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Strategies for Food Security and Structural Adjustment in Sub-Saharan Africa

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Mounting debt and a continuing inability to feed their populations have led countries of Sub-Saharan Africa to undertake reform programs to make their economies more market-oriented. At the same time, they have sought to protect the food security of their most vulnerable population groups. Kenya, Tanzania, and Zimbabwe are three case studies that represent the common dilemma: how to adhere to long-term economic reform while protecting vulnerable consumer groups from market inefficiencies and price shocks.

The food and financial crises in Sub-Saharan Africa in the 1980's persuaded governments there to reassess both their food and overall economic policies. Confronted with declining per capita food output and high variability in food production, governments were not always able to meet the rising food requirements of their populations. At the same time, higher prices for essential imports, as well as lower prices for their exports, led to larger trade deficits. Ensuing debt led to high current account deficits. International donors, concerned with the deteriorating financial conditions of these countries, proposed, as a condition of receiving further assistance, that the governments adopt structural adjustment programs (reforms aimed at bringing national expenditures in line with national income and allocating resources more efficiently) in an attempt to stabilize their economies and raise their rates of economic growth.

Strategies for food security and structural adjustment have sometimes had incompatible objectives. At the national level, food security aims at self-sufficiency in the production of staple foods. At the individual level, it aims at better distribution of food to assure adequate nutrition for everyone. Structural adjustment, on the other hand, aims for a more market-oriented economy to reduce government intervention, reduce government expenditures, and lower the current account deficits. (The current account balance measures the economy's trade in goods and services with the rest of the world plus monetary transfers between countries.)

The contradictions between an emphasis on food security or structural adjustment can be illustrated with the issue of subsidies. International donors argue that Sub-Saharan governments can no longer afford to provide consumer food subsidies, and that eliminating such subsidies is a precondition for reestablishing the country's economic well-being. Others, however, see that without some government intervention, many people will go without sufficient food, either because they cannot afford it or because the country's inefficient food distribution system cannot get the food to where it is needed.

The case studies of Tanzania, Kenya, and Zimbabwe, examined here, represent most other nations in the Sub-Sahara as well. In all three countries, agriculture contributes more than any other sector to employment, exports, and overall economic growth. Tanzania ($130 per capita income, 1989) and Zimbabwe ($650) represent the low- and high-income groups in Sub-Saharan Africa, while Kenya ($360) represents those in the middle. Reliance on external assistance varies from 36 percent of GDP in Tanzania to 5 percent in Zimbabwe.

General observations on the major issues facing Sub-Saharan Africa

*Policies that support long-term economic growth, such as removing subsidies, often contribute to a short-term decline in living standards.

*Improving the distribution network will facilitate the achievement of both structural adjustment and food security goals.

*Greater input availability, especially for small farms, is critical to increasing productivity in agriculture.

*Increased external assistance, in the face of short-term financial constraints, is essential to enhancing investment and increasing imports of agricultural inputs.

*Improved agricultural performance does not guarantee increased food security at the household level.

*Short-term income support for the poor could be provided by targeted intervention, such as jobs in public works programs.

The Economic Environment

During the 1980's, most African countries implemented policy reforms in response to financial crises. Market liberalization boosted agricultural production, but higher prices reduced consumer welfare.

In the late 1970's, countries like Kenya and Tanzania suffered an economic downturn. High oil prices and inappropriate exchange rate policies caused the terms of trade to deteriorate. Government monopolies of agricultural marketing subsidized consumers at the expense of producers, undermining producer incentives. Rapid population growth eroded any production gains. In Kenya, the trade deficit soared from $200 million to $800 million.

During the 1980's, many African countries shifted policy on the advice of foreign aid donors. With tighter constraints on capital, these donors made loans contingent on reforms in macroeconomic, trade, and agricultural policy. Macroeconomic reform goals were to control demand, increase supply, and encourage private marketing. Foreign assistance increased with the implementation of policy reforms (fig. 1).

The effects of policy reforms on food security are uncertain because they are recent and fragmented. Other factors obscure the effect of policy changes. Such factors can include the rigidity of the market (a lag between policy changes and market response), external market shocks (a decline in world prices), and exogenous events (exceptionally good or bad weather).

Food strategies focus on food security: improving production and enhancing nutrition. Structural adjustment seeks to improve the country's financial position and stimulate economic growth. The goals of both appear complementary in the long term, but may clash at the outset. For example, increased producer incentives are goals of both structural adjustment and food security. However, while maintaining producer subsidies, and thereby staple food levels, is an important food security goal, structural adjustment would reduce or eliminate such subsidies.

