AN ANALYSIS OF PRICE AND NON-PRICE BARRIERS TO AGRICULTURAL MARKETING AND TRADE IN SOUTHERN AFRICA

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ABSTRACT

AN ANALYSIS OF PRICE AND NON-PRICE BARRIERS TO AGRICULTURAL MARKETING AND TRADE IN SOUTHERN AFRICA

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This study examines the most important price and non-price constraints on and potentials for expanding Southern African agricultural trade, using a market coordination framework to organize the analysis.

Maize is the most important staple food in Southern Africa. Yet current maize pricing policies in major SADCC producing and consuming countries render official trade unprofitable in most instances. Consumer subsidy, pan-seasonal, and pan-territorial pricing policies strongly influence whether private sector and parastatal firms will be able to engage in profit-generating trade. Under present pricing policies, it is unlikely that expanded official trade can lead to increased SADCC food self-reliance because of the fiscal burden of subsidizing exports.

Analysis of maize and rice price data from open markets in Northern Malawi and Southwestern Tanzania demonstrates that incentives for engaging in informal intra-regional trade are greater than for official trade. The analysis suggests that informal trading networks have the potential to serve remote provincial markets more effectively than official networks, thus improving food availability for those populations.

Information from a survey of agricultural trading firms in five SADCC countries shows that transactions costs are high for intra-

regional trade. Cumbersome regulations, a paucity of market information, unreliable transportation, complicated payments procedures, and lack of confidence in the willingness of SADCC governments to facilitate trade were reported as significant barriers to regional trade. Most respondents reported that transactions costs were higher for intra-regional trade than for trade with the rest of the world.

The foreign exchange constraint is a fundamental cause of many marketing and trade barriers. For Zambia, the analysis demonstrates that while foreign exchange rationing reduced exchange rate uncertainty, it also created uncertainty because it restricted the ability of firms to effectively manage imports, inventories, and cash flow. So far, the gradual approaches to trade liberalization taken by Tanzania and Malawi have been more successful at reducing firm-level uncertainty than the abrupt shift by Zambia from rationing to foreign exchange auctioning.

A number of policies could be implemented by SADCC governments that would promote profitable regional trade by substantially lowering transactions costs.

To my parents

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LIST OF ABBREVIATIONS

ADMARC - Agricultual Development and Marketing Corporation (Malawi)
AIPC - Agricultural Input Priority Committee (Zimbabwe)
AMA - Agricultual Marketing Authority (Zimbabwe)
BLS - Botswana, Lesotho, and Swaziland
BOT - Bank of Tanzania
BOZ - Bank of Zambia
CIF - Cost, Insurance, and Freight
CIP - Commodity Import Program
CPI - Consumer Price Index
CSO - Central Statistical Office (Zambia, Zimbabwe)
DRC - Domestic Resource Cost
EAC - East AQfrican Community
EPP - Export Promotion Program
ERF - Export Revolving Fund
ERER - Equilibrium Real Exchange Rate
ERS - Economic Research Service (of the USDA)
FAE - Free Alongside Elevator
FAO - Food and Agriculture Organization of the United Nations
FAS - Foreign Agricultural Service (of the USDA)
FEMAC - Foreign Exchange Management Committee (Zambia)
FOB - Free On Board
FOR - Free On Rail
FOT - Free On Truck
GMB - Grain Marketing Board (Zimbabwe)
GRZ - Government of the Republic of Zambia
IATA - International Air Transport Association
IFPRI - International Food Policy Research Institute
IMF - International Monetary Fund
INDECO - Industrial Development Company (Zambia)
LAFTA - Latin American Free Trade Association
LINTCO - Lint Company of Zambia
MAWD - Ministry of Agriculture and Water Development (Zambia)
MDB - Marketing Development Bureau (Tanzania)
MFEPD - Ministry of Finance, Econpmic Planning, and Development (Zimbabwe)
MK - Malawian Kwacha
MLARR - Ministry of Lands, Agriculture, and Rural Resettlement (Zimbabwe)
MSU - Michigan State University
MT - Metric Ton
NAMBOARD - National Agricultual Marketing Board (Zambia)
NCDP - National Commission for Development Planning
NCZ - Nitrogen Chemicals of Zambia, Ltd.

NFI - No Funds Involved (Zambia, Zimbabwe)
NBC - National Bank of Commerce (Tanzania)
NMC - National Milling Company (Tanzania, Zambia)
NSO - National Statistical Office (Malawi)
OFI - Own Funded Imports (Tanzania)
OGIL - Open General Import License
OGL - Open General License (Tanzania)
PCU - Provincial Cooperative Union (Zambia)
PTA - Preferential Trade Area
RER - Real Exchange Rate
RSA - Republic of South Africa
SACU - South African Customs Union
SADCC - Southern African Development Coordination Conference
SITC - Standard Internationl Trade Classification
R - South African Rand
TANZAM - Tanzania Zambia Highway
TAZAMA - Tanzania Zambia Oil Pipeline
TAZARA - Tanzania Zambia Railway Authority
TNC - Transnational Corporation
TSH - Tanzanian Shilling
UDI - Unilateral Declaration of Independence (Rhodesia 1965-80)
UNDP - United Nations Development Programme
UNSO - United Nations Statistical Office
UZ - University of Zimbabwe
US$ - United States Dollar
USAID - United States Agency for International Development
USDA - United States Department of Agriculture
WFP - World Food Programme
WPI - Wholesale Price Index
Z$ - Zimbabwe Dollar
ZAMHORT - Zambia Horticultural Products Board
ZAMSEED - Zambia Seed Company, Ltd.
ZCCM - Zambian Consolidated Copper Mines
ZIMCO - Zambia Industrial and Mining Company, Ltd.
ZK - Zambian Kwacha

