

**ECONOMIC REFORM IN AFRICA:
A FOUNDATION FOR POVERTY ALLEVIATION**

David E. Sahn
Paul A. Dorosh
Stephen D. Younger

Prepared for the Special Program of Assistance Donors Meeting,
September 1994. The research assistance of Lisa Gennetian, René Bernier and
Paul Higgins is greatly appreciated.

CONTENTS

LIST OF TABLES	v
LIST OF FIGURES	viii
1. INTRODUCTION	1
2. AFRICA'S POOR	6
3. TRADE AND EXCHANGE RATE POLICY REFORMS	19
Goals of Trade and Exchange Rate Policy Reform	19
Macro-Economic Impact of Policy Reform	21
Implications of Reform for Income Distribution	27
Other Factors Determining Export Response	40
Conclusions	41
4. FISCAL POLICY, ADJUSTMENT, AND POVERTY IN AFRICA	42
The Pattern of Government Expenditures in Africa	42
Total Expenditures	42
Social Services	49
The Incidence of Public Expenditures	51
The Incidence of Social Sector Spending	51
The Incidence of Public Employment	64
Public Sector Retrenchment Programs	65
Labor Market Experience and Welfare of Retrenched Public Workers	66
Implications for Employment Policy	73
The Incidence of General Public Expenditures	75
The Incidence of Taxes and Tax Reform	77
Summary	81

5.	AGRICULTURE AND FOOD MARKETS	83
	Discrimination and Reform	83
	Export Crop Liberalization	85
	Cash Crops, Nutrition and Gender	97
	The Role of the Public Sector in Export	
	Crop Marketing	99
	Domestic Food Crop Liberalization	99
	Improving the Performance of Agriculture	108
	Supply Response in Agriculture	109
	Land Reform	116
	Summary	117
6.	CONCLUSIONS, RECOMMENDATIONS AND POLICY IMPLICATIONS	118
	Recommendations	120
	Implications for Future Action	122
	Complementary Action	123
	Conclusions	124
	REFERENCES	125

LIST OF TABLES

1	—	Regional Distribution of Poor Households for Selected Countries	7
2	—	Incidence of Households which are Poor by Region in Selected African Countries	8
3	—	Share of Expenditures on Food Among the Rural Poor in Selected Countries	10
4	—	Agriculture Income Shares of Poor Rural Households Disaggregated into Tradeables and Non-tradeables in Selected Countries	11
5	—	Côte d'Ivoire: Sectoral Distribution of Employed Population by per Capita Expenditure Quintile of Household in Which They Reside, by Region	13
6	—	Ghana: Sectoral Distribution of Employed Population by per Capita Expenditure Quintile of Household in Which They Reside, by Region	14
7	—	Sectoral Distribution of Employment, by Gender and per Capita Expenditure in Selected African Capital Cities	16
8	—	Characteristics of Enterprises by Gender of Proprietor in Conakry	17
9	—	Trade and Exchange Rate Liberalization in sub-Saharan Africa	22
10	—	Estimated Economic Rents from Foreign Exchange Restrictions	31
11	—	Household per Capita Incomes and Population, CGE Models	33
12	—	Real Exchange Rate Adjustment in the CFA Zone: Niger Model Simulation (Percent Change vs. Base Run)	35
13	—	Trade Liberalization: Madagascar Simulation Results (Percent Change from Base Run)	36
14	—	Macroeconomic Outcomes under Alternative Trade and Exchange Rate Policies: CGE Model Simulations	38
15	—	Household Incomes under Alternative Trade and Exchange Rate Policies: CGE Model Simulations	39

16	—	Percent Change in Real Government Expenditures per Capita 1975-77 to 1986-88	46
17	—	Health Sector Expenditure in Africa	52
18	—	Côte d'Ivoire: Proportion of the Population Using Health Facilities in the Past Month, by Gender and per Capita Expenditure Quintile	53
19	—	Ghana: Proportion of the Population Using Health Facilities in the Past Month, by Gender and per Capita Expenditure Quintile	54
20	—	Proportion of the Population using Health Facilities in this Past Month, by Gender for Conakry and Maputo	56
21	—	Education Sector Expenditure in Africa	57
22	—	Ghana: Proportion of Eligible Persons Attending Public and Private School, by Gender, Rural and Urban, and per Capita Expenditure Quintile	58
23	—	Côte d'Ivoire: Proportion of Eligible Persons Attending Public and Private School, by Gender, Rural and Urban, and per Capita Expenditure Quintile	59
24	—	Conakry: Proportion of Eligible Persons Attending Public and Private School, by Gender and by per Capita Expenditure Quintile	60
25	—	Maputo: Proportion of Eligible Persons Attending All Schools, by Gender and by per Capita Expenditure Quintile	61
26	—	Spells Without Work for Redeployees in Ghana and Guinea	67
27	—	Labor Force Status of Retrenched Public Sector Workers	69
28	—	Change in Monthly Earnings for Working Redeployees in Ghana and Guinea	70
29	—	Distribution of Redeployees' Households in per Capita Income Quintiles for the General Population	72
30	—	General Equilibrium Impacts of a Reduction in Government Spending: Model Simulations	76
31	—	Measures of Tax Incidence in Ghana	79
32	—	Structural Features of CFNPP Study Countries, Early 1980s	84
33	—	Real Producer Prices of Major Export Crops (1980-82 Average = 100)	86

34	—	Madagascar Rice Subsidy, 1986/87	101
35	—	Food Production per Capita Index (1980-82 Average = 100)	110
36	—	Real Agricultural GDP per Capita Index (1987 Prices, 1980-82 Average = 100)	111
37	—	Share of Agriculture in Total GDP	112

LIST OF FIGURES

1	—	Ghana: Real Exports and Imports (Goods and Non-Factor Services)	25
2	—	Madagascar: Real Exports and Imports (Goods and Non-Factor Services)	26
3	—	Average Real Exports and Imports: CFNPP 10 Country Sample	28
4	—	CFNPP Case Study Countries: Average Real External Debt	29
5	—	Average Ratio of Government Deficit with Grants to GDP in Africa	43
6	—	Government Expenditure Net of Interest in Africa: 1975-1988	45
7	—	Social Spending per Capita in Africa	50
8	—	Ghana: Government Revenue and Expenditures, 1974-1990	78
9	—	Composition of Tax Revenue in Ghana	80
10	—	World Prices of Major Agricultural Export Crops (Index of FOB Prices in U.S. Dollars)	87
11	—	Real Coffee Prices in Madagascar, 1972-1991	89
12	—	Real Coffee Prices in Tanzania, 1977-1991	90
13	—	Real Tobacco Prices in Malawi, 1971-1991	92
14	—	Impact of Eliminating Export Tax on Smallholder Tobacco During the 1980s: Malawi Simulation Results	93
15	—	Real Cocoa Prices in Ghana, 1971-1991	95
16	—	Lorenz Curve for Taxes on Cocoa	96
17	—	Expenditure Shares by Source of Consumption for Staple Commodities in Maputo	103
18	—	Mean Household Uptake of Rationed Rice by Characteristics of the Household Head in Conakry, 1984	104

1. INTRODUCTION

Africa's economic performance during the past decade has been disappointing. So, too, the record on poverty alleviation has not been favorable. This raises the issue as to what should be done to accelerate growth and reduce poverty. Addressing this issue inevitably focuses attention on the role and appropriateness of structural adjustment programs that were adopted in most African countries during the past decade. More specifically, were such initiatives required in the past, and should they be continued in the future?

Consensus on this question ends with the fact that misguided economic policies, the worldwide economic recession, and the collapse of commercial lending to developing countries led to extraordinary balance of payments crises in many countries in sub-Saharan Africa in the early 1980s. The resolution of these crises, however, has been widely debated, with most of the debate focused on the appropriateness and macroeconomic efficiency of the orthodox policies that the International Monetary Fund (IMF) and the World Bank promote in developing countries. While the international financial institutions and donors argue that devaluation, fiscal balance, monetary restraint, and "getting the prices right" improve the current account, increase growth and employment, and reduce inflation, important critics (Stewart 1992; Taylor 1993) disagree with such assertions.

In the wake of the first set of "adjustment" programs in the 1980s, several influential works (Cornia, Jolly, and Stewart 1987; Taylor 1988; UNECA 1989) formulated a new criticism of orthodox policies: regardless of their macro impact, orthodox policies imply a disproportionate cost for the poor in adjusting economies. The purpose of this paper is to build upon the research on adjustment and poverty alleviation to help understand the impact of such initiatives to date, and how these policies can be improved in the future. In doing so, it is important at the outset to acknowledge that perhaps the most contested economic issue of the past few years in Africa has been the contribution of structural adjustment programs to economic growth, development, and poverty reduction. In addition, related considerations such as whether there is a gender bias in economic reform have received considerable attention.¹ This paper informs the issue of the welfare impact of adjustment in two ways. First, we discuss how various policy measures associated with adjustment programs affect economic performance, income distribution and poverty. Second, based on this information, we suggest ways in which the design of economic reform programs can be modified so as to accelerate poverty reduction.

¹ As Haddad, Richter, and Smith (1992) note, by virtue of the fact that societal norms define different roles for men and women, adjustment inevitably has a gender dimension. And like the more general issue of the effects on poverty, the criticism of how adjustment policies adversely affects women has often been harsh. (See, for example, Agarwal, et al. [1989]).

In addressing the role of adjustment in poverty alleviation, and more specifically, whether and how adjustment programs can be altered to raise living standards, we focus on the effects of particular policies, rather than on "structural adjustment" in a broad sense. The reason for this is that the term "structural adjustment" is at best vague, and at worst, confusing.² It embodies a wide range of policy changes, implemented in dramatically different contexts, in response to a variety of prior conditions. As a consequence, a broad range of policy changes, such as increasing agricultural producer prices designed to improve both economic efficiency and the welfare of the poor, and reducing government expenditures, typically associated with the need to stabilize countries with runaway inflation, are collectively referred to as "adjustment." Likewise, such policies are implemented in countries as diverse as Cameroon, Mozambique and Zaire. These differences contribute to the confusion over the effect of adjustment programs on poverty.

Rather than condoning or condemning "adjustment" in some broad and necessarily abstract sense, this paper evaluates the impact of specific policy changes in specific country circumstances. Then, by repeating the analysis in several different countries, we attempt to identify appropriate generalizations regarding the impact of specific changes in policy on growth and income distribution. As a final step, we consider what this implies for the design of adjustment programs.

In focusing on policies, we emphasize those that are most central to adjustment operations, particularly reforms of trade and exchange rate, fiscal and agricultural sector policies. Furthermore, we rely on a combination of aggregate times series data across a wide spectrum of countries (e.g., government expenditures), as well as in-depth analysis of the impact of policy change in individual countries. In relying heavily on case studies, and then synthesizing results across countries to arrive at general conclusions, it is recognized that experiences in specific countries may not be consistent with our general findings. Nonetheless, the distinctive and diverse nature of countries included in this research provides the basis for generalizations about the impact of policy changes as applied in differing circumstances (e.g., economic structure; circumstances that preceded adjustment). Thus, we concentrate on examining whether indeed specific types of policy reforms, applied in different contexts, further imperil the poor and vulnerable and why (or why not). We believe that this approach is the correct basis for arriving at recommendations for future efforts to promote economic reform and reduce poverty.

By framing our discussion around the impact of policy change, we acknowledge the importance of non-economic factors, such as drought, civil strife, resource constraints, socio-cultural context and population pressures, in determining income distribution and economic performance. In any given

² In this paper we generally make no distinction between "stabilization" and "structural adjustment." Thus, we make no effort to distinguish whether policies such as exchange rate devaluation and fiscal prudence are the domain of stabilization or structural adjustment.

context, any of these factors may be of equal, if not greater importance than economic policy, the primary domain of this report. Moreover, these non-economic considerations are also critical in determining the political and managerial constraints to the promotion of economic reform. Indeed, the barriers to implementing and sustaining economic reforms, such as the failure to "internalize" reform or embrace the need for policy change due to political economy factors, are of major concern. Numerous publications, including internal evaluations of the World Bank, point to the failings in this regard, and more particularly, the imperative of countries developing a sense of "ownership" over adjustment programs. We strongly share these sentiments, and recognize the failings of reform where adjustment policies are not internally motivated, but instead imposed in the formulation of loan conditions. Quite simply, as we will illustrate in the context of many country experiences, it is easy for governments and the international community to agree to conditions that will subsequently be circumvented or ignored during implementation. Thus, unless the "internalization" and "ownership" issues are addressed prior to, or concurrent with the provision of supposedly conditional balance of payments support, the chance of success, whether measured in terms of implementation or policy outcomes, are greatly reduced.

Thus, there are two equally important aspects of successful policy reform: arriving at the appropriate design to improve growth and reduce poverty; and developing the consensus and institutional capacity to ensure their implementation. While we concentrate on the effect of policy change, and thereby give less attention to the latter issue of the determinants of implementation or the political economy of decisionmaking, a more thorough examination of such issues in a complementary exercise is commended.³ Nonetheless, the insights presented in this paper on policy performance in various contexts will inform the process of policy formation, and are thus intended to identify and accelerate the types of reforms that will contribute to faster growth and improvements in living standards. To the extent that this paper changes perceptions as to the appropriateness and impact of policy change, and in particular elucidates winners and losers (including delineation by gender), it may alter the ideas in good currency about adjustment policies, and thereby influence the policy-making process.

Our approach to research on adjustment policies and poverty differs from previous work in two important ways. One, we attempt to provide a solid microeconomic basis for our macroeconomic conclusions and to establish a coherent analytical link between macroeconomic policies and microeconomic outcomes. This requires a heavy reliance on a variety of household and enterprise surveys to help us understand the complexities of how African economies and economic agents

³ For further discussion on the slow pace of policy change, the failure to sustain reforms, and the importance of ownership, see, for example, Gallagher (1991); World Bank (1993); Husain and Farugee (1993); and Mosely, Harrigan and Toye (1991).

operate.⁴ There is little solace to be found in the quantity or quality of survey data in Africa. Even when data exists, it is often not available, and when available, is not as current as would be preferred. Nonetheless, the available data did allow an extensive analysis of consumer, producer and market behavior. Furthermore, it enabled us to address a wide variety of issues such as the causes of market failures, the role of parallel markets as the source of consumer goods and the outlet for the commodities produced by farmers, as well as who receives rents by getting access to rationed goods and foreign exchange in official markets. These are among the types of details that, if not carefully understood, can lead to erroneous conclusions about the impact of adjustment policies.

Two, we concentrate on the economic consequences of adopting certain policies in comparison with the consequences of alternative policy measures. To accomplish this, we employ a variety of analytic tools that, while empirically based, allow us to explore alternative policy scenarios, including those policies that, in fact, were not pursued (the so-called "counter-factual" scenario). Clearly, such inquiry into the economic outcomes under different policies is at the heart of any credible policy analysis.

In that context, we are also careful to distinguish correlation of certain policies and economic outcomes from causation. A considerable amount of research on poverty in Africa has compared some base year (e.g., 1980) with a recent year, noted a decline in some indicator of living standards, and concluded that "adjustment" caused that decline. Another line of research proceeds in a similar fashion, but uses a base year "before adjustment" to compare with another year "after adjustment." A further set of documents compares adjusting countries' performance, using categories such as strong, weak and non-adjusting countries, or early-intensive adjusters as compared to late-weak adjusters, to arrive at conflicting views on adjustment.⁵ All of these approaches, in addition to concentrating on "adjustment" as an integral entity rather than individual policies that might or might not be part of an adjustment program, fail to account for the fact that many other shocks influence economic performance and

⁴ These data sources include surveys conducted during the course of our research (such as the integrated household surveys in Conakry, The Gambia, Maputo and Tanzania; the farm surveys in Ghana and Madagascar; the enterprise surveys in Tanzania and Conakry; the retrenchment surveys in Ghana and Guinea), as well as existing data bases which were made available to us (such as the Côte d'Ivoire Living Standards Survey, the Cameroon and Zaire Household Budget Surveys, the Ghana Living Standards Survey and the Malawi cash-cropping survey conducted by the Harvard Institute of International Development).

⁵ See Mosley and Weeks (1993) for a discussion of the fruitless nature of this comparative approach. The radically different assessments such as classification has generated is perhaps best exemplified by the contentious interchange between the World Bank and the United Nations Economic Commission for Africa. See World Bank and UNDP (1989) and UNECA (1989).

the severity of poverty. African governments did not decide to pursue adjustment programs on a whim. Most were forced to change economic policies by external shocks (often severe) and/or significant economic deterioration brought about by poor domestic policies. Thus, most African countries undertake adjustment policies at a time when living standards are declining, a fact that surely influences the often unfavorable "before and after" evaluations of adjustment. Our research avoids these errors by evaluating only policies actually changed, and by examining their impact exclusive of other shocks, positive or negative, in the economies we study. In a phrase, we concentrate on comparing economic outcomes "with or without" policy changes rather than "before and after" any point in time.

With these points in mind, the remainder of this paper is organized as follows. In the next section, we discuss the salient features of poverty in Africa, largely based on the analysis of household data. By briefly profiling the poor, we provide the context for understanding how various policy changes affect their well-being. Furthermore, characterizing the poor prior to discussing policy is in keeping with the microeconomic, "bottom-up" approach to our research: our point of departure is the need to understand how the poor earn their income, gain access to food, and allocate their expenditures.

In Section 3, we then turn to a discussion of the effect of trade and exchange rate reform on household welfare. Appropriate empirically-based models are used to capture the vast array of complexities that arise from such reforms. These range from the fact that households engage in substitution in both how they earn and spend income, to the changes that occur in product markets and factor utilization, to the diminution in the size and distribution of rents that were characteristic of most pre-reform regimes that engaged in foreign exchange rationing.

The effect of economic reforms on the state's role in collecting revenues and providing economic and social services and employment, will be the subject of Section 4. While the need to address fiscal imbalances is clear, the question arises as to whether prudent fiscal policy is a threat to the poor. In particular, what we will focus on is the degree to which changes in patterns of taxation and expenditures jeopardize vulnerable groups in society.

Section 5 concerns reforms in agricultural, and input and product markets. Sectoral reforms in agriculture, and in particular those that alter incentive structures and realign prices, are key components of many adjustment programs. How such market liberalization affects the poor as mediated by the prices paid by consumers and received by producers of both domestic food products and export crops will therefore be examined. The income distribution effects of such changes will also be discussed.

Finally, the discussion in Section 6 will draw upon the body of knowledge on the impact of economic reforms on poverty to discuss whether and how adjustment lending operations can be modified or reoriented to achieve higher incomes of the poor. In this context, future research needs are also identified, given the underlying imperative of accelerating economic growth to alleviate poverty.

2. AFRICA'S POOR

Any examination of the role of adjustment programs in promoting poverty reduction should begin with understanding the characteristics and behavior of the poor. Such knowledge will provide the basis for constructing appropriate models to explore the differential effects of policy, as well as providing the intuition for understanding the mechanisms through which low income households are affected by reform.

Prior to presenting the most salient features of poverty in Africa, a few comments on the definition of "the poor" are warranted. First, our domain of concern about the impact of adjustment is households at the lower end of the income distribution within a country, making them poor in a relative sense, and without doubt in the African context in an absolute sense as well. More precisely, we employ different measures of poverty at different times, according to the dictates of the particular question at hand and also the availability of data. These measures include relative indicators of poverty such as a cut-off point in the income or expenditure distribution (e.g., households in the lowest 30 percent of the per capita expenditure distribution) as well as functional classifications of income distribution (e.g., small agricultural producers in the savannah). The latter is particularly useful when constructing general equilibrium models that trace through various changes in relative prices to household welfare.

Perhaps the most striking feature of Africa's poor is that they are predominantly rural. This is illustrated in Table 1, which shows the distribution of the poor between the capital city, small cities, and rural areas, where the poor are defined in terms of being in the bottom end of the per capita expenditure distribution. In all cases, the vast preponderance of the poor are in rural areas. This situation is a consequence of two factors: the fact that the share of the population in urban areas remains relatively low, and that the incidence of poverty is often considerably higher in rural than in urban areas. This latter point is portrayed in Table 2, which shows, for example, that the incidence of poverty in Abidjan is only six percent, rising to 44 percent in rural areas of Côte d'Ivoire. In Ghana, the poverty incidence increases elevenfold between Accra and the countryside.⁶

There is little doubt that the rapid rates of rural to urban migration will alter this poverty profile in the years ahead. Our concern about the impact of adjustment on poverty, however, still remains mostly a story about what happens

⁶ While these data are accurate comparisons of the poverty incidence across regions within a country, it would not be valid to compare the poverty incidence across countries. Across country poverty comparisons require data that were not available.

Table 1 — Regional Distribution of Poor Households for Selected Countries

	Share of the National Poverty		
	Urban/Large	Urban/Small	Rural
	(Percent)		
Cameroon ^a	12.5	0.0	87.5
Côte d'Ivoire ^b	3.5	10.8	85.7
Ghana ^c	0.9	19.8	79.3
Lesotho ^d	7.5	2.5	90.0
Madagascar ^e	7.3	4.4	88.2
Malawi ^f	2.0	0.0	98.0
Tanzania ^g	2.9	7.3	89.8
Uganda ^h	8.0 ¹	—	92.0

¹ All urban is included under Urban/Large, as no breakdown between large and small cities is available

- Sources:**
- ^a Lynch (1991)
 - ^b Côte d'Ivoire Living Standards Survey data tapes (1985)
 - ^c Ghana Living Standards Survey data tapes (1987)
 - ^d World Bank (1994)
 - ^e Dorosh et al (1990)
 - ^f World Bank (1990)
 - ^g Tinios et al (1994)
 - ^h World Bank (1993)

Table 2 — Incidence of Households which are Poor by Region in Selected African Countries

Country	Percent of Households that are Poor by Region		
	Urban/Large	Urban/Small	Rural
	(Percent)		
Cameroon ^a	1.5	29.5	48.7
Côte d'Ivoire ^b	5.6	14.5	43.7
Ghana ^c	4.0	14.5	43.7
Lesotho ^d	28.1	26.8	54.0
Madagascar ^e	18.0	26.0	37.0
Malawi ^f	10.0	—	63.0
Tanzania ^g	26.5	34.6	59.3
Uganda ^h	38.0 ¹	—	57.0
Zaire ⁱ	32.1	—	75.6

¹ All urban is included under Urban/Large, as no breakdown of large and small cities is available.

Sources:

- ^a Lynch (1991)
- ^b Côte d'Ivoire Living Standards Survey data tapes (1985)
- ^c Ghana Living Standards Survey data tapes (1987)
- ^d World Bank (1994)
- ^e Dorosh et al (1990)
- ^f World Bank (1990)
- ^g Tinios et al (1994)
- ^h World Bank (1993)
- ⁱ Tabatabai (1993)

to rural smallholders and rural self-employed outside of agriculture, the latter group whose welfare is linked closely with the performance of, and incentive structure, in agriculture. This is not to say that urban areas are not worth worrying about. In fact, political economy factors would dictate that governments and donors cannot ignore a decline in urban income as a result of reforms. This is true even if the needs of the urban population, relative to the vast majority of the rural dwellers, are small.

Returning to the rural poor, there are a few particularly important characteristics that determine how policies associated with adjustment programs will affect their welfare. First is that the predominance of rural incomes among the poor, particularly rural incomes among female-headed households, still come directly from agriculture. Besides agricultural earnings, income from wages and self-employment are also of considerable importance and are becoming more so as liberalization increases commercialization and population pressures mount. Of particular importance is the involvement of the rural poor in agro-processing and marketing of agricultural products, especially for women. So while we will discuss below the relatively more important role for microenterprises in urban areas, the fact remains that in absolute terms, microenterprise employment is still greater in rural than urban areas, and this source of employment is particularly important for women and disadvantaged groups. Furthermore, indications are that in countries such as Tanzania, where formal wage employment opportunities are scarce and official regulations that govern activities such as marketing and transforming agricultural products are being relaxed, there has been considerable growth of the microenterprise sector (Bagachwa, forthcoming).

The second major characteristic of the rural poor is that they remain heavily engaged in subsistence agriculture. Table 3 shows the share of food consumption, which comprises on average around two-thirds of total expenditures, that is in the form of consumption of own-produced products. These figures imply that many of the poor are insulated to a large extent from the market in their role as consumers. The potential deleterious consequences of fluctuations, as well as secular changes in real consumer prices, are thus mitigated for this group.

Despite this high degree of self-sufficiency, the poor are active participants in markets as sellers of their labor, but even more important, as agricultural producers. Results of household surveys indicate that not only do the poor sell agricultural output, but that tradable products, both export crops and food crops, comprise a significant share of marketings (Table 4). In some cases the poor are net purchasers of food grains, although in many instances, even the poor sell more than they purchase. The implication is that increases in the price of export crops will usually raise incomes of the rural poor, and this is the case in many instances for food crops as well. Even where the poor are net purchasers of certain agricultural products, increased demand for off-farm labor and higher wages that generally follow improved producer incentives will often contribute to higher overall incomes for the rural poor. The supply of labor, however, may be predominately male as females take on the responsibility for household food production. We will be discussing this issue in some detail in the section on reforms in agriculture and food markets.

Table 3 — Share of Expenditures on Food Among the Rural Poor in Selected Countries

Country/Region	Food Share		of which:	
		Percentage of Food Home Produced	Percentage of Food Purchased	
Côte d'Ivoire				
Forest	0.65	60		40
Savannah	0.70	63		37
Ghana				
Forest	0.72	51		49
Savannah	0.73	70		30
Madagascar				
Coast	0.59	86		14
Plateau	0.65	86		14
South	0.62	87		13
Malawi				
South	0.62	61		39
Gambia				
Regional	0.63	31		69
Tanzania				
All	0.71	51		49

Source: Dorosh and Sahn (1993)

Table 4 — Agriculture Income Shares of Poor Rural Households Disaggregated into Tradeables and Non-tradeables in Selected Countries

Country/Region	Share of Agricultural Income			
	Non-traded Food	Traded Food	Export Crops	Total
	(Percent)			
Ghana				
Forest	70	18	12	100
Savannah	73	26	1	100
Tanzania				
All	61	35	4	100
Côte d'Ivoire				
Forest	41	14	45	100
Savannah	46	32	45	100
Malawi				
South	24	53	23	100
Madagascar				
Coast	46	23	31	100
Plateau	69	30	1	100
South	58	36	6	100

Source: Dorosh and Sahn (1993)

While many of the rural poor are engaged actively as producers and sellers of agricultural products, they also tend not to be users of improved technology, and use little if any modern inputs. This is especially true for poor women farmers. The implication is that subsidies on inputs such as fertilizer are distributionally skewed to the non-poor (see, for example, Sahn, Arulpragasam, and Merid 1990; Lele 1992; Blandford, et al. 1993), though we have noted exceptions such as the fertilizer subsidy in Ghana, where the distribution of the benefits from the subsidy was relatively evenly distributed among farmers (Jebuni and Seini 1992).

The rural poor, in addition to having limited access to agricultural inputs, particularly when prices are subsidized and rationed, also fail to gain access to other products that are characterized by dual price regimes. This is especially true in the case of food subsidies, as will be discussed in greater detail among the countries in Section 5 on agriculture and food markets. Even worse, there were costs to the rural poor of the cheap food policies pursued to the benefit of urban households. Simply, farmers were characteristically taxed so that urban consumers could get access to low cost foodstuffs.

The final two points to be made about the rural poor is that they are predominantly self-employed and, as such, do not rely in any meaningful way on public sector employment. This is shown in Tables 5 and 6 for Côte d'Ivoire and Ghana, where, disaggregated by per capita expenditure quintile, we present the share of persons engaged as public sector workers, private wage employees, and the self-employed. The results indicate that the vast preponderance of workers are self-employed, reflecting the dominance of own account agriculture, and to a lesser extent, small and microenterprises in the service sector and manufacturing. Public sector employment is virtually non-existent among the rural poor and is negligible among workers from better-off rural households, especially women.

Furthermore, the poor have only limited access to subsidized social services, including public health and education services. The limited access to health care services and public education reflects the fact that the state historically failed to give priority to the types of primary health and education activities that are most meaningful for the poor, male and female alike. Instead, resources were misallocated to curative care, hospital construction and higher education, as discussed further in Section 4. This, coupled with poor management, lack of physical infrastructure, and shortage of key commodities that rely on scarce foreign exchange, has impeded the development of efficient social services in rural Africa.

Turning next to the urban poor, we find that even though poverty is less severe than in rural areas, it nonetheless is a burgeoning problem, especially as the urban centers swell. Urban poor are also more vulnerable to external and policy shocks. The cushioning effects of consumption from own agricultural production are much less, just as reliance on markets for consumption is greater. Likewise, although not universally true, in some pre-adjusting economies (e.g.,

Table 6 —Ghana: Sectoral Distribution of Employed Population by per Capita Expenditure Quintile of Household in Which They Reside, by Region

Region/Sector	Per Capita Expenditure Quintile ¹					All
	1	2	3	4	5	
	(Percent)					
Rural						
Self-Employment	95.9	92.0	91.1	85.6	80.7	91.4
Private Wage	1.9	2.6	4.6	4.5	8.0	3.5
Public Wage	2.2	4.5	4.2	9.9	11.3	5.1
Accra						
Self-Employment	57.1	58.8	45.5	55.7	42.9	48.9
Private Wage	42.9	17.7	25.5	23.7	32.1	27.5
Public Wage	0.0	23.5	29.1	20.6	25.0	23.6
Other Cities						
Self-Employment	81.9	76.6	74.1	62.8	56.1	69.8
Private Wage	9.6	9.5	12.6	14.8	19.1	13.3
Public Wage	8.5	13.9	13.3	22.4	24.8	16.9
All						
Self-Employment	93.7	88.5	84.1	75.0	62.2	82.9
Private Wage	3.2	4.5	7.9	10.1	18.2	7.7
Public Wage	3.1	7.0	8.0	15.0	19.6	9.4

¹ Quintiles based on expenditure distribution for the national sample

Source: Calculated from Ghana Living Standards Survey data tapes (1987)

Madagascar) the urban poor, unlike the rural poor, did get access to food subsidies. To the extent that reforms eliminated poorly targeted entitlements without installing new initiatives with improved targeting, the urban poor stood to lose. However, for the most part, the poor in the cities were reliant on parallel market prices so that any change in official prices, including elimination of implicit subsidies, did not harm them. The poor's inability to extract rents in the form of access to official food prices was also characteristic of their not enjoying the rents from foreign exchange rationing, subsidized credit, and other such distortions that exist prior to reform.

Regarding employment, urban workers were more likely to be engaged in public sector enterprises or as civil service workers than the rural household. This is shown in Tables 5 and 6. Twenty percent of the workers in Abidjan are on the public sector payroll, while 24 percent of the labor force in Accra are engaged in the public sector. Relative to rural areas, other cities also have a large share of public sector workers, but still the share is around one-third less than in the capital city in both Abidjan and Accra.

Disaggregating by gender shows another interesting aspect to the urban story. In particular, there is a large concentration of women among the self-employed in the cities (Table 7). More specifically, in Maputo and Conakry, approximately 80 percent of women workers are self-employed, in contrast to men — where in the case of Maputo, it is 27 percent, and 35 percent in Conakry. A similar story is found for Abidjan and Accra.

Interestingly, when we disaggregate sectoral employment in the capital cities, based on the expenditure distribution within the cities, we find that there are again some important gender distinctions in terms of sector of employment (Table 7).⁷ The basic message that emerges is that male public sector workers are distributed relatively evenly across the urban-only expenditure quintiles in Maputo, Conakry and Accra, although less so in Abidjan. In contrast, female public sector workers are concentrated in the upper end of the expenditure distribution. At the same time, the vast majority of women engaged in self-employment are among the relative poor in the capitals, again a pattern that does not apply to self-employed men who are distributed relatively evenly across the expenditure categories. It should be pointed out that this latter finding reflects that female-headed enterprises tend to be heavily concentrated in retail commerce, with lower use of capital inputs and credit, and lower gross and net revenues, as illustrated in Table 8 for Conakry (Mills and Sahn 1993). Again, this pattern has been observed in a range of environments, including Dar es Salaam, where the current asset value of female-headed enterprises was Tsh 208,000, versus Tsh 730,700 for male-headed enterprises in 1991; and where the male-headed firms are nearly four times more profitable than female-headed firms (Bagachwa, Sarriis, and Tinios 1993).

⁷ In the previous tables, we compare sector of employment in different regions using the national expenditure quintiles. In the case of Table 7, the expenditure distribution is specific to the capital city. This allows us to look at relative welfare within the major urban areas.

Table 7 — Sectoral Distribution of Employment, by Gender and per Capita Expenditure in Selected African Capital Cities

Capital City	Men						Women					
	Per Capita Expenditure Quintile						Per Capita Expenditure Quintile					
	1	2	3	4	5	All	1	2	3	4	5	All
Abidjan												
Self-Employed	27.3	22.2	12.5	23.0	25.2	21.8	80.3	77.3	55.0	43.8	23.1	62.0
Private Wage	68.2	62.5	59.4	54.0	39.5	57.6	7.6	11.4	27.5	25.0	38.5	18.8
Public Wage	4.6	15.3	28.1	23.0	35.9	20.6	12.1	11.4	17.5	31.3	38.5	19.2
Accra												
Self-Employed	22.8	26.9	41.2	23.3	23.3	27.9	81.8	82.6	84.2	57.1	63.6	76.4
Private Wage	38.6	50.0	25.5	44.2	48.8	41.2	4.6	6.5	10.5	21.4	9.1	9.6
Public Wage	38.6	23.1	33.3	32.5	27.9	30.9	13.6	10.9	5.3	21.4	27.3	14.0
Maputo												
Self-Employed	27.3	26.5	21.7	30.0	31.9	27.4	84.2	86.3	86.7	72.3	59.3	79.0
Private Wage	34.6	33.9	37.4	30.3	31.6	33.6	10.6	7.7	6.8	11.6	13.0	9.8
Public Wage	38.1	39.6	40.9	39.7	36.5	40.0	5.2	6.0	6.5	16.1	27.7	11.2
Conakry												
Self-Employed	36.7	37.9	35.7	34.4	30.2	35.0	91.0	88.6	78.5	63.6	45.7	78.0
Private Wage	37.3	33.5	36.7	33.8	32.8	35.0	4.2	3.2	8.7	8.6	18.1	7.0
Public Wage	26.0	28.6	27.6	31.8	37.0	30.0	4.8	8.2	27.8	27.8	36.2	15.0

Note: Expenditure quintiles are based on urban only income distributions.

Sources: Accra: Calculated from Ghana Living Standards Survey data tapes (1987)
 Abidjan: Calculated from Côte d'Ivoire Living Standards Survey data tapes (1985)
 Maputo: Sahn and del Nimro (1994)
 Conakry: Glick and Sahn (1993)

Table 8 — Characteristics of Enterprises by Gender of Proprietor in Conakry

	Men	Women
Enterprise Type		
Retail Commerce (%)	45.8	92.5
Small Industry (%)	19.0	3.2
Construction & Utilities (%)	1.7	13.7
Other(%)	2.6	21.5
All (%)	100.0	100.0
Finances		
Revenue (Gf)	644,354	183,521
Expenses (Gf)	368,611	108,662
Capital (Gf)	46,751	4,638
Materials (Gf)	293,772	96,835
Other (Gf)	28,088	7,189
Net Revenue (Gf)	275,743	74,859

Source: Mills and Sahn (1993)

In combination, we find that one of the key elements to the well-being of the poor is reform which fosters an environment where commerce and microenterprises in both rural and urban areas are able to flourish. Conversely, the poor are unlikely to lose significantly from public or formal wage sector layoffs. This is particularly true for women living in poor households since they are virtually always engaged as self-employed workers. However, this is not to say that those who are redeployed do not become a new class of poor, an issue we will be discussing in Section 4 of this paper.

While these generalizations are useful in gaining some insight into the poor's role in the economy as producers, consumers and beneficiaries of government spending, the fact remains that the poor are a large and diverse group in Africa. There also is the need to explore in greater detail the impact of specific policies on the poor, moving beyond the empirically based, albeit stylized, facts presented above. It is to the specifics of policy change and the implications for growth and income distribution that we now turn.

3. TRADE AND EXCHANGE RATE POLICY REFORMS

Trade and exchange rate policy reforms are probably the most controversial aspect of structural adjustment programs in sub-Saharan Africa. In part, the controversy arises because these policy reforms have large effects on the economy and, in particular, on income distribution. Moreover, for many government decision-makers, the debate regarding the appropriate long term development strategy—import substitution versus outward-oriented trade policy—remains unsettled. But perhaps the most important reason why trade and exchange rate policy reforms arouse such heated debate is that these policy changes often appear to be imposed from outside, as conditions for needed foreign financing by the World Bank, the International Monetary Fund or other donors.

This section analyzes the impacts of trade and exchange rate policy reforms on economic performance and income distribution. The starting point for the analysis is a discussion of the major goals of trade and exchange rate policy reform in sub-Saharan Africa. The effectiveness of policy reforms in terms of major macro-economic objectives, real exchange rate depreciation and levels of exports, is then explored.