The goals of the food strategies and macroeconomic reform can be merged if policies focus more on production expansion than on demand contraction. (In essence, demand contraction would reduce the amount of food consumed by the populace, a risky policy where so much of the region consumes near the subsistence level.) Improvements in crop technology, roads, and information networks will lead to higher yields and better producer response to incentive signals. However, increases in production without stimulation of consumption will create market surpluses, particularly of maize (the three study countries have limited resources to increase wheat and rice production). Kenya, Tanzania, and Zimbabwe already have trouble finding export markets to dispose of surpluses during good harvest years.

In the short term, targeted food subsidies, rationing, or other means of direct income transfers should be explored to help assure that the poorest and most vulnerable groups have access to adequate diets. The Sub-Saharan Governments are committed to family planning programs to slow population growth, which is expected to reduce pressures on resources and improve living standards in the long term. In the 1990's, the World Bank's strategy is to emphasize the provision of basic social services to the poor. The degree to which a country supports food security goals (improvement in food distribution, employment, and social services) can be among the criteria considered for receipt of financial aid.

Sub-Saharan Governments' reassessment of their food and agricultural policies has focused on the following areas:

Production:
- *Mandated prices*
- **Market privatization**
- *Input/fertilizer subsidies*
- *Preferential credit*

Consumption:
- Nutrition education
- Population control
- *Food subsidies (targeted)*
- *Income transfers, public works projects*

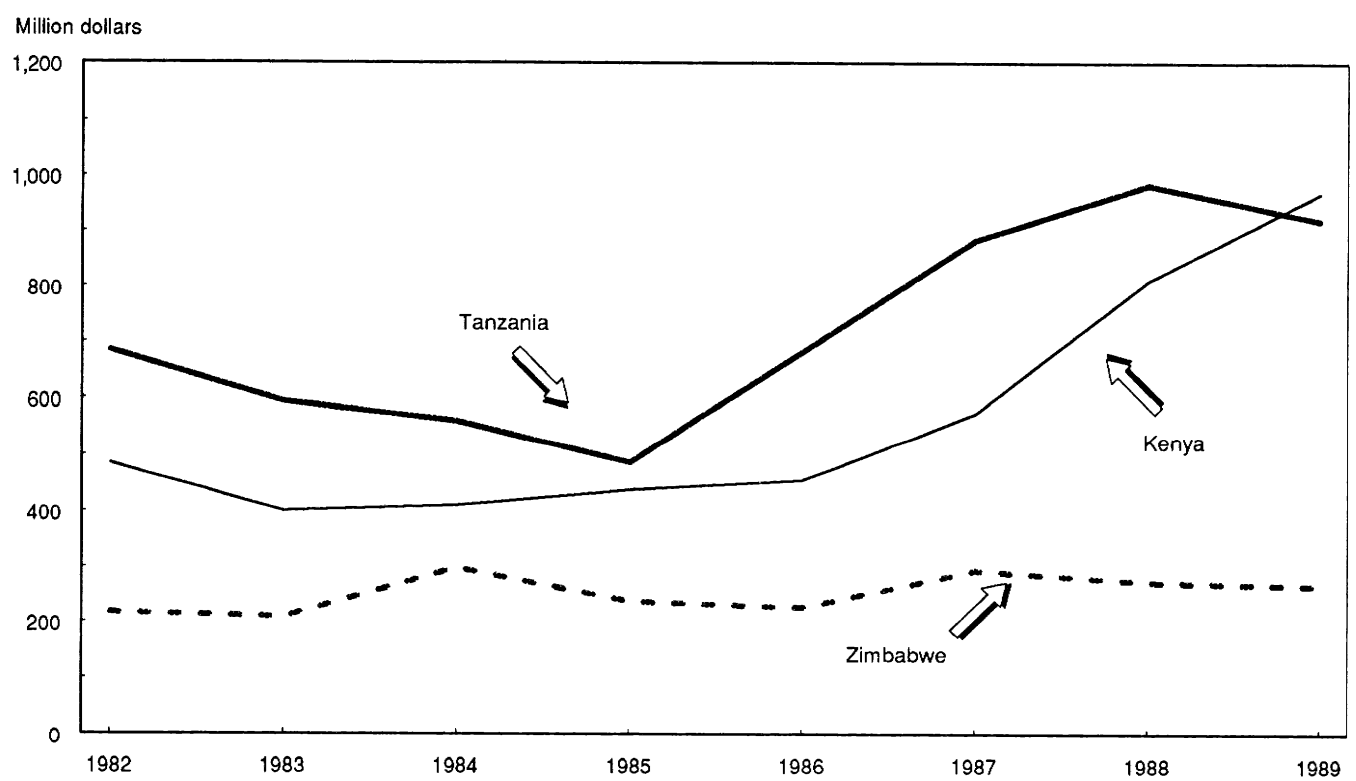
Trade:
- **Reduce imports**
- Adjust exchange rate
- Liberalize trade

Bold = Structural adjustment policy goals.
Italics = Food security goals.
Roman = Unclear impact on food security goals.