CHAPTER I

INTRODUCTION

1.1. Background

In recent years, the nine Southern African Development Coordination Conference (SADCC) member states [1] have increasingly voiced an interest in expanded intra-regional trade as one strategy towards increased food security within the region [2]. Because six of the nine countries are landlocked, transport costs are high, and dependence on trade with external countries (including South Africa) is perceived as risky, the desire to pursue such a strategy is understandable.

Yet levels of intra-regional trade have historically been quite low. The proportion of intra-SADCC trade in overall trade is only 4-5% (Chr. Michelsen, 1986). In 1982, this trade was valued at US$ 295.7 million. Food and live animal trade (SITC section 0) accounted for approximately 23% of this (or only US$ 66.7 million). In grain trade,

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[1] Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia, and Zimbabwe.

[2] Food security has been defined as "the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable and nutritionally adequate supply of food." (World Bank, 1986). Trade may contribute to food security by evening out supply variability and lowering prices in the short-run, and increasing incomes in the long-run. The relationship between trade and food security is more fully outlined in Chapter II.

concessional food aid shipments for a number of SADCC countries have increased in importance over the years with worsened economic conditions, increased civil strife, and periodic droughts. Of course, this varies by country. In Mozambique, dependence on food aid has risen dramatically. Food aid as a percentage of total cereal availability was roughly 16% over the 1979-81 period and commercial imports constituted 30% of total availability [3]. For 1988/89, the FAO has estimated total cereal import requirements at 815,000 MT while local production is forecast at only 541,000 MT [4]. The capacity to import on a commercial basis is virtually nil. On the other hand, in Zimbabwe the combination of attractive producer prices and good weather have resulted in the build-up of stocks of maize. Yet heavy storage costs and export sales at prices below marketing board acquisition costs have imposed a substantial fiscal burden on the Government of Zimbabwe over the last several years. This coexistence of food stocks and deficits within the region has led to an increased interest in: 1) determining why there is not more trade within the region; and, 2) designing strategies for expanding food security-related intra-SADCC trade.

Intra-SADCC agricultural trade can not be analyzed in isolation. First, it must be considered in the context of overall agricultural trade of the SADCC nations because many of the most important constraints on intra-regional trade are also constraints on overall trade (foreign exchange shortages, excessive bureaucracy). Moreover,

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[3] FAO, "Atlas of African Agriculture", Rome, 1986.

[4] FAO, "Food Supply Situation and Outlook", Rome, February 1989.

traditional trading patterns with developed countries may in themselves be a constraint on establishing new trading relationships among SADCC countries.

Secondly, intra-regional trade must be viewed against the backdrop of macro-economic and agricultural policies in individual SADCC nations. Some agricultural marketing and pricing policies are in direct conflict with expanding intra-regional trade (price controls, state trading monopolies in staple food commodities, import licensing) because they reduce the incentives to trade by placing restrictions on who can trade, what can be traded at what prices, and when trade is allowed. Other policies, such as pricing structures that are not harmonious with those of adjacent countries, inadvertently lead to increased trade because of incentives arising from subsidy differentials.

1.2. Research Objectives

The general objectives of the dissertation are as follows:

1. To describe current and historical patterns of agricultural trade: within the SADCC region; between SADCC countries and South Africa; and between SADCC countries and the rest of the world with particular emphasis on staple grains;

2. To determine the extent to which there is an economic basis for expanded agricultural marketing and trade within the SADCC region, given recent exchange rate and agricultural pricing policy developments and transportation costs;

3. To identify present non-price constraints on expanded marketing and trade of agricultural commodities and inputs through use of a market coordination and transactions costs framework of analysis;

4. To examine interactions between policy decisions and market structure in one country and their possible effects on

policy planning and performance in other countries. This is essentially a question of externalities generated by national macro-economic and agricultural policies;

5. To analyze the potential for selected institutional innovations to expand marketing and trade of agricultural commodities and inputs (regardless of source and destination), thereby improving food security in the region. Such innovations may include changes in pricing policies as well as measures designed to reduce the transactions costs of marketing and trading for market participants.

Because the range of issues involved in SADCC agricultural trade coordination is so broad, no claim is made that the analysis will adequately detail all major coordination problems and potential solutions. Rather an attempt has been made to identify a few of the most important constraints on trade and offer realistic prescriptions for overcoming them.

Johnson's (1986) distinction between disciplinary, subject-matter, and problem-solving research aids in clarifying research objectives. This dissertation is essentially subject-matter and problem-solving in nature. Identification of historical agricultural trade patterns, agricultural pricing and exchange rate policies that impede exchange, and the array of other institutional constraints on marketing and trade may be classified as subject-matter research. Because problem-solving research involves considerably more data collection and analysis, only two areas are analyzed in depth: agricultural prices and exchange rate policy issues; and the potential effects of alternative foreign exchange allocation systems on agriculture. These areas were chosen for in-depth focus because: 1) these are among the most important constraints on trade, according to market participants and other knowledgeable observers; and, 2) there

was a perceived demand for realistic solutions to these problems on the part of government, donor, and agricultural interest group officials. More limited analysis is done on the following issues: market information; excessive bureaucracy; potential effects of donor programs on private economic activity; and export promotion programs.