Given the brief overview of the macro-economic impacts of trade and exchange rate policy reform, the main part of this section of the paper is devoted to an analysis of the impacts of trade and exchange policy reform on household income distribution using estimates of economic rents associated with restrictions on foreign exchange and a set of counterfactual simulations using Computable General Equilibrium (CGE) models. Here it is argued that policy reforms leading to real exchange rate depreciation tend to have positive impacts on real incomes of the poor, especially the rural poor. A brief summary concludes this section.

GOALS OF TRADE AND EXCHANGE RATE POLICY REFORM

During the 1970s and early 1980s, most countries in sub-Saharan Africa adopted inward-oriented development strategies, attempting to encourage industrialization through import substitution. Import tariffs protected domestic industry from foreign competitors and agricultural exports were often heavily taxed. Nominal exchange rates typically were fixed relative to a major international currency (e.g. the U.S. dollar or French franc) for long periods of time. For many countries outside the CFA franc zone, government budget deficits led to increased domestic money supplies and general inflation.

Prices of tradable goods (especially export goods) tended not to rise along with the general price level, however, since the border price, evaluated using the official exchange rate, remained tied to world prices. Thus, the relative

price of non-tradable goods to tradable goods rose, i.e. the real exchange rate appreciated. With declining real prices of export goods reducing export incentives, foreign exchange earnings were diminished. At the same time, demand for imported goods in official markets, priced using the official exchange rate, increased. This imbalance between foreign exchange supply from export earnings and foreign exchange demand for imports was often resolved through rationing of foreign exchange, stricter import licensing requirements and higher import tariffs.⁸

The commodity boom of the late 1970s raised world prices of coffee, cocoa and other export commodities and mitigated the adverse effects of the real exchange rate appreciation for many sub-Saharan African countries. The subsequent fall of agricultural commodity prices in the early 1980s, together with a rise in oil prices and tighter world credit markets, aggravated the adverse effects of real exchange rate appreciation on the trade balance, however, and were major factors in balance of payments crises in most countries of sub-Saharan Africa outside the CFA zone.

Trade liberalization (including lowering of import tariffs and export taxes, and elimination of import quotas) and exchange rate reforms (devaluation and no rationing of foreign exchange) were advocated by the World Bank and others as necessary to promote growth and solve the balance of payments crisis (World Bank 1981).⁹ By improving producer incentives for tradables (both exports and competitive import-substitutes), it was expected that domestic factor resources (land, labor and capital) would be increasingly allocated to these sectors, enabling a growth in exports and real incomes.

Thus the major goals of trade and exchange rate policy reform are macroeconomic in nature: to increase economic openness and in so doing promote domestic production of tradables and economic growth. Apart from short-term efforts at stabilization aimed at easing balance of payments crises in the initial stages of policy reform, the aim of trade and exchange rate policy reform was not to reduce unsustainable current account deficits in the short to medium run. In fact, reform was often accompanied by increased foreign capital inflows, mainly through official grants and loans, implying a widening of the current account deficit, as discussed below.¹⁰

⁸ Collier (1991) points out that African countries avoided trade retaliation from developing countries in spite of the trade restrictions imposed, in part because of their use of foreign exchange rationing to control imports rather than tariffs which are easily quantifiable.

⁹ The 1981 report, *Accelerated Development in Sub-Saharan Africa*, often referred to as the Berg report, after its major author, generated considerable debate especially in regard to its call for large exchange rate devaluations. See Edwards (1993) for a summary of the debate and Wilson (1993) for a discussion of French support and recommendations for adjustment policies.

¹⁰ Note that the African experience contrasts sharply with that of most Latin American countries, where in fact reductions in the current account deficit were a major goal of trade and exchange rate policy reform.

Despite the fact that the objectives of trade and exchange rate policy reforms are primarily macroeconomic in nature, these policy reforms had large impacts on income distribution in countries that effectively implemented them. Before evaluating these policy reforms in terms of their consequences on household incomes, though, it is important first to examine to what extent these policies achieved their macro-economic objectives.

MACRO-ECONOMIC IMPACT OF POLICY REFORMS

The evidence from the eight non-CFA zone countries of the Cornell sample suggests that trade and exchange rate policy reforms have enjoyed limited success. Although for one country (Ghana), these reforms were associated with significant improvements in the macroeconomy, the performance of other reforming economies has been somewhat disappointing.

Two measures are used to evaluate the impact of trade and exchange rate policy reforms in the eight non-CFA zone countries during the 1980s. The extent of real exchange rate depreciation achieved as measured by the official nominal exchange rate deflated by changes in the domestic price level shows the degree to which changes in trade and exchange rate policy actually changed relative prices in the economy, at least in the official market for foreign exchange. Real exchange rate depreciation is only an intermediate measure of the effectiveness of policy reform, however. The second measure used, the change in real exports, gives an indication of whether the ultimate macro-economic goals of the reforms are achieved.

Table 9 summarizes episodes of trade and exchange rate policy reform in eight non-CFA zone countries during the 1980s. The periods of reform are defined by a sharp change in nominal exchange rates (exchange rate devaluations) over a period of one (e.g. in The Gambia, Guinea, Malawi and Zaire) to five (e.g. in Ghana) years. Note that trade and exchange rate reforms which were not fully implemented also took place in other years in many of these countries. For the eight countries, nominal exchange rate depreciations, measured by the change in the official exchange rate between the year immediately prior to the reform and the year immediately after the reform, averaged 1441 percent. For three countries, Ghana, Guinea and Mozambique, nominal depreciations exceeded 1000 percent.

Domestic inflation during these periods of adjustment was high, so that the change in nominal exchange rates did not lead to a correspondingly large real exchange rate depreciation. The domestic price of non-tradables (as proxied by the consumer price index),¹¹ rose along with the price of tradables (as reflected in the change in the nominal exchange rate). Econometric evidence from Ghana (Younger 1992) suggests that exchange rate devaluation did not cause much domestic inflation. Based on time series data, Younger finds that domestic prices increase only 5 to 10 percent in response to a 100 percent devaluation of

¹¹ Although the consumer price index contains tradeable goods, the relatively high weight of non-tradeable goods and the inclusion of marketing margins makes it a useful proxy for the price of non-tradeables.

Table 9 — Trade and Exchange Rate Liberalization in sub-Saharan Africa

Countries	Year of Liberalization	Nominal Depreciation^a	Real Depreciation^a	Change in Real Exports
		(Percent)		(Percent per Year)
Gambia	1986	82	-4	17.7
Ghana	1983-87	7258	749	6.7
Guinea	1986	1661	21	14.3
Madagascar	1987-88	137	57	-2.7
Malawi	1988	25	-18	-0.7
Mozambique	1987-88	1743	250	9.3
Tanzania	1987-88	338	111	6.7
Zaire	1984	287	88	9.9
Average		1441	157	8.3

^a Percentage change between the year immediately prior to liberalization and the year immediately after liberalization.

Source: World Bank (1993), Africa Development Indicators and authors' calculations

the official exchange rate. In a similar model, Zinnes (1993) finds a 25 to 30 percent increase in prices following a 100 percent devaluation in Zambia. In each country, government budget deficits financed by domestic money creation were responsible for most of the rapid increase in domestic prices.

In spite of domestic inflation, however, real exchange rate depreciation in excess of 20 percent was achieved in all six of the countries with nominal exchange rate depreciations of more than 100 percent.¹² For the eight country sample, real exchange rate depreciation averaged 157 percent, indicating a substantial change in the real price of foreign exchange in the official market.

Econometric evidence from a sample of sub-Saharan African country data from 1972 to 1987 suggests that over the period a one percent misalignment of the real exchange rate (defined as the difference between the actual real exchange rate and an estimated equilibrium real exchange rate) was associated with a .025 percent reduction in real GDP growth and a 0.096 to 0.112 percent reduction in real exports as a share of GDP (Ghura and Grennes 1993). Similarly, Balassa (1990) showed a negative correlation between real exchange rate appreciation and exports in sub-Saharan Africa. Numerous other studies using samples of developing countries outside of Africa have also shown negative relationships between real exchange rate appreciation and both real exports and growth.¹³

For the six countries in the sample shown in Table 9 that achieved real exchange rate depreciation,¹⁴ the average gain in real exports of goods and non-factor services¹⁵ was 8.3 percent per year. Of course, such a comparison of "before" and "after" misses important factors influencing the real exchange rate and real exports (such as terms of trade, trade taxes and climatic conditions) which also changed during the reform periods. The changes in exports only describe historical changes, but do not necessarily show causality. Indeed, the largest gain in real exports was achieved by The Gambia (42 percent between 1985 and 1987) in spite of a real exchange rate appreciation (reflecting inadequate

¹² The real exchange rate is calculated here as the official nominal exchange rate multiplied by the dollar-denominated import price index for developing countries (IMF, various years), and divided by the domestic consumer price index.

¹³ See Dollar (1992), Edwards (1988) and Frenkel and Khan (1990). Comparing average performance for various groups of African countries, Moseley and Weeks (1993) also find that real exchange rate depreciation was associated with higher investment, export growth and real GDP growth from 1980 to 1990.

¹⁴ In addition to Ghana, the five countries for which the real exchange rate in the year immediately after the reforms had depreciated relative to its value in the year just prior to the reforms are Guinea (comparing 1985 to 1987), Madagascar, Mozambique and Tanzania (all comparing 1986 to 1989), and Zaire (1983 to 1985).

¹⁵ Dollar exports of goods and non-factor services deflated by the IMF import price index for developing countries (IMF, various years).

implementation of reforms), mainly because of higher world groundnut prices in this period.¹⁶

Closer examination of two contrasting case histories, those of Ghana and Madagascar, sheds light on the variation of country experience. In Ghana, the reforms were implemented over a period of five years (1983 to 1987). As shown in Figure 1, Ghana's real exports fell sharply from 1977 to 1983, particularly after world cocoa prices fell in 1981. Trade and exchange rate policy reform took place over several years, between 1983 and 1987, during which time the nominal exchange rate (cedi/dollar) was devalued by 7258 percent, from 2.75 cedis/dollar in 1982 to 154 cedis/dollar in 1987. Real exports reached their nadir in 1983, the year the reforms began, before recovering to their 1982 level in 1985.

Comparing the year prior to reforms (1982) with the year after reforms (1988), real exports increased by 48 percent, an average of 6.7 percent per year over the period. By 1988, real exports were 34 percent higher than in 1982. Although the value of cocoa exports declined after 1987 due to a decline in world prices,¹⁷ other exports increased to allow total exports to remain constant. Non-cocoa exports increased by 221 million (1980) dollars between 1987 and 1990. Gold exports accounted for 28 percent of the increase (61 million [1980] dollars), with the remainder coming from other diverse exports.

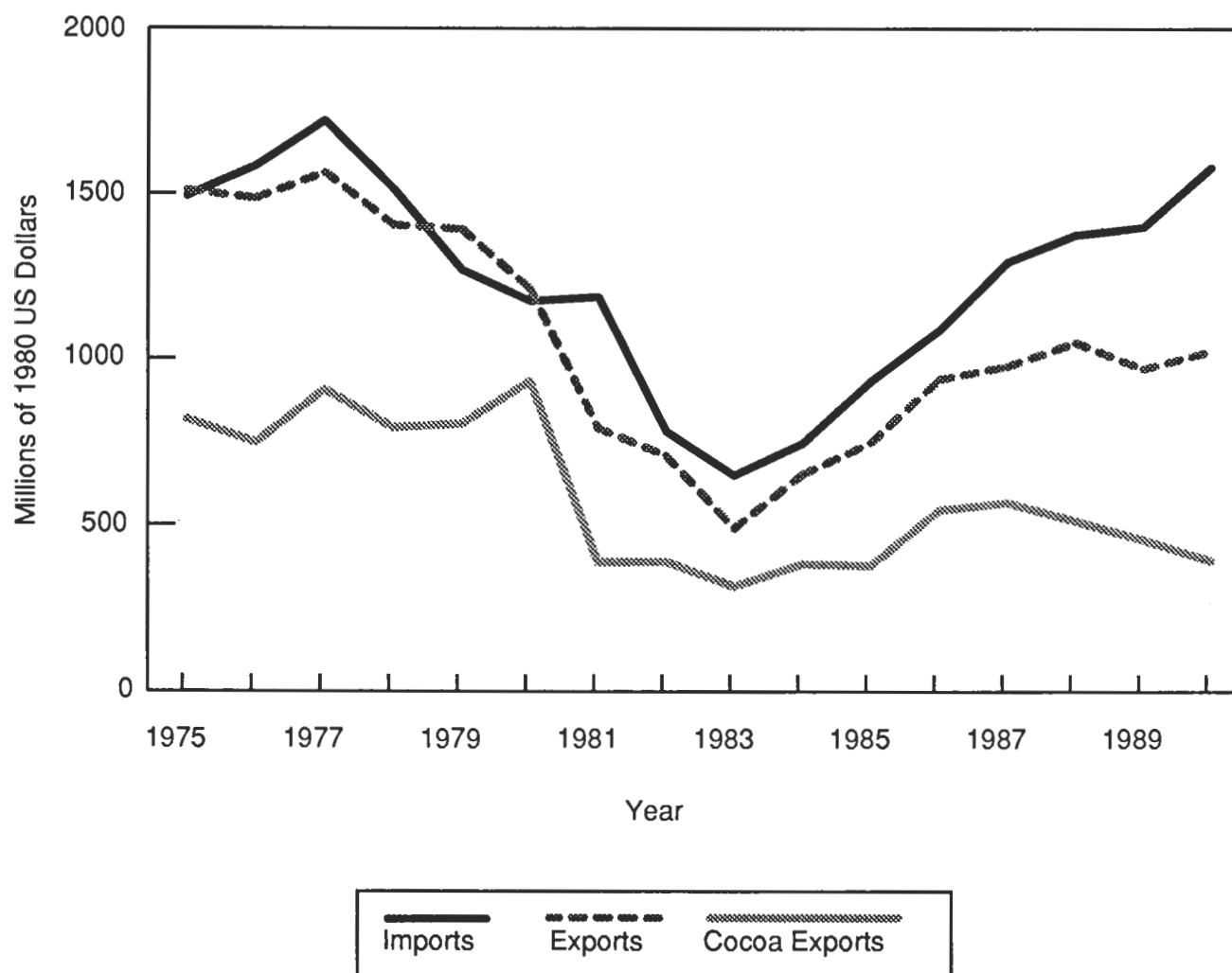
More typical of the somewhat muted response of real exports to changes in trade policy is the case of Madagascar, a country which undertook significant trade and exchange rate policy reforms in 1987 and 1988. In the late seventies, Madagascar benefited from high world prices of its major agricultural exports: coffee, cocoa and vanilla. During this time the Malagasy government launched an ambitious investment program funded mainly by foreign commercial borrowing. Imports of capital goods soared in 1979 and 1980 (Figure 2). Unfortunately, export earnings fell sharply during the investment boom as world coffee prices fell and as an appreciating real exchange rate (caused in part by the surge in foreign capital inflows) reduced export incentives. World credit markets tightened in the early 1980s and Madagascar's short-term loans came due, forcing an abrupt halt to the investment boom and the adoption of an IMF-sponsored stabilization in 1982.

Major policy reforms, including liberalization of domestic rice marketing, decontrol of prices, reductions in government spending and exchange rate devaluations, were undertaken gradually beginning in 1982; but major trade reforms, in particular, liberalization of the import licensing system, were not implemented until 1987 and 1988. In the aftermath of these reforms, which

¹⁶ See Jabara (1994) and Dorosh and Lundberg (1993) for details on The Gambia economy and the impacts of changes in world groundnut prices.

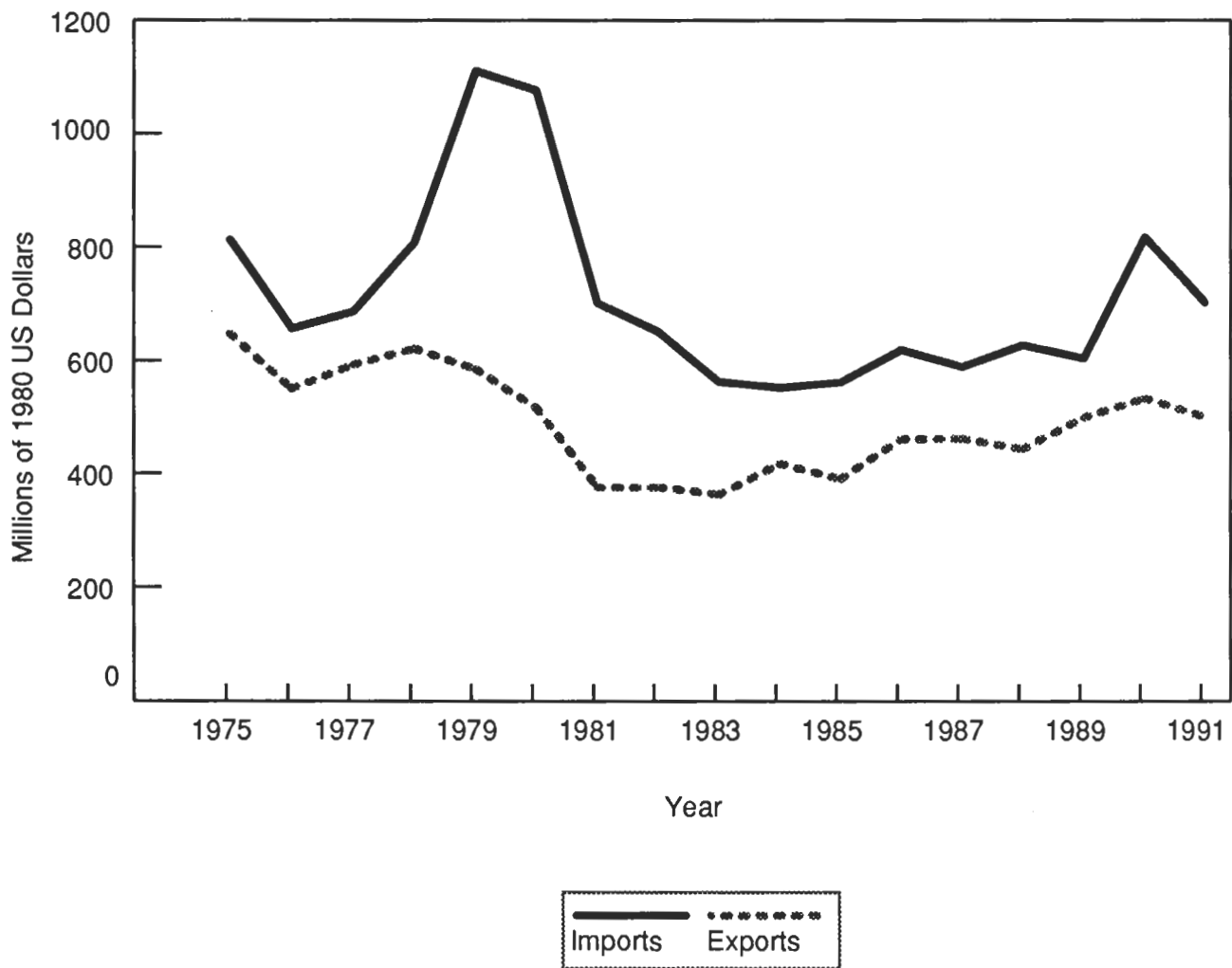
¹⁷ The volume of cocoa exports actually increased during this period, mitigating the effects of the decline in world prices on the value of cocoa exports.

Figure 1 — Ghana: Real Exports and Imports (Goods and Non-Factor Services)



Source: IMF (Various years), International Financial Statistics

Figure 2 — Madagascar: Real Exports and Imports (Goods and Non-Factor Services)



Source: IMF (various years), International Financial Statistics

included a 137 percent nominal devaluation (and a 57 percent real devaluation) of the Malagasy franc relative to the dollar in 1987 and 1988, real exports increased by 14 percent between 1986 and 1989 (an average of just 2.7 percent per year). More important, growth in real GDP per capita was positive in both 1989 and 1990, the first increases in real per capita incomes since the unsustainable investment boom of 1978 to 1980.¹⁸

The decline in both exports and imports in the early 1980s followed by a recovery beginning in the mid-eighties as experienced by Ghana and Madagascar is similar to the pattern observed for the Cornell study's 10 country sample as a whole (Figure 3). For most countries, neither the decline in real exports in the pre-reform period, nor the increase in real exports after policy reform, was as pronounced as that in Ghana.¹⁹

Finally, it is worth emphasizing that the trade and exchange rate policy reform did not lead to a long term decline in trade deficits. Foreign capital inflows increased, and the trade deficit widened for most countries after reforms were initiated, as loans from bilateral and multi-lateral donors increased to support the policy changes. For some countries, such as Madagascar, the increase in official foreign capital inflows came only after stabilization programs. These stabilization programs involved sharp cutbacks in imports previously financed by commercial borrowing. Nevertheless, beginning in the mid-1980s, official foreign capital inflows (and foreign debt) rose sharply, more than offsetting the reversal of private capital flows (Figure 4). Unlike in Latin America, adjustment in sub-Saharan Africa has not involved a net outflow of capital.

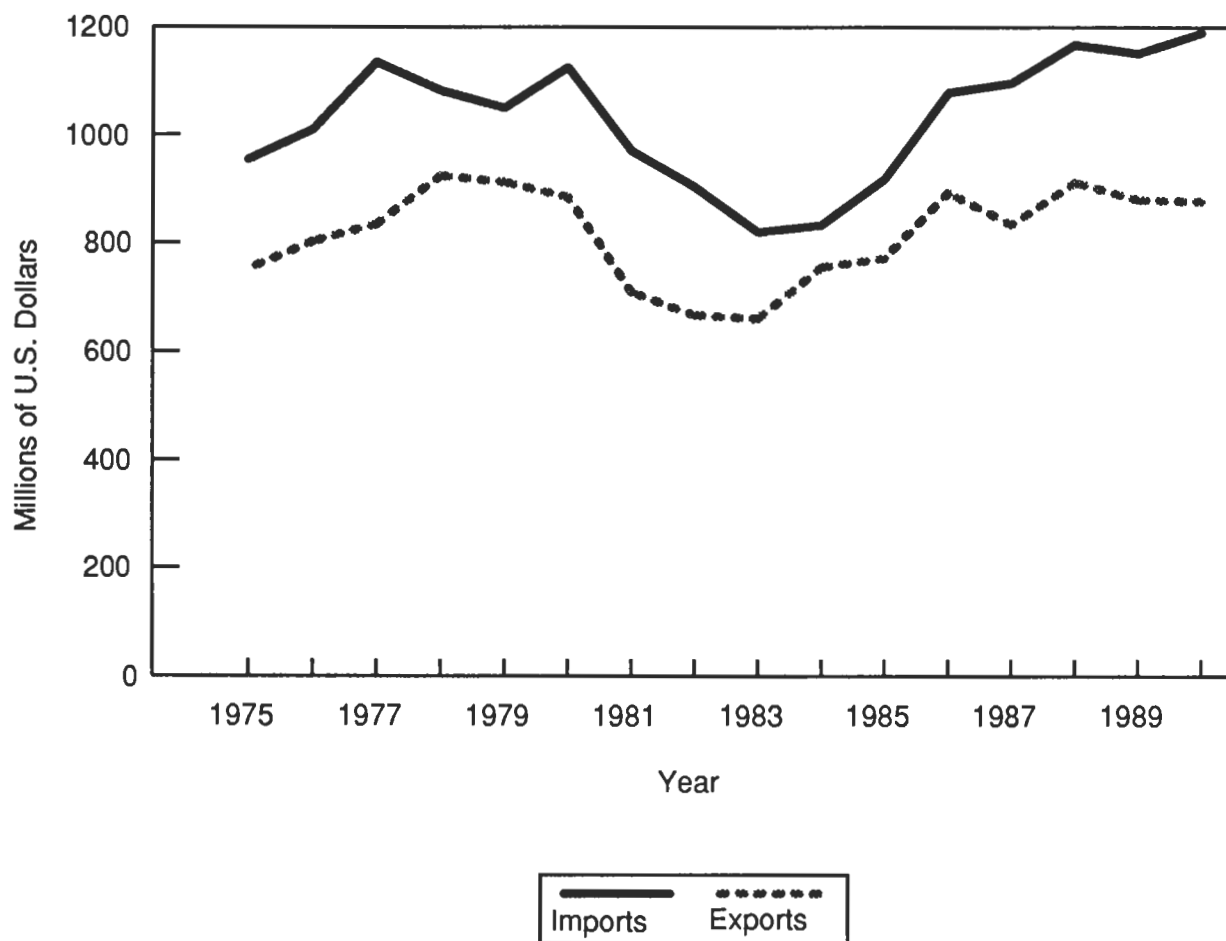
IMPLICATIONS OF REFORM FOR INCOME DISTRIBUTION

A major concern of critics of adjustment in sub-Saharan Africa has been the deleterious impact of exchange rate devaluations on the poor. How various household groups have been affected by these policy reforms depends to a large extent on whether they had access to foreign exchange and imported goods at official prices prior to the policy changes. In general, access to official markets by the poor was extremely limited, and, as is argued below, the poor were likely better off with trade and exchange rate policy reform than without the reforms. In contrast, households that did have access to foreign exchange and

¹⁸ Beginning in 1991, economic growth faltered as political turmoil related to an eventual transition to a new government led to strikes, disruptions in aid flows and reversals of earlier policy changes. In particular, trade and exchange rate policy reforms were reversed, and controls on foreign exchange were reimposed.

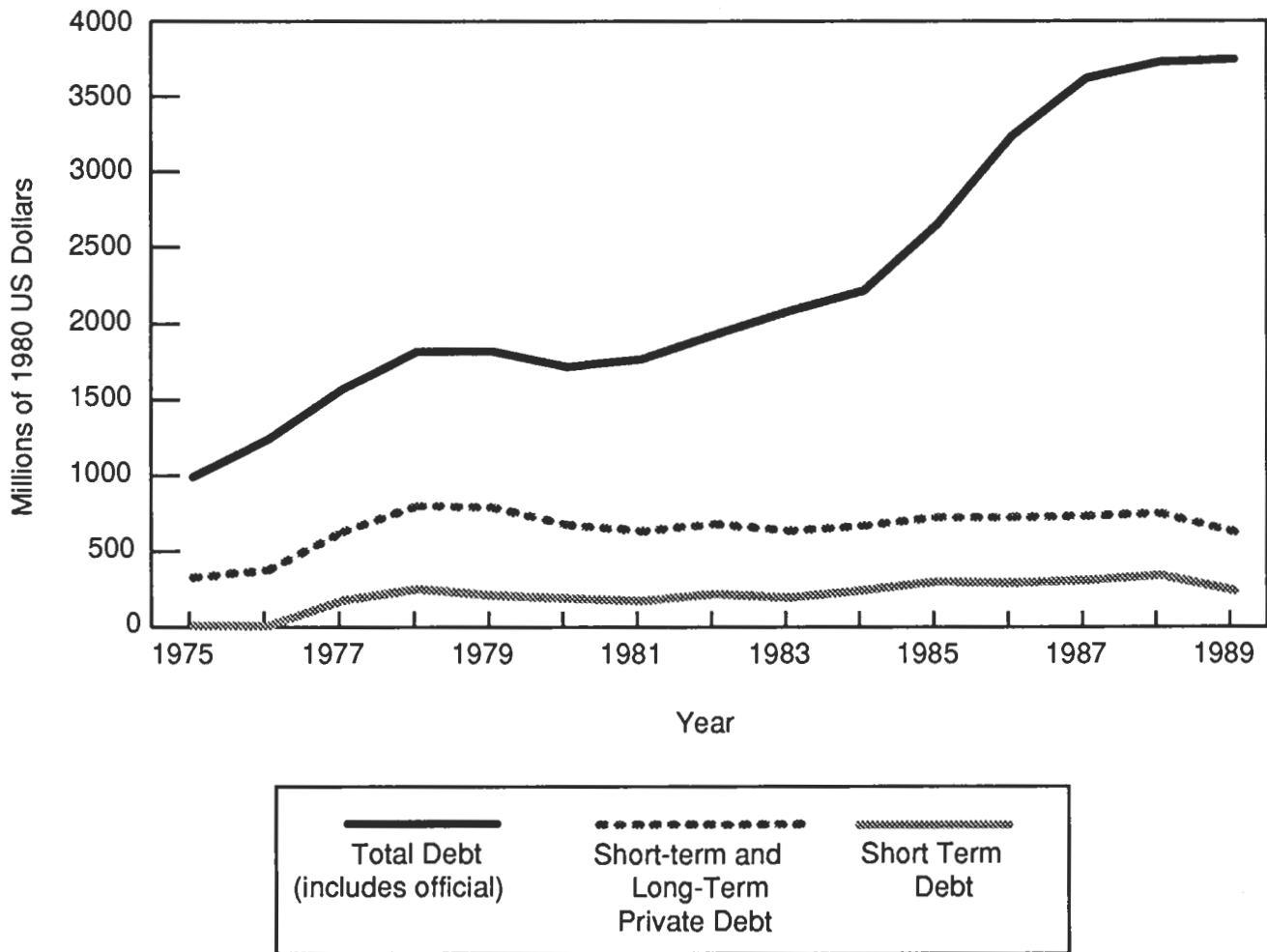
¹⁹ Note that the 10 country sample includes two countries, Cameroon and Niger, which as members of the CFA franc zone undertook structural adjustment programs without devaluation of the exchange rate.

Figure 3 — Average Real Exports and Imports: CFNPP 10 Country Sample



Source: IMF (various years), International Financial Statistics

Figure 4 — CFNPP Case Study Countries: Average Real External Debt



Source: World Bank (1993), Africa Development Indicators

imported goods at official markets, generally a small urban elite, suffered significant losses of income, a major reason behind their opposition to policy reform.

As described above, prior to trade and exchange rate policy reforms in the mid-eighties, demand for foreign exchange (for imports of goods and services or for capital transactions) exceeded supply of foreign exchange (derived from export earnings and foreign capital inflows). Rather than devaluing the currency, so as to encourage production of tradables and reduce demand for foreign exchange, many countries in sub-Saharan Africa relied on quantitative controls to ration scarce foreign exchange. These controls took various forms, including import licensing requirements, limited access to foreign exchange for travel abroad, and long administrative procedures to acquire foreign exchange for imports. Parallel markets for foreign exchange and imported goods developed, where excess demand, unmet in official markets, was met by foreign exchange and imported goods diverted from official markets. The premium paid in the parallel markets (the price in excess of the official price), enabled those who controlled access to foreign exchange and imports at official prices to capture excess profits (economic rents).²⁰

Excess profits associated with foreign exchange controls and trade restrictions in sub-Saharan Africa prior to policy reforms were enormous (Table 10). In the year immediately preceding reforms, premiums on foreign exchange in the parallel markets exceeded 100 percent (i.e. the parallel exchange rate was more than double the official exchange rate) in Zaire and Tanzania, and more than 1000 percent in Guinea, Ghana and Mozambique. Devaluations and trade policy reforms that lessened import restrictions reduced these premiums from an average of 1004 percent in the year preceding the reforms to only 25 percent in the year after the reforms.

The difference between the value of imports as measured at parallel prices and the value of imports measured at official prices provides a rough measure of the size of the excess profits associated with trade and exchange rate restrictions. These implicit rents (converted to dollars using the parallel exchange rate) averaged 460 million dollars for the eight country sample in Table 10, equivalent to 34 dollars per person.

Of course, these implicit rents were not distributed equally throughout the population. Some of these implicit rents accrued to government agencies that received import licenses and scarce foreign exchange to import capital goods and pay other foreign exchange costs of development projects. Much of the rents, however, went to the small minority of households that obtained imported goods and foreign exchange at official prices for home consumption or for resale in

²⁰ See Krueger (1974) for a discussion of the costs associated with rent-seeking.

Table 10 — Estimated Economic Rents from Foreign Exchange Restrictions

Countries	Year of Liberalization	Premium Before	Premium After	Implicit Rent Before	Rent per Capita
		(Percent)		(Mn\$)	(Dollars)
Gambia	1986	-5	9	-5	-6
Ghana	1983-87	2143	25	748	57
Guinea	1986	1177	3	533	106
Malawi	1988	13	30	75	10
Madagascar	1987-88	25	5	106	10
Mozambique	1987-88	4156	51	287	19
Tanzania	1987-88	405	74	908	40
Zaire	1984	117	2	1027	33
Average		1004	25	460	34

Source: World Bank (1993), Africa Development Indicators and authors' calculations

parallel markets.²¹ For these households, trade and exchange rate policy reforms represented huge losses of income. Other non-favored households generally purchased their goods in parallel markets and so were not directly affected by the elimination of rents.

How did the changes in the economy associated with policy reforms affect these households that did not have access to foreign exchange and imported goods at low official prices? Answering this question requires a framework that traces the effects of changes in policy on prices throughout the economy, production of goods, returns to labor and capital, household incomes and consumption. Here, counterfactual simulations using computable general equilibrium (CGE) models of four economies (Cameroon, The Gambia, Madagascar and Niger) are presented to highlight the impacts of policy changes on poor households.

The four CGE models are neo-classical in structure, following Dervis, deMelo, and Robinson (1982). All are based on detailed social accounting matrices (SAMs), constructed from data from the national accounts (including input-output tables), household expenditure surveys, and agricultural censuses and other surveys.²² Household groups are defined according to characteristics of asset ownership (land and cattle) and labor skills of the head of household, characteristics which correspond generally with income level (Table 11). By defining relatively homogeneous household groups sharing similar income sources and consumption patterns in this way, it is possible to simulate the effects of policy and external shocks on average welfare of major sub-groups of the poor and non-poor.

The equations of the models specify production of each activity as a function of land, labor and capital. Household incomes are determined according to their ownership of these factors of production, and household consumption is a function of both prices and incomes. Investment demand is determined by total savings in the economy. In general, prices and wage rates adjust to clear markets. No monetary or financial variables are modeled.²³

²¹ Absence of consumer goods at official prices in rural markets (one evidence that the rural poor do not receive the rents associated with foreign exchange restrictions) is a common feature of African economies with price and import controls. The resulting adverse consequences on agricultural growth are explored by Bevan, Collier, and Gunning (1990) for Tanzania, Berthélemy (1988) for Madagascar and Azam and Faucher (1988) for Mozambique.

²² See Dorosh and Essama Nssah (1991), Dorosh, Bernier, et al. (1991), Gauthier and Kyle (1991), Subramanian (forthcoming), and Jabara, Lundberg, and Sireh Jallow (1992) for complete descriptions of the social accounting matrices and data sources.

²³ Further details of the models are found in Benjamin (1993), Subramanian (forthcoming), Dorosh and Lundberg (1993), Dorosh (1994) and Dorosh and Essama Nssah (1993).

Table 11 —Household per Capita Incomes and Population, CGE Models

	Population (percent)	Per Capita Income ^a	Share of National Income (percent)
Cameroon			
Urban Non-poor	10.1	853	21.9
Urban Poor	0.9	310	0.7
Rural Non-poor	40.5	564	58.2
Farm	27.8	480	34.0
Non-farm	12.7	749	24.2
Rural Poor	48.5	155	19.1
Farm North	12.7	165	5.3
Farm South	25.6	148	9.6
Non-farm	10.2	160	4.2
All Cameroon	100.0	393	100.0
The Gambia			
Urban Non-poor	8.6	6702	28.3
Urban Poor	20.1	2554	25.2
Rural Non-poor	21.4	2061	21.7
Rural Poor	49.9	1013	24.8
All Gambia	100.0	2036	100.0
Madagascar			
Urban Non-poor	2.2	877	11.2
Urban Poor	14.7	170	14.5
Urban Middle Income	11.7	181	12.3
Urban Low Income	3.0	126	2.2
Rural Non-poor	23.5	271	37.1
Rural Poor	59.6	107	37.1
Farm Plateau	19.9	103	11.9
Farm East Coast	20.8	105	12.7
Farm West, South	14.0	118	9.6
Non-farm	4.9	103	3.0
All Madagascar	100.0	172	100.0
Niger			
Urban Non-poor	3.2	415	16.6
Urban Poor	11.3	116	16.5
Large City Poor	6.4	160	12.8
Small City Poor	4.9	60	3.7
Rural Non-poor	34.1	82	35.2
North	10.4	116	15.1
South	23.7	68	20.2
Rural Poor	51.4	49	31.6
North	31.2	49	19.2
South	20.2	49	12.5
All Niger	100.0	80	100.0

^a Units of incomes are as follows: Cameroon (thousand 1985 FCFA), The Gambia (1990 Dalasis), Madagascar (thousand 1984 FMG), Niger (thousand 1987 FCFA).

Sources: Dorosh (1994), Dorosh and Lundberg (1993), Dorosh and Essama Nssah (1991), and Subramanian (forthcoming)

To illustrate the income distribution implications of trade and exchange rate policy reform, Table 12 compares the results of simulations of two alternative policy responses to a terms of trade shock in Niger.²⁴ The first simulation shows the effects of a decline in the world price of uranium exports when foreign exchange for imports is rationed and the real exchange rate is held fixed.²⁵ The second simulation shows the effects of the same terms of trade shock, but with a freely adjusting real exchange rate.