Figure 1

Official development assistance

Development assistance increased after economic reform programs began in the mid-1980's.



Source: International Monetary Fund. Balance of Payments Yearbook.

Kenya

Kenya's limited agricultural land, rapidly growing population, and piecemeal market reforms have hampered progress on food security goals.

In the 1980's, Kenya addressed food security goals by aiming for self-sufficiency in major food crops and providing an adequate diet for the nation. Production shortfalls in 1979 and 1980 and the subsequent jump in maize imports focused the Government on national food policy. To boost productivity, it increased fertilizer supplies, most of which are imported, and raised producer prices, while still keeping them under some government control.

Kenya is highly dependent on agriculture, which accounts for more than 30 percent of GDP, employs 75 percent of the workforce, and contributes 65 percent to export earnings. A lack of arable land (60 percent of Kenya is desert with limited potential even for livestock) means that growth in agriculture, and thus the economy, will depend on improved yields.

Given Kenya's limited land, competition between cash crops (coffee and tea, for example) and food crops is a major concern. While Government food security policy promotes food crops, cash crops are needed to reduce the trade deficit. There is further competition for fertilizer and credit between major commercial farmers and small-scale farmers. The potential for increased yields will come from small farms, which produce 80 percent of Kenya's agricultural output. However, large farms, both state and commercial, use nearly 60 percent of Kenya's fertilizer. Production of maize, a staple food crop, accounts for only 20 percent of fertilizer use while cash crops use 60 percent of total fertilizer.

Government policies in the 1980's were aimed at increasing fertilizer supplies, improving procedures for setting producer prices, improving research and extension services, and increasing the national grain reserve. Since 1989, Kenya has faced a difficult trade environment in that the price of coffee (its main export) has fallen relative to the price of oil (its main import). This worsening balance of trade depletes foreign exchange needed to fund imports of agricultural inputs.

Research, while successful in developing improved varieties of maize, wheat, coffee, and tea, has done little for small farms in semi-arid areas. The extension service historically visited mostly commercial farms, but since 1983, visits to small farms (primarily food producers) have increased, with advice tailored to their needs.

The Government's objective in setting producer prices has been to provide incentives to farmers and to maintain price stability. To improve the efficiency of the pricing system, the Ministry of Agriculture begins reviewing agricultural prices in September, taking into account crop prospects, production costs, and market conditions. Producer price increases did not match either the inflation rate or the growth in food prices in the 1980's.

Kenya has a history of periodic shortfalls in domestic food production due to variable rainfall. The variation in per capita production averaged more than 10 percent in 1966-90. To prevent large price fluctuations, the Government regulates imports and manages a grain reserve of about a million tons. The Government relies heavily on external development assistance to support imports. More than half of all grain imports are via food aid (fig. 2).

Kenya's agricultural sector outperformed the Sub-Saharan region as a whole in the last three decades. Output improved 5 percent per year in the 1980's, but with population growing at 4 percent per year, there was little per capita growth (fig. 3). Nutritional problems persist among Kenya's low-income groups. Nearly 30 percent of children suffer from malnutrition.

Household incomes vary widely from the 1989 per capita average of $360. Rural households are especially poor: 70-80 percent earned less than Kenya's average in 1980-81. Rural women's heavy farmwork contributes to low birth weights, and limits feeding time for newborns. Low-income groups spend a disproportionate share of income on food (66 percent vs. 46 percent nationally). Seasonal price fluctuations are more common in small, remote markets. To offset this handicap, the Government is exploring off-farm employment in rural areas. Also, controls on the movement of maize within the country have been relaxed, making it easier to balance supplies between surplus and deficit areas.

Figure 2

Kenya: Food aid share of grain imports

Kenya has become more dependent on food aid, which now accounts for more than half of all grain imports.