1.3. Organization of the Dissertation

This dissertation is comprised of eight chapters, including this introduction.

Chapter II discusses previous research on issues pertinent to SADCC agricultural marketing and trade and regional cooperation including: selected theories of economic integration; the SADCC approach to regional cooperation; literature on intra-SADCC agricultural trade potential; and other food security research of potential relevance to SADCC agricultural marketing and trade analysis.

A basic premise of the dissertation is that both price and non-price factors impede the expansion of SADCC agricultural marketing and trade. Chapter III first discusses techniques for analyzing agricultural pricing issues. A transactions cost framework is then outlined which goes beyond neo-classical price analysis to incorporate non-price elements in the assessment of constraints on and potentials for SADCC agricultural marketing and trade expansion. Methods used to identify key market coordination problems and their potential solutions are also discussed.

Chapter IV describes current and historical patterns of staple grain trade: within the SADCC region; between SADCC countries and South

Africa; and between SADCC countries and the rest of the world. The chapter summarizes the evolution of maize, wheat, and rice trade patterns, including import bill fluctuations and the role of food aid.

Chapter V explores the implications of pricing, subsidy, and exchange rate policies in five Southern African countries (Zimbabwe, Zambia, Malawi, Tanzania, and South Africa) on the marketing and trade of staple food commodities. Because white maize is the most important staple food consumed in most Southern African countries, analysis focusses primarily on this commodity.

Chapter VI presents results of a survey of over 90 firms in five SADCC countries (Zimbabwe, Zambia, Malawi, Tanzania, and Botswana) related to perceptions of potentials for and constraints on expanding agricultural marketing and trade. Among the most important issues discussed are: cumbersome regulations on trading transactions; methods of payment for international transactions; protectionism; transportation; market information; donor programs; and government-sponsored export promotion activities.

Chapter VII provides in-depth analysis of perhaps the most important barrier to SADCC trade -- official rationing of foreign exchange. The chapter begins by clarifying the link between overvalued exchange rates and rationing, and identifies the wide array of possible objectives that foreign exchange allocation systems may be meant to satisfy. In addition, a general classification of exchange control systems is presented. A case study of the recent Zambian experience with different foreign exchange allocation systems follows. The next section broadens the analysis by incorporating insights from the

experiences of three other SADCC countries where foreign exchange is rationed -- Malawi, Zimbabwe, and Tanzania. The emphasis is on extracting lessons from individual country experiences which may provide insights about alternative methods for allocating foreign exchange in other countries.

Chapter VIII summarizes the most important findings of the dissertation, focussing on necessary conditions that should be in place before there can be significant SADCC agricultural marketing and trade expansion. Priority areas for future research are also identified.

CHAPTER II

POTENTIAL AND PROBLEMS RELATED TO AGRICULTURAL TRADE, FOOD SECURITY, AND SADCC

2.1. Introduction

This chapter discusses previous research on issues pertinent to SADCC agricultural marketing and trade, and regional cooperation. Section 2.2 begins by outlining the neo-classical theory of economic integration as well as arguments of dissenters from the neo-classical approach. Some of these criticisms draw upon the experience of African cooperation efforts such as the East African Community (EAC). The SADCC approach to regional cooperation is then discussed and a number of potential trouble-spots for cooperation are identified. Section 2.3 reviews literature on intra-SADCC agricultural trade potential. Section 2.4 briefly discusses food security research of potential relevance to SADCC agricultural marketing and trade analysis. The final section synthesizes the implications of this literature for SADCC agricultural marketing and trade research.

2.2. The Role of Economic Integration in Development

A. The Neo-Classical Position

There is a vast literature on the welfare effects of economic integration. The first major analytic treatment of integration is Viner's work, The Customs' Union Issue (1950). Prior to Viner,

economists viewed any movement away from free trade as an unambiguous movement away from Pareto optimality. Viner introduced two terms, "trade creation" and "trade diversion," which form the foundations of the analysis of the static welfare effects of integration. Establishment of a customs' union (removal of all internal tariffs and establishment of a common external tariff) results in opportunities to "create" new trade. Removal of internal tariffs facilitates creation or expansion of internal industries as free trade between member states is no longer blocked. This represents a welfare-enhancing move towards Pareto optimality. On the other hand, imposition of a common external tariff results in distortions which serve to "divert" import sourcing away from low-cost external producers and towards higher cost internal suppliers. The higher the common external tariff compared to the pre-customs' union tariff, and the more inelastic the import demand for a given commodity, the greater the magnitude of welfare reduction.

