

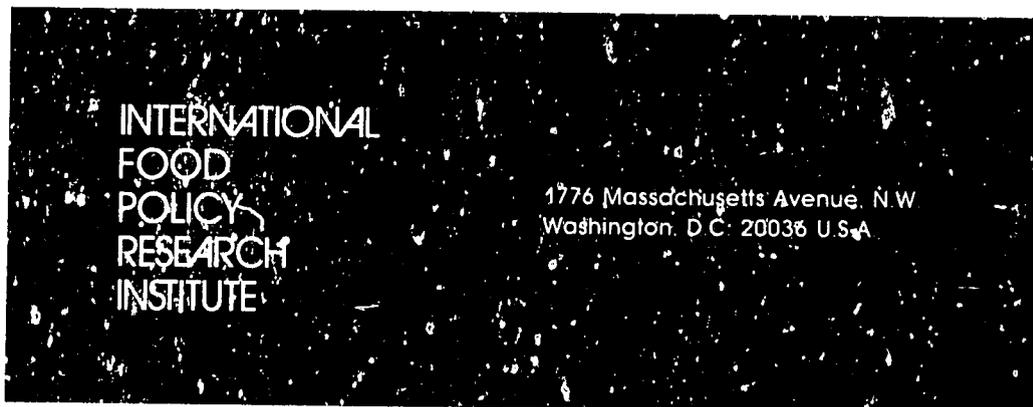
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# Market Integration in Southern Africa: A Route to Regional Food Security

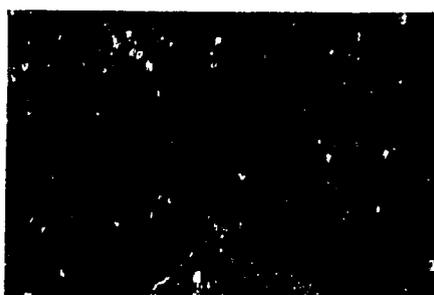
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## Market integration in southern Africa:

# A route to regional food security

*by Ulrich Koester*

The extensive efforts of both developed and developing countries in recent years notwithstanding, Africa does not have enough food, and the prospects for improved food security are not good, given the probability that in the decades to come Africa will depend even more heavily on world food markets. If we take Voldes and Siamwalla's definition of food security as "the ability of food deficit countries, or regions or households within these countries, to meet target consumption levels on a year-to-year basis",<sup>1</sup> we can identify two aspects of food insecurity. First, real income may be too low to provide target consumption for all groups of the society, even in the years of normal or above-normal domestic production; and second, real income may fluctuate as a result of variations in domestic production of food and

non-food products and/or import and export prices.

This article will explore whether regional cooperation among African countries could contribute to both aspects of food security. The term "cooperation" includes any joint action among partner countries that affects their economic activities, and thus market integration can be seen as a form of cooperation.

African countries, for their sheer numbers, should be more inclined to cooperate than the countries of other continents: "Africa is a relatively balkanized continent. With only 10 per cent of the world population [most African countries have a population of only 5-15 million], Africa numbers one-third of the countries of the world."<sup>2</sup> The markets of most national African economies are inadequate to meet the requirements of modern economic development, and this is especially true for the nine southern and eastern African countries.

In 1980 those nine countries — Angola, Botswana, Lesotho, Malawi,

Mozambique, Swaziland, Tanzania, Zambia, and Zimbabwe — joined to form the Southern African Development Coordination Conference (SADCC), stating as a primary objective the seeking of economic independence from developed countries, particularly the Republic of South Africa. This was to be achieved by undertaking joint projects, such as regional stockpiling or transport systems, that would contribute to greater economic security for the region. This article aims to investigate the scope of the SADCC approach to improving food security in the region.

Regional cooperation could improve food security, as defined above, if it contributed to increased income in the economy as a whole, especially for target groups, and/or if it helped stabilize food consumption. There are well-founded arguments that cooperation could affect both aspects of food security.