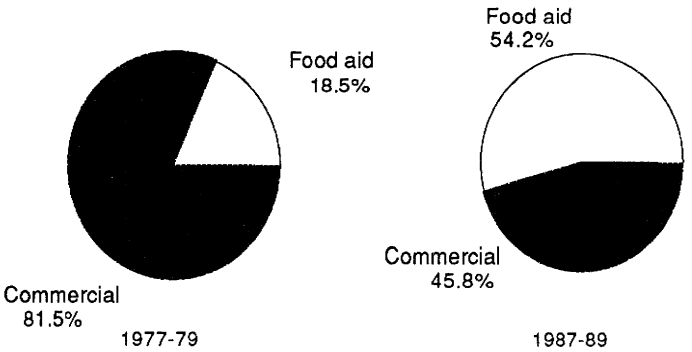
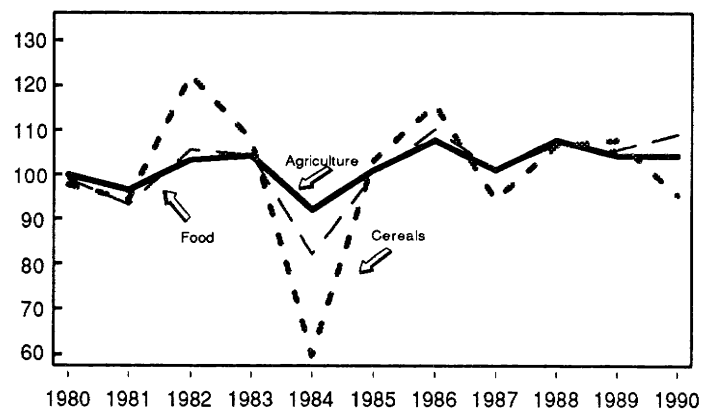


Figure 3

Kenya: Agricultural performance per capita (1979-81 = 100)

Agricultural production in Kenya barely kept pace with population growth.



Highlights: Kenyan Food Security Issues

*Food production— Per capita grain production declined in the 1980's. Producers were subsidized, but inflation eroded price gains. Lack of arable land is the greatest constraint to expanding agricultural production in Kenya. Agricultural output growth will depend on improved yields.

*Marketing— The maize marketing board's role in the market has fallen as involvement by private traders and cooperatives has grown. The Government has made an effort to improve the efficiency of the marketing system by encouraging private investment.

*Trade— Imports outpaced exports in the 1980's. Kenya relies heavily on external assistance to fund essential imports.

*Consumption— Retail food prices rose substantially more than wages during the 1980's. The Government reduced consumer subsidies in the 1980's, raising consumer prices. Per capita maize consumption declined while wheat consumption rose.

Table 1—General characteristics of Kenya, 1989

Population	24 million
Per capita income	$360
Government intervention until 1980's	Mix, more public than private
External aid	14 percent of GDP
Agriculture's share of exports	65 percent
Total debt/GNP	72 percent

Tanzania

Food production increased during the 1980's, but inadequate rural consumption remained a problem due to low purchasing power, a weak marketing system, and inadequate storage facilities.

Tanzania's food strategy objectives are to achieve food self-sufficiency and to provide an affordable food supply for the urban population. After 1985, Government policy shifted substantially to a more market-oriented strategy, eliminating price controls and reducing import restrictions. The Government's devaluation of the currency beginning in 1985 helped boost export earnings by 36 percent between 1985 and 1989.

A 10-year decline in per capita income prompted Tanzania, in 1986, to adopt the World Bank Economic Recovery Program (ERP). Policy measures included exchange rate adjustments, improved agricultural production incentives, market liberalization, and infrastructure development. Under the ERP, Tanzania's government withdrew from agricultural markets, encouraging private sector participation and stimulating the recovery of the agricultural sector (fig. 4). Grain imports in 1989 and 1990 were only about 12 percent of the 1980 level. Production increases were helped by favorable weather and producer incentives.

Although Tanzania has historically set producer prices for staple food commodities, it is attempting to phase out such policies in favor of total price liberalization. The Government hopes that this will enable farmers to cover their costs and increase output, and help the nation reach self-sufficiency in staple food production. Under the previous state-monopoly system, the Government established prices for each stage of the marketing chain. The National Milling Corporation (NMC) was responsible for village level collection, transportation, storage, processing, and final sale of products.

The NMC and other parastatals are now the buyers and sellers of last resort, replaced by cooperative unions and private traders. The Government has abolished permit requirements for transporting grain; individuals can move any quantity of grain across regional boundaries. Producer prices for many grains were also decontrolled.

Direct Government intervention is now limited to the Strategic Grain Reserve, 150,000 tons of maize used for emergency food distribution. However, most storage facilities are in need of repair. In some areas, post-harvest losses are as high as 40 percent with an average loss of 15 percent for all crops.