For customs' union theory to be relevant to developing countries, dynamic effects must also be addressed. Neo-classical arguments have focussed on the economies of scale that accrue to decreasing cost industries as markets expand due to lowered tariff barriers within the customs' union (Corden, 1972). In addition, some theorists (Cooper and Massell, 1965) recognize that there may be trade-offs between efficiency and other goals in developing countries. Development of an industrial base may be viewed as a public good whose social benefits (multiplier effects arising from employment creation, learning by doing, political stability, prestige, etc.) far outweigh more readily quantifiable financial benefits. In such cases, economic planners in

each customs' union member state may have an objective function that allows for a trade-off between production emanating from inefficient domestic industries (which are protected by the customs' union's common external tariff) and the foregoing of consumption of more efficiently-produced imports. Trade creation may therefore decrease welfare if high-cost domestic industries contract because they are not competitive with lower cost industries in other customs' union member states. Likewise, trade diversion can increase welfare if there is more (inefficient) domestic industrial activity because these industries can now more effectively compete in customs' union markets than before imposition of the external tariff.

B. The Revisionist Position

Beginning in the mid-1970's, a school of thought developed that seriously questioned the neo-classical theory of economic integration. Conceptually, this school had its origins in the dependency theory of Prebisch and others. Empirically, it drew on the generally disappointing results of regional integration efforts in Latin America, Africa, Asia, and the Caribbean. Among the integration efforts most closely studied were the Latin American Free Trade Association (LAFTA), the Andean Pact, and the East African Community (EAC).

Critics objected to the static nature of traditional integration theory because it was incapable of addressing fundamental development issues such as: the dynamic effects of integration on production and technological change; inter-commodity substitution; economic diversification strategies (as opposed to Ricardian specialization);

investment flows; and management of externalities emanating from integration. Moreover, the traditional theory ignored distributional effects and the dynamics of power relationships between groups of economic agents whose interests would in all likelihood diverge during the integration process. Vaitsos (1978) concludes harshly that:

> ...the basic economic theory on this subject could be characterized as thought diverting and to a large extent irrelevant. The traditional theory of international economics and international trade as applied to LDC's economic integration appeared to be, at best, sterile of simply rationalizing normative positions and external interests.

R.H. Green (1986) writes that the traditional theory is:

> ...pure, second best, laissez faire (free market/no state intervention), static North Atlantic capitalist neo-classicism. It is a very exotic plant indeed in Africa and one wide open to the charge of intellectual imperialism or neo-colonialism.

Perhaps the EAC experience is of greatest instructional value to those in SADCC who are considering alternative integration strategies. The EAC was established in 1923 by the British, survived independence, and was dissolved in 1978 after the three governments involved (Kenya, Tanzania, and Uganda) developed irreconcilable differences. These differences were both political and economic in origin. Ravenhill (1979) identifies five broad elements that led to the failure of the EAC:

Background Factors. - These involve the structure of member country economies. Adjacent African economies are not generally organized in a complimentary fashion. Rather they produce commodities that compete with each other in world and regional markets. In developed countries, tariffs are often the most significant barriers to

trade (hence the overwhelming emphasis on tariffs in the traditional neo-classical integration literature). However in LDC's, tariff barriers may be insignificant relative to other factors (quantitative restrictions, state trading monopolies, etc.) that impede trade. Tariff removal is of little significance to the integration process.

In addition, because industrial development is such a high priority, the politicization of the integration process is inevitable. Strong interest groups promoting regional integration are usually missing, while those promoting the protection of infant industries are often vocal and well-organized.

Institutional Infrastructure. - For a regional organization to be taken seriously, it must be given power to decide on policy harmonization and resource allocation among member countries. Few governments are willing to countenance the reduction in national sovereignty implied by a strong regional organization. As such, regional bodies tend to be under-staffed and under-funded. In addition, they are often prohibited from analyzing and making recommendations on major policy issues relevant to the integration process.

Salience of Gains. - Neo-classical proponents of integration cite the benefits of rationalizing production through the elimination of overlapping inefficient national industries in favor of a single regional industry. Instead of there being a multitude of fertilizer and textile factories, all operating at low capacity and supplying tiny

national markets, industries are allocated to single member countries based on comparative advantage. Economies of scale are realized as overhead costs are spread over a larger market and firms operate at fuller capacity.

In theory, countries not receiving a given industry can be compensated from the welfare gains accruing to the customs' union as a whole which result from improved allocative efficiency within the customs' union. In the case of the EAC, this was a naive view of the world. According to Ravenhill, there was a "polarization effect" as most industries gravitated towards the relatively more developed Kenyan economy and away from the Tanzanian and Ugandan economies. Although in economic theory, there could have been potential Pareto improvements through monetary transfers from Kenya to the other two countries, Kenya was unwilling to give compensation, and Tanzania and Uganda were not interested in receiving it. Kenyans viewed transfers as charity while Tanzanians and Ugandans believed that compensation contributed little to development because the substantial positive externalities associated with industry location would not be realized.

Assymetrical Interdependence. - For LDC's, trade with distant developed countries is often more attractive than trading with neighbors. Long-standing trade links with former colonial powers, prompt payment in hard currency for exports, attractive credit repayment terms for imports, and superior import product quality are among the major advantages of engaging in North-South trade compared to South-South trade. Ironically, it is also often easier to obtain

market information and communicate with developed countries thousands of miles away than it is with adjacent LDC's. As such, trading with developed countries may be viewed as safer and less complicated than with one's neighbors. This results in stronger interdependence with developed countries than with LDC's, rendering difficult the diversification of import sources and export destinations even if there is a sincere willingness to diversify.