Under both scenarios, real GDP declines as the economy suffers the effects of the terms of trade shock. However, with real exchange rate adjustment (a real exchange rate depreciation of 9.7 percent), the decline in exports is smaller because the real exchange rate depreciation improves incentives for export production. Moreover, for the economy as a whole, household incomes are higher, resulting in more savings and investment. Poor households also fare better under real exchange rate adjustment to a terms of trade shock than under foreign exchange rationing. Real incomes of the rural poor decline by 1.8 to 2.4 percent under adjustment compared to 4.3 to 5.2 percent without real exchange rate adjustment, since prices of export goods such as cattle and cowpeas rise, spurring production and labor demand. The urban poor benefit due to higher investment spending leading to increased demand for labor and higher returns to informal sector capital. The urban non-poor, as a group, suffer more under adjustment, however, since these households lose the excess profits (economic rents) associated with rationing.

A CGE analysis of the impacts of Madagascar's trade liberalization in 1987-1988 produces similar results (Table 13). Compared with a policy of maintaining foreign exchange restrictions for imports, trade liberalization results in an 11.8 percent depreciation of the real exchange rate in the first year of the simulation, leading to a 7.0 percent increase in exports. Increased economic efficiency and output results in a 2.8 percent increase in real GDP and a 19.0 percent increase in investment. The higher investment, in turn, leads to an even larger gain in real GDP (6.6 percent) by year six of the simulation.

Again, both urban and rural poor gain from the liberalization. The real exchange rate depreciation improves production incentives for tradable goods; agricultural output rises, leading to increased labor demand and higher real incomes of the poor. Producers of export crops, including small farmers on Madagascar's east coast, numbered among the poor, gain slightly more from the relative price changes than do other rural poor. Nevertheless, the overall increase in economic activity also leads to increased demand for agricultural

²⁴ The simulation models the effects of a 25.9 billion CFA franc decline in uranium revenues (equal to 3.9 percent of GDP in 1987), reflecting the fall in uranium export revenues from 1987 to 1990.

²⁵ Rationing of foreign exchange is modeled by putting a uniform implicit tariff on all imports, with rents from the implicit tariff accruing to the urban non-poor households.

Table 12 — Real Exchange Rate Adjustment in the CFA Zone: Niger Model Simulation (Percent Change vs. Base Run)

	Real Exchange Rate Adjustment	Foreign Exchange Rationing
Real GDP	-1.8	-1.7
Investment	-23.2	-31.7
Exports	-13.3	-16.1
Imports	-9.9	-12.0
Real Exchange Rate	9.7	0.0
Household Incomes		
Urban Non-Poor	-6.5	15.8
Urban Poor	-4.8	-7.7
Semi-Urban	-2.5	-4.8
Rural Non-Poor North	-2.3	-4.2
Rural Non-Poor South	-2.0	-4.1
Rural Poor North	-2.4	-5.2
Rural Poor South	-1.8	-4.3
Total	-3.1	-1.4

Source: Dorosh, Essama Nssah, and Samba Mamadou (1994)

Table 13 — Trade Liberalization: Madagascar Simulation Results (Percent Change from Base Run)^a

	Year 1	Year 6
Real GDP	2.8	6.6
Investment	19.0	38.0
Exports	7.0	12.9
Imports	5.9	10.9
Real Exchange Rate	11.8	18.0
Household Incomes		
Urban Non-Poor	-11.5	-8.3
Urban Middle Income	-4.5	9.8
Urban Low Income	2.0	4.8
Rural Non-Poor	4.2	6.6
Small Farm Plateau	2.8	5.3
Small Farm East Coast	4.3	8.3
Small Farm West, South	2.8	5.1
Non-Farm Rural Poor	2.6	4.2
Total	1.1	3.9

^a The base run simulates the continuance of import quotas on manufactured goods and rice at their 1984 per capita levels.

Source: Dorosh (1994)

goods employing rural unskilled labor and for construction, transport and marketing services employing urban unskilled labor, thus extending the benefits of the liberalization beyond simply export crop producers.

As the above two examples suggest, the extent to which the poor benefit from trade and exchange rate policy reform varies according to country. In order to highlight the role of individual country characteristics, Tables 14 and 15 compare the outcomes of two alternative policy responses to a negative terms of trade shock: allowing a full adjustment of the real exchange rate versus imposing quotas on imports to reduce foreign exchange demand (the practice of most economies prior to reform). In each country, the terms of trade shock is specified as a ten percent reduction in the world price of the major export good,²⁶ combined with a decline in net foreign capital inflows equal to 10 percent of initial exports.

Imposing quotas in response to a terms of trade shock results in a sharp decline in export earnings and real incomes in all four countries. In the absence of adjustment of the real exchange rate, the implicit tariff on imports (equivalent to the premium on foreign exchange for imports in the parallel market) helps reduce import demand and bring into balance supply and demand for foreign exchange. Rents created as a result of the premium on foreign exchange (which ranges from 14.2 percent in Niger to 35.1 percent in Madagascar), allow real incomes of the urban non-poor to rise while real incomes of all other household groups decline.

With a freely adjusting real exchange rate, although real GDP still declines, the fall is not as steep as in the case of import quotas. For example, in Madagascar, the real exchange rate depreciates by 11.5 percent and real exports as a share of GDP increase slightly (0.2 percent), compared with declines in real GDP and the export share of 2.3 and 1.0 percent, respectively, in the import quota scenario. The urban non-poor fare much worse under a liberalized trade and exchange rate regime, however, since there are no quota rents to boost their incomes.

Comparing results of the liberalized trade and exchange rate regime with results under a regime of trade and foreign exchange controls shows the extent to which the poor benefit from trade and exchange rate policy reforms. For all four country simulations, both the urban and rural poor enjoy higher incomes. Two factors explain this result. First, although these four African economies differ in terms of relative importance of agriculture, economic openness and other factors, they generally share key characteristics: concentration of poverty in rural areas, importance of agriculture and labor incomes for the rural poor, and relatively small manufacturing sectors. In the simulations, as rents

²⁶ Reductions in world prices of the following commodities are modeled: Cameroon (export crops — mainly cocoa and coffee), The Gambia (groundnuts and groundnut products), Madagascar (export crops — mainly coffee, vanilla and cloves), and Niger (uranium).

Table 14 — Macroeconomic Outcomes under Alternative Trade and Exchange Rate Policies: CGE Model Simulations

	Terms of Trade Shock with:		
	Import Quotas	Real Exchange Adjustment	Impact of Liberalization
	(Percent Change)		
Cameroon			
Real GDP	-1.83	-1.16	0.68
Investment / GDP	-0.89	-1.06	-0.17
Exports / GDP	-2.21	-0.01	2.25
Foreign exchange premium (level in percent)	26.83	0.00	-26.83
Real Exchange Rate	0.00	15.66	15.66
The Gambia			
Real GDP	-3.55	-2.34	1.25
Investment / GDP	-6.37	-6.26	0.12
Exports / GDP	0.75	2.81	2.04
Foreign exchange premium (level in percent)	16.97	0.00	-16.97
Real Exchange Rate	0.00	4.27	4.27
Madagascar			
Real GDP	-2.32	-1.07	1.28
Investment / GDP	-1.03	-0.50	0.54
Exports / GDP	-0.98	0.17	1.16
Foreign exchange premium (level in percent)	35.10	0.00	-35.10
Real Exchange Rate	0.00	11.46	11.46
Niger			
Real GDP	-2.94	-2.72	0.23
Investment / GDP	-3.78	-3.10	0.71
Exports / GDP	-1.25	-0.58	0.68
Foreign exchange premium (level in percent)	14.22	0.00	-14.22
Real Exchange Rate	0.00	9.16	9.16

Note: Impact of liberalization column gives the percentage change of household income of the real exchange rate simulation (column 2) relative to the import quota simulation (column 1).

Source: Dorosh and Sahn (1994)

Table 15 —Household Incomes under Alternative Trade and Exchange Rate Policies: CGE Model Simulations

	Terms of Trade Shock with:		
	Import Quotas	Real Exchange Adjustment	Impact of Liberalization
	(Percent Change)		
Cameroon			
Urban Non-poor	21.14	1.85	-15.92
Urban Poor	-8.81	-3.79	5.51
Rural Non-poor	-10.09	-2.98	7.91
Rural Poor	-10.04	-3.39	7.39
All Cameroon	-3.22	-2.00	1.26
The Gambia			
Urban Non-poor	4.32	-0.49	-4.61
Urban Poor	-8.75	-1.11	8.37
Rural Non-poor	-6.51	-3.82	2.88
Rural Poor	-5.71	-3.09	2.78
All Gambia	-3.78	-2.01	1.84
Madagascar			
Urban Non-poor	16.33	-7.35	-20.36
Urban Poor	-13.51	-3.51	11.56
Rural Non-poor	-5.61	-1.62	4.23
Rural Poor	-5.25	-0.96	4.53
All Madagascar	-3.23	-2.42	0.84
Niger			
Urban Non-poor	14.33	-7.30	-18.92
Urban Poor	-6.68	-3.94	2.94
Rural Non-poor	-4.09	-2.05	2.13
Rural Poor	-4.67	-2.11	2.69
All Niger	-1.52	-3.20	-1.71

Note: Impact of liberalization column gives the percentage change of household income of the real exchange rate simulation (column 2) relative to the impact quota simulation (column 1).

Source: Dorosh and Sahn (1994)

formerly acquired by the urban non-poor are eliminated, costs of importable goods are reduced, leading to a more efficient allocation of resources so that demand for unskilled labor (and real wages) rise. Second, because some of the poor are net producers of tradables, the real exchange rate depreciation directly increases their real incomes (e.g. of small farmers producing export crops in Cameroon and Madagascar). Thus, trade and exchange rate liberalization involving elimination of quotas and real exchange rate depreciation improves both macro-economic performance and leads to marginal increases in real incomes for poor households.²⁷

OTHER FACTORS DETERMINING EXPORT RESPONSE

The rosy scenario presented above in the model simulations suggests that trade and exchange rate policy reform, where implemented, benefited the rural poor, who constitute the large majority of Africa's poor, at least in comparison with a continuation of earlier policies involving trade restrictions and rationing of foreign exchange. However, these policy simulations by design do not attempt to include the effects of changes in the external environment or changes in other government policies coincidental with trade and exchange rate policy reform, such as droughts, terms of trade shocks, cutbacks in government expenditures and changes in capital flows. For the rural poor, two factors are of particular importance and are discussed further in Section 5: world prices of agricultural exports and domestic agricultural trade and price policy.

Outside of traditional agricultural exports, increasing exports may require administrative reforms. For example, in Tanzania, despite significant depreciation of the real exchange, numerous administrative procedures hindered exports, including requirements for export permits, export licensing by the Board of External Trade, export registration by the central bank and annual renewal of a business license from the Ministry of Industry and Trade (Lipumba 1993). Inadequate port, transport and communication facilities also hinder expansion of exports in many countries. Finally, the establishment of associations of traders and firms to facilitate contacts with potential importers, provide market information and assist in other trading arrangements can help spur exports in the context of an environment of improved price incentives (Thomas and Nash 1991).

²⁷ The result that real exchange rate depreciation tends to benefit the poor is consistent with findings by Schneider, et al. (1992) using a CGE model for Côte d'Ivoire with both real and financial variables developed by Bourguignon, Branson, and de Melo (1989a, 1989b). Model simulations show that a 22 percent real devaluation of the CFA franc in 1981 spurs exports, increases employment and reduces poverty in both urban and rural areas.

CONCLUSIONS

Changes in trade and exchange rate policies have important consequences both for the macroeconomy and for household incomes. In terms of macro-economic objectives (improving incentives for tradable goods sectors, increasing exports and efficient import substitution, and sustaining GDP growth), these policy reforms have enjoyed only limited success in most countries. Although real exchange rate depreciation has been achieved, there has been a limited response of exports and GDP growth.

The primary losers due to trade and exchange rate policy reform are households and institutions that previously had access to foreign exchange or imports priced at the official exchange rate. Model simulations suggest that other household groups, including the rural poor, tended to benefit from trade and exchange rate reforms as rents were redistributed throughout the economy, price incentives for production of many tradables improved and payments to unskilled labor, land and informal sector capital rose.

Given that the anticipated rewards of policy reform and economic openness on the macro-economic level have been small in most countries, it is not surprising that gains in real income for the poor, if achieved at all, have been small — far from enough to lift significant numbers of people out of poverty. In part the piecemeal nature of reforms and the lack of institutional and market linkages for export goods explain the meager macro-economic response. In addition, adverse terms of trade shocks and perverse agricultural pricing policies (discussed in Section 5) have offset the potential gains from policy reform, particularly for rural households.

Contrary to much conventional wisdom, the evidence suggests that trade and exchange rate policy reforms in themselves do not harm the poor, but instead tend to raise their real incomes. While these reforms are insufficient in themselves to achieve sustained economic growth with significant reductions in poverty, combined with suitable fiscal and sectoral policies, complementary investments in infrastructure, development of market linkages and favorable terms of trade, and trade and foreign exchange liberalization may result in more significant improvements in the welfare of the poor in sub-Saharan Africa.

4. FISCAL POLICY, ADJUSTMENT, AND POVERTY IN AFRICA

Second to exchange rate policy, the most controversial aspect of adjustment programs is fiscal policy. Attempts to stabilize African economies with balance of payments problems usually identify the large government deficits as a key source of macroeconomic instability. In response, lenders, primarily the IMF and The World Bank, often insist on fiscal "belt-tightening" as a condition for balance of payments assistance. While these conditions are obviously unpopular with the affected governments, they also have generated a significant amount of criticism in international circles. Early critics of adjustment lending claimed that drastic cuts in government expenditure had a disproportionate impact on poor households, withdrawing valuable social services from those who most need them. Most of the literature is based on experiences in middle-income Latin American and Asian nations (Pinstrup-Andersen 1989; Cornia, Jolly, and Stewart 1987; Musgrove 1987; Helleiner 1985, 1986), but the African experience often has been quite different. This section presents evidence from Africa that contradicts the widely accepted proposition that the poor in Africa have suffered from substantial cuts in government expenditure due to adjustment programs.

We first show that in Africa there has not been the sort of compulsive insistence on decreasing government expenditures that is often attributed to The World Bank and the IMF. This is followed by an examination of the incidence of government expenditures, including several categories of social services. We then address the fiscal dilemma faced by many African policy makers who would like to reduce the public sector wage bill as part of their fiscal reforms. That there are too many public sector employees is widely accepted; that they should be retrenched is not, with the social costs being put forth as the justification for maintaining the status quo. To help shed light on this issue, we discuss the welfare effects of retrenchment based on household surveys of retrenched public sector employees in Guinea and Ghana, where policy makers did pursue substantial cuts in public employment as part of their adjustment policies. We end our discussion of fiscal policy by addressing the other side of the fiscal ledger, that is: who pays the taxes? The burden of public spending thereby come into clearer view.

THE PATTERN OF GOVERNMENT EXPENDITURES IN AFRICA

Total Expenditures

It goes without saying that fiscal deficits are unusually large in Africa. But as Figure 5 shows, the notion that African economies have been subjected to radical changes in fiscal policy is exaggerated. On average, government deficits in Africa increased around the beginning of the 1980s, briefly returned to levels that prevailed before that increase, and increased again late in the decade. In most cases, this behavior of the deficit is mirrored in an increase and subsequent decline in expenditures. Further, as we have noted, expenditure

Figure 5 — Average Ratio of Government Deficit with Grants to GDP in Africa



Note: Data are population weighted average for 21 countries for which data are available.

Source: World Bank, Africa Development Indicators (1993)

reductions are far more controversial than tax increases, so we will concentrate on the behavior of expenditures here, returning to taxes later in the section.

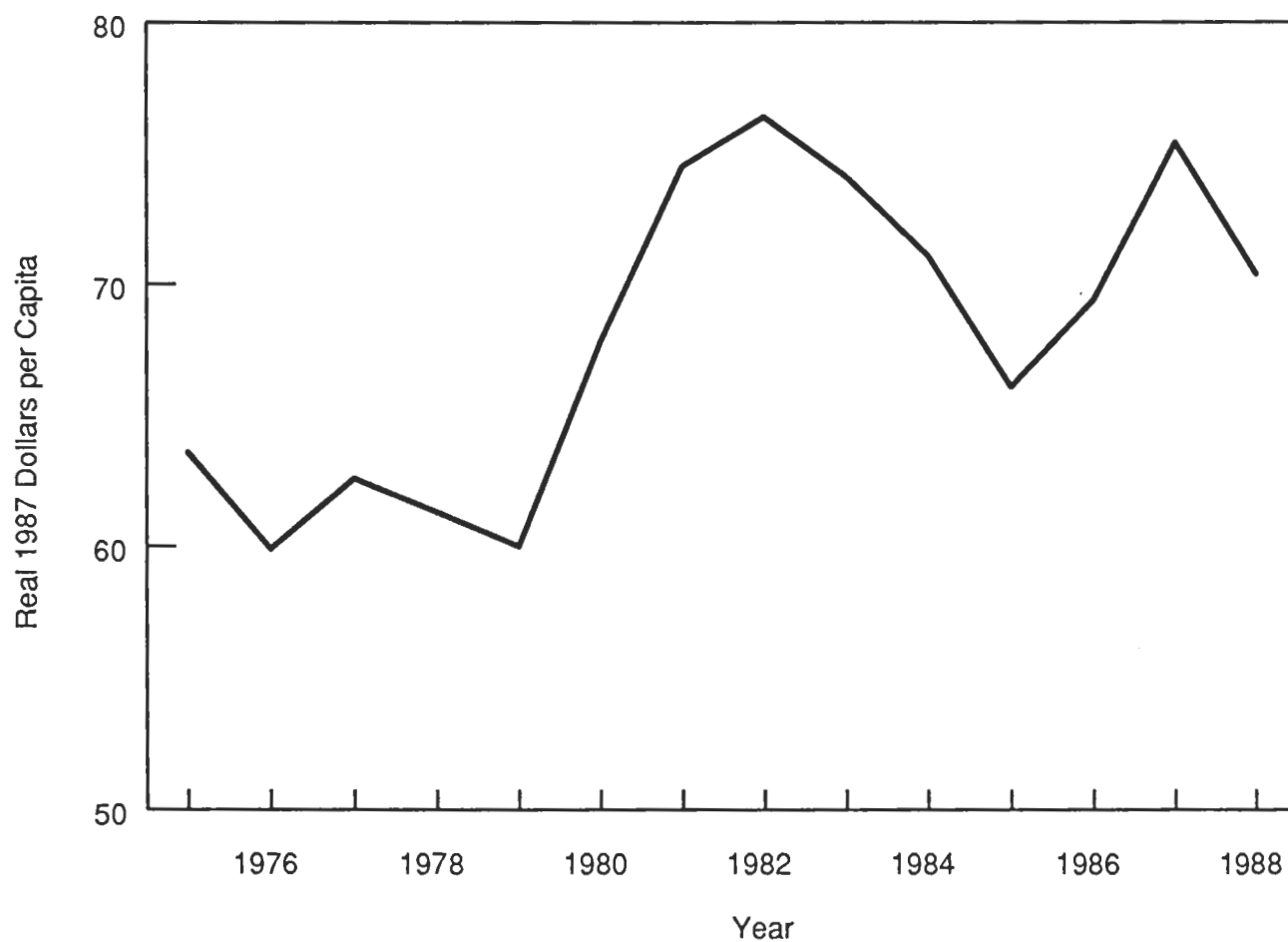
If we take the early 1980s as a point of reference, it is true that there has been some reduction in government expenditures in Africa (Figure 6). But those reductions have hardly been drastic—two percent of GDP on average—nor have they been sufficient to eliminate existing deficits. Further, taking the early 1980s as a point of reference, a practice that is common in the literature on adjustment and poverty, is misleading. Government expenditures in these years were unusually high by historical standards. Compared with expenditures in the mid-70's, fiscal contraction in the 1980s has done little more than deflate the bubble at the beginning of the decade.

The surge in government expenditures observed in Figure 6 often came from temporary access to additional financing (Nashashibi and Bazzoni 1993). In some countries, this had to do with commodity price booms (in coffee, cocoa, tea, and petroleum) during the late 1970s. These booms temporarily increased government revenues and thus encouraged governments to overextend their expenditures. Once international prices returned to more normal levels (or collapsed as in the case of coffee, cocoa, and petroleum), governments found it difficult to curtail spending and thus ran larger deficits. In other cases, particularly the more credit-worthy economies, the easy availability of international borrowing prior to the debt crisis made it easier to run deficits, and many countries did so. Yet, that source also proved to be short-lived.

Table 16 considers the variance of experience of African countries showing changes in government expenditure per capita net of debt service from the period 1975-1977 to 1986-1988. Of the 30 cases for which we have data, 10 have declines of net spending greater than 10 percent on average during this period. Four, Liberia (-14%), Mauritania (-26%), Sudan (-46%), and Uganda (-24%), reflect serious civil conflict and a fourth, Nigeria (-45%), evidently reflects a shift of expenditures to the states. Of the rest, declines in government spending usually occurred well before the country began any serious attempt at adjustment (Ghana (-11%), Sierra Leone (-18%), Tanzania (-25%), and Zambia (-22%)). Only Senegal (-29%) appears to be a case where expenditures fell sharply as part of an extended adjustment effort.

Within this broad characterization of government spending, it is useful to distinguish three archetypes of fiscal policy reform in Africa. The first is a country in which, after a strong increase in expenditures, the government has been forced to reduce its fiscal deficit through expenditure cuts. As we have seen, the cause has often been an unsustainable increase in expenditures financed by the temporary availability of foreign exchange from a commodity boom and/or foreign borrowing. Examples include Madagascar and Niger. In some sense, this is the type that most analysts have in mind when they think about adjustment programs, largely because the Latin American countries which have dominated the adjustment literature fall into this group. A second group includes economies that have managed their macroeconomic affairs reasonably well, but have suffered

Figure 6 — Government Expenditure Net of Interest in Africa: 1975-1988



Note: Population weighted average for 21 countries for which data are available, excluding Nigeria.

Sources: Government Finance Statistics Yearbook (1986-1992), Africa Development Indicators (1993)

Table 16 — Percent Change in Real Government Expenditures per Capita 1975-77 to 1986-88

Percent Change				
>150	50 to 150	10 to 50	-10 to 10	<-10 to -50
(Total Expenditures Net of Debt Service)				
Botswana	Burundi	The Gambia	Burkina Faso	Ghana
Cameroon	Ethiopia	Kenya	Gabon	Liberia*
Chad	Rwanda	Malawi	Swaziland	Mauritania
Congo**	Somalia	Mauritius	Zaire	Nigeria
Lesoto		Niger		Senegal
Seychelles		Zimbabwe		Sierra Leone
				Sudan
				Tanzania
				Uganda
				Zambia
(Education Expenditures)				
Botswana	Cameroon	Burkina Faso	The Gambia	Nigeria
	Kenya	Ethiopia	Ghana	Sierra Leone
	Lesoto	Malawi	Liberia	Somalia
	Rwanda	Mauritius		Uganda
	Zimbabwe**	Niger**		Zaire
		Swaziland		Zambia
(Health Expenditures)				
Botswana	Cameroon	Ethiopia	Burkina Faso	Somalia
Lesoto	Malawi	The Gambia	Ghana	Uganda
	Rwanda	Kenya		
	Swaziland	Mauritius		
	Zimbabwe	Niger		
		Zaire		

* Includes only 1986-87.

** Includes only 1976-77.

Sources: IMF, International Financial Statistics and Government Finance Statistics (various years), World Bank, Africa Development Indicators (1993)

unusually large negative shocks. This type is less common outside Africa because most other economies are not exposed to the same degree of risk of supply shocks and terms-of-trade shocks as African economies. Examples include Malawi and Cameroon. Finally, there is a type that is almost uniquely African. These are economies that had deteriorated so badly before an adjustment effort began that the public sector actually collapsed. Thus, during the course of the adjustment process, we find that public expenditure is often rising. Examples include Ghana, Uganda, and to a lesser extent, Tanzania.

As an example of the first archetype, consider the expenditure history of Madagascar. Through the mid-1970s, Madagascar had maintained rather conservative macroeconomic policies, with limited fiscal deficits and modest monetary growth and inflation. Beginning in 1979, however, the government decided that a "big push" was necessary to jump start economic growth. Thus, it adopted a program to "invest to the limit" (*investir à l'outrance*), with the investment concentrated in public services and state-owned enterprises.²⁷ The government financed this effort through foreign borrowing—tax revenues changed little. Further, most of the borrowing was through commercial creditors at market rates of interest. While this borrowing produced a boom in GDP growth (and more rapid inflation), the amounts in question, 631 million dollars in 1979 and 1980, equal to 8.4 percent of GDP and 60 percent of exports, were clearly unsustainable. Even before the debt crisis hit most developing countries in 1982, commercial creditors had begun to shy away from Madagascar. Thus, as credit dried up, the government was forced to reduce its spending, reversing the impact of the preceding expansion.

The size of the contraction is substantial: total spending per capita (net of debt service) declined by 8 percent of GDP from the peak in 1980 to 1983, when spending stabilized. At the same time, the current account of the balance of payments, which had ballooned to huge deficits during the investment push, gradually returned to its pre-boom levels, though this adjustment was drawn out over several years (in part, thanks to external finance from the IMF and World Bank). With the exception of the current account, which has never turned positive, Madagascar looks very much like a Latin American case, and the stereotypical case of an economy that, as a result of the debt crisis, was forced to contract spending substantially. Nevertheless, the interpretation of these events depends on one's point of departure. Taking 1980 as a base, the stabilization program looks extraordinarily severe, with draconian cuts in expenditures, including social services. Yet one must recognize that 1980 was neither a "typical" pre-adjustment year nor a state of equilibrium. Spending at those levels was clearly unsustainable, and the subsequent retrenchment has only returned spending to levels that prevailed before the debt-driven boom.

²⁷ Dorosh, Bernier, and Sarris (1990) present a more in-depth discussion of Madagascar's ill-fated development push and the subsequent stabilization and adjustment measures.

As an example of the second sort of economy, those suffering extraordinary bad luck, we consider Malawi. During the 1970s, Malawi enjoyed unusually rapid economic growth, with moderate inflation and small current account deficits. While it is true that the government did take advantage of the easy credit conditions of the late 1970s to run significantly larger current account deficits (partly in response to drought), recourse to such financing was not as exaggerated as in other countries. In the early 1980s, the war in Mozambique cut off Malawi's principal transport route. The c.i.f. margin as a percent of total import value increased from 22 percent in 1979 to 40 percent in 1984. In 1983, it was estimated that the economic cost of the transport shock was US 30 million dollars, over 2 percent of GDP. This shock lasted several years and occurred simultaneously with a drought, a massive influx of refugees from Mozambique, and a growing debt burden. The deteriorating economic circumstances necessitated a substantial adjustment, which the government undertook. Nevertheless, as in the case of Madagascar, the reduction in the current account deficit was quite prolonged, which was helped by lending from the international institutions. Similarly, while government spending net of debt service declined from its peak in the early 1980s, it remained above the levels of the 1970s for several years.

Finally we consider the case of Ghana, an archetype which unfortunately is more common in Africa than elsewhere.²⁸ Despite serious macroeconomic imbalances, Ghana basically refused to undertake either orthodox stabilization or adjustment policies from the early 1970s to 1983. As a result, the economy suffered a prolonged decline in GDP, with radically misaligned prices and incentives. These distortions forced a substantial contraction of government revenues (most of which were based on the hopelessly overvalued exchange rate) and a consequent reduction in expenditures. At its nadir, government spending was only 8.3 percent of GDP, with revenues of 5.6 percent. Spending on social services was in no sense protected, registering severe declines that probably understate the depth of the collapse: by 1983 these budgets were dominated by salaries for unskilled employees who had no materials with which to work. The main point of this case is that, in Africa, radical declines in government expenditure are not the unique consequence of adjustment programs; several countries managed to contract spending in a chaotic fashion that was more damaging to the economy and social sector budgets than any orthodox adjustment program. While this is especially discouraging, it is also important to note that government spending increased substantially during the course of Ghana's adjustment program, from 8 to 20 percent of GDP, with full approval of the IMF and World Bank. Further, social spending grew more rapidly and stabilized at higher levels than overall spending.

To summarize, African countries' experience with government spending has been more mixed than is generally believed. Many "adjusting" economies have suffered minor declines in spending despite their agreements with international creditors, while other "non-adjusting" countries have suffered serious reductions as a result of economic collapse due to a refusal to adjust. The notion that

²⁸ See Alderman (1991) and Younger (1991) for detailed analysis of Ghana's crisis and recovery.

signing an agreement with the Fund condemns a government to reduce its spending in general and social services in particular is clearly inconsistent with these data. What is more, the idea that donors get off the plane with a canned adjustment package for every country regardless of its initial conditions also rings hollow. Indeed, the sustained adjustment efforts in the illustrative cases of Madagascar, Malawi, and Ghana appear to have been sensitive to each country's initial conditions. In Madagascar, which indulged in a debt-financed boom in expenditures, the program required and obtained a roll-back of those expenditures to previous levels. In Malawi, which suffered severe exogenous shocks, the program maintained expenditures at a reasonably constant level despite their run-up in the late 1970s, and helped to finance those expenditures with sustained adjustment financing.²⁹ And in Ghana, where expenditures had already declined to unreasonably low levels, the program called for increases financed by both sustained adjustment lending and, as we will discuss below, a major tax reform.

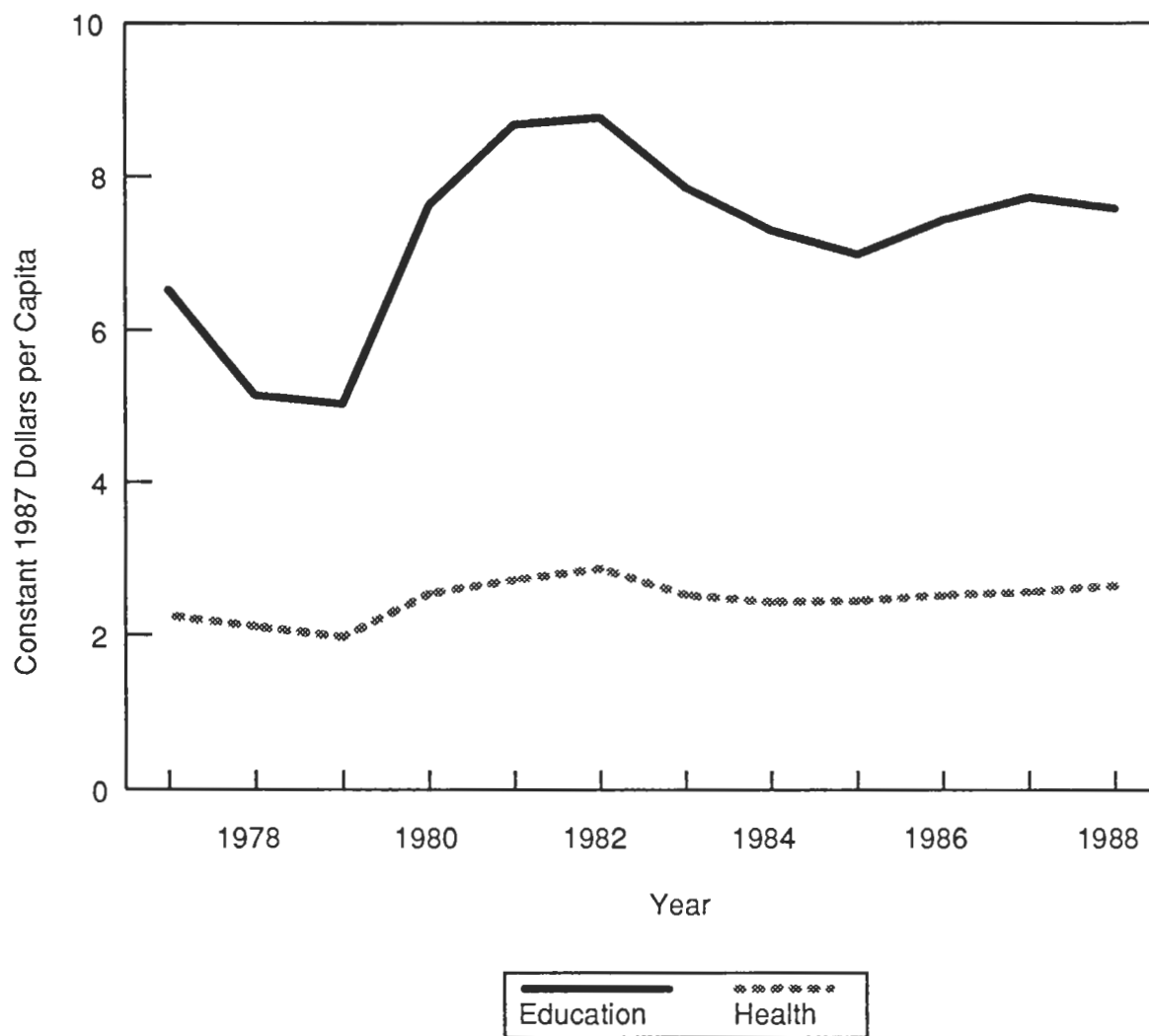
Social Services

There are good arguments in favor of public expenditures on social services, in terms of both equity and economic efficiency. Thus, one of the strongest criticisms voiced of adjustment programs is that they have forced governments to reduce their role as providers of social services, an issue we address here. But, as with overall government expenditures, the gap between the common perception and reality is considerable. On average in Africa, education expenditures experienced a sharp increase early in the 1980s, but unlike total expenditures, they remain well above the levels of the 1970s despite having declined from their peak (Figure 7). Health expenditures, on the other hand, remained much more stable, both during the bubble and during the subsequent stabilization. In neither case, however, have average expenditures on these social services declined to the degree that is commonly presumed. In fact, both health and education expenditures appear to have been protected during the stabilization in the mid-1980s, at least on average.

To consider the variance in countries' experiences, Table 16 shows the percent change in government spending on health and education expressed in constant US dollars per capita, from the period 1975-1977 to 1986-1988. These amounts vary by much more than government spending in general, mostly because the base amounts are so small (often no more than one or two dollars per capita). Nevertheless, the story is similar to that for total spending. A few countries with significant civil conflict (Liberia, Mauritania, Somalia, Sudan, and Uganda) have sharp declines, as do a few other economies that fell apart in the early 1980s (Ghana, Sierra Leone, Zambia, and Zaire). But with the exception of Senegal (for total expenditures net of debt service), the Gambia (in education), and arguably Zambia (in total expenditures and health), the declines are not part of an adjustment program.

²⁹ The same could not be said for larger and wealthier economies like Cameroon, however.

Figure 7 — Social Spending per Capita in Africa



Note: Population weighted average for 22 countries for which data are available.

Sources: Government Finance Statistics Yearbook (1986-1992), Africa Development Indicators (1993)

THE INCIDENCE OF PUBLIC EXPENDITURES

The Incidence of Social Sector Spending

Even though the data on expenditures are more heartening than is generally supposed, at least if one is disposed to view public expenditures as a good thing, this does not necessarily imply that maintenance of those expenditures is a good thing for poor households in Africa. Whether or not public expenditures in general, social services in particular, are good for the poor depends on the "incidence" of those expenditures; that is, who actually benefits from them.³⁰ In general, that is difficult to determine. Many public services—defense, maintenance of law and order, establishing and enforcing the rules of the game in commerce, etc.—do not have easily identifiable beneficiaries. In the area of social services, however, we can augment our use of sectoral budget data with household survey data to examine the use of public services, schools and health facilities. We should note at the outset that this information tells us nothing about the efficiency with which the government provides these services, nor does it consider the quality of service that different households receive. But examining households' reported use of services does give us some indication of who the beneficiaries are and, of course, who would suffer if services were cut.

Consider first the use of public health facilities. To begin, we note that in most African countries, the majority of public expenditures in the health sector go either to hospitals or administration, while much less is dedicated to primary and preventative medicine, services which are more likely to reach the poor (Table 17). Thus, there is no a priori reason to believe that the poor are major beneficiaries of public health expenditures. Tables 18 and 19 confirm this. It shows the number of visits to a public hospital or clinic during the past month, by per capita expenditure quintile for Côte d'Ivoire and Ghana, distinguishing between the urban and rural areas. Overall, use of public hospitals is correlated with household expenditures in both Ghana and Côte d'Ivoire, with the poor being much less likely to benefit from these services.³¹ Much of this correlation is due to the urban bias of hospital services: use is higher for urban than it is for rural residents in every quintile, and the difference between use by lower versus upper quintiles is stronger in rural areas, reflecting the difficulty that poor people in rural areas have in gaining access to hospital care. There is little difference between male and female use in each of these surveys. Use of other public facilities (mostly clinics and maternity facilities) is much more balanced, both within and between urban and rural areas, though these services usually receive a much smaller share of overall health sector budgets. In both countries, use of hospitals and other public services is similar for men and women, indicating little gender bias in

³⁰ More broadly, it also depends on the incidence of the taxes used to finance those expenditures, an issue we address later.

³¹ Dayton and Demery (1994) find similar results for Kenya.