**The case for regional cooperation.** Regional cooperation could lead to an

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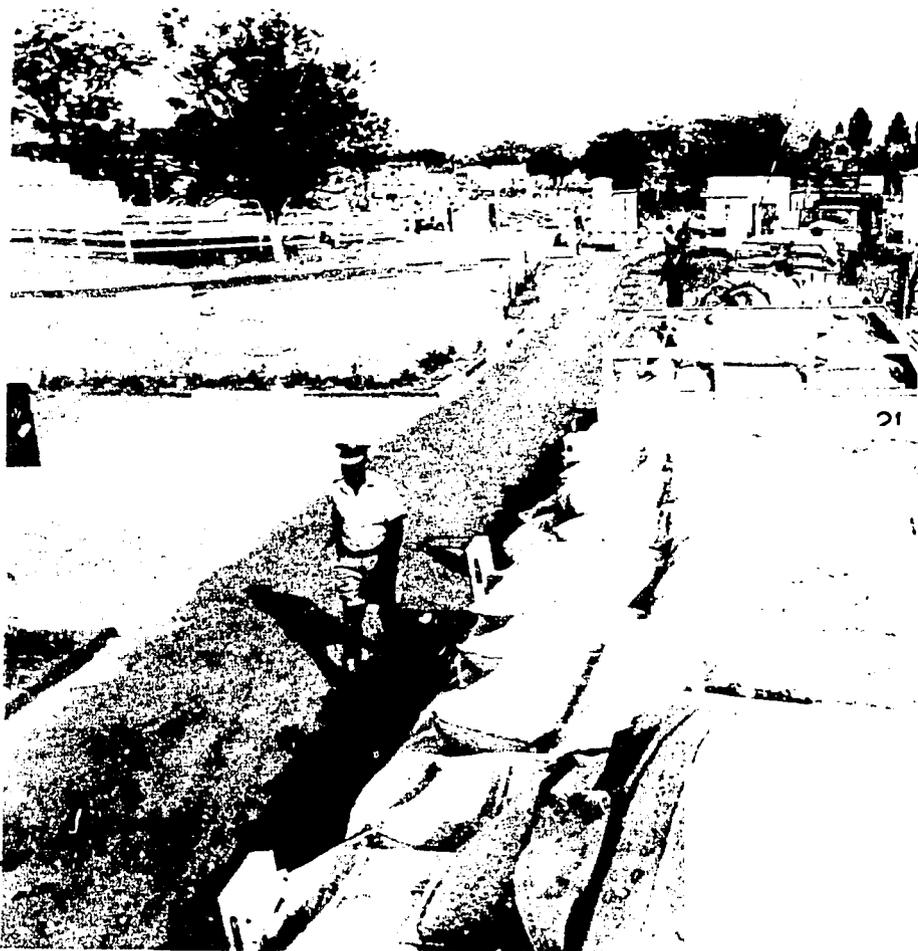
improvement in food security in the SADCC countries by:

- reducing the costs of achieving food-policy objectives;
- exploiting external effects of specific projects across national borders and exploiting economies of scale;
- achieving market integration.

SADCC governments give food security high priority. In political assessments of a country's food system, the contribution of agriculture both to food security and to GNP are taken into account. In fact, governments are often prepared to accept a lower GNP, which indicates a misallocation of resources in purely economic terms, if food security is thereby improved. The sacrifice of GNP, therefore, can be considered the economic cost of improved food security.

A strong argument can be made that a group of countries can, by cooperating rather than pursuing isolated national policies, achieve the same degree of food security at lower cost. First, the external effects of national food policies are of special importance for the relatively small SADCC countries. A food shortage in one country will inevitably affect the food situation in other countries since trade across borders cannot be controlled efficiently. Thus, coordination of policies could make national food policies more efficient. Second, fluctuations in production may impair food security. Individual countries can build up stocks, plan for higher levels of food production than with stable production, and build up foreign exchange reserves in order to achieve food security. Such "national insurance systems" are likely to be more expensive than a regional insurance approach for the consequences of fluctuations in food production. Real income in countries could, therefore, be higher with cooperation.

