimates of Real Earnings, 1987/88-1989/90

(Indices, 1986/87 = 100)

	1987/88	1988/89	1989/90
Poor smallholders			
Nominal wage 1/	102.9	117.7	158.8
Consumer prices 2/	127.5	162.3	187.5
Real wage	81.1	71.4	84.1
(Change in percent)	(-18.9)	(-11.9)	(17.8)
Poor estate workers			
Nominal wage 3/	100.0	131.5	226.0
Consumer prices 2/	127.5	162.3	187.5
Real wage	78.9	78.6	120.0
(Change in percent)	(-21.1)	(-0.3)	(52.6)
Urban poor--Lilongwe			
Nominal wage 4/	100.0	124.3	197.2
Consumer prices 5/	126.5	161.4	183.0
Real wage	79.6	75.1	107.0
(Change in percent)	(-20.4)	(-5.6)	(42.4)
Urban poor--Blantyre			
Nominal wage 4/	100.0	124.3	197.2
Consumer prices 6/	127.8	162.7	182.2
Real wage	78.8	74.6	107.4
(Change in percent)	(-21.2)	(-5.2)	(43.9)

Sources: Data provided by the Malawian authorities; and staff calculations.

1/ Weighted average of ADMARC producer prices (with 1988/89 ADMARC sales used as the weights) and income from off-farm activities. The latter is assumed to have moved in line with the rural minimum wage.
2/ Based on food in the overall CPI.
3/ Minimum wage, rural areas.
4/ Minimum wage, cities.
5/ Lilongwe low-income CPI.
6/ Blantyre low-income CPI.

the predominance of spending on food in total expenditures of the poor. 1/ Based on these income and consumer price assumptions, the real earnings of poor smallholders--the largest poor group--declined in 1987/88 and 1988/89 and increased in 1989/90. The calculations indicate an increase in real earnings from 1987/88 to 1989/90 of about 4 percent for poor smallholders. Considering that ADMARC prices--particularly for maize--have acted largely as floor prices in recent years, the real earnings of smallholders may have increased more over the period. However, to the extent that smallholder households produce less maize than they consume, the maize price increases would imply a real earnings decline for this group.

For poor estate workers, the nominal wage is assumed to have developed in line with the minimum wage for rural workers, whereas consumer prices are assumed to have moved in tandem with overall food prices, on the same reasoning that was used for smallholders. The calculations indicate a drop in the real wage for estate workers in 1987/88 and 1988/89, followed by a sharp increase in 1989/90, so that in 1989/90 the real wage was about 50 percent above the 1987/88 level. However, the calculations probably overstate the variations in the real wage, especially as estate workers are paid partly in kind, and these benefits may have been adjusted to offset movements in the formal minimum wage. To this extent, the real wage declines in 1987/88 and 1988/89 and the increase in 1989/90 might have been more moderate than suggested by the simple calculations. It should also be noted that employment was probably adversely affected to some extent by the overall rise in wages, although no quantification of this factor is available. Furthermore, while real wages may indeed have risen strongly over the program period, it should be remembered that the increase in the minimum wage was the first since 1986.

Real wage developments for the urban poor have been calculated on the assumption that the nominal wage has moved in line with the urban minimum wage in both Lilongwe and Blantyre. Consumer prices have been assumed to increase at the same rate as the respective low-income price indices. On these assumptions, the urban poor experienced sharp drops in the real wage in 1987/88 and 1988/89, which were more than compensated by a large increase in 1989/90, leaving the real wage in 1989/90 about 35 percent higher than in 1987/88. The caveats mentioned above with respect to the appropriateness of the minimum wage as an income indicator, and the adverse effect on employment of the wage increase, again need to be kept in mind. Note also that the urban poor who are engaged in informal sector activities and the urban poor who are unemployed are outside the formal protection of the minimum wage arrangements, and may have been adversely affected by the strong increase in maize prices; however, data are not available to assess the importance of this effect.

1/ The results are not significantly changed if the overall CPI for low-income groups is used.

While keeping in mind the limitations of the estimates presented, particularly as regards the narrow range of data on wages, some general conclusions may be drawn. First, each of the three poor groups experienced declines in their real wages in 1988/89, the first year of the ESAF program, mainly because of continued high consumer price inflation. In 1989/90, the success on the inflation front contributed to an increase in real wages. This increase, however, may have been much higher for the estate workers and the urban poor, who most likely were the main beneficiaries of the increase in minimum wages, than for the poor smallholders. The real earnings for poor smallholders--who constitute the majority of the poor--appear not to have risen, although to the extent to which actual prices received for their marketed output exceeded prices set by ADMARC, it is possible that their real earnings did develop more favorably.

IV. Conclusions

The purpose of this paper has been to investigate, through a case study on Malawi, the scope for assessing the impact of economic policies on the poorer sectors of the population. A simple methodology was applied that recognized both the limited availability of data and the staff constraints that Fund missions normally encounter. This approach was intended to provide a simple guide to the first-round (i.e., price) effects of programs supported by the Fund on real earnings among the poorer sectors of the population.

Even with this circumscribed approach, we found that the requisite data were scarce and, in key respects, relevant information was not available. The definition of the poor needed to be rather ad hoc, based on nutritional intake, based in turn (in the case of smallholders) on the size of the household plot. Moreover, we found that information on income and expenditure patterns has severe limitations, particularly for the rural poor. Specifically, official household surveys cover only the main cities (which is typical of developing countries), where only a few of the poor are located. The scattered information available could not be easily combined to establish patterns of income and expenditure, without recourse to rather crude assumptions. In the face of these problems, a very simplified numerical analysis was adopted. Notwithstanding the shortcomings with respect to data, the analysis indicated that a simple methodology can be usefully applied to gauge important short-run consequences of economic policies on poverty. This analysis can, in turn, be taken into account when formulating economic policies to mitigate adverse effects on the poorer groups.

With regard to the conclusions of the analysis, the study found that poverty in Malawi is a predominantly rural phenomenon, with smallholders constituting the majority of the poor. Poverty in the cities is much more limited. The elements of the ESAF program that have most clearly affected the real incomes of the poor relate to first-round price effects of agricultural pricing policies and the overall anti-inflationary measures; developments in minimum wages have also been important. Simple ad hoc calculations suggest that all poor groups experienced a decline in real wages in 1988/89, when the ESAF program began. In 1989/90, all poor groups appear to have improved their real income position, with the real wages of urban poor and estate workers, in particular, seeming to have increased strongly. More generally, it must be emphasized that Malawi's ESAF program did not incorporate measures directed specifically at the poverty groups, but focused instead on achieving improved standards of living through more broadly based macroeconomic stabilization and structural changes.

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