Table 17 — Health Sector Expenditure in Africa*

Country	Health Sector Expenditure Shares	
	Primary	Other ⁵
Angola	6 ¹	94
Burundi	20 ²	80
Chad	19 ³	81
Côte d'Ivoire	34 ²	65
Ghana	23 ²	77
Lesotho	14 ²	86
Madagascar	18 ²	81
Senegal	58 ²	42
Tanzania	31 ^{3,4}	69

¹ Development expenditures only.

² Recurrent expenditures only.

³ Total expenditures.

⁴ Data divided into Hospital (69%), Preventive (6%), and Other (25%).

⁵ Other includes secondary, hospital, and administration.

* Figures are from most recent year that data is available.

Source: Sahn and Bernier (1994)

Table 18 — Côte d'Ivoire: Proportion of the Population Using Health Facilities in the Past Month, by Gender and per Capita Expenditure Quintile

	Quintile				
	1	2	3	4	5
	(Percent)				
Public Hospital					
All	2.8	4.0	5.4	6.9	6.1
Male	2.9	3.8	5.6	6.9	5.9
Female	2.9	4.2	5.3	6.9	6.3
Rural	2.6	2.9	4.3	4.9	8.7
Urban	3.9	6.5	6.9	8.3	5.6
Other Public Facilities					
All	6.5	6.7	7.3	8.2	6.8
Male	6.4	6.7	6.6	7.1	6.3
Female	6.5	6.7	7.9	9.2	7.3
Rural	6.6	7.3	7.8	9.4	7.5
Urban	6.0	5.3	6.6	7.3	6.6
Private Facilities					
All	0.2	1.1	1.1	2.5	3.8
Male	0.2	1.1	1.5	3.0	4.1
Female	0.1	1.0	0.8	2.0	3.6
Rural	0.2	1.1	0.8	1.0	1.1
Urban	0.0	1.0	1.6	3.5	4.4

Source: Côte d'Ivoire Living Standards Survey (1985)

Table 19 — Ghana: Proportion of the Population Using Health Facilities in the Past Month, by Gender and per Capita Expenditure Quintile

	Quintile				
	1	2	3	4	5
	(Percent)				
Public Hospital					
All	2.5	4.6	5.4	6.9	8.4
Male	2.7	4.1	4.9	6.1	7.2
Female	2.2	5.0	5.8	7.6	9.9
Rural	1.9	3.9	3.8	5.9	6.4
Urban	4.9	6.2	8.0	8.0	9.4
Other Public Facilities					
All	2.5	3.6	4.4	5.8	3.3
Male	2.3	3.1	4.1	5.8	2.9
Female	2.7	4.1	4.6	5.9	3.6
Rural	2.6	3.6	5.4	6.6	4.0
Urban	2.3	3.8	2.7	5.0	2.9
Private Facilities					
All	3.8	5.5	5.7	7.6	11.3
Male	3.8	6.2	5.5	6.9	10.6
Female	3.9	4.8	5.8	8.2	12.2
Rural	3.7	5.1	5.8	7.2	9.4
Urban	4.5	6.3	5.4	7.9	12.2

Source: Ghana Living Standards Survey (1987)

the provision of these services. Finally, we note that wealthy people (usually the top quintile) use private health care more intensively than the poor, probably because of the inferior quality of public services. This fact does not imply, however, that only poor people use public health services. Rather, public hospital care is not well-targeted to the poor. Similar data for Maputo and Conakry using only the *urban* expenditure distribution (owing to the absence of a national data set), show that the poor use public health facilities less than the non-poor though the differences are not large for Maputo (Table 20). Overall, the limited use of all services reflects the scarcity of health care in these cities.

Turning our attention to public education, the data are more encouraging than in the health sector. On average about half of the education budget goes to primary schools (Table 21), which are more likely to benefit the poor. On a per pupil basis, however, there is an extraordinary bias in favor of secondary and especially university students. For the 22 countries with available data, per pupil expenditures for secondary students average almost 5 times as much as those for primary students. For University students, per pupil expenditures are 50 times those for primary students.

Based on household surveys, Tables 22 through 25 give the results for the use of public schools, by level, for eligible children.³² Use of public primary schools is fairly evenly spread across the expenditure quintiles in the national samples for Côte d'Ivoire and Ghana, and even favors poorer households in Ghana (because the upper quintiles use private schools). But for secondary and post-secondary schools it becomes less likely that a child from a poor household will in fact attend school (public or private).³³ Note that this is inversely correlated with the per pupil expenditures discussed earlier.

There is a marked difference in enrollment rates for boys and girls. The gender bias occurs in all levels of schooling in both countries. In Côte d'Ivoire, the bias is consistent across all expenditure quintiles, while it is somewhat stronger for poor households in Ghana. In addition, the differences between boys' and girls' attendance is generally greater at higher levels of education than for primary school. Distinctions between urban and rural areas are less pronounced in the case of school attendance than they are for health care. With the exception of post-secondary education, use of schools is comparable between regions in the two countries, though this does not account for differences in school quality. The evidence for Conakry and Maputo (Table 24 and Table 25) shows a stronger bias against the poor than the comparable data for Accra and urban Ghana at the primary school level while the secondary data are

³² Some results do not include post-secondary education because of the very small sample sizes in each survey. In addition, we note that the samples for Abidjan and Accra are small, which give rise to a more erratic pattern than in the other samples.

³³ Demery and Verghis (1994) find similar patterns for Kenya.

Table 20 — Proportion of the Population using Health Facilities in this Past Month, by Gender for Conakry and Maputo

		Quintile				
		1	2	3	4	5
(Percent)						
Conakry						
Public Hospital						
All		1.8	2.4	2.9	3.5	4.4
Male		2.0	2.5	2.9	3.4	3.6
Female		1.7	2.3	3.0	3.6	5.3
Other Public Facility						
All		2.6	3.0	3.1	3.1	4.6
Male		2.8	2.6	2.8	3.0	4.5
Female		2.4	3.3	3.5	3.2	4.7
Private						
All		0.5	0.9	0.6	0.9	1.7
Male		0.6	0.9	0.6	1.1	1.9
Female		0.3	1.0	0.7	0.6	1.5
Maputo						
Public Hospital						
All		3.7	3.6	3.6	6.0	4.6
Male		4.0	3.1	3.5	6.2	4.6
Female		3.4	4.0	3.6	5.7	4.7
Other Public Facility						
All		1.4	2.3	2.9	2.2	2.3
Male		1.3	2.1	2.7	1.9	3.7
Female		1.5	2.5	3.1	2.5	0.9
Private						
All		2.4	2.2	2.4	2.4	3.2
Male		2.0	2.3	1.8	2.0	2.8
Female		2.8	2.2	3.1	2.8	3.5

Sources: Maputo Food Security Survey (1992), Conakry Household Welfare Survey (1990)

Table 21 —Education Sector Expenditure in Africa^a

Country	Education Sector Expenditure Shares			Per Pupil Education Expenditures		
	Primary	Secondary	University	Primary	Secondary	University
	(Percent)			{Indices (Primary=100)}		
Benin	54	27	18	100	252	1,988
Burkina Faso	46	24	29			
Cameroon	42	25	33	100		
Central African Republic	54	25	21		212	1,677
Chad	68	29	3	100		
Côte d'Ivoire	52	33	15		306	1,794
Gambia	49	39	12	100	230	
Ghana	86 ¹	—	14			4,120
Guinea	36	32	32	100	306	4,362
Kenya	49	25	25	100	578	
Madagascar	72 ¹	—	28			
Malawi	45	18	37			
Mozambique	37	43	20	100	628	9,344
Nigeria	81 ¹	—	19	100	337	6,017
Senegal	48	26	25	100	210	1,867
Tanzania	56	16	27			
Togo	38	34	27	100	325	3,370
Zambia	45	31	24	100	608	11,985
Zimbabwe	55	30	14			
Average	48 ²	29	22			

¹ Primary and secondary combined.

² Average excludes Ghana, Madagascar, and Nigeria.

* Figures are from most recent year that data is available.

Source: Sahn and Bernier (1994)

Table 22 —Ghana: Proportion of Eligible Persons Attending Public and Private School, by Gender, Rural and Urban, and per Capita Expenditure Quintile

	Quintile				
	1	2	3	4	5
	(Percent)				
All					
Public Schools					
Primary	50.7	53.5	54.3	53.5	42.3
Middle	29.4	34.1	32.3	35.4	33.7
Secondary	8.0	8.8	12.4	11.3	14.2
Post-Secondary	1.1	2.1	2.3	2.4	3.1
Private Schools					
Primary	6.6	8.2	8.9	10.2	23.8
Middle	1.2	1.9	2.3	1.6	6.6
Secondary	1.2	0.9	0.7	2.2	2.4
Male					
Public Schools					
Primary	57.5	58.4	56.7	58.6	48.1
Middle	36.8	37.7	33.3	43.5	40.7
Secondary	10.4	15.0	19.1	16.0	21.1
Post-Secondary	1.4	2.8	3.3	3.6	1.9
Private Schools					
Primary	7.6	8.8	9.4	10.0	20.4
Middle	1.1	2.2	3.3	1.9	6.2
Secondary	1.6	0.0	0.5	5.5	1.8
Female					
Public Schools					
Primary	43.2	48.0	51.6	48.8	37.9
Middle	20.7	30.1	31.0	29.2	27.1
Secondary	5.4	2.6	6.5	7.3	6.8
Post-Secondary	0.8	1.6	1.6	1.5	4.4
Private Schools					
Primary	5.5	7.6	8.4	10.4	26.4
Middle	1.3	1.4	1.0	3.0	7.1
Secondary	0.8	1.7	0.9	2.1	2.9
Rural					
Public Schools					
Primary	47.9	53.3	54.1	54.8	55.4
Middle	28.7	31.4	29.6	29.0	20.4
Secondary	8.7	8.8	12.1	7.1	9.2
Post-Secondary	0.8	0.3	1.8	1.0	0.0
Private Schools					
Primary	5.8	5.0	4.8	6.0	2.7
Middle	1.3	1.7	0.7	1.6	2.0
Secondary	1.0	0.6	0.4	2.7	0.0
Urban					
Public Schools					
Primary	60.3	54.0	54.5	52.1	36.8
Middle	31.8	40.4	36.9	42.4	39.3
Secondary	5.2	8.6	12.7	15.8	16.9
Post-Secondary	2.6	6.3	3.3	4.0	4.7
Private Schools					
Primary	9.5	16.4	15.4	14.6	32.8
Middle	0.7	2.2	5.0	3.5	8.5
Secondary	2.1	1.4	1.3	4.7	3.7

Source: Ghana Living Standards Survey (1987)

Table 23 — Côte d'Ivoire: Proportion of Eligible Persons Attending Public and Private School, by Gender, Rural and Urban, and per Capita Expenditure Quintile

	Quintile				
	1	2	3	4	5
	(Percent)				
All					
Public Schools					
Primary	36.0	44.2	49.3	45.9	41.6
Secondary	15.3	14.2	17.4	17.9	17.2
Post-Secondary	0.3	1.2	1.0	2.1	3.3
Private Schools					
Primary	2.4	3.7	6.4	9.6	18.9
Secondary	1.8	3.9	4.9	8.9	11.4
Male					
Public Schools					
Primary	42.5	49.3	55.8	50.8	43.8
Secondary	20.7	24.1	31.3	26.2	28.4
Post-Secondary	0.7	2.7	1.2	3.3	3.5
Private Schools					
Primary	3.0	3.9	8.2	11.6	22.2
Secondary	2.6	4.9	8.1	9.1	15.6
Female					
Public Schools					
Primary	28.5	39.4	43.1	40.8	39.8
Secondary	8.9	6.3	7.6	12.0	10.7
Post-Secondary	0.0	0.0	0.9	1.0	3.1
Private Schools					
Primary	1.7	3.4	4.7	7.5	16.2
Secondary	0.9	3.0	2.7	5.3	9.0
Rural					
Public Schools					
Primary	35.4	44.8	45.2	53.6	52.6
Secondary	13.7	13.1	18.7	15.8	6.3
Post-Secondary	0.4	0.8	0.5	0.7	0.0
Private Schools					
Primary	1.1	2.0	2.8	3.1	0.0
Secondary	1.2	2.2	2.4	7.2	2.1
Urban					
Public Schools					
Primary	38.9	42.6	54.3	41.2	39.3
Secondary	21.4	15.4	16.5	18.7	18.3
Post-Secondary	0.0	1.9	1.6	3.0	3.8
Private Schools					
Primary	8.7	8.1	10.8	13.5	22.8
Secondary	4.1	5.8	6.6	6.8	12.1

Source: Côte d'Ivoire Living Standards Survey (1985)

Table 24 — Conakry: Proportion of Eligible Persons Attending Public and Private School, by Gender and by per Capita Expenditure Quintile

	Quintile				
	1	2	3	4	5
	(Percent)				
All					
Public Schools					
Primary	59.4	57.9	64.9	67.6	65.0
Secondary	35.7	36.4	43.9	49.4	43.2
Post-Secondary	3.5	3.7	3.0	3.9	4.1
Private Schools					
Primary	3.2	8.2	7.5	5.9	13.6
Secondary	0.9	0.6	0.5	1.5	3.5
Male					
Public Schools					
Primary	67.6	67.0	73.0	80.4	71.3
Secondary	52.4	53.1	57.3	64.7	63.7
Post-Secondary	6.3	7.5	5.5	9.8	10.3
Private Schools					
Primary	3.8	7.3	9.5	5.9	18.1
Secondary	1.7	1.3	0.5	2.0	4.4
Female					
Public Schools					
Primary	49.8	47.3	57.0	54.5	60.0
Secondary	16.1	20.7	29.7	37.5	29.7
Post-Secondary	0.5	0.6	1.3	0.0	0.0
Private Schools					
Primary	2.6	9.3	5.6	6.0	10.0
Secondary	0.0	0.0	0.5	1.0	2.9

Source: Conakry Household Welfare Survey (1990)

Table 25 — Maputo: Proportion of Eligible Persons Attending All Schools, by Gender and by per Capita Expenditure Quintile

		Quintile				
		1	2	3	4	5
		(Percent)				
All	Primary	60.6	65.9	73.6	70.7	83.7
	Secondary	21.5	26.1	31.4	40.8	57.0
	Post-Secondary	1.6	0.4	3.4	6.5	—
Male	Primary	61.2	65.6	75.5	68.3	80.0
	Secondary	24.5	27.2	30.3	44.5	51.7
	Post-Secondary	3.3	0.9	4.0	9.6	23.6
Female	Primary	59.9	66.3	71.4	73.0	86.7
	Secondary	18.5	25.1	32.4	37.6	61.2
	Post-Secondary	0.6	0.0	2.9	4.1	12.3

Source: Maputo Food Security Survey (1992)

quite similar. The gender bias is particularly strong in Guinea, especially for non-primary education, but notably absent in Maputo (except for post-secondary education).

The broad conclusion from this analysis is that government spending on social services is not well-targeted to the poor and not well targeted to improve enrollment rates of girls. Ideally, public expenditures, especially on social services, should disproportionately benefit the poor, yet there are very few instances where poor households benefit substantially more than the middle class from public services. At best, a few public services, especially primary education and non-hospital health services, benefit the poor about as much as middle and upper classes, but those are precisely the areas that get short shrift in the allocation of education and health sector budgets. Second, with the exception of expenditures for primary education and non-hospital health services, if public budgets for social services were to be cut, the impact would fall more on the middle class and the wealthy than the poor. This is not to say that the poor would not be hurt — some poor households do in fact benefit from these services — but the poor's losses would be less than the remainder of the population.

While the above figures are for the most recent year that data were available, generally in the latter part of the 1980s, an equally important question is how these patterns have evolved during the past decade, particularly in adjusting countries. Unfortunately, household survey data are not available over time to examine this issue. However, budget data over time can be examined. Our review of the evidence on the evolution of intrasectoral allocation of expenditures shows no trends in spending patterns across countries with adjustment programs, whether it be in education or health. Indeed, some countries witnessed marginal reallocations toward primary services, but conversely, others showed the opposite, leading to the conclusion that as of the early 1990s, the process of structural adjustment had yet to contribute in a meaningful way to improved technical efficiency, or equity of social sector spending in Africa (Sahn and Bernier 1993).

Likewise, other problems beyond the mix of services provided, such as the disproportionate share of budgets allocated to wages and salaries, particularly of administrative workers, or the tendency to overemphasize development expenditures (e.g., buildings that involve new and lucrative construction contracts) at the expense of recurrent ones (e.g., maintenance, supplies) all reduce the technical efficiency of social service expenditures. These tendencies come as no great surprise, and are consistent with the theme throughout this paper of the politically powerful capturing rents associated with both economic distortions in particular, and public sector activities in general. In addition, the patterns observed imply that the poor would benefit much more from a reallocation of public expenditures to improve the quality and quantity of services that they are more likely to use than from an overall increase in health or education budgets allocated in current proportions.

The challenge therefore is to go beyond the small consolation that structural adjustment has not had an adverse impact on health sector

expenditures, to consider how public sector resources are used and how allocative efficiency can be increased. Toward that end we see three general areas, inextricably intertwined, in need of consideration: decentralizing the delivery of services and shifting decisionmaking to either the local level or the private sector, encouraging participation of disadvantaged groups, especially females; designing equitable systems for cost recovery; and addressing the underlying weaknesses in public administration, including training, improvements in organizational structure, and increased accountability, particularly in the areas of financial management.

Regarding the area of decentralization, few would dispute that in theory such an approach is commendable, particularly to increase accountability to the population supposedly being served. On the other hand, problems ranging from loss of economies of scale, to loss of national standards (and identity, which is often crucial to fractious African nations where the state's role in setting the curriculum may be paramount), need to be reconciled. Nevertheless, overcentralization has resulted in myriad problems, ranging from starving regional health care providers to the stifling of locally-based alternatives to centralized management, including those that involve private sector initiatives. In fact, in those cases where decentralization has been tried, particularly in the case of health care, improvements in the management and technical efficiency of services have been noted.

Part of efforts to decentralize and further locally-based alternatives to centralized management has been adopting the concept of community financing. This is embodied in the ideas behind the Bamako Initiative, launched in 1988 by WHO and UNICEF, to "revitalize the public sector health care delivery system by strengthening district management [and] capturing some of the resources the people themselves are spending on health" (UNICEF 1992). One controversial issue that is related to this concept, however, is that of user fees. Cost recovery as a means of expanding the financial resources of the social sectors has been legitimately criticized. These criticisms range from the arguments that instead of worrying about user fees it is better simply to reallocate defense expenditures to social services. Likewise, there is legitimate concern over the high administrative costs of collecting fees for services, particularly in light of the fact that a mechanism needs to be found to target subsidies to those unable to pay for a basic package of services. Furthermore, there are no assurances that cost-recovery will be used to finance expanded services. Instead, politics may result in revenues being shunted off for other purposes, or supply bottlenecks, such as the number of trained teachers, may prevent expansion of services.

Despite these legitimate concerns, a few realities must be confronted. First, is that the practice of across the board subsidies is, in absolute terms, transferring more resources to the non-poor than poor. This is largely an artifact of the greater costs associated with secondary and tertiary services utilized disproportionately by the non-poor. Second, the latitude for intersectoral shifts is constrained by a whole set of other political economy considerations, that may in fact be less amenable to change than how the health or education ministry run their business. Third, is that in addition to equity

arguments for targeting, there are likely efficiency arguments, such as externalities being greater for primary education and preventative health care. While these and other arguments have been articulated elsewhere, there is some emerging evidence that supports raising prices in the social sector for certain households and/or services (see, for example, the review by Jimenez 1994), and more specifically, that intrasectoral shifts, as mediated through applying user fees for hospital care and higher education will not only be highly progressive, but also provide financial resources to greatly expand primary services (Demery and Verghis 1994; Dayton and Demery 1986). Nonetheless, much more careful examination needs to be performed to both determine the appropriate means and mechanisms for efforts at cost recovery, and thereafter the appropriate nature of government expenditures to promote equity and efficiency goals in the social services.

Likewise, a recent study by Litvach (1992) shows that although user fees increased the cost of health care services in Cameroon, the poor benefitted as a consequence of greatly improved quality of services, which in fact saved them money by reducing dependence on less effective sources of care.

Finally, at the heart of both the successful decentralization and pricing of services is the issue of personnel management and administration. Reform in these areas is clearly required. Most important is to clarify channels of authority and accountability, especially of finances, addressing the often chaotic and inefficient organizational structure, and provide appropriate incentive structures. Decentralization and community control over financial resources will go a long way toward that objective. However, the role of the state in fashioning appropriate organizational reform and management development remains.

The Incidence of Public Employment

By attempting to do too much in too many arenas, the government often accomplishes very little in each. Yet it is recognized that any attempt to reduce the size of the public sector involves the politically and socially difficult question of retrenchment. Here, too, the concerns are often expressed in terms of the impact on poor households and the potential for impoverishing a large and politically influential segment of the working population by laying them off. But the fact that in most African economies a significant proportion of government expenditures do not produce any useful services receives much less concern. This includes wages and salaries for public sector workers who, while officially holding a civil service job, do not actually do anything productive. This phenomenon is widespread in Africa (see, e.g., the recent volume edited by Lindauer and Nunberg forthcoming). These expenditures, while technically pertaining to the various ministries and state run enterprises, are actually no more than transfer payments. As such, there are no beneficiaries other than the workers who receive the salaries. As in the case of social services, household survey data can shed light on who benefits from these wage payments by identifying households which include public sector employees and the earnings they receive from those jobs.

Tables 5, 6 and 7 show that in all four surveys, households in the lower expenditure quintiles are less likely to benefit from public employment than those in the middle and upper expenditure quintiles. Table 7 also shows that women, in general, are less likely to benefit from public employment than men. While these results hold in general, it is most striking for the national samples in Ghana and Côte d'Ivoire. As in the social services, the urban bias of public expenditures on wages is clear. These results suggest two general conclusions. First, to the extent that public sector salaries are no more than transfer payments, they are unusually generous: sufficient to ensure that their recipients are better off than the population in general. That is, expenditures on public sector salaries are regressive. Second, to the extent that the government undertakes a retrenchment program, the affected workers will probably not be among the poorest households in the country.³⁴ Of course, it is entirely possible that after losing a public sector job, a laid-off employee and his or her family will become poor because they cannot find other, equally remunerative work. To investigate that possibility, we now turn to survey results for retrenched public sector workers in Ghana and in Conakry, Guinea.

PUBLIC SECTOR RETRENCHMENT PROGRAMS

Despite the widespread recognition of the severe fiscal problems that overstaffing imposes on African economies, governments have been reluctant to retrench public sector employees. In the few countries that have initiated such programs, implementation has been spotty, and governments have faced political opposition to retrenchment. Public sector employees often succeeded in either stifling the layoffs or extracting lucrative end-of-service benefits which make extensive layoffs too costly to pursue (Kingsbury 1992 and Karp-Toledo 1991). Further, the fiscal gains of retrenchment are easily reversed by renewed hiring after the program is underway. Mills and Sahn (1993) estimate that about half of the staff reductions in Guinea were offset by hiring of new civil servants, while the comparable figure in Ghana was one-quarter (de Merode 1992). Finally, there is a significant amount of concern among governments and donors alike over the social consequences of retrenchment, especially for poor households.

³⁴ It is often argued that generous public sector wage payments find their way to the poor, rural households via remittances. Data on remittances from Ghana, however, suggest that this is of minor importance. Remittance receipts from any source (including abroad) make up about 5 percent of the poor's income.

Labor Market Experience and Welfare of Retrenched Public Workers

While there are a variety of interesting and important questions about the impact of mandatory layoffs in the public sector, the three most pressing concerns for policy makers and international observers interested in the welfare of African economies are:

- (1) Will former public sector employees find new jobs, and if so, how quickly?
- (2) If these employees do succeed in finding new work, how will their new earnings compare with those of the public sector? and
- (3) Will former public sector workers, whether employed or not, fall into poverty as a result of having been retrenched?

To address these and other questions, we have undertaken two household-level surveys of the families of former public sector employees, one in Conakry (in conjunction with our larger household welfare survey) and a second in Ghana.³⁵

In response to the first question, Table 26 shows that the labor market experiences of the retrenched workers in the two economies were quite different. In Guinea, the median spell of unemployment before finding a first post-retrenchment job was approximately two years, and a significant number of former public sector employees had not found work at the time of the survey several years after their retrenchment. In Ghana, on the other hand, reabsorption into the labor market was rapid, with half of all retrenched civil servants finding work within one month, and 80 percent within a year after being laid off. In part, this difference reflects differing degrees of "moonlighting" while in the public sector. In Ghana, about half of the retrenched civil servants held a second job while they were in the civil service, almost always in the informal sector or agriculture. Virtually all of these employees continued to work at that second job after being laid off, and on average, they increased the hours per week dedicated to it from 16 to 39. This group, then, had an easy means of shifting employment with little loss of time. But even for the remaining workers, the transition has been much smoother than in Guinea. While an explanation for this difference goes beyond what these surveys can answer, we suspect that the different structure of the labor markets in the two countries explains some of it. In Ghana, despite the statist tendencies of economic policy in the 1960s and 1970s, there remained an active and important informal sector; while in Guinea, the Sekou-Touré regime worked hard to stamp out that sector, apparently with success. Given that the public sector accounts for a great deal of formal sector employment, formal sector jobs are relatively

³⁵ See Mills and Sahn (1993) for a general description of the Conakry survey and an overview of its results. See Alderman, Canagarajah, and Younger (1993) for the same information for the Ghana survey.

Table 26 — Spells Without Work for Redeployees in Ghana and Guinea

Country	Months Not Working After Redeployment				
	< 1	1-12	13-24	25-48	>48
Ghana					
All	67	19	7	6	1
Female	41	37	11	10	2
Male	63	26	5	5	1
Median					
Guinea ¹					
All	25	8	9	12	46
24					

¹ Similar gender disaggregation is not reported for Guinea due to the small number of women who are redeployees.

Sources: Alderman, Canagarajah, and Younger (1993), Mills and Sahn (1993)

scarce at a time when the public sector is retrenching workers. Former public sector employees must turn to other employment opportunities, and there are probably many more of these in Ghana than Guinea. In fact, 80 percent of working redeployees in Ghana are engaged either in self-employment activities or farming, while for Conakry only 35 percent of working redeployees are self-employed.

There are important differences between the labor market transitions of men and women in both countries. In general, men are much more likely than women to find new wage employment. In fact, it is interesting to note that in Conakry, retrenched women generally enter new work more quickly than men. Yet Mills (1994) shows that this is the logical result of discrimination against women in the formal wage sector. Because women know that their probability of employment in that sector is low, they more readily accept less remunerative work in the informal sector, where entry is not as difficult. Men, on the other hand, have a stronger incentive to shun informal employment, hoping to find a formal sector job.

In Ghana, the transitions of men were somewhat easier than those for women, but this is entirely due to the fact that more men than women were moonlighting while in the civil service. After controlling for moonlighting, gender has no effect on the probability of employment after retrenchment (Alderman, Canagarajah, and Younger 1994). It is true, however, that women in Ghana are less likely to be in wage employment, as in Conakry.

Cumulating the transitions to employment from the time of retrenchment to the time of the survey, we find that the rapid acquisition of new work in Ghana gives redeployees a degree of labor force participation which is virtually identical to the general population³⁶ with 89 percent employed and only 3 percent unemployed in the technical sense that they are actively seeking but have not found work (Table 27). In Guinea, only 60 percent of redeployees are working at the time of the survey, but this is not very different from the general population, where only 64 percent are currently employed. The unemployment rate for redeployees, however, is more than double that of the general population.

Turning to our second question, the results in Ghana and Guinea are almost exactly the reverse. Table 28 shows that total earnings of former civil servants now employed in the informal sector (the vast majority) declined by 40 percent between the time of their retrenchment and the survey date, while those in the formal sector (less than 20 percent of all redeployees) have remained constant. In Conakry, on the other hand, earnings of retrenched workers who are now self-employed are about the same as they were before being laid off, while those of former public sector workers who found other work in the formal sector have actually increased in real terms. This latter result, which seems counter-intuitive, is probably due to the fact that real wages in general have been rising in Guinea since the time of the retrenchments, which occurred just

³⁶ For each survey, we compare redeployees to the general population older than the youngest redeployee, which is 21 for Ghana and 30 for Guinea.

Table 27 — Labor Force Status of Retrenched Public Sector Workers

	Ghana		Conakry	
	Redeployees	General Population >21	Redeployees	General Population >30
Working	83	89	60	64
Inactive	14	8	24	29
Unemployed	3	3	16	7
Sector of Employment for Those Working				
Wage		21		65
Self-Employment		39		36
Agriculture		39		—

Sources: Mills and Sahn (1993), Alderman, Canagarajah, and Younger (1993)

Table 28 — Change in Monthly Earnings for Working Redeployees in Ghana and Guinea

Country	Sector	Average Change in Earnings
Ghana	Formal	-1%
	Informal	-41%
Guinea	Wage	18%
	Self-Employment	2%

Sources: Alderman, Canagarajah, and Younger (1993), Mills and Sahn (1993)

after the Guinean economy had "bottomed out" at the end of the Sekou-Touré regime. In fact, public sector wages have increased by up to 100 percent in the intervening years (depending on the year of retrenchment), indicating that laid-off workers in Guinea have also suffered, at least relative to their peers who remain in the public sector.³⁷ In Ghana, on the other hand, retrenchments, which began in 1987, did not take place until well after the economic recovery began in 1983. Thus, the general increase in wages has been less marked since the layoffs than in Guinea.

The sharp decline in earnings is alarming in Ghana. To explore the issue further, we have estimated earnings functions for retrenched workers, both before and after their retrenchment (Younger, Canagarajah, and Alderman 1994). We find that the returns to human capital variables, including education, work experience, age, and household characteristics, are statistically indistinguishable across the two functions. That is, the decline in earnings is not due to lower rates of return to human capital after retrenchment than before. Instead, the difference is a discrete downward shift in the earnings function unrelated to human capital. This decline probably reflects the loss of a rent associated with civil service employment: earnings of civil servants are above the market.

Earnings for working female redeployees in Ghana are lower than those for men. This difference is due entirely to the selection process which sorts men into wage labor jobs and women into self-employment. Within any sector of the labor market (wage labor, self-employment, and farming), women's earnings are comparable to men's after controlling for human capital and household composition. Yet, because wage workers generally earn more than non-wage workers, women's overall earnings are lower. In Guinea, on the other hand, self-employed women earn significantly less than self-employed men (Mills and Sahn 1993), though the few women employed in the wage sector do have earnings comparable to men.

Given the fact that former public sector workers in Guinea have had difficulty finding new work, and that former civil servants in Ghana have significantly lower earnings, there are good reasons to be concerned about the poverty implications of retrenchment. In particular, has retrenchment created a new class of poor? Consider first the case of Ghana. Table 29 shows the proportion of retrenched workers' households in each per capita income quintile for the GLSS household survey. Redeployees' households would be similar to Ghanaian households in general if the distribution were 20 percent per quintile. Before retrenchment, it was highly unlikely that a redeployees' household was in the lowest quintile, while more than a proportionate share were in the second and third quintiles. This is consistent with the fact that households with public

³⁷ These figures do not account for the significant increase in education levels of public sector workers during the same period, in part because retrenched workers were not as educated as those who stayed, and in part because new hires have had more education. See Mills, Sahn, Walden, and Younger (1994).

Table 29 — Distribution of Redeployees' Households in Per Capita Income Quintiles for the General Population

	Quintile				
	1	2	3	4	5
	(Percent of Households)				
Ghana per Capita Income					
Before Redeployment	4	28	26	21	20
Current	20	26	23	16	14
Conakry per Capita Expenditure					
Current Civil Servants	15	18	18	26	23
Current Redeployees	26	23	18	16	17

Sources: Mills and Sahn (1993), Alderman, Canagarajah, and Younger (1993)

sector employees tend to be better off than the general population in Ghana, as in the other countries we have studied. This is true even though the redeployees came, for the most part, from the lower echelons of the civil service. After retrenchment, the situation is worse, as one would expect given the decline in redeployees' earnings. At the time of the survey, 20 percent of redeployees' households were in the lowest quintile, and a more than proportionate share are found in the second and third quintiles. Thus, relative poverty clearly increased among these households. Nevertheless, the distribution of retrenched workers' households is not significantly different from that of the general population, indicating that poverty, while increasing for this particular group, is not much worse for them than it is for the Ghanaian population in general.

In Conakry, the survey does not allow us to compare incomes before and after retrenchment, although we can compare the per capita expenditures (a better measure of welfare) of retrenched workers' households with those of public sector employees who still hold their job (Table 29). These results show that retrenched workers' households are overrepresented in the lower two quintiles, while current civil servants are about equally as likely to be in the upper two quintiles. Nevertheless, the difference does not account for differences in skill levels between present and former public sector workers. In fact, a regression of household expenditures on households' human capital and composition for the entire Conakry sample shows that, once these other characteristics are accounted for, the fact of having a household member who was retrenched does not reduce household welfare relative to the general population. In this case, it is also important to recall that the survey is for Conakry only, where households are likely to be better off than in rural areas. Thus, while retrenched workers' households may be slightly poorer than the population of Conakry, they are probably not worse off than Guineans in general.

Implications for Employment Policy

The most common concern about public sector retrenchment programs is not that some public service will be reduced as a result of the layoffs. Virtually everyone understands the gravity of overstaffing in Africa. Rather, the concern is that the social costs for the affected workers will be too great to justify the benefits to the government budget. What does our research in Ghana and Guinea indicate in this regard? And what are the implications for other governments contemplating such a policy?

In both cases, it is clear that household welfare has declined after retrenchment and that there are more poor households among laid off workers than there were prior to retrenchment. In this sense, they are a "vulnerable" group. Nevertheless, it does not appear that poverty is extraordinarily severe among retrenched workers' households in either country, and most retrenched workers' households are not poor, at least relative to other households in the same country. Thus, while recognizing the significant losses that many families incurred in Ghana and Guinea, we should also recognize that these losses were suffered from an initial position that was somewhat privileged relative to the

population in general. Further, the data presented in Section 2 on the relative welfare of households with public employees in Maputo and in Côte d'Ivoire suggest that in those countries as well, public sector workers are better off than the population in general.

On these grounds, we are tempted to conclude that there is little reason to target retrenched workers as an especially disadvantaged segment of the population (as did, for example, the PAMSCAD program in Ghana). Some of these workers are poor, and more so than before being laid off, but they are no poorer, on average, than their neighbors. Nevertheless, we must also recognize that this group will suffer peculiar, if temporary, costs associated with finding new work, and it is entirely appropriate to mitigate these costs. Further, to the extent that a protracted spell of unemployment represents a broader cost in terms of the waste of a country's human resources, attempting to minimize the spell is an appropriate public policy.

Unfortunately, programs directed at this problem have a poor track record in Africa. (See Mills, et al. 1994) To begin, administrative capacity is, almost by definition, weak in governments that require massive retrenchment. Thus, for example, the programs to retrain and retool redeployed workers in Ghana required almost four years to get off the ground. Further, the irony of creating a new bureaucracy (the Ministry of Mobilization in Ghana, the *Bureau d'aide à la reconversion des agents de la fonction publique* [BARAF] in Guinea) to reduce the existing one is difficult to miss. Finally, while special loan programs to help retrenched workers start their own businesses are popular, their performance is poor. First, loan repayment rates are usually abysmal: the "loans" end up as grants. This is true of the BARAF in Guinea and several other loan programs. (See Mills, et al. 1994; Kingsbury 1992; and Karp-Toledo 1991.) Second, the distribution of loans/grants tends to be more biased towards the better-off public sector employees, so that their inclusion makes the overall severance package more regressive.

The one policy to aid laid off workers that appears to work well and have low administrative costs is severance pay in cash. Any country that has a centralized, computerized payroll (which it should have before starting a retrenchment program; otherwise, it is too easy to undercut the program with massive rehiring) can easily make severance payments. Further, by making severance pay more generous for those with low public sector salaries—the most likely to become poor—this policy can address concerns for the poorest workers with low administrative costs. Finally, we note that in Ghana, where severance was paid lump-sum, a significant amount of severance pay went to savings, particularly for those who are currently self-employed. In Guinea, on the other hand, severance payments were strung out over an extended period, and much less was invested. Given that most small businesses (potential and extant) are likely to be credit-constrained in Africa, having access to a large amount of cash can be very helpful in starting or expanding an enterprise.

One other aspect of redeployees' labor history should be noted: the transition to new work was especially easy for redeployees who already held a

second job while working in the public sector. To the extent that programs can be designed to target this group for layoff, the social costs of unemployment can be minimized. For example, announcing that a full eight hour work day will be required may encourage "daylighting" workers with good opportunities outside the public sector to volunteer for retrenchment if there is some incentive (severance pay) to do so.

To summarize, in Ghana and Guinea, retrenched workers are not especially poor as a group even after losing their jobs. In that sense, they do not seem either more or less deserving of special anti-poverty programs than the population at large. Laid off workers do, however, face unusual costs in having to search for new work, and some amount of severance pay is appropriate to compensate these costs. Beyond that, other programs to assist retrenched workers have not done well. Administrative constraints are a problem, and special loan programs often end up transferring a significant amount of resources to the better-off workers. We believe, then, that it is better to stick to pure severance programs, adjusting the amounts of severance pay or the associated formula to accommodate social welfare concerns. In particular, giving extra weight to salaries in the lower echelons seems appropriate.