**Externalities and economies of scale.** The SADCC approach focuses on externalities from the very beginning. There is an agreement that only those national projects that have a regional impact should be supported by the Council of Ministers and included in



the SADCC programmes of action. This implies that projects in one country may have positive effects on other countries. The specification of some of the first projects in the Food Security Programme of SADCC manifests this general principle. Projects included: a regional early warning system, a regional resources information system, a regional food reserve system, a regional food aid system. It can be expected that all these projects will produce effects that go beyond national borders and will thus support the regional cooperation approach. But other projects that are not part of the Food Security Programme may also help to improve food security because of externalization. This is especially true of the development of a regional transport system, which was considered as the first priority from the very beginning. Improvements in the transport sector will help to lower transport costs, which are important for many food products that are often bulky and of low per-unit value. Moreover, national and subregional markets

*Maize from Zimbabwe shipped through Mozambique. Regional cooperation could improve food security*

will be more integrated if transport costs are lower, and this will in turn help to fight temporary food shortages in locally separated markets.

Earlier research showed that regional cooperation might be helpful in exploiting economies of scale in industrial production. Perhaps regional cooperation for food security can be promoted with the same argument, especially for the agroprocessing industry, the importance of which in the SADCC countries and other developing countries is increasing. Most of these industries, located in nationally separated markets, use only a small portion of their production capacity — often not more than 30 per cent. Opening national borders for trade in these products, and inter-country planning of production capacities, would help to avoid excess capacities, and thus would lower prices and increase real income.

**Market integration.** According to the



economic theory of integration, regional market integration can only contribute less to food security than worldwide integration. Hence, countries would be well advised to open their economies even if partner countries do not. But, there might be good reasons other than economic ones to prefer regional to worldwide integration.

Policy-makers often renounce policies that are best from a purely economic point of view because of political constraints. A country's pattern of protection can be explained only if the political market for protection is taken into consideration. The argument for worldwide integration is based mainly on economic reasoning, but the arguments for regional integration are founded on political considerations as well. The political will is likely to be stronger for regional integration than for worldwide integration. Moreover, worldwide integration lowers protection without visibly compensating producers. Regional integration, on the other hand, changes the pattern

of protection, helping some producers while hurting others. It can be hoped that producers will, therefore, be less opposed to regional integration.

If market integration improves food security, regional schemes might be preferred to worldwide since they might better help to reduce instability in food consumption. It is, of course, easier to coordinate the actions of a few selected countries than of many. International stabilization schemes have shown that adherence by member countries to agreed rules is impossible to enforce if the membership is large, and that the potential for free-riding weakens the viability and the functioning of an international scheme.

The traditional approach of the economic theory of integration is likely to lead to false conclusions in valuing the integration efforts of some landlocked countries because transport costs have been disregarded. This assumption is crucial for the conclusion that regional integration can only be less advantageous in economic terms than worldwide integration.

**Quantitative analysis.** To sum up, integration of regional markets may be more beneficial than worldwide integration under some conditions. There are some good arguments in favour of cooperation among SADCC countries, but to assess the potential benefits, a quantitative analysis is needed.

Some joint actions to improve food security are based on an insurance approach. It is hypothesized that stabilizing food consumption is less costly for a group of countries than for individual countries, but this will be true only if food production or, more generally, real income fluctuates more on the national level than on the regional level. Calculations indicate that the range of fluctuations in cereal production among SADCC countries is wide. At 68.8 per cent, Botswana's production fluctuates the most, and at 9.2 per cent Tanzania's the least. Overall SADCC fluctuations are 9 per cent over a period of about 20 years.

Because production and export earnings fluctuate differently among SADCC countries, risk-pooling strategies can be recommended. These strategies could include a regional food reserve system, as planned by the SADCC countries. With such a system, the sum of national stocks could be reduced by 41 per cent, resulting in cost savings of up to \$67.8 million.

