Policy Options to Stabilize Food Supplies

A Case Study of Southern Africa

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Introduction

The issue of improving global food security has been at the center of policy discussions since the World Food Summit in 1996. A commonly accepted definition of food security is “access by all people at all times to enough food for an active and healthy life” (World Bank, 1986). This definition encompasses both supply and demand dimensions. However, the first step toward achieving food security requires having adequate supplies at the aggregate level.

There are two sources of food insecurity that occur at the aggregate level. One source is inadequate levels of food supplies. This slowly developing problem tends to be more noticeable when one examines underlying food supply trends, which have been declining in many countries. Another source of insecurity is high annual food supply variability, which in shortfall years can lead to severe hardship. The hardship often occurs in years of low domestic production when countries are unable to muster the adequate foreign exchange necessary to import commercially the food quantities that would cover the deficit.

Different policy options have been proposed over the years to address aggregate food insecurity. External assistance, particularly food aid, has been used historically but has had limited success in preventing food supply shortages in most lower income countries. Although donors commit to providing food aid, the quantities often have been inadequate to meet the shortrun deficits in many countries. Moreover, longrun trends show that the volume of food aid has declined over time while the demand has been growing. Therefore, in the policy debate related to options to safeguard food security, “self-reliance”—the ability to commercially import the levels of food to meet consumption requirements—is what most countries are considering. In this environment, in addition to self-help measures, one policy option is regional collaboration, which can play a crucial role in both reducing short-term instability in food supplies and attracting the cooperation of donors to improve the long-term food security of countries.

This report examines regional policy alternatives that can stabilize aggregate food supplies. The policy options that are considered include a grain stocking program and a grain import insurance program approach. These options can be considered only a first step toward achieving food security at the national level. Demand-side considerations that affect direct consumer access, such as income inequality, geographic isolation and programs that target vulnerable populations, are beyond the scope of this study.

This report is motivated by a desire to find food security policy options that are economically more efficient than food aid deliveries, which can allow resources to be used for other purposes. Budgetary pressures among the major food aid donor countries, which have led to reduced food aid budgets over the last decade, have contributed to the interest in such alternatives.[1] These alternative programs may have the additional benefit of being less intrusive to markets than food aid, which is discussed in more detail in the conclusions section.

The Southern Africa Development Community (SADC) region was chosen as a case study to examine alternative programs for several reasons.[2] One reason

[1] Food aid allocation decisions are usually beyond the control of recipient countries.

[2] The countries of SADC now include Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe. After this study was begun, the Democratic Republic of Congo and Seychelles applied for membership in the organization. These countries have been excluded from the analysis.

is that the SADC region is representative of other countries and regions where food aid imports had been rising before the recent budgetary pressures forced food aid donations downward. Another consideration is that the political changes in South Africa, which joined SADC in 1994, require a re-examination of the previously discussed policy options that now include South Africa in the analysis because this country accounts for about 55 percent of the region's total grain production.[3] Another factor is that, despite the region's most recent political problems, SADC would appear to be a good candidate to implement regional policy options given its history of cooperation.[4] Finally, consumers in the region have in common that they prefer the staple of white maize (UNFAO/CIMMYT, 1997).

[3] A regional stocking program, similar to the one examined here, was analyzed by Technosynesis, 1984. A key feature of this now outdated study was that stocks would be held decentrally throughout the region. It appears that this proposal was not implemented due to unclear policy objectives and other administrative issues (Hay and Rukuni, 1988). This report examines an alternative proposal: that stocks be held in South Africa to take advantage of its excess storage capacity.

[4] Robson (1997) argues that the southern African countries have had a strong record of cooperation after they formed the Southern African Development Coordination Council (SADCC, the predecessor to SADC) in 1980 since there was a common regional goal to reduce economic dependence on (apartheid-era) South Africa. One could argue also that the continued existence of the Southern African Customs Union (SACU), which is one of the oldest operating customs unions in the world, supports the claim that the region has a strong history of cooperation.

The primary goal of this study is to examine whether the two policy options under consideration, grain stocks and grain import insurance, are more efficient and cost effective than food aid in stabilizing food supplies in the SADC countries from a donor point of view. The effectiveness of the different options in stabilizing supply is evaluated by determining the reductions in the standard deviation of per capita grain supplies. The costs of the policy options considered are evaluated in aggregate and on a per capita basis across countries. Although food aid has no cost to recipient countries, it has a similar goal of stabilizing food supplies.

The potential effectiveness of implementing these policy options in the future is considered by reviewing how the programs would have performed historically using model simulations with actual data. For the 1970-95 period, this report finds both the insurance program and stocking program would have been more effective policy tools in reducing supply variability in most countries compared with the status quo (food aid). Among the two policy options, the stocking program showed a slightly greater average reduction in supply variation. The stocking program and possibly the insurance program could be less expensive for donors than the costs of food aid.[5]

[5] As explained later, the insurance program requires a startup fund. Under a minimum level criterion, the program would be slightly more expensive than food aid.