THE INCIDENCE OF GENERAL PUBLIC EXPENDITURES

We noted in the previous section that apart from users of public services in health and education, and workers who draw public salaries, it is difficult to identify the beneficiaries of many types of government expenditures. For that reason, we cannot hope to identify the overall incidence of all government expenditure through the use of household survey data alone. We do have available a complementary research strategy, however. With general equilibrium models, we can identify the change in real incomes for different households that results from an across-the-board reduction in public expenditures, the sort of fiscal "belt-tightening" that many critics of adjustment programs have argued falls disproportionately on the poor.

What are the general equilibrium effects of government spending on household incomes, and in particular, poor households? Simulations using CGE models for Cameroon, The Gambia, Madagascar and Niger indicate that cuts in government spending affect government workers and the urban population most severely, with little short-term effects on other households (Table 30). A ten percent reduction in real government expenditures reduces demand for skilled labor and thus leads to lower real wage rates for skilled labor, especially in Madagascar and Niger where the government is a major employer of skilled labor. Real incomes of the urban non-poor in Niger fall by 7.7 percent. In Madagascar, where the government workers are among the middle class, (here included under the broad category of urban poor), real incomes of the urban poor decline by 3.1 percent.

Table 30 — General Equilibrium Impacts of a Reduction in Government Spending: Model Simulations

	Cameroon	Gambia	Madagascar	Niger
	Percentage Change ^a			
Real GDP	0.03	-0.38	-0.20	-0.18
Consumption / GDP	-0.09	-0.32	0.00	-1.13
Total investment / GDP	0.85	1.26	0.71	2.23
Government recurrent expenditures / GDP	-0.65	-1.32	-0.92	-1.33
Government revenue / GDP	0.05	0.03	0.32	-0.01
Exports / GDP ^b	0.07	0.16	0.10	0.12
Imports / GDP ^b	0.07	0.16	0.10	0.12
Change in foreign savings / base year exports	0.00	0.00	0.00	0.00
Real exchange rate	0.41	0.29	0.58	0.84
Real wage rates				
Skilled labor	-1.97	-0.36	-8.32	-11.40
Semi-skilled labor	-0.52	0.48	-3.83	—
Unskilled labor	0.16	-0.02	0.64	0.31
Real incomes				
Urban non-poor	0.11	-0.76	0.93	-7.66
Urban poor	-0.78	-0.97	-3.12	-0.96
Rural non-poor	-0.28	0.14	0.04	-0.66
Rural poor	-0.11	0.05	0.56	-0.44
Small farm - export-oriented			0.67	-0.49
Total	-0.16	-0.42	0.00	-1.75

^a Percentage change relative to a base simulation with an adjustable real exchange rate.

^b Exports and imports valued at the base simulation real exchange rate.

Source: Model simulations, Dorosh and Sahn (1994)

For those households not directly employed by the government, however, the biggest effect of the decline in government spending is the potential for increased investment as savings in the economy are freed up. Real investment increases in all four countries, by 0.71 to 2.23 percent of GDP. To the extent that private investments raise output in subsequent years, and that these investments are in labor-intensive activities, the poor stand to gain from the decline in government recurrent expenditures. There is thus a tradeoff, not only between current and future consumption, but also between concentrated benefits for a few workers in the current period and potential widespread, but smaller (on a per capita basis), benefits for the broader population in the future.

THE INCIDENCE OF TAXES AND TAX REFORM

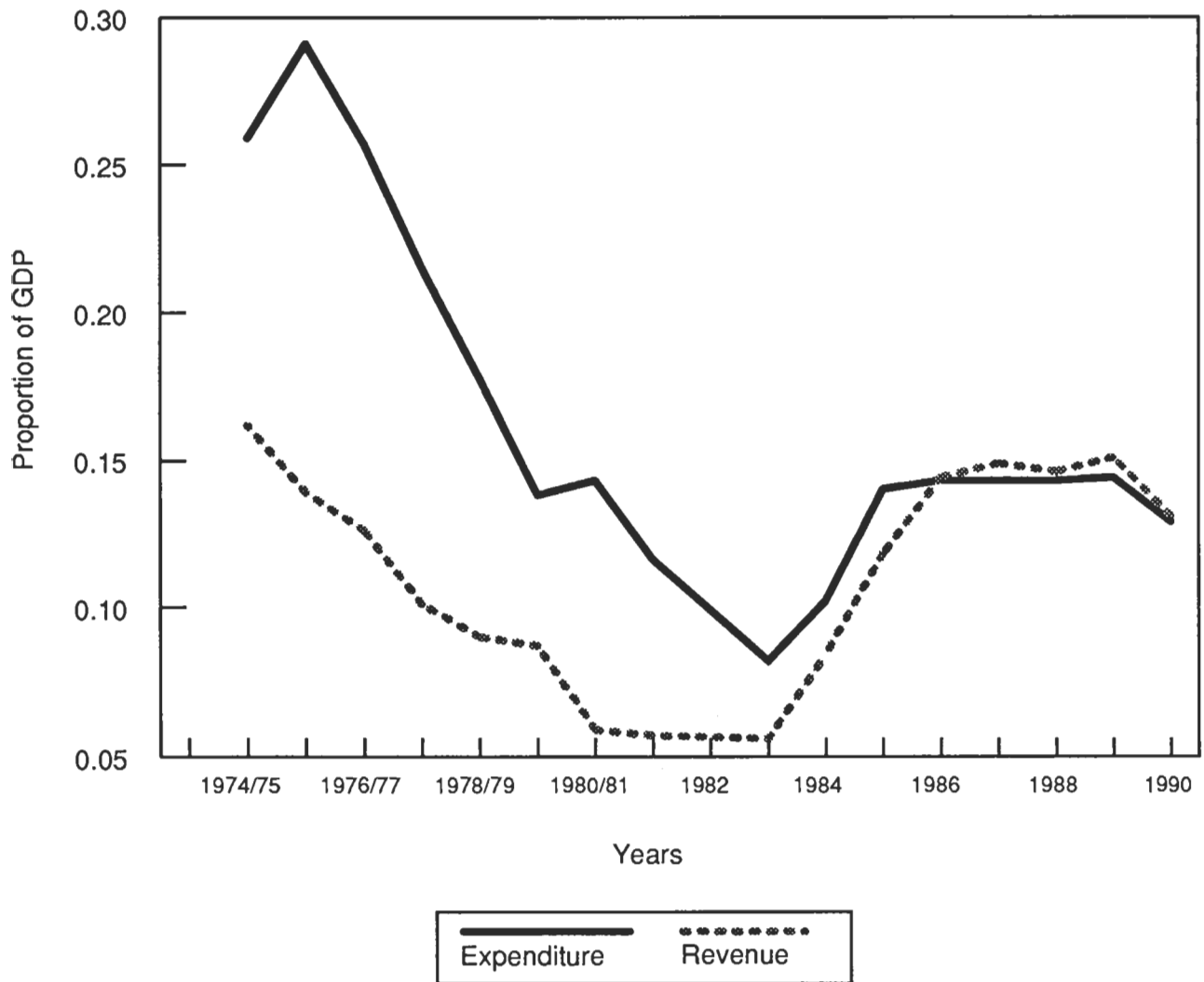
While adjustment policies for public expenditure have received a great deal of attention, and have been subject to a great deal of criticism, changes in tax policy have gone largely unnoticed. Yet in many African countries, the level of public expenditure is not unreasonably high (Figure 6). Rather, the main fiscal problem is a lack of revenue (and a poor allocation of the existing resources). This is particularly true of the economies that suffered serious economic collapse before entering their adjustment programs. The most striking example is Ghana. As Figure 8 shows, tax revenue declined precipitously in the decade before the Economic Recovery Program (ERP) began, and spending was eventually pulled down with it. During the ERP and under the conditionality of the IMF and the World Bank, government spending actually increased quite substantially, as we have seen. Yet the deficit was quickly reduced to zero because of the recovery of tax revenues.

This is a different and relatively unpublicized approach to fiscal stabilization, but it begs the same question as expenditure cuts: who suffers when taxes are raised? To understand this, we examined the incidence of several different taxes that the government of Ghana has used to increase its revenues, as well as some which have declined in importance. Table 31 shows a summary measure of each tax, the "progressivity coefficient" which is essentially the area between a Lorenz curve for household expenditures and a second for tax payments of the particular type.³⁸ A positive coefficient indicates that the tax is progressive, i.e. that wealthier households pay a larger amount of the tax proportionate to their expenditures than poorer households (and, a fortiori, more in absolute terms). On the other hand, if it is negative, the tax is regressive. The broad-based taxes on income and sales are moderately progressive, as is the excise tax on petroleum products, while other excises are less so, and the tax on cocoa is quite regressive.

With this information in hand, consider Figure 9 which shows the development of major categories of taxes over time. In particular, note that during the ERP, broad-based taxes capture an increasingly larger share of GDP, as do excises,

³⁸ Younger (1993) develops this methodology.

Figure 8 — Ghana: Government Revenue and Expenditures, 1974-1990



Source: Younger (1993)

Table 31 —Measures of Tax Incidence in Ghana

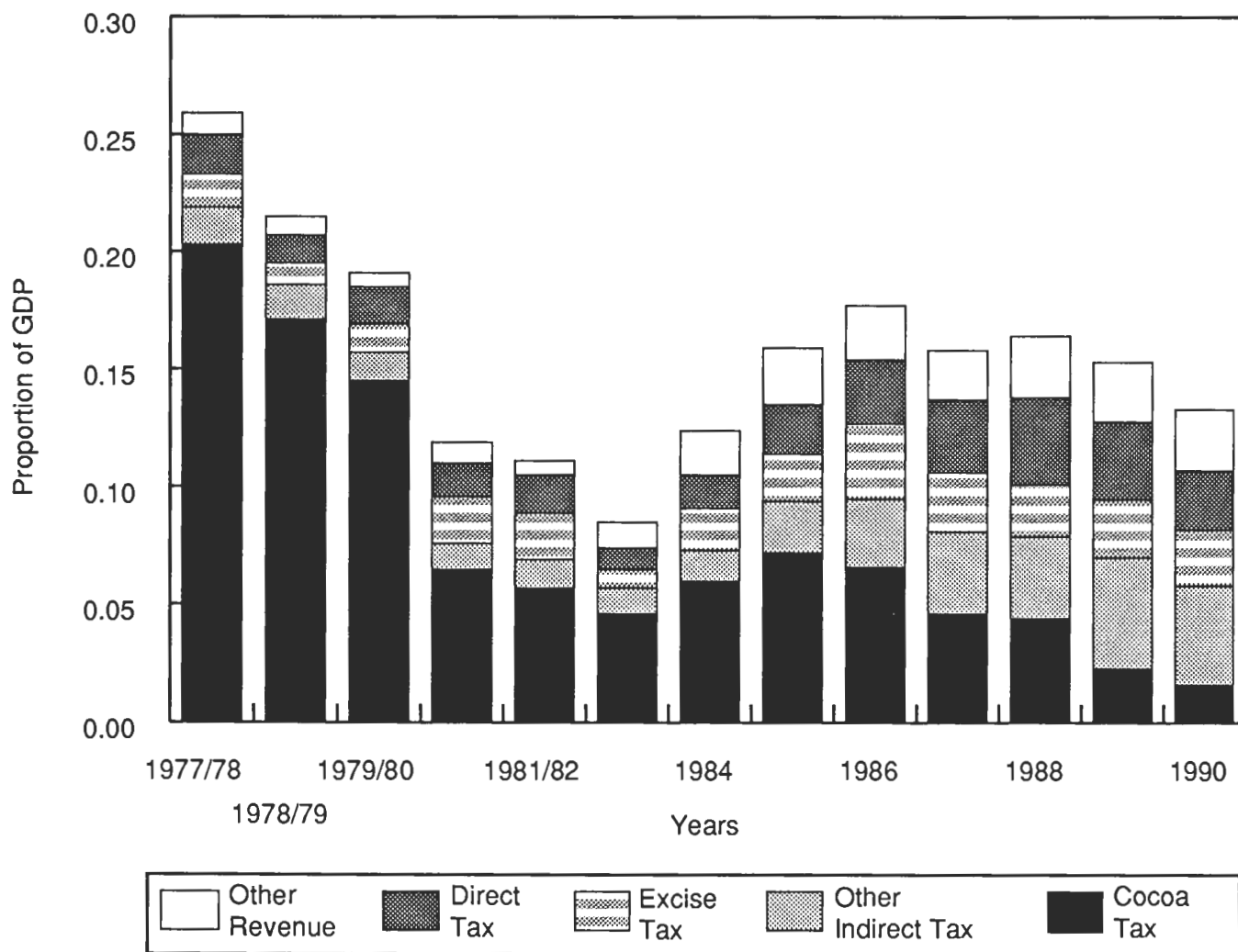
Tax	Proportion of Tax Paid by Poorest 30% of Households	Progressivity Coefficient ^a	Number of Households Paying This Tax
Cocoa Taxes, Implicit and Explicit	0.19	-0.14	383
All Direct Taxes on Households	0.08	0.07	2579
Sales Taxes	0.11	0.03	3034
All Non-Petroleum Excise Duties	0.13	-0.00	2737
Petroleum Excise Duties of which	0.09	0.07	3034
Duties on Kerosene	0.16	-0.12	2658
Duties on Gasoline ^a	0.05	0.19	2731
All Taxes Combined for:			
1977/78	0.17	-0.10	
1981/82	0.14	-0.05	
1987	0.12	-0.00	
1990	0.11	0.03	
Note: Poorest 30% of Households' Share of Expenditures	0.11		3034

^a This includes the indirect effect of gasoline prices on transport costs.

^b The progressivity coefficient measures the area between the Lorenz curve for per capita expenditures and that for per capita tax payments.

Source: Younger (1993)

Figure 9 — Composition of Tax Revenue in Ghana



Note: The cocoa tax includes the implicit tax on cocoa exports coming from exchange rate overvaluation.

Source: Younger (1993)

while the importance of the cocoa tax dwindles. Thus, during the course of the adjustment program, Ghana's tax structure has become much more progressive. This does not mean that poor households are paying less tax today than they were in the early 1980s. Given the rise in the overall tax take, virtually every household is probably paying more (with the exception of cocoa farmers) and to understand the total impact on poor households, we would need to combine information on tax incidence with that for expenditures. Nevertheless, the fact that taxes have shifted towards wealthier households is encouraging.

While we do not have comparable information for other countries, it is important to note that by far the most regressive tax in Ghana is the cocoa duty. Taxes on agricultural exports are quite common in Africa, as we show in the section on agriculture and adjustment. Economists have long argued against such taxes on efficiency grounds, but if the pattern we observe in Ghana is more general, there is a strong case for reducing these taxes in terms of social equity as well.

SUMMARY

There is little doubt that sound fiscal management is required for sustainable economic growth. The debate is how to carry out prudent fiscal policy without jeopardizing the vital public investments and services that contribute to long-term growth and human development. Our contribution to this debate has been, first, to note that general perceptions about the severity of public expenditure cuts demanded by adjustment programs in Africa are exaggerated. To the extent that those expenditures benefit poor households, the impact of adjustment policies on Africa's poor probably has been less dramatic than most people believe. More fundamentally, we have noted that the poor are often not the principal beneficiaries of certain public expenditures, either as employees or as users of public health and education services. In fact, the social services for which we have household consumption information often benefit the middle class and wealthy more than the poor. Thus, an important conclusion is that governments (and donors) will do better at poverty reduction if they focus on the reallocation of existing resources rather than increasing overall expenditures that, as currently constituted, often do not reach the poor. That said, we also recognize that many African governments, especially those that suffered significant collapse in the early 1980s, need to improve their tax revenues. To do so, once again there is ample latitude for reform to both reduce the efficiency losses and welfare costs associated with tax policy.

The lack of fiscal discipline in the past, coupled with the historically low marginal efficiency of government investment, low marginal productivity of government workers, and low technical efficiency of social services does raise the issue of whether the government should reduce its role in the provision of many services, and if so, what in particular should be jettisoned from the budget. We have shown that not only are the general equilibrium effects of government spending unfavorable to the poor, but large shares of the budget in most countries remain distributionally regressive, despite some encouraging signs to the contrary in terms of increasing progressivity accompanying revenue

enhancement. Growth and equity considerations suggest that there is clearly more to be done to reduce bureaucracies and to ensure that public investment is of the nature that will "crowd-in" private investment. Likewise, despite the rhetoric about social welfare concerns in the context of adjustment, the basics of social welfare policy, as manifested in the incidence of public spending on education and health, need to be reoriented. As we will discuss later, distortion and deficiencies in social policy and human resource development are not primarily an issue of macroeconomic management and stability, but instead are an issue of sectoral reform and the development of a pro-active poverty alleviation strategy. Such effects are complements of adjustment lending, but they should not be viewed as synonymous with the provision of the quick disbursing loans that characterize adjustment lending.

5. AGRICULTURE AND FOOD MARKETS

Agriculture and food markets play a key role in African economies and in the determination of real incomes of Africa's poor. In many African countries, inappropriate food and agricultural policies, including high rates of taxation on agricultural exports, regulation of commodity markets, and costly food subsidies, seriously distorted these markets, contributing to the economic stagnation that Africa has suffered. For this reason, food and agricultural policy reforms have been a major part of structural adjustment efforts.

The agricultural sector remains at the heart of most African economies, in terms of incomes, consumption and trade. Most of the labor force still is engaged as agricultural workers. Agriculture is generally the most important sector in GDP. The share of private consumption that is devoted to food is generally over 50 percent, and with the exception of countries with a particularly important primary product export (such as bauxite in Guinea), the share of exports from agricultural products is extremely high (Table 32).

The poor are even more dependent on agriculture and food markets than the population in general. As discussed in Section 2, this is because Africa's poor are concentrated in rural areas and their incomes derive to a large extent from own-farm production, wages earned as paid agricultural laborers, and incomes earned in processing and marketing of agricultural products. Moreover, expenditures on food comprise a larger share of total consumption by both the urban and rural poor than for higher income groups. Finally, because women farmers are the primary producers of food in most countries, agricultural policies can potentially have large impacts on the welfare of women and children.

DISCRIMINATION AND REFORM

Policies that discriminate against agriculture, including distorted food markets, have been major contributors to the economic crisis in Africa. Most pronounced are state monopolies in export crop marketing and related export price controls which have particularly deleterious effects on export performance and the balance of payments. In combination, the consequence is high rates of nominal export crop taxation, contributing to stagnating production and diversion of output to parallel markets involving high transaction costs. Also customary, although not as widespread, has been intervention in staple food trade. A feature of such intervention is characteristically the pursuit of cheap food policies for urban consumers by implicitly taxing farmers. The food subsidies are generally rationed, without favorable distributional effects. A similar story applies to input subsidies. In some cases, such subsidies figure heavily in the fiscal deficits, illustrating the interaction between major microeconomic distortions and macroeconomic stability.

Table 32 —Structural Features of CFNPP Study Countries, Early 1980s

Countries	Share of Agriculture in GDP	Share of Labor Employed in Agriculture	Share of Food in Private Consumption	Share of Exports in GDP	Share of Agriculture in Total Exports	Major Agricultural Export Crop(s)
	(1980-82 average)			(Percent)		
Cameroon	28	70	55	20	42	Coffee/Cocoa
The Gambia	41	84	58	30	24	Groundnuts
Ghana	57	65	64	25	64	Cocoa
Guinea	31*	81	51	31	3	Coffee
Madagascar	32	81	60	12	77	Coffee/Vanilla
Malawi	37	83	61	25	86	Tobacco
Mozambique	59	85	73	23	51	Cashew/Cotton
Niger	31	91	56	23	31	Groundnut/Cotton
Tanzania	53	80	68	20	63	Coffee/Cotton
Zaire	31	72	71	39	8	Coffee/Palm Kernel

* 1985-86 average

Source: STARS data base, World Bank (1993)

As a result, reform of food and agriculture markets is an important topic in the debate over adjustment policies, as are the consequences of these reforms for the poor. In the remainder of this section we will explore the implications of the efforts to eliminate the most egregious distortions in agriculture and food markets, focusing on trade and market liberalization. First, we will address the issue of reducing export crop taxation. This will be followed by a discussion of food market liberalization, including the removal of food subsidies and elimination of monopolistic marketing boards. We address the implications for both rural producers and net consumers in rural and urban areas. Once again, the effect of changes in policy on the poor are highlighted. Finally, given the substantial change in many agricultural markets, we discuss some of the reasons behind the limited supply response observed to date in Africa, and possible complementary measures to achieve greater gains in output.

Export Crop Liberalization

Reduction in export crop taxation is a characteristic feature of most agricultural policy reforms in sub-Saharan Africa. These policies are only one determinant of real producer prices, however. Prices that farmers receive for their tradable products depend as well on world prices and the real exchange rate.

As described in Section 3, a depreciation of the real exchange rate in itself permits an increase in the real price of agricultural tradable goods. However, a decline in world prices or an increase in the implicit or explicit rate of taxation on these products can offset or even reverse the positive impact on real agricultural prices. As with the seven countries shown in Table 33, real producer prices of major export crops increased substantially in the 1980s only for cocoa in Ghana and cashews in Mozambique. Although real producer prices of coffee in Madagascar and Tanzania in 1989-91 were approximately equal to those in 1980-82, they were still substantially below their levels of the mid-1970s.

Declining terms of trade for agricultural exports is a major reason why real exchange rate depreciation in a number of countries did not lead to higher producer prices of their export crops. Beginning in the mid-eighties, world prices for cocoa and especially coffee fell sharply, reducing export earnings for Cameroon, Côte d'Ivoire, Ghana, Madagascar, Tanzania and other African countries (Figure 10). For Malawi, a large increase in transport costs due to the closing of marketing links through Mozambique had the effect of reducing export prices for tobacco and other products. The extent to which these external price shocks and co-incidental macro-economic reforms affected real producer prices, however, was determined by agricultural trade and price policy.

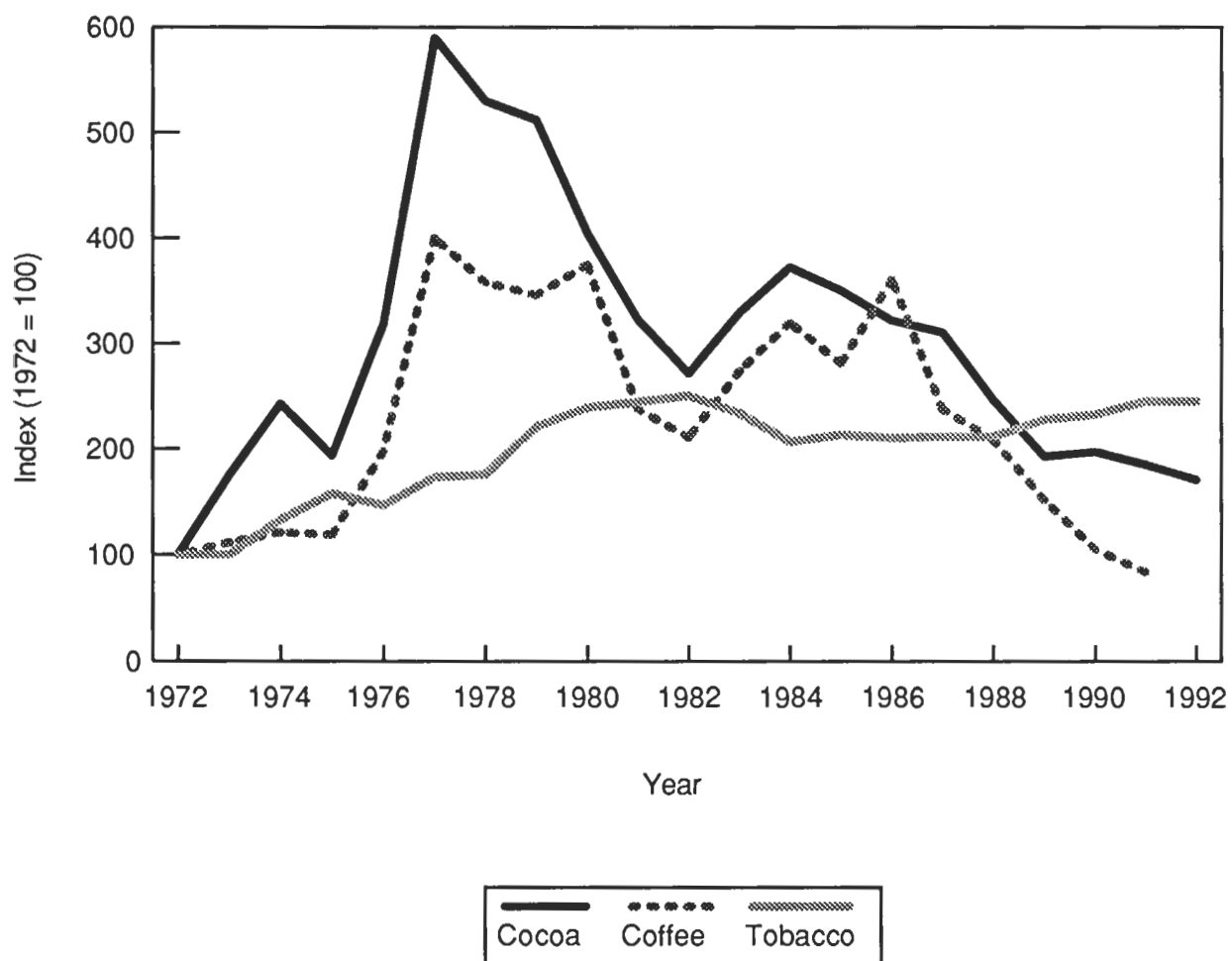
In Madagascar, coffee producers were heavily taxed under the guise of a price stabilization fund until the liberalization of trade in export crops in the late 1980s. Direct taxation, measured by the difference between the border price measured at the official exchange rate and the producer price set by the government, was particularly high from 1976 to 1980. Official producer prices

Table 33 — Real Producer Prices of Major Export Crops (1980-82 Average = 100)

Country (Major Export Crop)	Years		
	1975-77	1980-82	1989-91
Cameroon (Cocoa)	73	100	49
Gambia (Groundnuts)	121	100	79
Ghana (Cocoa)	167	100	177
Guinea (Coffee)	76	100	117
Madagascar (Coffee)	138	100	104
Malawi (Tobacco)	105	100	113
Mozambique (Cashews)	84	100	199
Niger (Cowpeas)	110	100	120
Tanzania (Coffee)	274	100	99
Zaire (Coffee)	61	100	—
Unweighted Average (not including Zaire)	128	100	117

Sources: Arulpragasam and Sahn (1994)
 Blandford et al. (1994)
 Dorosh, Bernier and Sarris (1990)
 Dorosh and Bernier (forthcoming)
 Donovan (1993)
 IMF, statistical annexes
 Jabara (1990)
 Jaeger (1992)
 World Bank, country memoranda

Figure 10 — World Prices of Major Agricultural Export Crops (Index of FOB Prices in U.S. Dollars)



Sources: Alderman (1991), Dorosh, Bernier, and Sarris (1990), Jaeger (1992)

were kept low while world coffee prices rose sharply (Figure 11). Rapid domestic inflation coupled with a fixed nominal exchange rate contributed to a sharp decline in the real border price of coffee, reducing revenues for the stabilization fund and justifying low producer prices to mitigate the loss of revenues. The total rate of taxation, measured by the difference between the border price measured at the parallel rate and the producer price, remained high, however.³⁹ This indirect taxation of exports through the mandatory surrender of foreign exchange at the official exchange rate was the counterpart of the implicit rents received by those who received foreign exchange at the low official exchange rate.

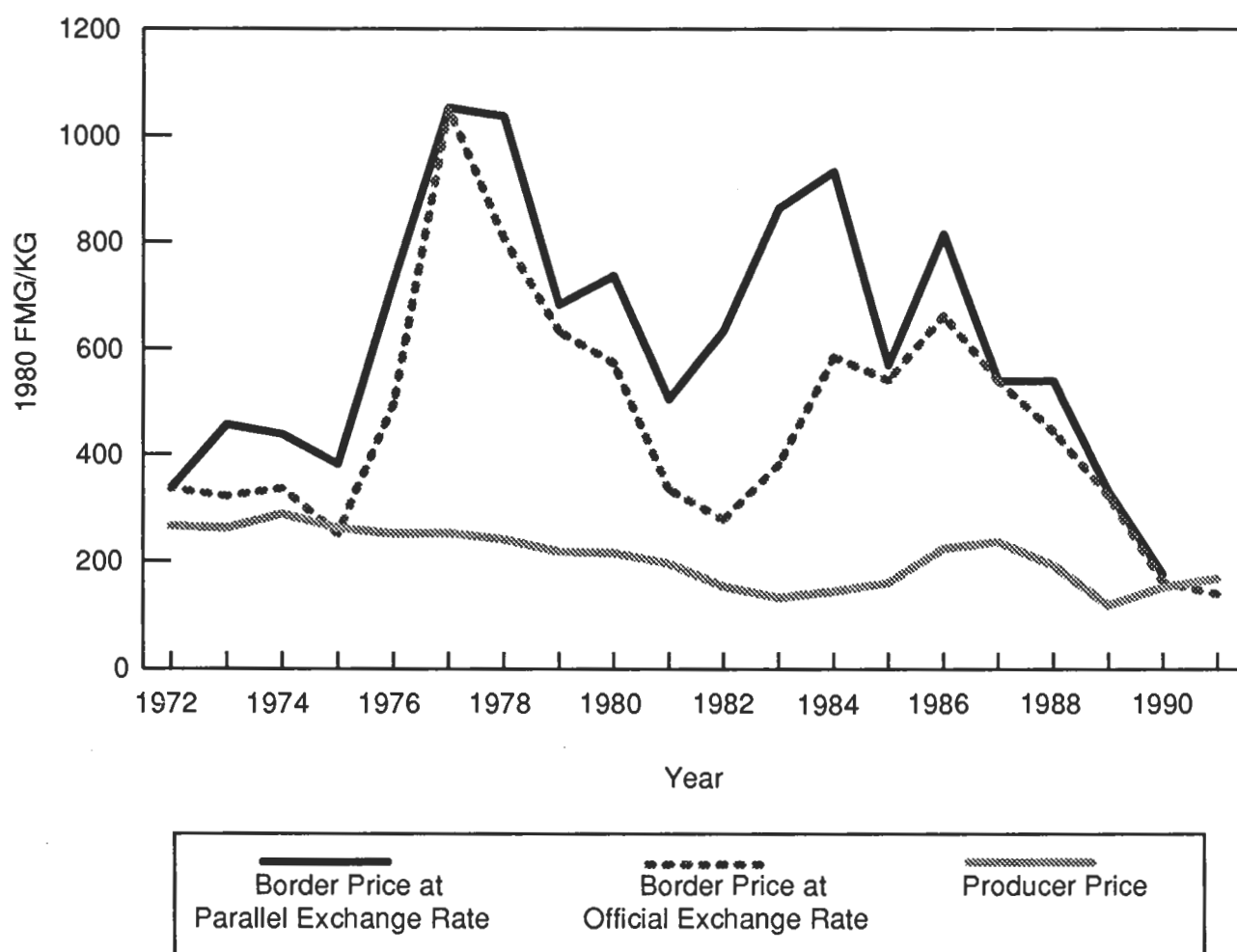
Nominal exchange rate devaluations in the mid-eighties closed the gap between the border prices measured at the official exchange rate and the border prices measured at the parallel exchange rate. The devaluation did not lead to an increase in the producer price of coffee, which had fallen by 54.2 percent in real terms between 1974 and 1983 (Dorosh, Bernier, and Sarris 1990). Instead, the revenues of the stabilization fund increased as the border price rose while the real producer price fell. Trade and exchange rate liberalization in 1987 and 1988 essentially eliminated the spread between official and parallel exchange rates through 1990, but the continued decline in world prices prevented an increase in real producer prices in spite of the elimination of explicit export taxes. Thus, the potential increases in real coffee prices for Malagasy farmers from trade and exchange rate policy reforms were prevented first by agricultural pricing policy in the mid-eighties, which kept producer prices low, and by the decline in world coffee prices in the late eighties.

CGE model simulations for Madagascar indicate that taxes on the country's major exports (coffee, vanilla and cloves) reduced real incomes of households throughout the economy (Dorosh 1994). With a ten percent increase in the export tax on these products, real GDP falls by 0.8 percent and exports fall by 3.0 percent in dollar terms. Small farmers on the east coast, where these export crops are mainly grown, suffer real income declines of 1.2 percent.

For coffee producers in Tanzania, the overvalued official exchange rate, rather than direct export taxes, has been the major source of taxation. Real producer prices of coffee were maintained at relatively stable, but very low, levels throughout the adjustment period (Figure 12). Between 1977 and 1988, domestic producer prices were on average 79 percent below border prices measured at the parallel exchange rate. As in Madagascar, trade and exchange rate policy reforms in 1987 and 1988 reduced the spread between parallel and official exchange rates. This reduction was offset by the decline in world prices of

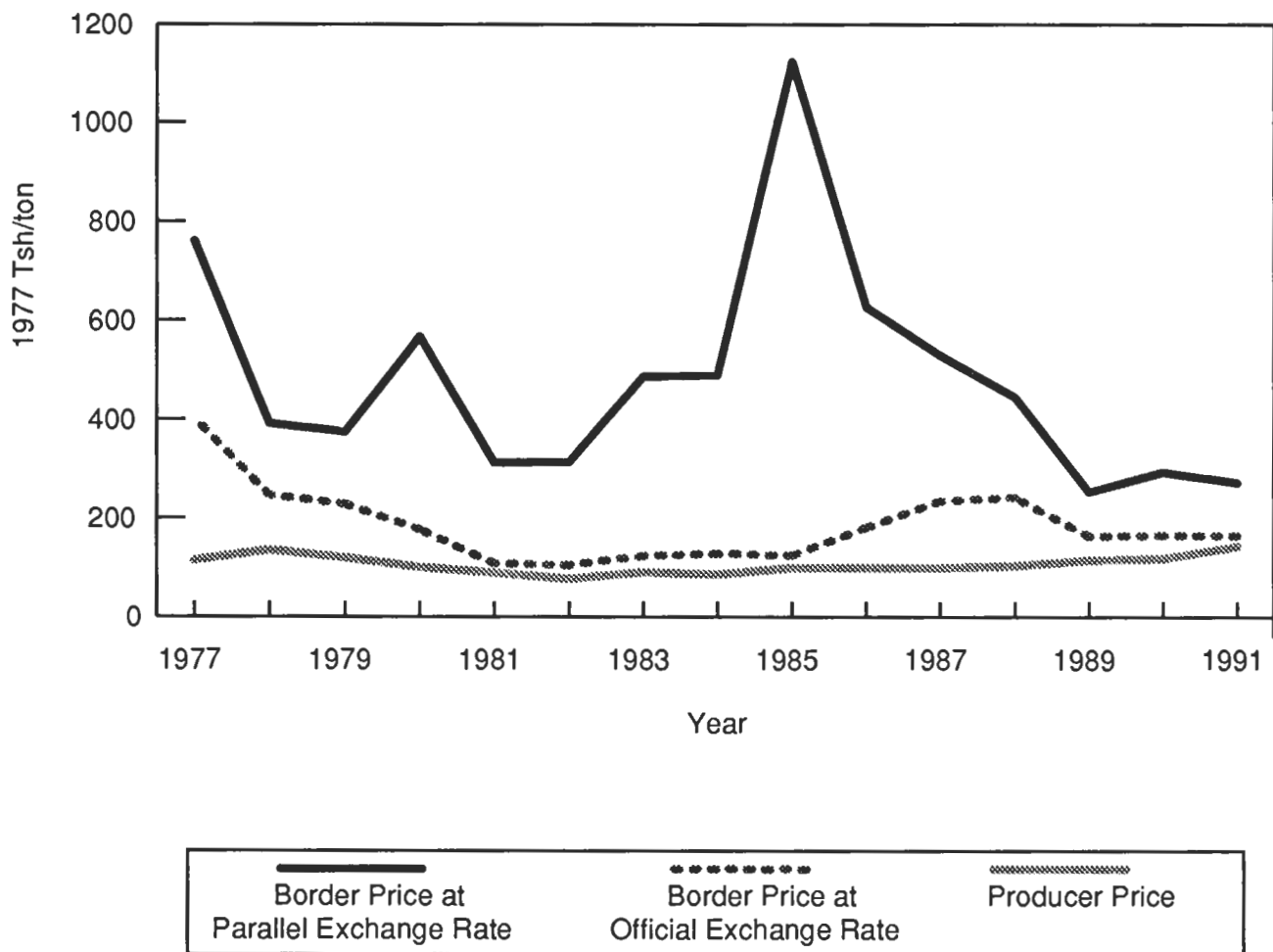
³⁹ Krueger, Schiff, and Valdès (1988) define indirect effects of trade and exchange rate policy using an estimated equilibrium exchange rate rather than the parallel exchange rate to measure distortions in the foreign exchange market. Calculations of indirect taxation on Malagasy agriculture using an equilibrium exchange rate provide similar results to those presented here (see Dorosh, Bernier, and Sarris 1990)

Figure 11 — Real Coffee Prices in Madagascar, 1972-1991



Sources: Dorosh, Bernier, and Sarris (1990), Dorosh and Bernier (1991)

Figure 12 — Real Coffee Prices in Tanzania, 1977-1991



Source: Sarris and van den Brink (1993)

coffee which lowered border prices at official exchange rates in 1989 and 1990 and direct taxes on coffee exports which were not substantially reduced. Only in 1991 was the rate of direct taxation on coffee exports reduced substantially (from 29.2 to 13.2 percent of border prices), enabling a 21.3 percent increase in real producer prices.