To highlight the significance of transport costs as a determinant of regional integration benefits, import and export parity prices have been calculated for selected locations in the SADCC region. It was assumed that countries traded only with overseas markets without having set up a regional integration scheme. The difference between import and export parity prices is extremely large.<sup>3</sup> The export parity price is even negative for some specific locations, while for others it is only about one-third or less of US grain prices. The large difference in prices indicates, first, that a policy of autarky in staple foods is likely to be reasonable only if no trade with neighbouring countries is allowed; second, that price ratios of staple prices may differ considerably from country to country; and third, that fluctuations in domestic production are more likely to lead to changes in national carry-over stocks than to changes in trade flows.

We can presume that the potential for intraregional trade is greater if the region as a whole is self-sufficient in staple foods but individual countries are not. Market integration would help to replace intraregional trade with interregional trade, providing higher export prices for exporting countries and/or lower import prices for importing countries.

The food balance sheet shows that the SADCC region would have been almost self-sufficient in grain equivalents in 1980 if production had equalled the average of 1979-81. Of course, this outcome is not just a reflection of the region's production potential and consumer needs. It is certainly also a consequence of the prices and price ratios set by the

governments of individual countries. A different set of producer and consumer prices could change the amounts as well as the pattern of production and consumption. However, the figures indicate that the region might be able to produce enough staple food to feed its population. This is quite important for the trade potential created by integrating the markets of these countries, which would promote trade within the region.

In investigating the potential benefits of market integration, it is reasonable to consider the region as a nearly closed economy. Thus, integration would result more in creating trade than in diverting it. More trade would be created: (a) the more the food balance of individual countries is unbalanced, either for total staple foods or for individual staples; (b) the more a country's consumption pattern might change due to the creation of intraregional trade; and (c) the more the region's products differ in quality from the interregionally traded goods.

In 1979-81 all but two of the nine SADCC countries produced a surplus of at least one staple food. The imbalance of an individual country's producing a single product would increase if free trade were allowed among the member countries. The presumption is supported by evidence that people in countries that do not produce specific staples, such as rice and cassava, do not include them in their diet.

The potential for growth in intraregional trade is higher when countries that produce surpluses of some staples are bordered by countries with deficits in the same staples. Such was the case for five countries in 1979/81.<sup>4</sup> Thus, there is a potential for trade among the SADCC countries with present production and consumption if individual countries can adjust and, thereby, increase the potential for intraregional trade in staple foods. The presumption that there is a potential for trade among SADCC countries is further supported by other empirical evidence. Production and export patterns differ significantly among the nine coun-

tries. Although exports are highly specialized, with the major export product accounting for more than 50 per cent of total agricultural export earnings for most countries, these exports clearly vary from country to country.

**Obstacles to regional cooperation.** Exploiting potential benefits is not only a question of economics. It is a challenging political task. Experience with other integration schemes has shown that the uneven distribution of benefits and costs among partner countries has often weakened the schemes' viability. Benefits and costs may never be shared completely evenly, but their distribution depends very much on the fields of integration chosen and the institutional framework set up. Hence, the SADCC countries may be well advised to delay market integration which inevitably leads to uneven benefits and costs. Instead, joint projects could, if complemented by fair sharing of costs and benefits, overcome the main obstacles to regional cooperation.

<sup>1</sup> A. Valdés and A. Siamwalla, introduction to *Food Security for Developing Countries*, ed. Alberto Valdés (Boulder, Colo.: Westview, 1981), p. 2.

<sup>2</sup> D. Mazzeo, "Conclusions: Problems and Prospects of Intra-African Cooperation", in *African Regional Organization*, ed. Domenico Mazzeo (Cambridge: Cambridge University Press, 1984), p. 225.

<sup>3</sup> U. Koester, *Cooperation to Improve Food Security in Southern and Eastern African Countries*, *Research Report 53* (Washington, DC: International Food Policy Research Institute, 1986), p. 55.

<sup>4</sup> *Ibid.*, p. 59.