Government efforts to control marketing were aimed at increasing participation of small farms in the commercial market. However, producers in remote areas may revert to subsistence farming if prices remain low and the fertilizer and transportation subsidies are removed. Because most marketed crops are grown in the south, far from central consumption areas, a good distribution system is crucial for food security.

Over 70 percent of Tanzania's freight moves by roads, which have deteriorated badly over the past 15 years. The small domestic fleet of trucks used to haul food from farm to market is constrained even further by a lack of spare parts, poor maintenance, and deplorable rural road conditions. These conditions have led to food losses as high as $200 million a year.

Small farms throughout Africa are handicapped by the lack of inputs and credit to boost production. To increase input availability, the ERP has granted import duty exemptions for agricultural machinery and fertilizers, but foreign exchange constraints and weak distribution channels delay deliveries. The credit system is undermined by bad debts and the frequent use of farm credit for nonfarm activities. Although exchange rate devaluation has made agricultural exports (72 percent of total exports in 1989) more competitive, it has also made imports of essential inputs more expensive.

Local malnutrition persists. Tanzania's per capita income ($130) is one of the lowest in the world, and food prices have risen faster than wages since 1984 (fig. 6). Seasonal malnutrition in rural areas is evident from a study that found post-harvest weights of villagers 11 percent higher than those observed during a lean period.

Figure 4

Tanzania: Agricultural performance per capita (1979-81 = 100)

Agricultural production has outpaced population growth; drought is less prevalent than in Kenya.

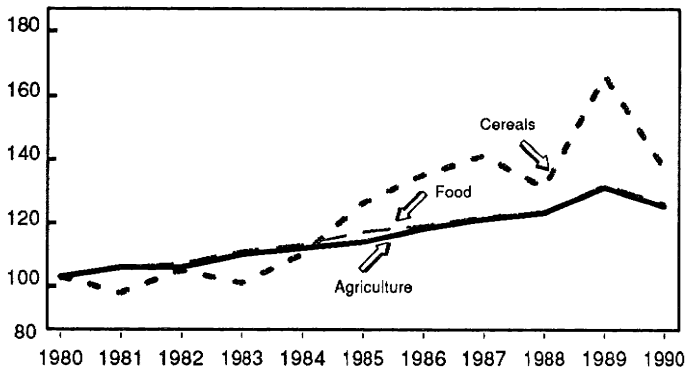


Figure 5

Tanzania: Food aid share of grain imports

While food aid supplied more than half of Tanzania's grain imports in the 1980's, total grain imports in 1989-90 were only about 12 percent of the 1980 level.

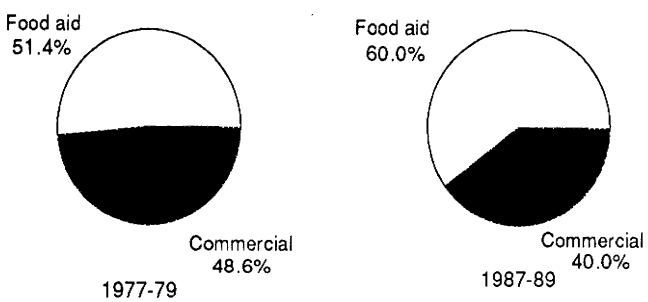
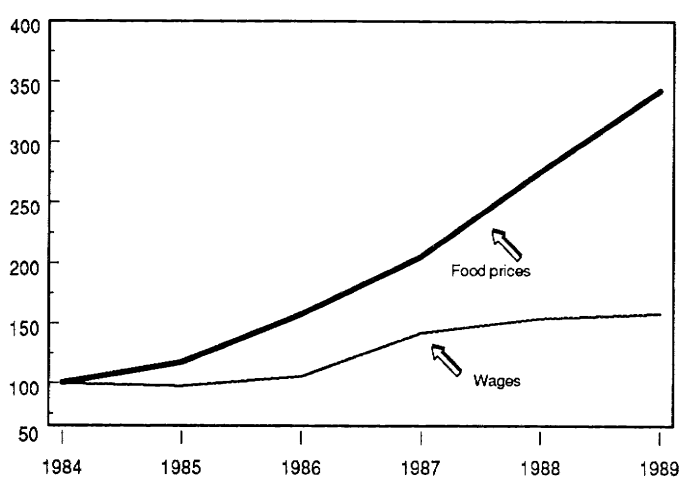


Figure 6

Tanzania: Index of wages and food prices (1984 = 100)

The share of income spent on food increased as food prices rose faster than wages.



Source: World Bank. Unpublished information.