CGE model simulations indicate that a decrease of 20 percent in the tax rate on Tanzania's export crops would lead to increases in welfare of 0.2 to 0.3 percent in the short run for the rural and urban poor, as returns from export crops increase and as real wages for unskilled labor rise by 1.0 percent in the economy overall (Sarris 1994). Loss of tax revenues necessitates a drop in public spending, but permits a slight increase in real investment of private formal enterprises. Real incomes of the rural and urban nonpoor fall with a reduction in export taxes, though, as their rents associated with foreign exchange rationing decline.⁴⁰

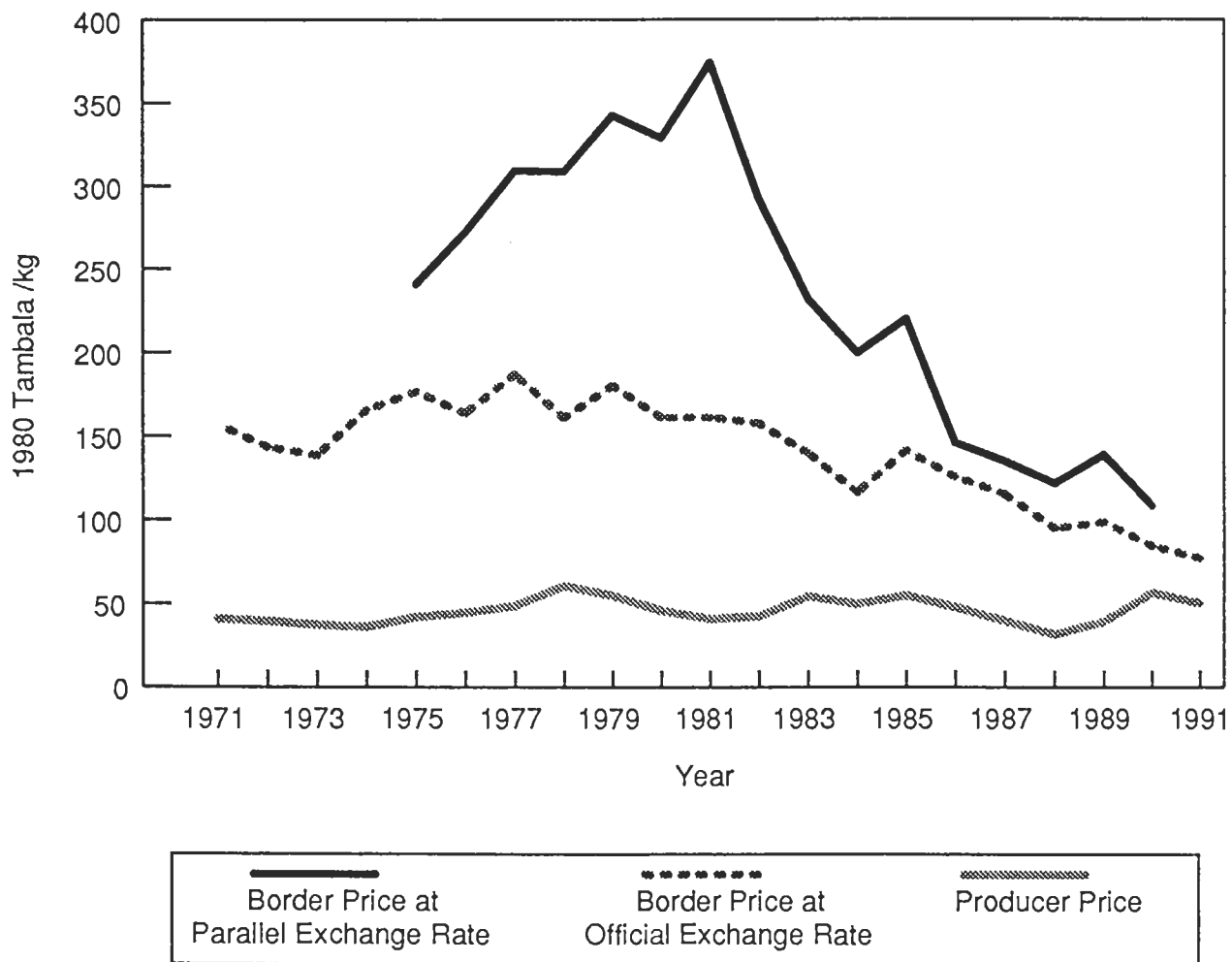
In Malawi, direct taxation of smallholder tobacco exports⁴¹ was substantial during the seventies as producers received less than one-third of the border price at the official exchange rate (Figure 13). Measured at parallel exchange rates, border prices were more than five times higher than producer prices. In the early eighties, the border price using parallel exchange rates fell sharply due to a large increase in transport costs as routes through Mozambique were closed. Border prices at official exchange rates showed a more mild decline as a series of nominal devaluations narrowed the gap between parallel and official exchange rates. Despite the continued decline in border prices, direct taxation of tobacco exports of smallholders was reduced from 66.8 percent in 1988 to 35.3 percent in 1991, resulting in a 59 percent increase in real producer prices during this period.

A reduction in rates of taxation on smallholder tobacco in the early 1980s would have softened the effects of the increase in transport costs for the rural poor. Simulations using an econometric model of Malawi indicate that in the absence of taxing smallholder export crops, GDP would have grown at an average annual rate of 4.4 percent more quickly during the 1980s (Van Frausum and Sahn 1991). Furthermore, the share of value added that would have accrued to Malawi's rural poor would have risen by 9.3 percent. Real incomes of poor smallholders would have increased by a total of 13.7 percent (Figure 14). Thus, the continued taxation of export crops by parastatals was a lose-lose situation: lower economic growth and lower incomes for the rural poor.

⁴⁰ The CGE model for Tanzania simulates both the real and monetary sides of the economy. In the simulation described here, the price level, government spending and the trade deficit are all endogenous. See Sarris (1994) for further details.

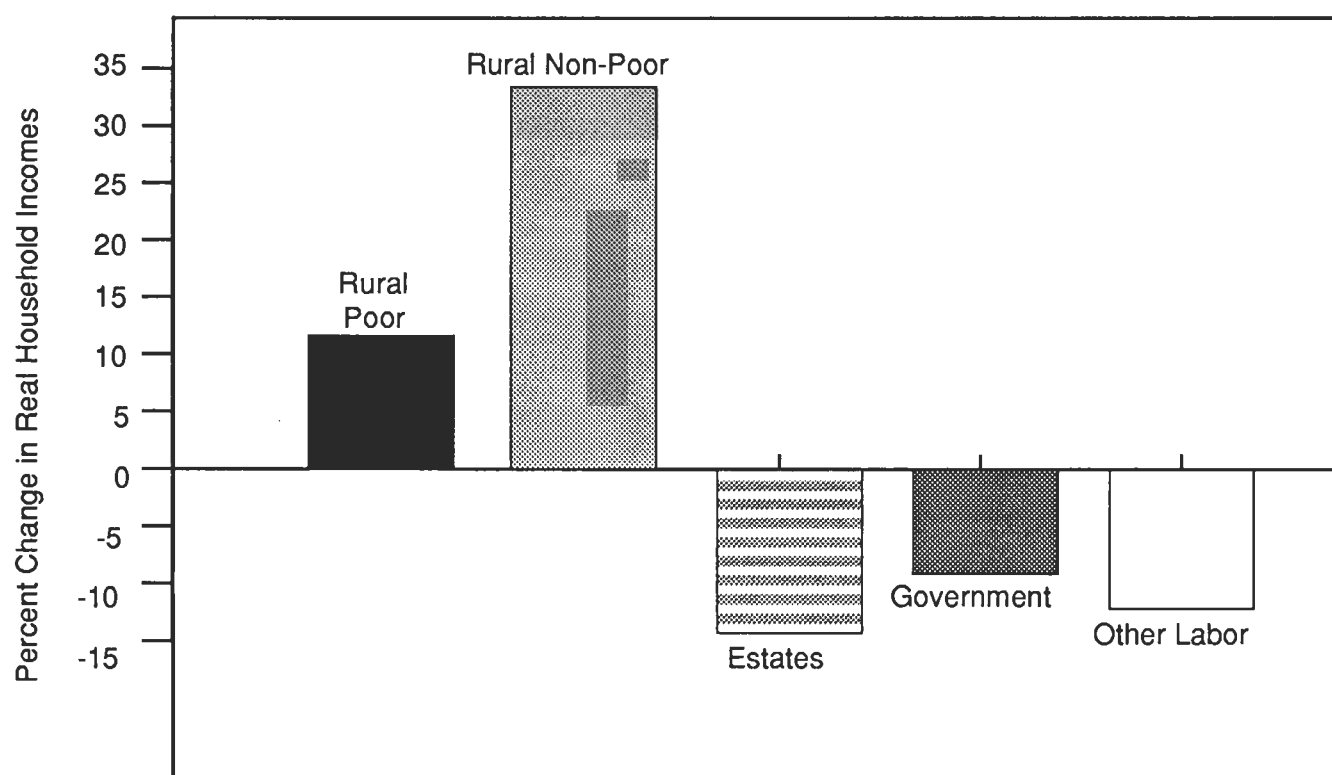
⁴¹ In Malawi, fire-cured tobacco is grown mostly by smallholders, while burley tobacco and flue-cured tobacco is grown mainly on estates. Sahn and Arulpragasam (1991a, 1993a) discuss the impacts of pricing policies for various types of tobacco under adjustment in Malawi.

Figure 13 — Real Tobacco Prices in Malawi, 1971-1991



Sources: Donovan (1993), Jaeger (1992), Sahn, Arulpragasam, and Merid (1990)

Figure 14 — Impact of Eliminating Export Tax on Smallholder Tobacco During the 1980s: Malawi Simulation Results¹



¹ Export tax reduced from 38 to 0 percent of FOB

Source: Van Frausum and Sahn (1993)

By contrast, real producer prices of cocoa did rise substantially in Ghana with trade and exchange rate liberalization, although explicit taxation on cocoa exports remained high (Figure 15). The large surge in cocoa prices in the mid-seventies coincided with a period of high domestic inflation and fixed nominal exchange rates in Ghana, so that despite the increase in world prices, real border prices measured at the official exchange rate plummeted. Thus, explicit export tax revenues fell sharply after 1979 both because of the smaller price spread between producer prices and border prices at official exchange rates and because the huge difference between border prices at parallel exchange rates and official domestic producer prices encouraged smuggling. The series of devaluations of the cedi between 1983 and 1987 eliminated much of the spread between parallel and official exchange rates and raised substantially the real border price of cocoa (measured at official exchange rates). These exchange rate reforms, coupled with a reduction in the direct export tax rate on cocoa allowed real producer prices of cocoa to rise by 154 percent between 1983 and 1987. Despite these reforms, explicit taxation remained high, at 74.6 percent of the producer price in 1987 and 33.2 percent in 1991.

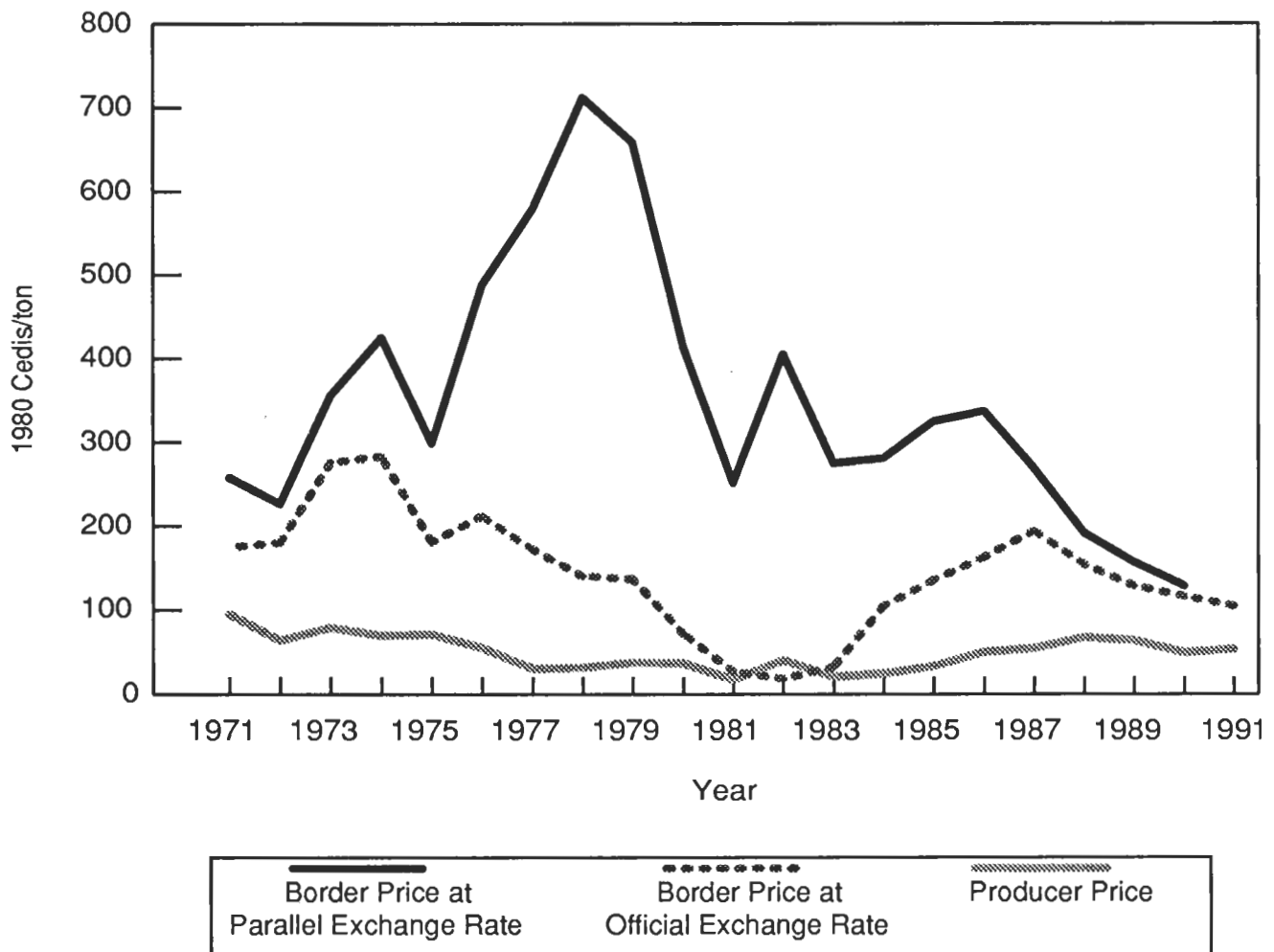
As noted in the previous section, cocoa taxes in Ghana fall disproportionately on lower income households. That is, poor households tend to pay a higher share of their income on cocoa taxes than do rich households (Figure 16).⁴² Based on the share of cocoa taxes in their total expenditures in 1987, reducing the rate of taxation on cocoa from the actual 1987 level of 69.7 to 10 percent of the producer price would increase real incomes of cocoa producers in the bottom 30 percent of the national income distribution by 22.2 percent. This represents a sizeable income gain for the 11.3 percent of poor households in Ghana who are cocoa farmers.⁴³

Analyses of the impacts of reducing export taxes on agricultural products in other countries further support the premise that reduction of export taxes on agriculture have positive effects for the rural poor. Simulations using a CGE model of Cameroon suggest that a reduction in the export tax on coffee and cocoa from its historical 1985/86 level of 31.6 percent to 10.0 percent of the f.o.b. price results in a 4.8 percent increase in average real incomes of poor farmers in the southern region of the country, a group comprising 21 percent of households in the country (Subramanian, 1994). Similarly, in simulations of the effects of an increase in producer prices of groundnuts in The Gambia for 1986,

⁴² The Lorenz curve is a plot of household's cumulative expenditures and cumulative tax payments, with households ordered by their level of expenditures. If expenditures are equal across households this is a straight line from the origin to (1,1). The more convex the curve, the greater the inequality of expenditures (or tax payments). If the Lorenz curve for a tax is less convex than that for expenditures, which it is in the case of cocoa, it means that poorer households are paying a disproportionately large share of the tax relative to their expenditures: the tax is regressive.

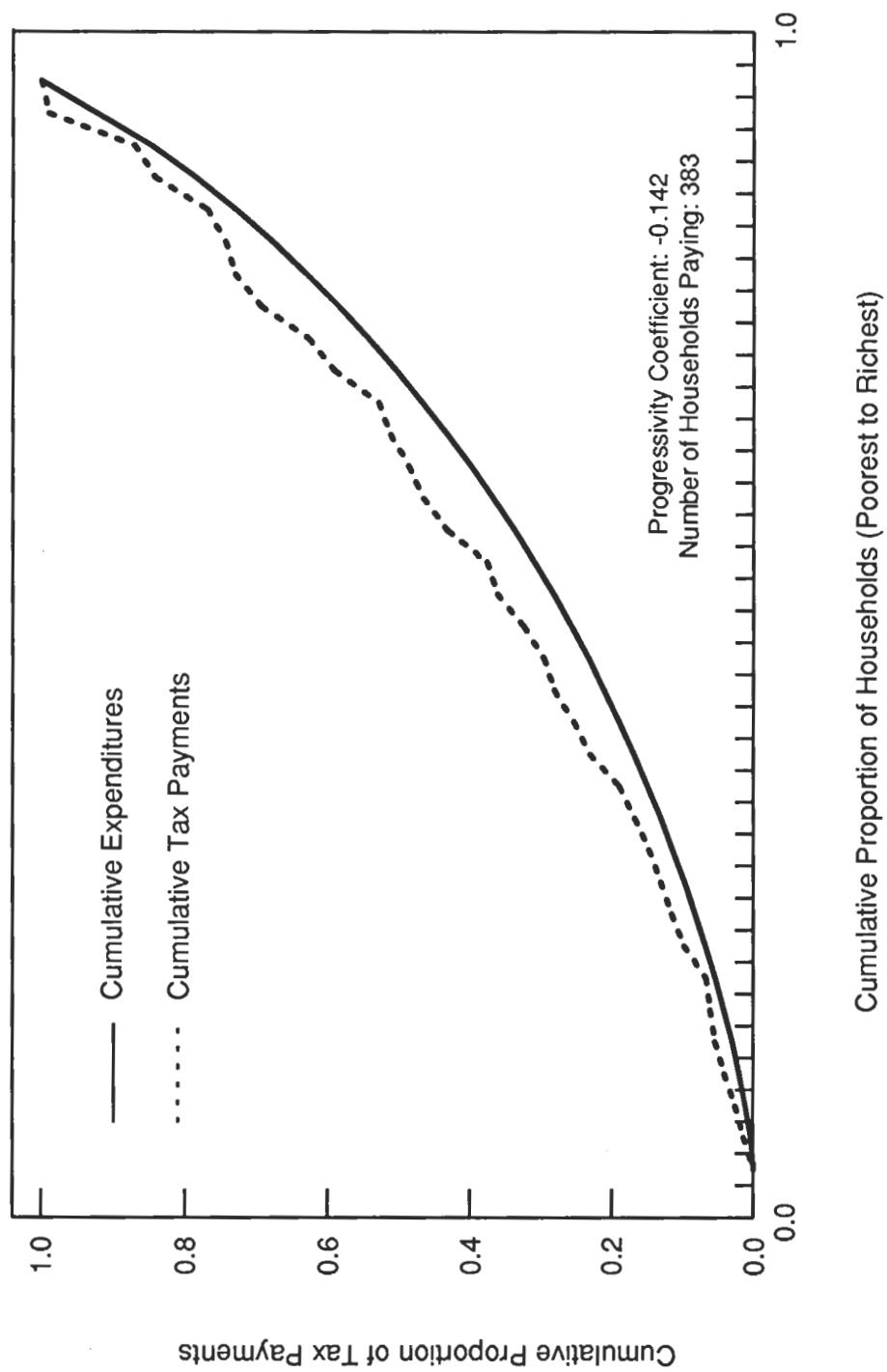
⁴³ These calculations are based on the Ghana Living Standards Survey (GLSS) data and cocoa tax information from the IMF (1993). See also Younger (1993a).

Figure 15 — Real Cocoa Prices in Ghana, 1971-1991



Source: Alderman (1991) and authors' calculations

Figure 16 — Lorenz Curve for Taxes on Cocoa



real incomes of the rural poor rose substantially. A reduction in the implicit export tax on groundnuts by 75 percent of the f.o.b. price increased real incomes of rural poor households (who, in The Gambia, are among the major producers of groundnuts) by 4.4 percent (Dorosh and Lundberg 1993).

Cash Crops, Nutrition and Gender

While the above evidence indicates that higher producer prices and other incentives to increase export-crop production are beneficial to the poor, there remains a concern that these policies may adversely affect food production and the welfare of women and children, despite contributing to higher household incomes.⁴⁴ To the extent that male labor and other inputs are diverted from food production to export-crop production, the burden of maintaining food production at the household level may fall primarily on women (Haddad 1990; Meena 1991).

Regarding the issue of food versus cash crops, there is little corroborating evidence to suggest that policy reform that encourages export crop production leads to lower food crop availability. Instead the economic incentive structure and nonprice environment (e.g., market infrastructure, technology, credit) for export and food crops generally move in the same direction (von Braun and Kennedy 1986; Weber, et al. 1988; Lele and Adu-Nyako 1992). In part this is because a large share of food products are tradable goods, whose prices tend to rise with agricultural market liberalization and real exchange rate depreciation (Dorosh and Sahn 1993).

A related concern is that higher producer prices and other measures to spur cash crop production result in the loss of control of income by women to the detriment of the welfare of women and children. For example, it is argued that because of a failure to correctly identify the household member responsible for crop production, some agricultural projects that provided inputs to men inadvertently reduced women's control over cash income. Projects such as the groundnut seed multiplication project in Malawi (Gladwin and McMillan 1989), the tea scheme in Tanzania (Elson 1991), and the irrigation and rice cultivation project in The Gambia (Carney 1988) reportedly caused wives of program participants or women in general to lose their cash crop and/or the income generated by cash crops. In Ghana and Côte d'Ivoire, limited access to land and heavier time commitments to household work led to the erosion of female income when cash crops were integrated into existing agricultural activities (Haddad 1990).

⁴⁴ The potentially adverse effects of incentives for export crops are but one aspect of structural adjustment programs criticized for their reputed effects on women and children. See Elson (1991), Commonwealth Expert Group (1989), Due and Gladwin (1991), Mehra (1991), Nindi (1992), Saito and Spurling (1992).

In light of these experiences with agricultural projects, econometric analysis has been employed in several countries to determine the impact of an increase in the share of income from cash crops. In general, results indicate that household welfare, particularly the nutritional status of children, improves with increases in cash crop income (von Braun and Kennedy 1994). In the case of Malawi, for example, Sahn, Van Frausum and Shively (1992) show that the shifting to export crop production would not have any deleterious effects, and this is regardless of the gender of the household head.⁴⁵ In fact, the analysis suggests that the average height-for-age z-score of children less than five years of age would improve by 0.36 as a result of eliminating taxation on tobacco.

Similarly, in Côte d'Ivoire, econometric analysis of household expenditure data suggests that reduced taxes on export crops during the 1970s and early 1980s would have resulted in positive nutritional benefits for the poor (Sahn 1992). This is attributable to two factors. First, households in the bottom two quintiles of the per capita expenditure distribution are extensively engaged in the production of export crops, resulting in higher incomes when taxation was reduced. Second is the fact that the nutritional status of households engaged in export crop production was comparable to those engaged in food crop production, controlling for other pertinent covariates, including the level of income. Thus, eliminating the tax on cocoa and coffee would not have only raised incomes of households, but conferred positive nutritional benefits, indicating no adverse shift in resource control and/or utilization in the wake of changing patterns of production. Similar findings have been reported for The Gambia (von Braun, Puetz, and Webb 1987), Rwanda (von Braun, de Haen, and Blanken 1991), as well as Kenya, where research shows that a shift to cash cropping is not associated with increased preschool malnutrition (Kennedy 1989).

In sum, a key lesson that emerges is that welfare gains, as measured by higher incomes as well as improved nutritional outcomes, can be achieved if marketing can be made more efficient and taxation reduced. This is the case even when there is little or no supply response to price changes. Although, gender considerations are important in the design of projects and extension efforts, as will be discussed below, increased incomes from export crops do not necessarily lead to reduced welfare of women and children. To the contrary, the evidence suggests that greater incomes from export crops have led to improved nutritional status of children in a number of countries.

⁴⁵ In Malawi, female-headed households in the densely populated Southern region of the country comprise around 30 percent of households. Almost all are households without a male spouse in residence, either because the spouse is employed elsewhere (e.g., in South Africa or on estates in Malawi) or because of divorce or death of the spouse. Controlling for income and other covariates, gender of headship has no effect on nutrition, regardless of the reason for the husband being absent.

The Role of the Public Sector in Export Crop Marketing

Unfortunately for the poor, however, there has been an overall reluctance to allow the marketing of export crops to be taken over by the private sector. This applies to cases such as Cameroon and Ghana, which have a long and successful history of private-sector involvement in domestic food marketing, as well as to cases such as Malawi and Tanzania, which are cautiously taking steps to liberalize the domestic food market, but have moved much more slowly to liberalize export crop markets.

The reluctance to allow private-sector involvement in export crop marketing has some reasonable underpinnings. Among them is that there may indeed be economies of scale in export crop marketing, unlike trade in domestic food products. Also, there are potential obstacles to participating in world markets that may prove difficult for the private, small-scale entrepreneur to respond adequately. Such legitimate concerns, however, are often used to justify inefficient government enterprises interfering in markets at the expense of the producer. Indeed, in cases such as Malawi, the underlying reason for the persistent rules and regulations regarding pricing and marketing export crops can only be explained by the desire of the government to continue to tax the smallholder sector, and to protect the favored estate sector. Likewise in Cameroon, the slow pace with which the monopoly power in marketing cocoa, coffee, and cotton, is being relinquished, is hardly justified by the need for price stabilization. While poor farmers do benefit from some degree of stability, especially the institution of a price floor, the existing state-controlled system has simply fostered inefficiencies in export crop marketing, thereby lowering prices to producers and offering them no tangible benefits (Blandford, et al. 1994).

All of this is not to suggest that state run export enterprises can not help the farmer. The experience with coffee in Colombia, for example, shows the potential benefits of well-managed enterprises whose primary client is the farmer, rather than whose primary purpose is generating revenues for the treasury and distributing economic rents. However, the transformation of existing exploitative enterprises in sub-Saharan Africa will be difficult, and argues in favor of exploring other mechanisms such as producer cooperatives and similar types of concerns as a means of achieving the economies of scale and other institutional support that will facilitate export promotion.

DOMESTIC FOOD CROP LIBERALIZATION

Coincident with initiatives to reduce export controls have been some advances in removing the restrictions that impede the transmission of market-determined prices of food crops from the producer to consumer. On the one hand, producer and consumer food prices will be affected by exchange rate realignment, particularly in the case of tradable goods such as imported rice or maize. But generally of greater importance is the effect of liberalization that removes the restrictions that impede the transmission of market determined prices from the farm-gate to the consumer.

In this regard, we have the overriding concern that liberalization, especially when combined with other reforms such as devaluation and subsidy removal, will be harmful for the poor, particularly those who are net purchasers of staple foods and those who were reliant on purchases through official market channels. In addressing this concern, the evolution of consumer prices paid by the poor is a good barometer of reform-induced changes in welfare. Here, though, it is important to realize that in many instances, poor households did not have access to food at official prices, but instead relied on open (in some cases illegal) markets for the bulk of the purchases.

To amplify, we can identify, broadly speaking, four categories of market intervention, ranging from heavy government intervention to essentially a laissez-faire approach to domestic food pricing policy. In the first category of countries state involvement was substantial through procurement and resale of goods in rationing schemes. Examples are Madagascar and Mozambique, where such involvement included explicit food rationing with quantity restrictions. In the second category are countries such as Tanzania and Malawi, that were also involved extensively in setting product prices through market interference, but did not become extensively engaged in administering rationing systems for the sale of products through ration cards and quantitative controls. Governments in the third group of countries, particularly prominent in West Africa, were involved in the markets for rice and to a lesser extent, coarse grains and other crops, primarily through their role as importers. In principle, government policies were designed to support domestic producers as well. In practice public agencies exerted little influence over producer or consumer prices for staple food consumption. The final category consists of those cases where the state did not interfere in food markets, and left private traders unfettered. In this situation, reform is of relatively limited relevance, though there are important lessons to be learned from such experiences.

In the first category of countries, Madagascar, Mozambique, and to a lesser extent, Guinea, were all engaged extensively in rationing products under their control. Amongst these three countries, Madagascar stands out as the only one where some of the poor were clearly substantial losers from domestic food market liberalization.⁴⁶ Prior to reform, official rice prices were kept low through large quantities of rice imports, which comprised nearly one-quarter of total demand in 1982. The low priced product was available universally in the capital city, Antananarivo. While those in the upper expenditure quintiles purchased more subsidized rice in absolute terms, relative to their income, the value of the subsidy was greater for the urban poor (Table 34). But most important, is that rural households were not beneficiaries of the system. In fact, the rationing scheme was limited to urban areas where the better-off households were concentrated, in contrast to the rural areas where over 90 percent of Madagascar's low income households are found (Dorosh, Bernier, and Sarris 1990).

⁴⁶ Another example of the urban poor losing from the elimination of food subsidies is found in Zambia (Pearce 1991).

Table 34 — Madagascar Rice Subsidy, 1986/87

	Expenditure Quartile			
	1	2	3	4
Value of Transfer (FMG)	14,918	20,703	20,3997	24,966
Transfer as % of Expenditure	31.8	25.3	18.5	13.1

Source: Dorosh and Bernier (1994)

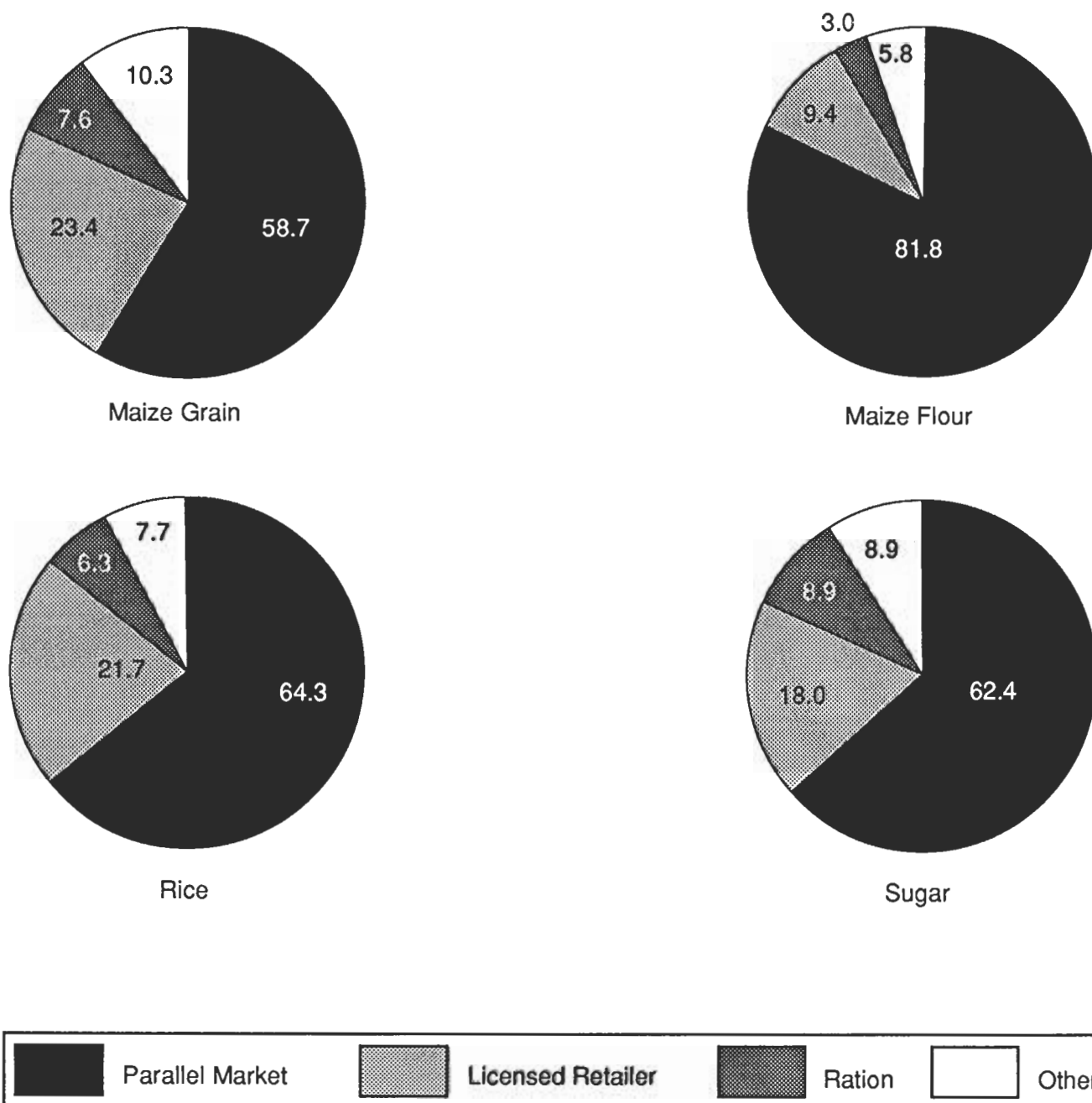
In the case of Mozambique, prior to economic reform the state attempted to exert virtually total control over maize marketing, including over international trade. One of the manifestations of that policy was the food rationing system in Maputo, the capital, which was purportedly intended to ensure access to food for the entire population. While the official price was indeed substantially below the open market price, in practice, the vast majority of the product was purchased through the high priced parallel market (Figure 17). Thus, the system conferred little positive benefit on the poor. The major beneficiaries of state interference in markets were traders and parastatals who got access to the subsidized commodities at below market prices, and thereafter resold them at close to world market prices (Sahn and Desai 1994).

Similarly, the food marketing system was also under state control in Guinea. Prior to reforms there existed a dual-market structure: officially priced rice was available in Conakry at prices that were subsidized as much as 70 percent. The evidence from survey data suggests, however, that access was skewed toward better off households (Figure 18), although even they were reliant on parallel market prices that were as much as 3.5 times higher than the official price. In fact, prior to the instituting of economic reforms, on average, only 25 percent of the cereals were purchased from official sources in the capital, while outside the capital, this figure was less than five percent.

With the beginning of economic reforms, state controls of marketing were largely dismantled in Guinea. The liberalization process was gradual in nature, as the government tried to maintain a system of official subsidies to privileged institutions. Nonetheless, over time, liberalization of rice imports and domestic marketing reduced the parallel market premium on rationed imported rice, contributing to a decline in the retail market price in the mid-1980s. Whereas in 1980, for example, the parallel market price was 345 percent of the c.i.f. price (at parallel exchange rates), by 1989 the retail price was only 118 percent of the c.i.f. price (Arulpragasam and Sahn, forthcoming). Thus, formal abandonment of the ration system coupled with the process of liberalization of imports and commercial trade contributed to cheap and abundant imported rice at lower real prices for the poor consumers. It should be noted, too, that farmers in Guinea Maritime, the region of the country nearest Conakry, are large consumers of imported rice. Given the weak substitutability between highly regarded domestic rice and lower quality imported rice, multi-market results indicate that increased imports would not lead to a large decline in farm-gate prices of rice and would in fact raise real incomes of rural households (Arulpragasam and Sahn, forthcoming).