This is reinforced by LDC vulnerability to external shocks. Events such as the 1973 oil crisis, the collapse of world prices for many primary commodities later in the 1970's, and the global recession of the early 1980's forced many governments to think strictly in terms of short-run national needs. Under such circumstances, making immediate sacrifices to obtain medium and long-run benefits becomes economically and politically unaffordable. "Taking chances" with non-traditional trading partners may no longer be allowed by national planners faced with balance of payments difficulties and domestic recession.

Ideological Divergence and Political Volatility. -Differences in ideology which may have serious negative implications for integration efforts are most likely in the areas of:

- government attitudes towards direct foreign investment;
- foreign trade planning;
- the role of public intervention;
- allocation of industries on a regional basis.

If industries are allowed to locate wherever they wish ("laissez-faire regionalism"), gains will be skewed against socialist states as private enterprises are most likely to invest in countries with liberal pricing policies, attractive investment codes and favorable labor legislation.

If there are frequent changes of member governments, personal relationships between leaders can also undermine regional cooperation. The 1972 Uganda coup which replaced Milton Obote with Idi Amin brought this issue to the forefront in the EAC. The alliance between Uganda and Tanzania forged by Nyerere and Obote to counteract the economic dominance of Kenya quickly dissolved due to the bitter enmity between Nyerere and Amin. Moreover, economic disintegration under Amin seriously damaged the EAC as Uganda was no longer viewed as a reliable trading partner.

Ravenhill concludes that neo-classical integration theory is of little practical value to LDC's. Trade creation in a customs' union of underdeveloped economies is minimal. More fundamentally, neo-classical integration analysis is strongly rooted in static theory whereas the most important issues facing developing nations are dynamic in nature. In addition, the distribution of gains is complicated by the presence of trans-national corporations (TNC's) who may see integration as antithetical to their interests. Prior to integration, TNC's benefit from high tariff barriers and monopolies in each national market of the region. In addition, their bargaining power is stronger in a fragmented region because they can play governments off against each other for concessions. After establishment of a customs' union,

competition for internal markets becomes fiercer and member states may adopt common investment codes and attempt to rationalize industrial activity. Such measures have the potential to cut into TNC monopoly profits and reduce their bargaining power.

C. The SADCC Philosophy of Regional Cooperation

SADCC was founded in April 1980 in Lusaka. The nine member governments agreed to pursue the following four general objectives:

- the reduction of economic dependence, particularly, but not only on South Africa;
- the forging of links to create a genuine and equitable regional integration;
- the mobilization of resources to promote the implementation of national, interstate and regional policies;
- concerted action to secure international cooperation within the framework of the strategy for economic liberation [1].

Several observers, (Zehender, 1983, Green, 1986) have noted that the SADCC founders drew effectively on lessons from the EAC failure in formulating their strategy. They pointedly rejected the neo-classical model as a framework for regional cooperation, viewing it as economically irrelevant and politically impractical. To date, controversial issues such as establishment of a common currency and establishment of regional industries have been avoided. Energy has

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[1] Quoted from Zehender (1983), p.18.

instead been focused on realistic medium-term goals such as mobilization of funds for financing regional projects in the areas of transport and communications. In the view of SADCC strategists, previous Third World integration efforts have attempted to accomplish too much, too quickly, especially in light of the heterogeneous ideological and economic make-up of member states. The result has either been dissolution (the EAC) or atrophied development accompanied by a slide into irrelevance (LAFTA and the Andean Pact).

There has not yet been any regional discussion on harmonization of macro-economic and agricultural policies. Instead, SADCC has followed an approach whereby each country is assigned a portfolio which it is responsible for managing on a regional basis. So far, the emphasis has been on implementing feasibility studies to identify regional projects. Country portfolio responsibilities were first established in 1981 at Blantyre (Table 2-1). Interestingly, although trade expansion is the driving force for integration in traditional economic theory, no trade portfolio was originally designated. Not until 1986 was it added when it was assigned to Tanzania.

Despite an understandable reluctance to deal with trade issues, if SADCC is to evolve in a fashion relevant to the development interests of the region as set forth in the Lusaka Declaration, some of the difficult issues related to regional trade and industrial cooperation will eventually have to be addressed.

Zehender identifies five areas of potential conflict for SADCC. In his view, these factors can not be ignored in assessing the feasibility of regional cooperation initiatives. Several of these

Table 2-1: Original SADCC Country Sectoral Portfolio Responsibilities (1981)

Country	Sectoral Portfolio
Angola	Energy development, including alternative energy resources, and related environmental problems
Botswana	Projects to combat animal disease, establishment of a regional crop research center specializing in semi-arid tropical vegetation
Lesotho	Land use and the prevention of soil erosion
Malawi	Fisheries and wildlife development
Mozambique	Transport and communications
Swaziland	Training and advanced training of specialist personnel
Tanzania	*Industrial development and industrial cooperation
Zambia	Establishment of a Southern African Development Fund, mining
Zimbabwe	Foodstuffs supply and food security

* Trade was assigned to Tanzania in 1986.

Source: Zehender (1983).

factors closely parallel the elements identified by Ravenhill that were responsible for the EAC failure.