Highlights: Tanzanian Food Security Issues

*Food production— Agricultural production increased 4-5 percent per year in the late 1980's. Local shortages persisted, nevertheless. In the mid-1980's, producer prices were raised to offset the abolition of fertilizer subsidies (1984-86). Marketing inefficiencies, input shortages, foreign exchange constraints, payment delays, and weak infrastructure continue to hinder agricultural growth.

*Marketing— Public investment to improve market infrastructure (roads and information systems) is critical to expanding private sector activities. Seventy percent of commodities are now traded on the open market.

*Trade— Devaluation has raised the cost of imports, including fertilizer and other inputs for the food sector. Although poorly managed stocks make food imports more variable, dependence on imported foods declined from 14 percent to less than 2 percent during the 1980's.

*Consumption— Wages rose by 12 percent per year during 1983-89, while the inflation rate was about 30 percent, indicating a decline in real wages. Low wages relative to food prices meant that an increasing share of income was spent for food.

Table 2—General characteristics of Tanzania, 1989

Population	24 million
Per capita income	$130
Government intervention until 1980's	Controlled entire economy
External aid	36 percent of GDP
Agriculture's share of exports	84 percent
Total debt/GDP	186 percent

Zimbabwe

Zimbabwe's food security benefits from strong agricultural performance. However, growth of food production is threatened by the communal sector's shortage of inputs and credit.

Zimbabwe has taken a different tack from Tanzania and Kenya. Like those countries, Zimbabwe hopes to achieve food security for low-income households, an adequate return to producers, and food self-sufficiency. And Zimbabwe did devalue its currency to promote exports. But unlike Kenya and Tanzania, Zimbabwe has stepped up the role of the Government in most markets. As a result, the country has seen little increase in its international assistance because most donors felt that it had not outlined a comprehensive reform package. Zimbabwe is less dependent on external aid than other Sub-Saharan countries. Such aid amounts to only 5 percent of gross domestic product.

Zimbabwe is more reliant on agriculture than the sector's 10-18 percent share of GDP indicates. About 70 percent of the population live in rural areas with agriculture their primary source of income. A decline in agricultural performance means a reduction in purchasing power and, consequently, a decline in consumer demand. Agriculture also provides inputs for Zimbabwe's agricultural processing industries, which produce a third of exports.

Commercial farmers (fewer than 5,000, mostly of European colonial ancestry) operate on about a third of Zimbabwe's land, that with the most reliable rainfall and the best soil. The communal sector controls 40 percent of the farmland but, for the most part, lacks the access to markets and technology of the commercial farms. Since independence in 1980, the Government has reduced the commercially farmed area by 30 percent by resettling landless families onto that land. That resettlement also induced changes in cropping patterns. Commercial farms moved from food to industrial crops, while communal farms increased their market share of food crops (fig. 7).

Agricultural output was strongly influenced by weather in the 1980's (fig. 8). Weather variation, which is extreme in Zimbabwe, now has a greater effect on food security since the communal sector is more vulnerable. These subsistence farmers operate in the poorest rainfall areas, using few modern inputs and labor-intensive techniques. Maize yields remain less than 60 percent of world levels, dropping to 25 percent in drought years. Yields in the communal areas are only 16 percent of those for commercial farms. Commercial farmers use most of Zimbabwe's fertilizer (70-75 percent) and are the main recipients of credit (85 percent).

Government marketing restrictions hurt household food security. Prices are inflated by unnecessary transport to and from Government-mandated grain depots. Marketing boards set producer prices for main crops, except for tobacco, based on a review of market conditions and negotiations with producers. In the 1980's, domestic prices for maize, wheat, and sorghum followed border prices.

Because of food security concerns, Zimbabwe maintains large grain stocks, about 1 year's worth of maize production. That level of stocks is probably too large, even in drought years; and during good years, stock disposal becomes a problem. Other countries in the region are potential importers but have similar weather patterns and financial constraints that limit commercial food imports. Zimbabwe lacks a long-term strategy for stabilizing production to ensure food security or for reducing stock costs.

Zimbabwe is almost self-sufficient in grains; import dependence was usually less than 5 percent during the 1980's and food aid accounts for a small share of grain imports (fig. 9). Exports are highly diversified. To encourage exports, the Government adopted a more flexible exchange rate policy and allocated foreign exchange for imports of capital goods and inputs.

Despite its relative wealth compared with other countries in the region, Zimbabwe, like Kenya and Tanzania, is beset by regional and seasonal malnutrition. Malnutrition was the chief cause of death of children aged 1-4 during 1988/89. In the rural areas, landless households in the communal areas are the most vulnerable groups. About 40 percent of farms in communal areas are headed by women. The lack of education among these women influences the nutritional status of children. Indicators of malnutrition increase by 100-200 percent during the weaning period (12-23 months of age), when food availability and sanitary precautions come into play.