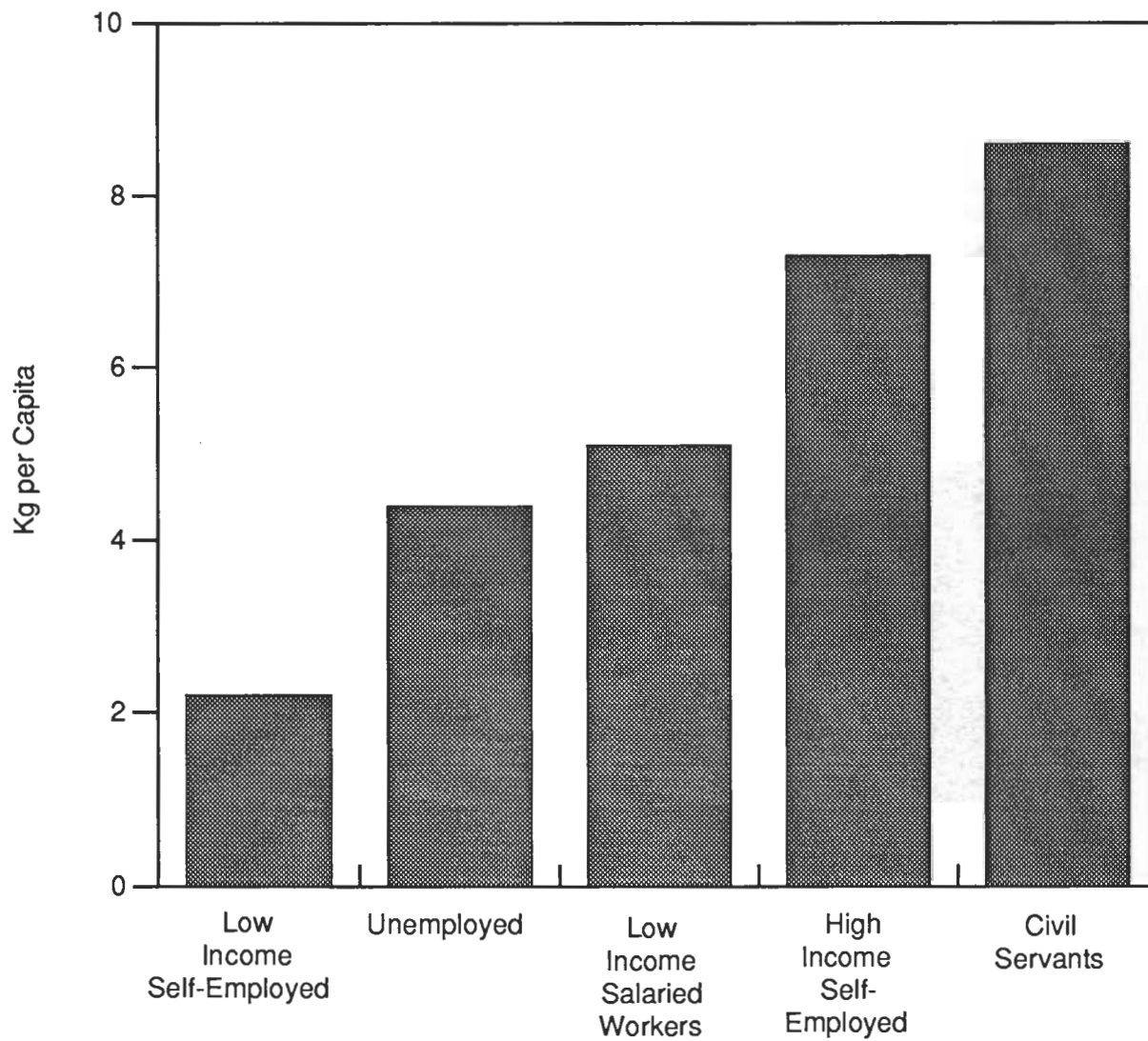
The second set of countries is exemplified by Tanzania and Malawi, where there was extensive control over maize markets, but no explicit quantitative rationing. In the case of Tanzania, efforts to liberalize markets have been laconic, largely reflecting the difficulty of abandoning government direct intervention in food markets amidst official skepticism about the role of private traders in ensuring food security. Yet, the institutional weakness of the state grain marketing agencies contributed to enormous financial losses for these agencies, high marketing margins, and policies that benefited neither consumers nor producers.

Figure 17 — Expenditure Shares by Sources of Consumption for Staple Commodities in Maputo



Source: Sahn and Desai (1993)

Figure 18 — Mean Household Uptake of Rationed Rice by Characteristics of the Household Head in Conakry, 1984



Source: Sahn and Arulpragasam (forthcoming)

In the wake of progress toward liberalizing Tanzanian grain markets, maize and rice prices fell and real incomes rose for the poor (Sarris and van den Brink 1993). This is attributable to the easing of product shortages on parallel markets and improved marketing efficiency. More specifically, liberalization led to higher food production in response to improved price signals and greater availability of consumer and investment goods (Collier and Gunning 1989). Greater market supply, coupled with the elimination of official markets (to which the poor did not have access), led to more moderate consumer prices in the open market (Amani, et al. 1988).

Despite these improvements, a survey of private grain traders indicates that many impediments still remain to improving their performance. High on this list is the uncertainty and credibility of the actions of the state. This contributes to the reluctance of traders to invest in business assets, such as storage structures. State disengagement from the inappropriate roles assumed in the past is not to argue against taking on appropriate responsibilities, particularly in the area of relieving infrastructural constraints that impede the activity of the private market (Amani, van den Brink, and Maro 1992).

As in Tanzania, strict controls over the maize market have given way to more liberated markets in Malawi. In the pre-reform period, however, while the state grain agency set market prices in practice, those paid by the consumer diverged dramatically. Indications are that the rural poor were not well served by official grain outlets, but instead relied on open markets where prices were substantially higher, and reflected the seasonal price of storage (Sahn and Arulpragasam 1993). Although the early stages of reform fell short of expectations, in large measure because of the restrictions and regulations placed on private traders (Sahn, Arulpragasam, and Merid 1990), there were improvements in the functioning of the private markets. Some concern, however, still remains over the slow rate of expansion of private trade into thinner markets in the north of the country.⁴⁷ The important point, however, is that, in general, consumers have not been adversely affected by the diminished role of ADMARC in grain marketing (World Bank 1994).^{48, 49}

⁴⁷ Policy contradictions and partial implementation have been largely responsible for the failings of liberalization efforts (Scarborough 1994).

⁴⁸ A very early assessment of the impact of liberalization of maize markets by Lele (1989) does suggest adverse effects on the poor.

⁴⁹ Another good example of the deleterious welfare consequences of government interference in maize markets is Zimbabwe. The major beneficiaries of the system of state controls of grain marketing were urban millers and better off large commercial farmers. Conversely, the benefits from liberalization would accrue primarily to the poor who would prefer less expensive higher extraction maize meal, along with the small-scale milling industry that produces such products (Jayne, Rukini, Majek, Sithole, and Mudimu 1991). Similarly, Sahn and Alderman (1987) discuss the benefits of liberalizing the maize market in Somalia, and Badiane (1989) argues that removing marketing restrictions and state interference in the Sahel will have positive benefits for the poor.

The third group of countries involved in domestic food marketing is exemplified by Cameroon, The Gambia and Niger. In these cases, government attempts to influence producer prices for crops such as cassava, millet and sorghum failed because government purchases were generally inadequate to have a significant effect on market supply. This point is well illustrated in the case of Niger, where there was little relationship between the official purchase price offered to farmers by parastatals and market prices prior to reform. Thus, eliminating the role of money-losing parastatals had little effect on consumer welfare since such institutions were not instrumental in price determination for key commodities such as millet, sorghum and cowpeas (Jabara 1991).⁵⁰

Finally, we consider the case of Ghana, an example of a country with little government involvement in food markets, both before and after adjustment. Food prices there have declined since the beginning of adjustment, although this is simply a continuation and acceleration of a trend that began prior to adjustment. For example, the rate of decline in maize prices was 1.6 percent per year postadjustment, as contrasted with 0.7 percent preadjustment.⁵¹ An appreciable decline in prices was also found for rice, the other major traded food, as well as nontraded goods, including sorghum, millet gari, and yam, with only cassava prices failing to show a marked downward trend. These moderating prices were due to a combination of more favorable weather and a variety of policy-induced factors that have contributed to production increases, as well as falling marketing costs despite higher fuel prices. The latter resulted from increased availability of foreign exchange (in large part from aid flows) that permitted the rehabilitation of infrastructure and increased availability of spare parts for vehicles (Alderman 1991, 1993).

In sum, our analysis of efforts at food market liberalization indicates that substantial progress has been made. Indeed, differences are noted, but in practice the degree of reform is strongly linked to prior conditions and level of interference. For example, in most of West Africa, intervention in food markets was relatively limited, and where attempted, particularly in the case of roots and tubers, and coarse grains, not terribly effective or important.⁵² Where this intervention was eliminated, it meant relatively little for producers, and even less for consumers. Many West African governments also were actively engaged in importing grains, particularly rice. This has often continued, in

⁵⁰ Humphreys (1986) also points out how prices of staple commodities fell in Mali after market liberalization.

⁵¹ The large jump in prices during the drought year of 1983 is left out of the analysis because it would otherwise exaggerate the postadjustment price decline.

⁵² The clearest exception to this rule was Guinea, where not only was marketing of all crops, in theory, under the strict control of the state, but so too was much of the production in the state farms. In practice, neither the marketing agencies ever gained true control, nor did the state farms ever represent a significant share of production (Arulpragasam and Sahn, forthcoming).

fact, providing the source of cheap foodgrains to the city, and in Guinea, to the countryside as well.

While there is little question that the Guinea experience of raising urban food security through importing cheap basic staples, particularly of low cost, low quality rice, finds applicability elsewhere in West Africa, the underlying concern over the adverse effects on agriculture remain. This being said, however, efforts to achieve self-sufficiency in food grains by limiting access to cheap rice on world markets have been unsuccessful in reducing the flow of food imports. Moreover, they have represented an ineffective poverty alleviation strategy, and diverted attention from non-traditional exports and other strategies that would use resources more efficiently (Stryker, et al. 1994).

In contrast, many governments in East and Southern Africa were heavily engaged in maize marketing through procurement schemes that often discriminated against the farmer, and did little to help the poor consumer. Eliminating the parastatal structures responsible for grain marketing has proven much more difficult. Despite the gradual nature of the process, liberalization has occurred in all cases studied. Furthermore, the poor are in general not the losers, although, in some cases of remote and very thin markets (e.g., the north of Malawi), traders have been slow to pick up the slack left behind by the disengagement of the state. Nonetheless, the overall evidence indicates that protecting the interests of consumers is generally a weak justification for delaying the liberalization of food markets. And even in those cases where there is no strong evidence of improved pricing efficiency subsequent to reforms, this must be evaluated in the context of the dualistic nature of market structures that often existed prior to reforms.

Of course, arguing against the types of state interference in commodity markets that has characterized Africa in the past is not synonymous with no role for government in pursuing household food security. In fact, where feasible, it is ideal for the state to be engaged in identifying the poor, and thereafter targeting transfers, whether they be in cash or kind. For example, in Mozambique, an ineffectual and expensive food rationing system was in place in the capital city, Maputo, prior to the onset of adjustment. The irony, however, is that the yellow maize grain in the ration system, is an inferior product, with a negative income elasticity for the non-poor. Therefore, it would have been possible simply to augment the supply of the yellow maize grain that was available in open markets to reduce the price of yellow maize.⁵³ This would have achieved the welfare objectives purportedly motivating the failed rationing system (Dorosh, del Ninno, and Sahn 1994).

While the Mozambique example should not be viewed as generalizable, insofar as the convenience of a self-targeting commodity is an attribute that is not to be found in all contexts, it does show the need to search for modalities that are efficient means of transferring income to the poor. In Guinea, for example,

⁵³ The cost of increasing imports of yellow maize could have been paid for by reducing the amount of rice (a luxury good for the poor) provided.

imports of low quality rice are effectively self-targeting (Arulpragasam 1994). Multi-market simulations indicate that a ten percent reduction in the tariff on low-quality imported rice⁵⁴ results in an increase in the daily per capita calorie intake of the urban poor by 2.85 percent and a reduction in the headcount of poverty from 35.6 to 33.0 percent of the urban population. Moreover, as noted above, local and low-quality imported rice are relatively poor substitutes, so that the tariff reduction has only a minor effect on the price of higher quality local rice and a marginally positive effect on real incomes of rural households near Conakry.

In contrast to these examples of the market mechanisms to target subsidies, in Madagascar imported rice is of higher quality and is a closer substitute for local rice. Imported rice is thus not self-targeting and appears to have had more significant disincentive effects on producers than in Guinea. CGE simulations indicate that the imposition of a 30 percent tariff on imported rice, a policy debated by Malagasy government in the early 1990s, leads to small increases in paddy production and in real incomes of surplus-producing farmers. Urban poor households suffer a 1.9 percent decline in real incomes in the short run (Dorosh 1994).

The differences in the country experiences noted above reinforce the need for an analytical framework that identifies avenues to increase food security without resorting to inherently distortionary market interventions. In Guinea, like in Mozambique, this can be achieved through policies that promote the increased imports of low priced, low quality basic staples. In these instances, domestic producers are not threatened, at least in the short-term. In the long-term, this is even less likely to be a problem if countries adopt sensible strategies to promote exports, and diversification, both from the point of view of the composition of agricultural incomes, as well as between agriculture and other income sources, particularly from small-scale manufacturing and services.

IMPROVING THE PERFORMANCE OF AGRICULTURE

Finally, there remain two issues that are of great importance in conditioning the ability of reforms in food markets and agriculture to contribute to poverty alleviation. These are the questions of supply response and access to land. Our purpose here is not to resolve various debates such as the nature of public investments to spur agricultural innovation, or what in fact should be done to address the constraints listed below. Many of the gender-differentiated impediments considered in the following discussion are embedded in the social and economic structures of sub-Saharan Africa. Instead, we highlight the need to further consider the appropriate role of the state in facilitating increased agricultural and reduced rural poverty.

⁵⁴ Guinea's rice imports in the early 1990s were mostly 25 percent broken.

Supply Response in Agriculture

The preceding analysis of the impact of macro and market prices on output and incomes assumes only limited price responsiveness. The jury is still out, however, on what are reasonable expectations in terms of the response of aggregate output to policy change, and how this response can be bolstered.

Data on agricultural production in Africa paint a rather somber picture of trends in the past two decades. A simple unweighted average of food production per capita in the ten countries in Table 35 shows a decline of 12 percent between 1975-77 and 1989-91. Real agricultural GDP has fallen by a similar percentage (Table 36), while agriculture's share in GDP has remained roughly constant, on average (Table 37).

Data on trends in food production for Africa are of uncertain quality, however, given the limited resources devoted to the difficult task of collecting information on multiple crops grown in remote rural areas.⁵⁵ One questions, for example, the validity of the large declines in per capita food production in Cameroon, The Gambia and Ghana in Table 35, given general macro-economic performance and the absence of significant increases in real food prices in these countries. Improvements in survey data and information systems are badly needed to improve agricultural policy evaluation and planning in most African countries.

Apart from possible measurement problems, lackluster performance of the agricultural sector would not be unexpected given the general lack of improvement in producer prices following agricultural policy reform.⁵⁶ In addition, weather, civil strife and other factors greatly complicate the interpretation of the observed production trends. A number of studies have found that price elasticities are low, especially for aggregate supply (Bond 1983; Lecaillon and Morrisson 1985, for Burkina Faso; Strauss 1984, for Sierra Leone; Martin and Crawford 1988, for Senegal; and Singh and Janakiram 1986, for Nigeria). Exceptions to this finding of low own-price elasticities, such as rice in Mali (Lecaillon and Morrisson 1986), were generally limited to single crop response, not aggregate output. A more recent study by Block (1993), however, suggests that the agricultural sector has been well served by reforms that raised producer incentives. Total factor productivity appears to have increased owing to policy

⁵⁵ See Jaeger (1992b) for a more detailed discussion of the quality of African production data.

⁵⁶ Trends in producer prices are difficult to interpret, however, since the only data from pre-reform periods in most countries refer to official producer prices, not market prices which most farmers faced. Nevertheless, in some countries, there were substantial increases in real prices faced by farmers. Real producer prices for rice rose by 20 percent in Madagascar in the 1990s due to market liberalization and the reduction in subsidized imports (Dorosh, Bernier and Sarris 1990). In Mozambique, economic reform and the legalization of private trade resulted in a 28 percent increase in real white maize producer prices over the same period (Dorosh and Bernier 1994).

Table 35 — Food Production per Capita Index (1980-1982 Average = 100)

Country	1975-77	1980-82	1989-91
Cameroon	113	100	91
Gambia, The	133	100	82
Ghana	120	100	97
Guinea	98	100	102
Madagascar	107	100	96
Malawi	102	100	92
Mozambique	116	100	96
Niger	92	100	115
Tanzania	107	100	96
Zaire	105	100	97
Unweighted Average	109	100	96

Source: World Bank, Africa Development Indicators (1993)

Table 36 — Real Agricultural GDP per Capita Index (1987 Prices,
1980-82 Average = 100)

Country	1975-77	1980-82	1989-91
Cameroon	81	100	75
Gambia, The	102	100	75
Ghana	94	100	81
Guinea	—	100 ^a	98
Madagascar	115	100	96
Malawi	110	100	92
Mozambique	—	100	88
Niger	100	100	89
Tanzania	114	100	102
Zaire	108	100	98
Unweighted Average	103	100	89

^a For Guinea, 1986 = 100

Source: World Tables, World Bank (1994)

Table 37 — Share of Agriculture in Total GDP

Country	1975-77	1980-82	1989-91
		(Percent)	
Cameroon	34.2	28.0	23.0
Gambia, The	42.8	41.3	32.8
Ghana	50.7	56.8	47.7
Guinea	—	—	28.8
Madagascar	32.3	32.3	36.5
Malawi	39.5	36.9	34.4
Mozambique	—	59.1	64.7
Niger	35.1	30.8	37.0
Tanzania	56.1	53.4	55.7
Zaire	27.3	29.0	34.8
Unweighted Average	39.8	40.8	39.5

Source: World Tables, World Bank (1994)

reform, even though technical change, the usual driving force behind such gains, has been limited.

While resolving the elasticities question and the problems of production estimates are beyond the scope of this paper, it is amply clear that recovery in agriculture through increasing factor productivity is the key to both reducing poverty and accelerating economic growth in most African countries. For example, policies that would increase rice production are shown not only to have the expected positive impact on the rural households, but also improve the incomes of the urban poor in Conakry (Arulpragasam 1994). Similar multi-market results are found for the impacts of a potential post-war recovery of agricultural production on both rural and urban households in Mozambique (Dorosh and Bernier 1994).

Koné and Thorbecke (1994) use a growth-multiplier analysis to show that in Zaire investing in agriculture is the most effective strategy to both alleviate poverty and increase GDP. Likewise, Dorosh and Haggblade (1993) report large growth multipliers for investments in the rehabilitation of small irrigated rice perimeters in Madagascar. CGE model simulations indicate that increasing small-holder irrigated rice production in Madagascar also leads to increased real incomes of the urban poor (Dorosh 1994).

The strong evidence in favor of agricultural recovery as being a key element of any strategy to accelerate economic growth is in large measure due to the fact that farmers are indeed responsive to price and market signals. However, it is equally true that a wide range of factors determine the size of the response including the stock of unused resources (e.g., land), the mobility of labor, the marketing infrastructure, the extent of knowledge and available information, and the degree of risk-aversion, as determined by the instability of the economic and natural environment. In most of these areas, there is also general consensus that public investments have a role in fostering aggregate output growth. In other words, certain public inputs into agriculture, including investments in research, extension, information systems and so forth are needed to expand the supply response and raise real incomes. Successful adoption of improved plant varieties (e.g. flint maize in Malawi⁵⁷), is unfortunately still the exception in much of Africa. More typical is Madagascar, where limited supply response to improved price incentives in rice was linked to low use of fertilizers and inadequate water control (Bernier and Dorosh 1993).

In considering the constraints placed on agriculture being the engine of economic recovery among the most prominent problems is the dilapidated or limited market infrastructure. For example, a survey of traders in Tanzania showed that the paucity of marketing structures and feeder roads were impediments to reducing marketing margins. So, too, the lack of communication infrastructure hindered the activities of private traders (Amani, van den Brink, and Maro 1992). The costs of inefficient marketing are particularly evident in Guinea where the cost of transporting a kilogram of rice from Boke to Conakry in 1987 was three times

⁵⁷

See Simler (1994).

as expensive as that of transporting a kilogram of rice from Bangkok to Conakry (Arulpragasam and Sahn, forthcoming). These costs not only act as impediments to domestic commerce and production, but have large welfare costs. In fact, multi-market results indicate that reducing the marketing margins by 30 percent for food products contributes to an increase of local rice consumption by 18.5 percent in Conakry, once again raising real incomes of the urban poor, as well as the rural poor (Arulpragasam 1994). A similar story emerges from the CGE model results for Cameroon (Benjamin 1993). Thus, it is quite clear that while dismantling of marketing parastatals that impede commerce and reduce incentives is prerequisite to rural recovery and poverty alleviation, so too are complementary efforts to lower the high transaction costs that presently face producers and consumers. Conversely, the dismantling of marketing parastatals that not only reduced incentives, but contributed to high transaction costs, is commended.

It is also critical to note that the constraints faced by small farmers that have lessened their benefits from improved price signals, as well as the benefits to the economy as a whole, may be particularly acute for women. Among these constraints are restrictions on labor mobility, the high cost of transportation to market, and lack of access to land, agricultural inputs, credit and extension services.

Restrictions on women's labor mobility stem from asymmetry in men's and women's obligations, relatively fewer female rights and weaker bargaining positions. When women in Côte d'Ivoire turned to producing and marketing attiéké (a food from cassava) the costs far outweighed the benefits. The production added to women's other jobs of household work and they received low profits because of their lack of access to prepared land and transportation (Traoré 1984). Kennedy and Bouis (1989) show that in the Philippines and Kenya changing production from semi-subsistence crops to cash crops increased household incomes. In the Philippines, women used their increased income to hire additional labor and thus to do less work during periods of pregnancy and nursing. In comparison, women in labor-constrained Kenya spent the extra income to support a more energy-intensive diet.

Even though the heavy demands of childrearing and other household activities may limit the availability of women's labor for increasing agricultural output, increased opportunities for wage employment and income generation may be perceived as beneficial by women. For example, in the Ibarapa District of Nigeria, a case study of women's agricultural work by Guyer and Idowu (1991) concludes that "unless the economy goes into absolute decline, the demand for female wage labor in local men's farming will increase ... women will welcome this development as yet another way to earn a living ... Short of a cultural revolution, women will continue to generate economic niches that allow them to do this, and indeed try to make the greater contributions [from] the high prices induced by SAP demand" (276-277).

Rural poor women farmers may also have less access to agricultural implements, extension services and credit. Although formal credit facilities and extension services are oriented toward large estate farms and cash crops, women are underrepresented in estate and cash-crop production. Issues of training center location, lack of food crop research and inaccessibility to credit apply to all smallholders, both women and men. However, among smallholders, women receive relatively fewer productivity-enhancing inputs.

For example, in parts of The Gambia women's productivity in individual farming is consistently estimated as 70 percent below men's because women tend to grow crops with technologies that result in lower net returns on their labor time. Average lower labor productivity than men for the same crop also is explained by access to labor-saving implements (von Braun and Webb 1987). Gladwin and McMillan (1989) found that female farmers in Malawi used suboptimal quantities of fertilizer. When access to cash and credit were held constant gender did not have a significant direct effect on fertilizer use.

Similarly, Gladwin and Due (1991) modeled a farmer's decision between chemical and organic fertilizer in Malawi and Cameroon and showed that women farmers want to use chemical fertilizer on maize but are constrained by lack of cash and credit rather than their beliefs in organic substitutes.⁵⁸ This model also showed that women farmers are very risk-averse, and they therefore limit their use of credits in fear of defaulting on loans in bad years. Koons (1989) also found in Cameroon that farmers who purchased inputs were visited often. Women felt they should not ask for farm visits because they were too poor, too small or too far away, or that visits were only for farmers who purchased inputs

When women produce cash crops or when extension information applies to food crop production, studies show that a female extension agent and grass roots or community organizations for women increase the availability of extension information to women farmers (Gill 1987; Saito and Spurling 1992). The assumption that extension information provided to the husband will be passed on to his wife (or wives) often does not hold.⁵⁹ Due to gender stereotyping, male extension agents may not work with female farmers.⁶⁰ In many African countries, few women are full members of farmer's clubs or organizations. In Malawi, by law, married women are automatic members receiving credit indirectly

⁵⁸ This low utilization of purchased inputs is not limited to women, however, and is characteristic of all poor farmers in most of Africa (e.g., see Sahn 1993).

⁵⁹ In Kenya, interviewed rural women reported that their sources of agricultural advice were 40 percent from extension workers, 30 percent from husbands and 30 percent from others (Gill 1987).

⁶⁰ The 1980-81 National Sample Survey of Agriculture in Malawi found that 54 percent of husbands received extension advice from an extension worker, compared to 33 percent of wives and 32 percent of female heads of households (Quisumbing, Schwartz, and Chibawana 1992).

through their husbands. Other, never married, divorced or women in polygamous relationships go to the clubs as individuals. Social stigmas set them apart from male participants (Due and Gladwin 1991). Formalizing women's clubs or organizations, and redefining membership based on individual (including smallholder) farming may be one method of increasing female access to information.

Land Reform

Perhaps the most contentious area for intervention by the state in terms of raising output and improving equity is in the area of the underlying indigenous institutions that affect the access to, and use of land. In countries and regions where land scarcity is not a major problem, access is not a major policy issue. In many other cases, where density is high and land pressures are increasing, access is becoming increasingly important. This is nowhere more obvious than in cases such as Malawi, where our research has shown the deleterious consequences for the welfare of poor, and the economy as a whole, of the interference of the state in land market transactions and the imposed duality between estates and smallholder procedures (Sahn and Arulpragasam 1991a, 1991b, 1993). The literature on land reform does indicate that state intervention, e.g. through titling schemes, is generally not warranted or effective (Feder and Noronho 1987; Shipton 1987). However, the issue remains as to the adequacy of institutional arrangements governing land use, and how to provide incentives, reduce uncertainty, and address asymmetric information in factor markets. In fact, the evidence in this regard is conflicting. Some have argued that the inadequacy of the public resources of the state has been a major contributing factor to failed institutional arrangements in land markets (Feder and Feeny 1991). This viewpoint clashes with the perspective that the property rights regimes have not impeded technological change, and that there is no overall problem of "missing institutions" that have slowed productivity gains or exacerbated poverty in rural areas. Instead, dangers exist for inequitable distribution of land caused by the introduction of proposed titling schemes. Thus, instead of allocating public resources to the bureaucratic implementation of cadastral survey and land titling schemes, resources should be directed toward the development of agricultural technology, such as that which increases labor productivity without increasing risk, adapting to Africa's particular agroclimates and economic conditions (van den Brink and Bromley 1992).

Land ownership is especially problematic for women due to traditional patrilineal inheritance schemes (Goheen 1991; Haddad 1990). Thus, even in countries and regions where land scarcity is not a major problem, ownership is an impediment for women farmers. Expansion of cash cropping and increased competition for land acquisition has disadvantaged women's land ownership. In Cameroon, privatization measures have altered a woman's right to own land compared to usufruct rights to land under traditional laws (Goheen 1991). In some cases, increased production of cash crops relocated food crops farmed by women to lower quality lands which may be situated farther from villages (Saito and Spurling 1992).

SUMMARY

Agricultural and food policies determine to a large extent how macroeconomic policies and world market prices affect domestic producers and consumers. In a number of countries, inappropriate policies in these sectors prevent macro-policy reforms from changing relative prices, improving producer incentives and eliciting a supply response in agriculture. Given agriculture's large share in total domestic output and in employment, the lack of coordination of agricultural and food policy with broader trade, exchange rate and fiscal reforms jeopardize macro-economic, sectoral and household level objectives of adjustment.

Unfortunately, state intervention in agriculture in Africa has often been to the detriment of the poor. Producer prices for crops produced by the rural poor have been kept artificially low through explicit taxation of exports, marketing restrictions and inappropriate exchange rate policies. Moreover, in most cases, the urban poor have not greatly benefited from food subsidies, ostensibly designed to increase their welfare.

Experience to date with reform is mixed. Changes in relative prices succeeded in raising real incomes of producers in Ghana (cocoa), Madagascar (rice) and Mozambique (white maize). Initial efforts at market liberalization in Malawi and Tanzania likewise appear to have raised real incomes of producers without significant adverse effects on the urban poor. And at least in some cases, there is sizeable evidence that agricultural reform has worked in the favor of poor women, as well as poor men. Yet supply response in agriculture has been in most cases disappointing, suggesting the need for complementary reforms and investments.

As illustrated by the wide array of approaches and experiences in food market interventions discussed in this section, it is extremely difficult to draw generalizations about agricultural policy reforms, particularly in regard to food crops. Micro-level factors, including institutional marketing arrangements, time constraints faced by women farmers, lack of access to inputs and local agro-ecological conditions, make design of agricultural policy country-specific. Understanding and overcoming country- and region-specific constraints on the supply response of agriculture is crucial for sustained agricultural growth and poverty reduction.

6. CONCLUSIONS, RECOMMENDATIONS AND POLICY IMPLICATIONS

Our analysis of the types of economic policy reforms undertaken in Africa under the conditionality of adjustment credits suggests that on balance, they have not had a deleterious impact on the poor. In fact, apart from the few exceptions we have noted, most of the poor in most countries were likely to have been net gainers to the extent that their governments undertook the types of adjustment policies discussed in the previous sections of this paper. This is not to say that there are no losers as a result of reform. Likewise, losers may include some of the poor and vulnerable. Of particular concern has been the plight of retrenched workers and women. While the evidence regarding both groups is mixed, the heterogeneity of the poor suggests the need not to neglect dimensions such as gender in the analysis. The biggest losers from adjustment policies, however, are the urban elite who had access to official markets and prices. It comes as no surprise, therefore, that the pace of reform in much of Africa has been retarded by the influence of politically astute and persuasive elements of society who benefited from access to rents, particularly through controlling cheap foreign exchange, cheap credit, and other rationed goods.

Why do our results differ from the received wisdom? We believe the answer to that question is to be found foremost in the fact that we have focused on the with and without question, instead of being concerned with a before and after comparison. As we indicated in the introduction, the counterfactual is the appropriate measure by which to judge the merits or failings of policy change.

Other factors also explain the divergence of our findings from more commonly held perceptions. First, there is often a failure to distinguish between the recession, brought on by egregious policy distortions and unfavorable external conditions, and the subsequent policy response, as embodied in adjustment programs. Second is that there is often a failure to distinguish between the receipt of adjustment loans and actual policy reform. Many countries have had adjustment programs financed by the international community. Few have shown a strong commitment to correcting bad policy; and even where reforms have been undertaken, they are often reversed. The political economy considerations that impede reform, and its sustainability, are clearly of great concern, although not surprising in light of the distributional impacts discussed above. It is an error, however, to suggest that the declining living standards in countries receiving loans, is a failure of policy. Instead it is a failure of the institutions charged with implementation of policy to embrace and institute reform.

A third additional point in explaining our research results is our attention to the role of parallel markets and the underground economy. As we have indicated, the implications of reform programs on the functioning of open versus controlled markets for foreign exchange, food, inputs, and so forth,

are radically different. Most research, however, has examined movements in official markets. Attention to the parallel open markets where the poor participate as consumers and producers results in different conclusions, again explaining the lack of correspondence between some of our results and the ideas generally in good currency.

While our message may be divergent from those openly antagonistic to adjustment policies, we also recognize that for the countries that have adjusted, the resulting economic gains have been marginal in most cases. Adjustment programs in Africa have not generated rapid and sustainable economic growth that could produce comparable gains for poor households, nor have they resulted in a radical redistribution of existing resources in favor of the poor. In part, this reflects poor implementation of the policies included in the program rather than inefficacy, a point we return to below. But it is also true that even in African countries with relatively more aggressive policy reform, growth, while improving, is certainly not spectacular.⁶¹

Exports have also been slow to recover from losses in market share, and account imbalances have worsened in some cases. Simply put, there are no Asian dragons in Africa. Thus, while reforms associated with adjustment programs may have been on-balance favorable for the poor, for the economies as a whole such efforts have not worked even small miracles. This comes as no surprise, and in part reflects the limited purview and scope of the balance of payments support and the related conditionality of adjustment lending. In part, the weakness in actual design of adjustment lending by the external sponsors is undoubtedly a contributor. Not clearly spelling out conditions, not focusing on priorities, and not having sufficient insight and knowledge, or an appropriate analytic framework for the design of adjustment programs, are part of the problem. So too, is the failure to incorporate complementary measures to promote economic growth early enough in the process. These measures include the renewed emphasis on human resource development, and investments to facilitate the growth of the private sector, such as infrastructure development and improved legal and regulatory frameworks. Giving priority to such measures is paramount, a fact being increasingly reflected in the design of adjustment loans. It is also the case, however, that investment projects and technical assistance may be better modalities than balance of payments support to foster the development of human resources, augment physical capital and improve the efficiency and fairness of markets. Furthermore, projects offer greater opportunity for addressing non-economic social and cultural factors that contribute to poverty and deprivation, such as gender discrimination and time constraints (due to demands for household work) that limit women's participation, and thus the potential benefits from, and extent of, economic recovery.

⁶¹ While recent studies such as the World Bank's report, *Adjustment in Africa* (1994), make the case that reforming countries perform better than non-reformers, the differences are not large.

RECOMMENDATIONS

A number of recommendations for future adjustment lending follow from the conclusion that rapid reform benefits the poor, despite that it may not be sufficient to realize the dual objectives of rapid growth and poverty alleviation. Perhaps most crucial to making adjustment more effective, exchange rate and trade policy reforms should proceed rapidly. Elimination of quantitative restrictions and foreign exchange rationing are policy changes that warrant immediate and full implementation, both on equity and efficiency grounds. Where such policies have been slow to be implemented, the impediments such poor policy performance imply for economic success are great.

In terms of fiscal policies, the macroeconomic instability that ensues from irresponsible fiscal management threatens both growth and equity. This applies even to the best of Africa's performers, such as Ghana, to say nothing of completely debilitating policies in countries such as Zaire. The major fiscal policy issue for the poor is how money is spent, and how revenue is raised, with the overriding imperative that the total level of spending is not too great to fuel inflation and crowd out private investment. On both counts, there is considerable latitude to move rapidly to improve policy performance, and thus outcomes. The need for increased progressivity is particularly acute for expenditures in the social sectors and for the structure of taxation. While this truth is widely acknowledged, progress in this domain has been slow. Likewise, a key component to any broad based attack on poverty that includes the state as a partner requires a reallocation of the budget from supporting bloated and unproductive bureaucracies to services and investment that reach the poor. The political difficulties involved in weak regimes reallocating the budget and eliminating jobs and rent seeking is not underestimated. Such action will result in the loss of support from some politically astute allies. However, the harsh implications (for the dual objectives of growth and equity) of failing to reform the public sector and eliminate rents should also not be minimized.

When it comes to reforms in the agricultural sector, there is little justification for the widespread practice of gradual elimination of state controls that tax producers of export crops. Instead, it is imperative to move rapidly to liberalize export crop marketing arrangements that have taxed small farmers. In general, reforms in domestic marketing arrangements for food crops should also be made rapidly, although some attention needs to be given to the anomalous circumstances when a share of the poor lose from the elimination of food subsidies, or the withdrawal of state procurement agencies. Targeted transfers can be considered under such circumstances. Caution, both about the demanding managerial requirements for targeting, and the potential adverse consequences, ranging from encouraging rent-seeking behavior to impeding market development is warranted.

Overall, while there may be important issues of timing or sequencing of reforms, these are for the most part a matter of ensuring reasonable macroeconomic management of transitions. For example, undertaking nominal exchange rate depreciation with the intent of affecting the real exchange rate

is predicated on the pursuit of disciplined fiscal and monetary policy. For the most part, however, the issue of sequencing of reforms is highly context specific, making generalizations difficult. Again to illustrate, import liberalization should generally not be undertaken without removing barriers to exports, and in fact, the removal of certain import ties and barriers, particularly on luxury goods, may commend phasing such efforts. In some cases where labor market and other policies impede factor mobility, it may also be important that these be addressed synchronously to have the most beneficial impact on the poor. These examples of logical management of the ordering of policy change depend on the nature of the distortions that are extant, and the structure of the economy. While care thus must be given to managing macroeconomic and sectoral reforms, particularly to ensure that the overall growth and stability objectives are achieved, once this is done, the addition of a poverty dimension to the timing and sequencing issue, for the most part, is an unnecessary academic complication that has provided an excuse to slow the process of reform. Simply, since the evidence shows that key adjustment policies (e.g., trade and exchange rate, fiscal, and agricultural and food market reforms) benefit the poor, governments should proceed with these reforms as rapidly as is feasible while maintaining macro-economic and sectoral policy coherence.

In that regard, rapid disengagement of the state from inappropriate interference in markets, such as manifested through foreign exchange rationing and forced procurement of agricultural output, can be achieved with a minimum of managerial oversight. Likewise, there is enough excess in state employment that large reductions in the public sector work force can be achieved without undue delays, even if this process begins with a removal of ghost workers and closing of money losing state enterprises.

Where the problem of rapid reform becomes more challenging (and thus far most debilitating to the growth and poverty agenda) is in the area of fiscal priorities. For example, in the area of tax policy, even if one makes the appropriate legal reforms, enforcement remains problematic. Quite simply, improving legal frameworks and regulations is fine, but finding the institutional capacity to ensure their application is much more complicated. Similarly, public investment and expenditure policy require more careful review, both in the context of reordering priorities, and ensuring their implementation. Basic principles apply, such as reallocation of existing services to those used primarily by the poor. Nonetheless, manpower shortages at the central level that impair strategic planning, and the absence of trained workers and community based facilities, slow the realization of the best intentions of policy-makers. So too, however, politics often get in the way of addressing the interests of the poor. This is no where more apparent than in the rigidities in sector budget allocation, exemplified by the persistence of high levels of defense spending.