Intensity of Attitudes Towards Relations with South Africa. - While all SADCC member governments condemn apartheid at the diplomatic level, each have adopted different approaches to South Africa based on economic realities. While Tanzania and Angola have virtually no historical trade links with South Africa, all other states are to varying degrees dependent on South Africa for transport, imports, exports, and employment. South Africa has been persistent in attempting to play SADCC governments off against each other through establishment of the South African Customs' Union (SACU) and the signing of bilateral trade agreements and non-aggression pacts.

Organization of Government and the Economy. - SADCC politico-economic systems range from the conservative monarchies of Lesotho and Swaziland, the (relatively) free-market orientations of Botswana and Malawi, to the various types of socialist configurations operating in Angola, Mozambique, Zimbabwe, Zambia, and Tanzania. Efforts at economic policy harmonization could be fraught with difficulty given the heterogeneous ideological make-up of the region.

Resource Base and Deployment. - The polarization phenomenon that so severely weakened EAC cooperation also has the potential to develop in SADCC. Zimbabwe has a far more developed industrial and human capital base than any of the other countries. As such, it could

benefit disproportionately if an industrial coordination scheme was followed that was based on comparative advantage. The BLS states and Malawi might be viewed as more attractive for direct foreign investment due to their more receptive policies towards TNC's. There is a strong possibility that those socialist-oriented countries not possessing a strong industrial base (Zambia, Mozambique, and Angola) would reap few benefits from regional integration and might actually see their infant industries damaged if barriers from Zimbabwean competition were lowered. As the dominant economic power of SADCC, Zimbabwe's position resembles that of Kenya in the EAC.

External Economic Affiliations. - This refers to the various international groups (ACP, IMF, COMECON) with which SADCC governments are affiliated or at least wish to become affiliated. When Zehender was writing, this was perhaps a more serious area for potential conflict than it is now. In particular, Angola and Mozambique have not joined COMECON despite their desire to become members after independence. Instead, Mozambique is now a member of the IMF and Angola is presently petitioning for membership. For better or worse, the world-wide recession of the 1980's has pushed even those SADCC countries with strong leftward leanings towards stronger relations with the IMF and the World Bank to gain access to western credit. Ironically, due to the serious economic problems currently facing most SADCC governments and the need to introduce austerity measures, the potential to achieve some degree of economic policy harmonization may now be greater than ever before.

Interest articulation among non-governmental groupings. - According to Zehender, national industrial associations, chambers of commerce, and other economic interest groups are underdeveloped in nearly all SADCC countries. Zimbabwe is perhaps the sole exception. As such, there is little capacity to back up regional cooperation issues below the governmental level. Here again, this may now be less of a problem than it was in the early 1980's. In recent years, export promotion organizations and business interest groups have been established in several SADCC countries where none previously existed. Some examples are the Malawian Export Promotion Council, the Zambian Export Promotion Board, and the Zambian Industrial and Commercial Association (ZINCOM). In addition, a series of PTA and SADCC trade fairs have taken place and now seem to be firmly established as annual events. There appears to be a strong potential for SADCC to take a lead role in the promotion of trade fairs and other forms of regional market information networking. Such efforts tend to be universally popular, regardless of the range of ideologies of the participants.

A more fundamental barrier to increased regional cooperation is the fact that these new organizations may not yet be able to effectively articulate their interests in national economic policy debates. While advocates of protectionism have traditionally had strong voices in these debates, well-organized trade liberalization constituencies have not yet developed in most SADCC countries.

Zehender concludes that in light of the substantial potential for conflict, SADCC member states should continue to proceed cautiously, according priority to national policies and treating regional

cooperation as a complimentary activity in fields where benefits are clearly achievable for several states at once. In the area of trade liberalization, Zehender accepts the SADCC strategy of negotiating a series of bilateral agreements based on one standard agreement because it is probably most realistic in the medium-term. Such agreements may include provisions for barter to overcome the hard currency constraint endemic to the region.

2.3. Previous Efforts at Assessing the Potential for Increasing Intra-SADCC Trade

Little analytical work has been done on the potential of increasing intra-regional trade. This is partly because the issue has only recently gained prominence. As noted earlier, trade was not among the original SADCC portfolios assigned to countries in 1981. In addition, the lack of reliable data on intra-SADCC trade flows, production costs, demand and supply elasticities, and open-market prices render analysis very difficult.

The first study that attempted to assess intra-SADCC trade potential was commissioned by SADCC and implemented in 1986 by the Chr. Michelsen Institute of Norway. The authors constructed a SADCC trade database from national and United Nations sources. They estimated intra-regional trade as only 5% of total exports and 4.4% of total imports of the SADCC countries in the early 1980's. Total intra-SADCC exports for 1982 were valued at approximately US$ 300 million. Of this, 45 to 50% were manufactured and semi-manufactured goods, roughly 25% consisted of food products, 16 to 17% were fuels and energy products, and 10% was made up of other crude materials. This contrasts

with overall SADCC exports which are generally dominated by minerals (Zambia, Botswana, and Zimbabwe), petroleum (Angola), and agricultural and livestock products (Malawi, Tanzania, Zimbabwe, and Botswana).