Real per capita income declined by about 1.7 percent per year in the 1980's. Food security depends on the purchasing power of individual households, and that was eroded by increased inflation in the mid-1980's.

Figure 7

Zimbabwe: Share of maize sales by communal areas

The Government was successful in increasing communal farmers' market participation.

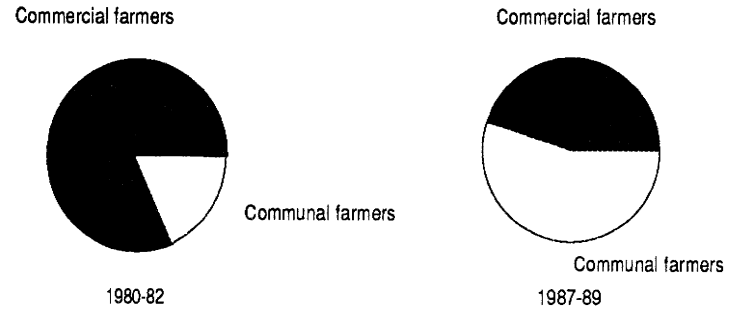


Figure 8

Zimbabwe: Agricultural performance per capita (1979-81 = 100)

Agricultural production, while erratic, outpaced population growth by 30 percent over the last decade.

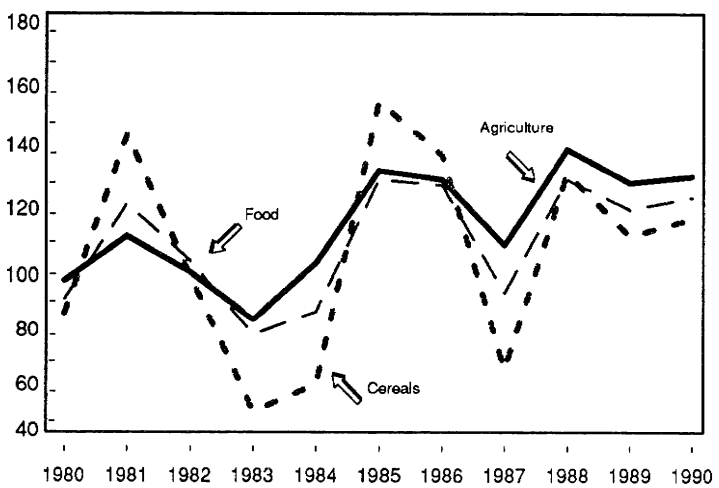
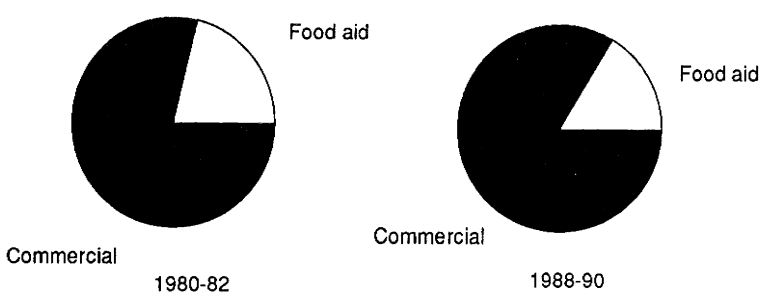


Figure 9

Zimbabwe: Food aid share of grain imports

Food aid accounted for a small share of grain imports. Furthermore, imports amounted to only 5 percent of total grain consumption.



Highlights: Zimbabwean Food Security Issues

*Food production— Growth in production declined, as the productivity gap between commercial and communal farms widened. The resettlement program did not lead to increased production. Producer prices failed to keep pace with inflation, and the prices of uncontrolled commodities increased faster than Government-set prices on wheat, maize, and cotton.

*Marketing— Government control of the maize market has encouraged communal farmers to sell more of their production. Marketing costs are increased by the radial road network that connects rural areas with urban centers but not with adjacent communal areas.

*Trade— Exports are diversified. Zimbabwe has achieved near self-sufficiency in major food crops.

*Consumption— Inflation has reduced real per capita income 1.7 percent per year since 1980. Consumption has not kept pace with population growth. The Government's fixed-wage policy gave larger raises to the lowest paid, but was enforced mainly in the public sector.