IMPLICATIONS FOR FUTURE ACTION

The implication of the above discussion is that donors do not need to increase their attention to getting the conditions right for balance of payments support (conditions which are in fact appropriate, for the most part), but instead to concentrate on assisting governments implementing the conditions outlined and utilizing the loans provided in such a way as to foster labor intensive growth and productivity gains (which we think has not been nearly so successful). In this regard, we remain concerned about slippage in terms of achieving policy change, which needs to be given more attention by donors. This is problematic given that the dependency relationship on adjustment lending goes both ways. Aid flows are often determined as much by the donor's need to lend as the recipient's actual need for foreign exchange.

A related problem is the capacity of the state to effectively absorb and utilize large foreign capital inflows, a particularly serious problem when such resources are allocated to the very state structures that have not proven very effective in meeting past conditionality, or addressing underlying weaknesses in their policy framework. There is also a contradiction that while reform programs ostensibly favor market-based development and growth of the private sector, the direct beneficiary of most adjustment assistance is the government itself. The government thus gains control of the local currency counterpart to the balance of payments assistance, often being able to allocate this to whatever expenditures it likes. In countries that have received large increases in foreign aid through adjustment assistance, this has led to a "boom" in the public sector. This fiscal expansion can often "crowd out" investment in the private sector despite the professed intention to promote private sector development. Further exacerbating this problem is the fact that while adjustment policies are designed to increase openness and improve international competitiveness, and raise exports, the increased balance of payments support is associated with appreciation of the real exchange rate, diminishing the incentives for exporters. (See, for example, Younger [1993]).⁶² Even worse, adjustment lending without credible enforcement of conditionality may provide the financing to avoid undertaking reforms. The resulting problem, however, goes beyond simply a waste of financial resources. Instead, the slippage and policy instability created by a lack of commitment to reform raises skepticism and cynicism among those in the private sector who will make adjustment a success. It may further perpetuate and strengthen regimes that in fact are committed to avoiding, rather than undertaking, reform.

⁶² The importance of raising exports does not stem solely from the fact that they provide foreign exchange. If it did, then balance of payments support would be as good as a country's own exports, perhaps even better in that it frees resources from foreign exchange generation for other purposes. Instead there is something inherently dynamic in exporting (e.g., learning-by-doing, scale economies in production). To the extent that long-term balance of payments support reduces the incentive to export, it will in fact be harmful.

Given that the financing gap is real, just as is the liability of supporting bad government and not achieving real policy change, what does this imply for future action? On the one hand, there may be an argument for greater donor involvement in the utilization of balance of payments support, or even endeavoring to circumvent the state's control of the local currency generated by the sale of needed foreign exchange. While such approaches may be desirable, they raise a number of problems. These range from the limitations in terms of alternative institutional structures to absorb local currency generated by large foreign capital inflows, to broader issues such as state sovereignty.⁶³ At the end of the day, the internalization and ownership issues of macro and sectoral reform represent a large part of the solution. Our experience suggests that this lack of commitment to reform is an acute problem which has yet to be adequately addressed and represents an acute institutional failure. Greater policy dialogue and consensus building, incorporating stakeholders from without government in the process, are the types of approaches recognized to promote such ownership. Encouraging government participation and enthusiasm in the reform process is, however, difficult to motivate from the outside, and instead is largely endogenously determined. This is all too well illustrated in the case of Somalia where the substantial progress in many areas of policy change was quickly reversed, or in the case of Zambia, where after a decade of resistance to the fundamentals of macroeconomic management, an extraordinary commitment to adjustment policies is now found.

COMPLEMENTARY ACTION

While a sound macro and sectoral policy framework must be achieved through policy change along the lines discussed above, any serious attack on poverty also requires appropriate complementary investments that will favor the poor and vulnerable, especially women and children. Recall, however, that development strategies, multifaceted in concept and diverse in investments, were failing in Africa by the late 1970s. This realization led donors and governments to examine the reasons why development projects were yielding unacceptably low rates of return. The answer usually was found in poor policy. As a result, donors and a few governments began to put increasing emphasis on getting the fundamentals right. This first and foremost involved restoring macroeconomic stability, without which virtually any development strategy would fail. But it also included a wide range of so-called sectoral reforms designed to allow markets to function efficiently again. Thus entered the concept of policy-based lending.

⁶² In addition, there is a question as to who is more likely to make a wise decision in the allocation of foreign aid funds: the local government (which usually has more discretion with balance of payments support), or the donor (which usually exercises more influence over project expenditures). We do not have answers to these questions, so we cannot determine the appropriateness of long-term balance of payments support, but these are clearly issues that deserve attention in future research.

While the factors that contributed to the onset of policy-based adjustment lending are thus clearly understood, they also serve to remind us of fundamental truths: that adjustment policy does not negate the need for sound development policy; that balance of payments support in the form of adjustment loans is not a substitute for good policy; and that good policy does not eliminate the need for investment that contributes to a broader development strategy. Thus, a more micro focus on investment in rural health clinics and schools that foster human resource development, physical infrastructure such as rural roads that improve market efficiency, agricultural research, information and extension services that raise productivity, legal and regulating frameworks that address matters ranging from gender discrimination in labor markets to unwarranted export regulations are necessary. These measures, together with a foundation including a stable macroeconomic environment in which price incentives reflect opportunity costs, are the basis for accelerated growth and poverty reduction.

CONCLUSIONS

Our central message then comes down to five propositions. First, rapid and sustained growth is essential to alleviate poverty. Redistribution of existing wealth and income would, in itself, be woefully inadequate to significantly raise real incomes of the poor in most countries. Second, the successful implementation of adjustment policies is needed to achieve the growth objective. What is more, during the short- to medium-term, policy change usually contributes to improved income distribution and higher incomes for the poor due to a range of factors, such as the reduction in rents, increased economic efficiency, and improved productivity of labor. Third, the implementation of adjustment policies has been weak, due in large part to a combination of institutional factors that stem from the underlying political and social conditions. Until this is addressed, adjustment programs will not achieve their objectives. Fourth, carte blanche balance of payments support in the absence of rapid and sustained policy change will be counterproductive. This is because it will appreciate the exchange rate, but more significantly, it turns over resources to and thereby supports governments which have proven themselves unable or unwilling to invest in poverty reduction. Fifth, complementary investment in human resources and physical infrastructure is imperative. Recall, investment led growth was put on the side burner in order to address a macro-framework that was counter to achieving reasonable rates of return. Such investments can either be incorporated into adjustment loans (preferably after macroeconomic stability and appropriate relative prices are firmly established so as not to diffuse attention), or in many instances more ideally, into project lending. The latter offers the potential for substantial attention to managerial and institutional issues that are not well addressed in broadly stated conditions.

REFERENCES

- Agarwal, Bina, et al. 1989. Engendering Adjustment for the 1990s. Report of A Commonwealth Expert Group on Women and Structural Adjustment. United Kingdom: Commonwealth Secretariat.
- Alderman, Harold. 1993. "Intercommodity Price Transmittal: Analysis of Food Markets in Ghana." In *Oxford Bulletin of Economics and Statistics*. 55(1).
- _____. 1991. *Downturn and Economic Recovery in Ghana: Impacts on the Poor*. Monograph No. 10. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Alderman, Harold, Sudarshan Canagarajah, and Stephen Younger. 1993. *Consequences of Permanent Lay-off from Civil Service: Results from a Survey of Retrenched Workers in Ghana*. Working Paper No. 35. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Amani, H. K. R., et al. 1988. "Effects of Market Liberalization on Food Security in Tanzania." In *Southern Africa: Food Security Policy Options*. (Proceedings of the 3rd annual conference on food security research in southern Africa, 1-5 November, 1987). M. Rukuni and R. Bernstein, eds. Harare: Department of Agricultural Economics and Extension, University of Zimbabwe/Michigan State University Food Security Research Project.
- Amani, H.K.R., Rogier van den Brink, and W.E. Maro. 1992. *Tolerating the Private Sector: Grain Trade in Tanzania After Adjustment*. Working Paper No. 32. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Arulpragasam, Jehan. 1994. *The Effects of Trade and Exchange Policies in Food Markets, Household Food Consumption and Urban Poverty in Guinea Maritime: A Multi-Market Analysis*. Working Paper No. 65. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Arulpragasam, Jehan and David E. Sahn. Forthcoming. *Economic Transition in Guinea: Implications for Growth and Poverty*. New York: New York University Press.
- _____. 1993. "Policy Failure and the Limits of Rapid Reform: Lessons from Guinea." In *Adjusting to Policy Failure in African Economies*. David E. Sahn, ed. Ithaca, NY: Cornell University Press.
- Azam, J.P. and J.J. Faucher. 1988. "The Case of Mozambique." In *The Supply of Manufactured Goods and Agricultural Development*. Development Centre Paper. Paris: OECD.

- Badiane, O. 1989. "The Potential for an 'Espace Regional Cerealier (ERC)' among West African Countries and its Possible Contribution to Food Security." Paper presented at the Seminar on Regional Cereals Markets in West Africa. Lomé: CILSS/OECD/Club du Sahel.
- Bagachwa, Mboya S.D. Forthcoming. *The Microenterprise Sector of Tanzania: Evolution and Significance*. Working Paper No. 69. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Bagachwa, Mboya S.D., Alexander Sarris, and Platon Tinios. *Small Scale Urban Enterprises in Tanzania: Results from a 1991 Survey*. Working Paper No. 44. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Balassa, Bela. 1990. "Incentive Policies and Export Performance in Sub-Saharan Africa." *World Development*. 18(3): 383-391.
- Benjamin, Nancy. 1993. *Income Distribution and Adjustment in an Agricultural Economy: A General Equilibrium Analysis of Cameroon*. Working Paper No. 41. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Bernier, René and Paul A. Dorosh. 1993. *Constraints on Rice Production in Madagascar: The Farmer's Perspective*. Working Paper No. 34. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Berthélemy, J.C. 1988. "The Case of Madagascar." In *The Supply of Manufactured Goods and Agricultural Development*. Development Centre Paper. Paris: OECD.
- Bevan, David, Paul Collier, and Jan Willem Gunning. 1990. *Controlled Open Economies: A Neoclassical Approach to Structuralism*. New York: Oxford University Press.
- Blandford, David, Deborah Friedman, Sarah Lynch, Natasha Mukherjee, and David E. Sahn. 1994. "Oil Boom and Bust: The Harsh Realities of Adjustment in Cameroon." In *Adjusting to Policy Failure in African Economies*. David E. Sahn, ed. Ithaca, NY: Cornell University Press.
- Block, Stephen A. 1993. *Agricultural Productivity in Sub-Saharan Africa*. Thesis presented to The Committee on Higher Degrees in Political Economy and Government. Cambridge, MA: Harvard University.
- Bond, M. 1983. "Agricultural Responses to Prices in Sub-Saharan Africa." IMF Staff Paper 30. Washington, DC: International Monetary Fund.
- Bourguignon, F., W.H. Branson, and J. de Melo. 1989a. *Macroeconomic Adjustment and Income Distribution: A Macro-Micro Simulation Model*. Technical Papers, No. 1, Paris: OECD Development Centre.

- Bourguignon, F., W.H. Branson, and J. de Melo. 1989b. *Adjustment and Income Distribution: A Counterfactual Analysis*. NBER Working Paper. Cambridge, MA.
- Carney, Judith A. 1988. "Struggles Over Land and Crops in an Irrigated Rice Scheme: The Gambia." In *Agriculture, Women and Land: The African Experience*. Jean Davison, ed. Boulder: Westview Press.
- Collier, P. 1991. "Africa's External Economic Relations: 1960-90." *African Affairs*. (90): 339-356.
- Collier, Paul and Jan Willem Gunning. 1989. *The Tanzanian Recovery, 1983-1989*. Photocopy.
- Conakry Household Welfare Survey. 1990.
- Cornia, A.P., R. Jolly, and F. Stewart. 1987. *Adjustment with a Human Face*, vol. 2. Oxford: Clarendon Press for UNICEF.
- Côte d'Ivoire Living Standards Survey data tapes. 1985.
- Dayton, Julia and Lionel Demery. 1994. *The Public Health Expenditure and the Rural Poor in Kenya*. Washington, DC: The World Bank. Mimeo.
- _____. 1986. "Financing Education in Developing Countries: An Exploration of Policy Options."
- de Merode, Louis. 1992. *Implementing Civil Service Pay and Employment Reform in Africa: The Experiences of Ghana, the Gambia, and Guinea*. Draft.
- Demery, Lionel and Mathew Verghis. 1994. *The Incidence of Education Expenditure in Kenya*. Washington, DC: The World Bank. Unpublished mimeo.
- Dervis, Kemal, Jaime deMelo, and Sherman Robinson. 1982. *General Equilibrium Models for Development Policy*. Washington, DC: The World Bank.
- Dollar, David. 1992. "Outward-oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-1985." *Economic Development and Cultural Change*. 40: 523-544.
- Donovan, Graeme. 1993. "Malawi — Structural Adjustment and Agriculture." A World Bank Sector Study. Washington, DC: The World Bank.
- Dorosh, Paul A. 1994. *Structural Adjustment, Growth and Poverty in Madagascar: A CGE Analysis*. Monograph No. 17. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul and René Bernier. 1994. *Agricultural and Food Policy Issues in Mozambique: A Multi-Market Analysis*. Working Paper No. 63. Ithaca, NY: Cornell Food and Nutrition Policy Program.

_____. 1991. Memorandum on the monitoring of export crop prices in Madagascar. Washington, DC: Cornell Food and Nutrition Policy Program.

Dorosh, Paul A., René Bernier, Armand Roger Randrianarivony, and Christian Rasolomanana. 1991. *A Social Accounting Matrix for Madagascar: Methodology and Results*. Working Paper No. 6. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul, René Bernier, and Alexander Sarris. 1990. *Macroeconomic Adjustment and the Poor: The Case of Madagascar*. Monograph No. 9. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul, Carlo del Ninno, and David E. Sahn. 1994. *Food Aid and Poverty Alleviation in Mozambique: The Potential for Self-Targeting with Yellow Maize*. Working Paper No. 50. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul A., and B. Essama Nssah. 1993. *External Shocks, Policy Reform and Income Distribution in Niger*. Working Paper No. 40. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul A., and B. Essama Nssah. 1991. *A Social Accounting Matrix for Niger: Methodology and Results*. Working Paper No. 18. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul A., B. Essama Nssah, and Ousmane Samba-Mamadou. 1994. *Terms of Trade and the Real Exchange Rate in the CFA Zone: Implications for Income Distribution in Niger*. Working Paper No. 57. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul and Steven Haggblade. 1993. "Agriculture-led Growth: Foodgrains Versus Export Crops in Madagascar." In *Agricultural Economics*. 9 (1993): 165-180.

Dorosh, Paul and Mattias K.A. Lundberg. 1993. *A General Equilibrium Analysis of Adjustment and the Poor in Gambia*. Working Paper No. 46. Ithaca, NY: Cornell Food and Nutrition Policy Program.

Dorosh, Paul A., and David E. Sahn. 1994. *A General Equilibrium Analysis of the Effect of Macroeconomic Adjustment on Poverty in Africa*. Unpublished.

Dorosh, Paul A., and David E. Sahn. 1993. *A General Equilibrium Analysis of the Effect of Macroeconomic Adjustment on Poverty in Africa*. Working Paper No. 39. Ithaca, NY: Cornell Food and Nutrition Policy Program.

- Due, Jean M. and Christina Gladwin. 1991. "Impacts of Structural Adjustment Programs on African Women Farmers and Female-Headed Households." *American Journal of Agricultural Economics*. 73(5): 1431-1439.
- Elson, Diane. 1991. "Gender and Adjustment in the 1990's: An Update on Evidence and Strategies," presented at the Inter-Regional Meeting on Economic Distress: Structural Adjustment and Women, Lancaster House, London, June 13-14 1991.
- Edwards, Sebastian. 1993. "Openness, Trade Liberalization, and Growth in Developing Countries." *Journal of Economic Literature*. XXXI: 1358-1393.
- _____. 1988. *Exchange Rate Misalignment in Developing Countries*. Baltimore, MD: The Johns Hopkins University Press.
- Feder, Gershon and David Feeny. 1991. "Land Tenure and Property Rights: Theory and Implications for Development Policy." *The World Bank Economic Review*. 5(1): 135-153.
- Feder, Gershon and Raymond Noronha. 1987. *Land Rights Systems and Agricultural Development in Sub-Saharan Africa*. Washington, DC: The World Bank.
- Frenkel, J., and M. Khan. 1990. "Adjustment Policies and Economic Development." *American Journal of Agricultural Economics*. 72: 815-820.
- Ghana Living Standards Survey data tapes. 1987.
- Gallagher, Mark. 1991. "A Scorecard of African Economic Reforms." *The Fletcher Forum of World Affairs*. 15(1): 57-76.
- Gauthier, Madeleine, and Steven Kyle. 1991. *A Social Accounting Matrix for Cameroon*. Working Paper No. 4. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Ghura, Dhaneshwar, and Thomas J. Grennes. 1993. "The Real Exchange Rate and Macroeconomic Performance in Sub-Saharan Africa." *Journal of Development Economics*. 42: 155-174.
- Gill, Dhara S. 1987. "Effectiveness of Agricultural Extension Services in Reaching Rural Women: A Synthesis of Studies From Five African Countries." Food and Agricultural Organization of the United States, September 1987.
- Gladwin, C. and D. McMillan. 1989. "Is a Turnaround in Africa Possible Without Helping African Women to Farm?" *Economic Development and Cultural Change*. 37(2): 345-364.
- Glick, Peter and David E. Sahn. 1993. *Labor Force Participation, Sectorial Choice, and Earnings in Conakry, Guinea*. Working Paper No. 43. Ithaca, NY: Cornell Food and Nutrition Policy Program.

- Goheen, Miriam. 1991. "The Ideology and Political Economy of Gender: Women and Land in Nso, Cameroon." In *Structural Adjustment and African Women Farmers*. Christina Gladwin, ed. Gainesville: University of Florida Press.
- Guyer, Jane and Olukemi Idowu. 1991. "Women's Agricultural Work in a Multimodal Rural Economy." In *Structural Adjustment and African Women Farmers*. Gladwin, C., ed. Gainesville: University of Florida Press.
- Haddad, Lawrence. 1990. Gender and Economic Adjustment in Ghana and Côte d'Ivoire: Executive Summary. IFPRI. Draft Report.
- Haddad, Lawrence, Andrea Richter and Lisa Smith. 1992. The Gender Dimensions of Economic Adjustment Policies: Potential Interactions and Evidence to Date. Draft.
- Helleiner, G.K. 1986. "Stabilization and Adjustment Policies and Global Poverty: Agenda for Change." In *Stabilization, Adjustment and Poverty*. International Employment Policies Working Paper 1. Geneva: International Labour Office.
- _____. 1985. "Stabilization Policies and the Poor." Paper presented to a conference on government policy and the poor in developing countries. Toronto, Canada: University of Toronto.
- Humphreys, Charles P. 1986. "Mali: Cereals Policy Reform in the Sahel." A Report Prepared for the OECD/Club du Sahel/CILSS.
- Husain, Ishrat and Rashid Faruquee. 1993. *Adjustment in Africa: Lessons from Country Case Studies*. Washington, DC: The World Bank.
- International Monetary Fund. (various years). *International Financial Statistics*. Washington, DC.
- International Monetary Fund. 1993. "Ghana — Recent Economic Developments." Washington, DC.
- Jabara, Cathy. 1994. "Structural Adjustment in a Small, Open Economy: The Case of Gambia." In *Adjusting to Policy Failure in African Economies*. David E. Sahn, ed. Ithaca, NY: Cornell University Press.
- Jabara, Cathy L. 1991. "Structural Adjustment and Stabilization in Niger: Macroeconomic Consequences and Social Adjustment." Monograph No. 11. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Jabara, Cathy L., Mattias Lundberg, and Abdoulie Sireh Jallow. 1992. *A Social Accounting Matrix for Gambia*. Working Paper No. 20. Ithaca, NY: Cornell Food and Nutrition Policy Program.

- Jaeger, William K. 1992. *The Effects of Economic Policies on African Agriculture*. World Bank Discussion Papers 147. Washington, DC: The World Bank.
- _____. 1992a. "The Causes of Africa's Food Crisis." In *World Development*. 20(11): 1631-1645.
- Jayne, T.S., M. Rukini, M. Hajek, G. Sithol, G. Mudinu. 1991. *Structural Adjustment and Food Security in Zimbabwe: Strategies to Maintain Access to Maize by Low-Income Groups during Maize Market Restructuring*. University of Zambia, Harare, and Michigan State University.
- Jebuni, Charles and Wayo Seini. 1992. "Agricultural Input Policies Under Structural Adjustment: Their Distributional Implications." Working Paper No. 31. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Jimenez, Emmanuel. 1994. *Human and Physical Infrastructure: Public Investment and Pricing Policies in Developing Countries*. Policy Research Working Paper 1281. Washington, DC: The World Bank.
- Karp-Toledo, Elaine. 1991. Les Fonds d'Emploi — Sont-ils Efficaces? Une Evaluation Socio-economique de la Dire/FNE au Senegal. Draft.
- Kennedy, Eileen. 1989. "The Effects of Sugarcane Production on Food Security, Health, and Nutrition in Kenya: A Longitudinal Analysis." Washington, DC: International Food Policy Research Institute.
- Kennedy, E. and H. Bouis. 1989. "Traditional Cash Crop Schemes' Effects on Production, Consumption, and Nutrition: Sugarcane in the Philippines and Kenya." Washington, DC: International Food Policy Research Institute. Mimeo.
- Kingsbury, David S. 1992. "Compensatory Social Programs and Structural Adjustment: A Review of Experience." Bethesda, MD: Development Alternatives, Inc.
- Koné, Solomane and Erik Thorbecke. 1994. *Macroeconomic Policies and Poverty Alleviation in Zaire: A Social Accounting Matrix (SAM) Approach*. Working Paper No. 55. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Koons, A.S. 1989. "Reaching Rural Women in the Northwest Province." A Presentation of More Ways in Which Women are Not Men. Draft paper for the conference on Development in Cameroon: The Role of Food and Agriculture. Gainesville, Florida: Center for African Studies, University of Florida.
- Koopman, J. 1990. "Women and Rural Poverty." State of the World Rural Poverty Working Paper No. 7. Rome: IFAD.

- Krueger, Anne O. 1974. "The Political Economy of the Rent-Seeking Society." *The American Economic Review*. 64(3): 291-303.
- Krueger, Anne O., Maurice Schiff, and Alberto Valdes. 1988. "Agricultural Incentives in Developing Countries: Measuring the Effect of Sectoral and Economywide Policies." *The World Bank Economic Review*. 2(3).
- Lecaillon, J. and C. Morrisson. 1986. *Economic Policies and Agricultural Performance: The Case of Mali*. Paris: Organization for Economic Cooperation and Development.
- _____. 1985. *Economic Policies and Agricultural Performance: The Case of Burkina Faso*. Paris: Organization for Economic Cooperation and Development.
- Lele, Uma. 1989. "Structural Adjustment, Agricultural Development and the Poor: Lessons from the Malawi Experience." MADIA Discussion Paper No. 9. Washington, DC: The World Bank.
- Lele, Uma and Kofi Adu-Nyako. "Approaches to uprooting poverty in Africa." *Food Policy*. April: 95-108.
- Lindauer, David and B. Nunberg. Forthcoming. *Rehabilitating Government: Pay and Employment Reform in Developing Economies*. Washington, DC: World Bank.
- Lipumba, N.H.I. 1993. "Economic Adjustment, Policy Performance, and Development in Tanzania." In *Policies for Growth and Development in Africa*. A Collection of Papers Presented at the Second Regional Conference of the International Center for Economic Growth. Africa Correspondent Institutes. Abidjan, Côte d'Ivoire April 20-24, 1993.
- Litvach, Jennie. 1992. *The Effects of User Fees and Improved Quality of Health Care Utilization and Household Expenditure: A Field in Adamaoua Province of Cameroon*. PhD dissertation. Fletcher School in Tufts University.
- Lynch, Sarah. 1991. *Income Distribution, Poverty, and Consumer Preferences in Cameroon*. Working Paper No. 16. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Maputo Food Security Survey. 1992.
- Martin, F. and E. Crawford. 1988. "Analysis of Alternative Producer Price Policies in Senegal Using a Micro-macro Modelling Approach." East Lansing, Michigan: Michigan State University. Mimeo.
- Meena, Ruth. 1991. "The Impact of Structural Adjustment Programs on Rural Women in Tanzania." In *Structural Adjustment and African Women Farmers*. C. Gladwin, ed. Gainesville: University of Florida Press.

- Mehra, Rekha. 1991. "Can Structural Adjustment Work for Women Farmers?" *American Journal of Agricultural Economics*. 73(5): 1440-1447.
- Mills, Bradford. 1994. *The Impact of Gender Discrimination on the Job Search Strategies of Redeployed Public Sector Workers*. Working Paper No. 51. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Mills, Bradford and David E. Sahn. 1993. "Characteristics of Small Scale Enterprises and Proprietors in Conakry." *Guinea Bulletin* No. 9. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- _____. 1993. *Is There Life After Public Service: The Fate of Retrenched Workers in Conakry, Guinea*. Working Paper No. 42. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Mills, Bradford, David E. Sahn, E.E. Walden, and Stephen Younger. 1994. *Public Finance and Public Employment: An Analysis of Public Sector Retrenchment Programs in Guinea and Ghana*. Working Paper No. 52. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Mosley, Paul, Jane Harrigan and John Toye. 1991. *Aid and Power*. London: Routledge.
- Mosley, Paul and John Weeks. 1993. "Has Recovery Begun? 'Africa's Adjustment in the 1980s' Revisited." *World Development*. 21(10): 1583-1606.
- Musgrove, P. 1987. "The Economic Crisis and its Impact on Health and Health Care in Latin America and the Caribbean." *International Journal of Health Services*. 17(3): 411-441.
- Nashashibi and Bazzonie. 1993. *Alternative Exchange Rate Strategies and Fiscal Performance in Sub-Saharan Africa*. IMF Working Paper. Washington, DC: IMF.
- Nindi, B.C. 1992. "Gender, Exploitation Development and Agricultural Transformation in sub-Saharan Africa." *Eastern Africa Economic Review*. 8(2): 123-134.
- Pearce, Richard. 1991. "Urban food subsidies in the context of adjustment: The case of Zambia." *Food Policy*. December: 436-450.
- Peters, Pauline E., M. Guillermo Herrera with the assistance of Thomas F. Randolph. 1989. "Cash Cropping, Food Security and Nutrition: The Effects of Agricultural Commercialization Among Smallholders in Malawi." Harvard Institute for International Development.
- Pinstrup-Andersen, Per. 1989. "The Impact of Macro-economic Adjustment: Food Security & Nutrition." In *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America*. Simon Commander, ed. London: Curry/Hineman.

- Quisumbing, Agnes, L. Schwartz and C. Chibawana. 1992. "Women in Agriculture: Issues and Strategies." Working Paper Draft.
- Sahn, David E., ed. 1993. *Adjusting to Policy Failure in African Economies*. Ithaca, NY: Cornell University Press.
- _____. 1992. "Public Expenditure in sub-Saharan Africa During a Period of Economic Reforms." *World Development*. 20(5).
- Sahn, David E. 1990. "The Impact of Export Crop Production on Nutritional Status in Côte d'Ivoire." *World Development*. 18(12).
- Sahn, David E. and Harold Alderman. 1987. The Role of Foreign Exchange and Commodity Functions in Trade, Agriculture, and Consumption in Somalia. Washington, D.C: International Food Policy Research Institute. Photocopy.
- Sahn, David E. and Jehan Arulpragasam. 1994. "Adjustment without Structural Change: The Case of Malawi." In *Adjusting to Policy Failure in African Economies*. David E. Sahn, ed. Ithaca, NY: Cornell University Press.
- _____. 1993. "Land Tenure, Dualism, and Poverty in Malawi." In *Including the Poor*. Jacques van der Gaag and Michael Lipton, eds. Washington, DC: World Bank.
- _____. 1991a. *Development Through Dualism? Land Tenure Policy and Poverty in Malawi*. Working Paper No. 9. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- _____. 1991b. "The Stagnation of Smallholder Agriculture in Malawi: A Decade of Structural Adjustment." *Food Policy*. 16(3).
- Sahn, David E., Jehan Arulpragasam, and Lemma Merid. 1990. *Policy Reform and Poverty in Malawi: A Survey of a Decade of Experience*. Monograph No. 7. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Sahn, David E. and René Bernier. 1993. *Evidence from Africa on the Intrasectoral Allocation of Social Sector Expenditures*. Working Paper No. 45. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Sahn, David E. and Carlo del Ninno. 1994. *Living Standards and the Determinants of Poverty and Income Distribution in Mozambique*. Working Paper No. 56. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Sahn, David E. and Jaikishan Desai. 1994. *The Emergence of Parallel Markets in a Transition Economy: The Case of Mozambique*. Working Paper No. 53. Ithaca, NY: Cornell Food and Nutrition Policy Program.

- Sahn, David E. and Lawrence Haddad. 1991. "The Gendered Impacts of Structural Adjustment Programs in Africa: Discussion." In *American Journal of Agricultural Economics*. 5(December): 1448-1451.
- Sahn, David E. and Alexander Sarris. 1991. "Structural Adjustment and Rural Smallholder Welfare: A Comparative Analysis." *World Bank Economic Review*. 5(2): .
- Sahn, David E., Yves van Frausum, and Gerald Shively. 1994. "Modeling the Nutritional and Distributional Effects of Taxing Export Crops." *Economic Development and Cultural Change*. 42(4): 773-793.
- Saito, Katrine A. and Daphne Spurling. 1992. "Developing Agricultural Extension for Women Farmers." World Bank Discussion paper No. 156.
- Sarris, Alexander. 1994. *A Social Accounting Matrix for Tanzania*. Working Paper No. 62. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- _____. 1994. *Macroeconomic Policy and Household Incomes: A Dynamic General Equilibrium Analysis for Tanzania*. Working Paper No. 68. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Sarris, Alexander and Rogier van den Brink, eds. 1993. *Economic Policy and Welfare During Crisis and Adjustment in Tanzania*. New York: New York University Press.
- Scarborough, Vanessa. Malawi Agricultural Sector Memorandum: Agricultural Pricing and Marketing Issues. Working Paper No. 7. The World Bank. Draft.
- Shipton, Parker. 1987. *The Kenyan Land Tenure Reform: Misunderstandings in the Public Creation of Private Property*. Developmental Discussion Paper No. 239. Cambridge, MA: Harvard Institute for International Development.
- Simler, Kenneth. 1994. *Agricultural Policy and Technology Options in Malawi: Modelling Smallholder Responses and Outcomes*. Working Paper No. 49. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Singh, I. and S. Janakeram. 1986. "Agricultural Household Modeling in a Multicrop Environment: Case Studies in Korea and Nigeria." In *Agricultural Household Models*. I. Singh, L. Squire, and J. Strauss, eds. Baltimore: Johns Hopkins University Press.
- Strauss, J. 1984. "Joint Determination of Food Consumption and Production in Rural Sierra Leone." *Journal of Development Economics*. 14: 77-103.
- Stewart, Frances. 1992. *Alternative Development Strategies in Sub-Saharan Africa*. New York: St. Martin's Press.

- Stryker, Dirck, et al. 1994. "Linking Macroeconomic and Sectoral Policies and Investments with the Alleviation of Poverty in Sub-Saharan Africa." Cambridge: Associates for International Resources and Development. Photocopy.
- Subramanian, Shankar. 1994. *Structural Adjustment and Income Distribution in Cameroon*. Working Paper No. 67. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Tabatabai, Hamid. 1993. *Poverty and Food Consumption in Urban Zaire*. Working Paper No. 47. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Taylor, Lance. 1993. *The Rocky Road to Reform: Adjustment, Income Distribution, and Growth in the Developing World*. Cambridge: MIT Press.
- Taylor, Lance. 1988. *Varieties of Stabilization Experience: Towards Distribution, and Growth in the Developing World*. Cambridge: MIT Press.
- Thomas, Vinod and John Nash. 1991. "Reform of Trade Policy: Recent Evidence from Theory and Practice." *The World Bank Research Observer*. 6(2): 219-240.
- Tinios, P., A.H. Sarris, H.K.R. Amani, W.E. Maro, and S. Zografakis. 1994. *The Structure of Households in Tanzania in 1991: Results from a National Household Survey*. Working Paper No. 59. Ithaca, NY: Cornell Food and Nutrition Policy Program. Unpublished.
- Traore, A. 1984. "Women's Access to Resources in the Ivory Coast: Women and Land in Adioukrou District." In *Rural Development and Women in Africa*. Geneva: International Labour Office.
- UNECA. 1989. *Statistics and Politics — ECA Preliminary Observations on the World Bank Report*. Addis Ababa.
- UNICEF. 1992. *Progress Report and Recommendation on the Bamako Initiative*. Presented to the UNICEF Executive Board, 1992 Session. New York.
- van den Brink, Rogier and Daniel W. Bromley. 1992. *The Enclosures Revisited: Privatization, Titling, and the Quest for Advantage in Africa*. Working Paper No. 19. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- van Frausum, Yves and David E. Sahn. 1991. "An Econometric Model for Malawi: Measuring the Effects of External Shocks and Policies." Cornell Food and Nutrition Policy Program. Ithaca, NY: Cornell University.
- von Braun, Joachim, Hartwig de Haen, and Juergen Blanken. 1991. "Commercialization of Agriculture Under Population Pressure: Effects on Production Consumption and Nutrition in Rwanda." IFPRI Research Report No. 85. Washington, DC: International Food Policy Research Institute.

- von Braun, Joachim and E. Kennedy. 1994. *Agricultural Commercialization, Economic Development and Nutrition*. Baltimore: Johns Hopkins University Press.
- von Braun, Joachim and Eileen Kennedy. 1986. "Commercialization of Subsistence Agriculture: Income and Nutritional Effects in Developing Countries." Washington, DC: International Food Policy Research Institute.
- von Braun, Joachim, D. Puetz, and P. Webb. 1987. "Technological Change in Rice and Commercializations of Agriculture in a West African Setting: Effects on Production, Consumption, and Nutrition." Research Report. Washington, DC: International Food Policy Research Institute.
- von Braun, J. and P.J.R. Webb. 1987. "The Impact of New Crop Technology on the Agricultural Division of Labor in a West African Setting." Washington, DC: International Food Policy Research Institute.
- Weber, et al. 1988. "Informing Food Security Decisions in Africa: Empirical Analysis and Policy Dialogue." Staff Paper 88-50. East Lansing: Michigan State University.
- Wilson III, Ernest J. 1993. "French Support for Structural Adjustment Programs in Africa." *World Development*. 21(3): 331-347.
- World Bank. 1994. "Agricultural Sector Memorandum: Strategy Options in the 1990s." World Bank Report No. 12805 MAI. Washington, DC: The World Bank.
- World Bank. 1994. *Adjustment in Africa: Reforms, Results, and the Road Ahead*. A World Bank Policy Research Report. New York: Oxford University Press.
- World Bank. 1994. "Lesotho Poverty Assessment." World Bank Report No. 13171 LS. Washington, DC: The World Bank.
- World Bank. 1993. *Uganda: Growing Out of Poverty*. A World Bank Country Study. Washington, DC: The World Bank.
- World Bank. 1993. *Adjustment in Sub-Saharan Africa: Selected Findings from OED Evaluations*. Report No. 12155. Washington, DC: The World Bank.
- World Bank. 1993. Africa Development Indicators (STARS: Socio-Economic Time Series Access Retrieval System).
- World Bank. 1990. Malawi Country Economic Memorandum: Growth Through Poverty Reduction. Washington, DC: The World Bank.
- World Bank. 1981. *Accelerated Development in Sub-Saharan Africa: An Agenda for Action*. Washington, DC: The World Bank.

- World Bank and United Nations Development Programme. 1989. *Africa's Adjustment and Growth in the 1980s*. Washington and New York: World Bank and UNDP.
- Younger, Stephen. 1993. "Aid and the Dutch Disease: Macroeconomic Development When Everybody Loves You." *World Development*. 20(1).
- _____. 1993. *Estimating Tax Incidence in Ghana: An Exercise Using Household Data*. Working Paper No. 48. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- _____. 1992. *Testing the Link Between Devaluation and Inflation: Time Series Evidence from Ghana*. Working Paper No. 24. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- _____. 1991. *Monetary Management in Ghana*. Working Paper No. 8. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Younger, Stephen, Sudarshan Canagarajah, and Harold Alderman. 1994. *A Comparison of Ghanaian Civil Servants' Earnings Before and After Adjustment*. Working Paper No. 64. Ithaca, NY: Cornell Food and Nutrition Policy Program.
- Zinnes, Clifford. 1993. *Exchange Rate Management in Zambia*. unpublished draft.