Because of data limitations and the highly irregular year-to-year pattern of intra-regional trade, it was not possible to forecast future trade trends. Instead the authors attempted to match products imported by a SADCC country from outside the region (at the five-digit SITC level) with products exported by other SADCC countries. However this effort was hampered by the unavailability of BLS data and the fact that the five-digit SITC was not specific enough for identifying meaningful matches for many industrial commodities.

Based on their database, the authors then identify products with the potential to be included in bilateral trade agreements (Table 2-2). They include only those items that were actually traded during the 1980-1984 period. Rather cryptically, they also add that only trade flows that may be of a "somewhat long-term nature" are included. Nowhere do they indicate what criteria are used to make this judgment. These judgments are presumably based on whether the countries involved have consistently exported these commodities in the past.

The authors also present a table of additional products that do not appear in actual trade flows, but for which they believe there may be potential for future inclusion in intra-SADCC trade agreements (Table 2-3).

The usefulness of the Michelsen database is limited because trade flows are only reported in US dollar-denominated values. The problems associated with value data are well-documented (Heimstra, 1986,

Table 2-2: Commodities for Potential Bilateral Trade Agreements Among SADCC Countries

Product (and SITC)	Exporter	Importer(s)
Meat (011)	Botswana	Mozambique
	Zimbabwe	Angola
Fish - Fresh and Dried (031)	Malawi	Zimbabwe
	Tanzania	Zambia
Maize (044)	Zimbabwe	Botswana
Sugar (061)	Zimbabwe	Botswana
Wood (240)	Swaziland	Zambia
Pulp (251)	Swaziland	Zimbabwe
Cotton (263)	Zimbabwe	Malawi
Non-ferrous ores (283)	Botswana	Zimbabwe
Coal and coke (321)	Zimbabwe	Zambia
	Mozambique	Malawi
Electric energy (351)	Zambia	Zimbabwe
Tires and tubes (629)	Mozambique	Angola, Tanzania
Paper (641)	Zimbabwe	Malawi, Zambia
Textiles (650)	Botswana	Zimbabwe
	Malawi	Zimbabwe
	Mozambique	Tanzania
	Tanzania	Mozambique
	Zimbabwe	Botswana, Malawi, Zambia
Cement (661)	Mozambique	Swaziland
	Zambia	Malawi
	Zimbabwe	Botswana, Malawi
Iron and Steel (670)	Zimbabwe	Botswana, Malawi, Zambia
Zinc (686)	Zambia	Tanzania
Ag. implements (712)	Zimbabwe	Tanzania

Source: Michelsen (1986).

Table 2-3: Additional Commodities for Potential Bilateral Trade Agreements Among SADCC Countries

Potential Exporter	Products
Angola	Fish and fish meal, petrochemical products, wood, tropical timber
Botswana	Coal, electric energy, soda ash, textile chemicals
Lesotho	Mohair, pharmaceuticals
Malawi	Rice, processed agricultural products, fertilizers (ammonium nitrate, calcium nitrate)
Mozambique	Cotton, prawns, sawn wood, particle board, electric energy, salt, textiles, fertilizers (ammonia urea), refined petroleum products
Swaziland	Fertilizers, tractors
Tanzania	Cotton, prawns, salt, textiles, textile chemicals, tractors and farm implements, pulp and paper, batteries, transformers and switchgear, glass and glassware
Zambia	Copper and copper products, lead, textiles, farm implements, fertilizers, asbestos
Zimbabwe	Woolen blankets, textiles, farm implements, fertilizers, asbestos

Note: These are products that have not been traded intra-regionally in the past, but for which the Michelsen team believed intra-SADCC trade potential existed in the near, medium, or long-term future.

Source: Michelsen (1986).

Stackhouse, 1987). Exchange rate overvaluation, the presence of other price distortions such as export subsidies, and a number of other problems make working with value data difficult. Some of the Michelsen trade potential analysis is based on an assessment of whether 1984 trade values were lower than in any of the previous years reported. If so, the authors conclude that there is potential for expanding trade beyond 1984 levels. However, there is a need to determine whether such differences are attributable to quantity changes or per unit price changes. Quantity data should also have been reported, although it is recognized that this can be problematic for certain commodities such as machinery, chemicals, etc. which are non-homogeneous at the available SITC levels.

The authors freely admit that the analysis was far from rigorous and highly speculative in nature. Nevertheless, their list of commodities constitutes a useful reference point for identifying commodities for more detailed analysis of intra-SADCC trade potential.

The three most important studies specific to SADCC agricultural trade were attempts to formulate cereals supply stabilization strategies for the region. The first study was sponsored by the SADCC Food Security Unit and carried out by Technosynesis (1984). The study's authors proposed that cereals stocks be maintained at strategic points in the region. Stocks would be owned by a regional body with a mandate from SADCC to purchase and release stocks based on appropriate trigger mechanisms.

SADCC did not approve the Technosynesis proposal although it continued to perceive a need for some type of regional supply

stabilization program. This led to the commissioning of another study by SADCC. Vakakis (1987) proposed establishment of a regional cereals import financing facility (as opposed to stock ownership by a SADCC authority). This facility was to be initially financed by donors, but would eventually serve as an impetus to development of a more vigorous regional cereals market.

Hay and Rukuni (1988) discuss a number of issues that have led to problems in getting the Vakakis scheme operating. One of the most serious problems is that it is not clear whether the scheme is meant to stabilize market supply (in which case cereals purchased by governments via the facility are resold in markets) or consumption by vulnerable households (in which case there would presumably be an important role for direct food aid distribution).