Table 3—General characteristics of Zimbabwe, 1989

Population	10 million
Per capita income	$650
Government intervention until 1980's	Mix, more public than private
External aid	5 percent of GDP
Agriculture's share of exports	40 percent
Total debt/GNP	54 percent

Production Issues

Sub-Saharan countries are subject to large swings in agricultural production, due both to variability in weather and to inadequate inputs. Small farms, which are not very responsive to producer price incentives, look to government for improved infrastructure, information, and surplus management.

Kenya, Tanzania, and Zimbabwe are highly dependent on the agricultural sector for food, employment, income, and foreign exchange. Their agricultural sectors are handicapped by traditional farm practices and low productivity. Most Sub-Saharan Governments seem committed to freeing up the agricultural markets from government control. However, production incentives alone will not be enough to increase per capita food production without improved technologies.

Yields are low relative to world standards and differ widely between commercial and subsistence farms. Most fertilizer is used on large farms. Operators of small farms are unable to afford many inputs, and the distribution of inputs that are available is often bottlenecked. While the countries are trying to improve the distribution of modern inputs by encouraging the private sector, foreign exchange shortages limit the ability to meet existing demand. Unreliable input supplies, combined with uncertain weather patterns, increase producer risk.

To encourage production, the Governments have allowed producer prices to rise. High inflation, however, particularly in Tanzania and Zimbabwe, has eroded gains that would normally accompany higher producer prices. Widespread market imperfections and poor transportation networks reduce producer response to price signals, particularly by small farms. Commercial farmers, in general, gain the most from policy reforms.

Many small farms are in remote areas. These farmers face high transportation costs and are relatively unaffected by price changes or exchange rate policies. Marketing among rural areas is constrained by a system designed to supply urban centers. Sub-Saharan Governments have tried to provide preferential credit to the agricultural sector, but such efforts were often mismanaged, resulting in near bankruptcy for the banks.

A series of bad years followed by good years in the 1980's bounced production from shortages to surpluses. Well-managed stocks would help to ensure food security and reduce price variability. Current stock policies, however, are overly cautious, with governments tending to keep larger stocks than required by import lead times.

Multiyear food aid ("guaranteed" levels for several years; provided by the EC in Kenya, for example) and triangular operations (for example, donor-sponsored purchases of surplus maize from Zimbabwe to be shipped to Mozambique) have helped the countries cope with production variability. A Regional Early Warning System headquartered in Zimbabwe was devised by the Southern African Development Coordination Conference (1980) to provide advance information on crop production and food supplies.

Consumption Issues

Production surpluses do not guarantee the food security of individual households. Government can improve access to food of its low-income citizens with targeted consumption programs.

The experiences of Kenya, Tanzania, and Zimbabwe indicate that to achieve food security, policies should focus on both supply and demand. In practice, however, efforts have been aimed more at increasing production (along the line of structural adjustment policies) than at improving consumption. While increased food production improves the nutrition and living standards of producers, it may not translate into food security for households with limited purchasing power.

During the 1980's, many Sub-Saharan countries enjoyed periods of production surpluses, but saw per capita grain consumption decline and severe malnutrition persist. In fact, malnutrition among children in Zimbabwe seems as high as in Kenya and Tanzania, despite Zimbabwe's food surplus and relatively abundant production.

Current macroeconomic policy reforms, which include lower consumer price subsidies, are expected to curtail food consumption of the poor in the short run. Reduced consumption for the low-income group, who are already close to the subsistence level, may precipitate a decline in labor productivity and a rise in health costs. To protect vulnerable groups, compensatory policies, such as public employment, unemployment compensation, and child-feeding programs, may need to be considered, especially during periods of income decline.

Historically, Sub-Saharan countries have adopted price subsidies directed to urban areas. Such policies were expensive, with the high-income groups receiving larger per capita subsidies. Subsidies were reduced significantly in the 1980's due in part to budgetary pressures. Targeted policy measures, such as food rationing, food stamps, and supplemental food programs, are less expensive and can increase the real income of a larger segment of the population. For example, a pilot subsidy program in the Philippines, based on geographic targeting (selected nutritionally poor villages), was very cost effective. In Brazil, small amounts of subsidized food were sold in poor sections of urban areas. In Bangladesh, subsidies and changing consumption habits were combined: Consumers in the targeted areas were offered a choice of wheat or larger quantities of sorghum.

The success of a targeted consumption program, particularly in rural areas, depends on market infrastructure and government management. In Tanzania, already deeply in debt and with deplorable roads, the chance of successfully carrying out a cost-effective targeted program is much less than in Zimbabwe. Public employment programs, used extensively in Indonesia and Bangladesh, are cost effective because of low wage rates. In Tanzania, projects such as road maintenance can even support market liberalization by improving infrastructure.

For More Information . . .

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