Another problem is that the scheme is to be fully paid for by the international community in the first few years. Some critics have attacked it as no more than the institutionalization of food aid. It therefore is seen as interfering with the objective of increased SADCC food self-reliance.

A third problem is that some countries may benefit more than others from establishment of such a facility. Because Zimbabwe is the only country currently possessing a large volume of exportable stocks, it would benefit most on the supply side. Because Mozambique is experiencing the most critical foreign exchange shortfalls for purchasing food, it would benefit most from a donor-funded import-financing facility. A country like Botswana, while being an

historically food-deficit producer, would reap few benefits because of its large foreign exchange surpluses.

Two problems not cited by Hay and Rukuni relate to the extent to which the Vakakis proposal fails to address policy issues constraining increased trade, and the secondary benefits of the scheme arising from an increased flow of regional market information.

As will be seen in chapters V and VII, exchange rate and pricing policies are serious barriers to increasing SADCC agricultural trade. It is not clear how implementation of the Vakakis scheme can lead to a more fully-integrated regional cereals market if these constraints are not addressed. Moreover, for better or worse, a number of the major donor organizations have become accustomed to requiring policy conditionality on programs and projects that they finance. It is therefore doubtful that significant donor resources could be marshalled for such an expensive undertaking [2] which had no policy conditionality attached to it.

There is also an assumption made by the study's authors that the lack of market information is an important barrier to expanded regional cereals marketing and trade, and that operation of this facility could help to alleviate it. However, this proposition is open to question if official cereals trade is monopolized by parastatal grain boards in each of the nine SADCC countries and the officials in these parastatals regularly communicate with each other.

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[2] Originally estimated at US$ 206.1 million over three years (1987/88-89/90).

For theoretical foundations, the Vakakis team relies heavily on an International Food Policy Institute (IFPRI) study by Ulrich Koester (1986). Koester presents a more rigorous analysis based on a series of statistical measures which he argues are indicators of intra-SADCC agricultural trade potential. These calculations are based on the differences between regional and national production variability, comparative advantage concepts, and transportation costs.

Koester concludes that a regional cereals trading/stockpiling scheme would contribute to food security because overall regional cereals production variability is less than individual member country production variability. The establishment of a regional grain reserve, or the liberalization of regional cereals trade, would contribute to more stable regional consumption at lower cost than if each country operated its own food reserve strategy.

To test for comparative advantage and complimentary trade potential between SADCC nations, Koester constructs a series of indices related to production, imports, and exports of 49 agricultural commodities of the SADCC countries. These statistical measures attempt to determine whether there is a potential for trade expansion based on patterns of production, export, and import similarity between SADCC countries. If these patterns vary greatly between countries or some SADCC countries are exporting certain commodities to the rest of the world while other SADCC countries are simultaneously importing the same

goods, it is hypothesized that there is potential for expanding intra-SADCC trade [3].

Stackhouse (1987) identifies a number of shortcomings of Koester's statistical analysis, treating each index in turn [4]. She concludes that the indices all suffer from a number of common weaknesses. First, because costs of production are not considered, none of these indices are valid determinants of comparative advantage in any theoretical sense. Second, of the 49 commodities included in index calculations, many are meant solely for export to European and other developed country markets. SADCC consumer demand for most of these commodities will remain virtually non-existent in the foreseeable future. If some of these indices are recalculated for only staple food commodities, the results are less favorable. Third, much of the analysis is too aggregate in nature to be useful for assessing trade potential in individual commodities on a country-by-country basis. Fourth, the meaning of some of the indices is unclear. For example, a "comparative production performance coefficient" is presented which indicates that the share of a commodity in a given country's total agricultural production is greater than that commodity's share in total world production. According to Stackhouse, all this shows is "that in both Zimbabwe and Zambia the share of millet and sorghum is greater than the share produced in the world as a whole. On balance, this is a fairly meaningless finding" [5]. Finally, the indices abstract from the

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[3] For a detailed description of index formulas, explanations, and results, see Chapter VI of Koester (1986).

[4] See Chapter II of Stackhouse (1987).

[5] Ibid., page 34.

institutions most important for determining trade patterns and performance. In fairness to Koester, the analysis is probably meant to do just that in order to first address the question of what trade patterns might be if institutional barriers were eliminated.

One point needs to be made that somewhat contradicts Stackhouse's last argument. If the various indices purport to measure comparative advantage, they do not abstract nearly enough from institutions. Current agricultural production and trade patterns reflect a series of national policy decisions related to prices, exchange rates, and investment which in many cases have little to do with efficiency considerations. For example, in most SADCC countries, producer prices for major staple food crops and some exportable commodities are determined on a cost of production basis (Vakakis, 1987). Consumer subsidies are also common. This is because policy-makers in these countries perceive food self-sufficiency, price stability, affordable food for urban wage earners, and maintenance of farm sector income and employment to be at least as important as promotion of allocative efficiency. Although international organizations such as the IMF and the World Bank strongly encourage movement to border pricing formulas for producer price determination and reduction of consumer food subsidies, introduction of these measures has been resisted by most SADCC governments. Official maize surpluses in Zimbabwe and Malawi and deficits in Zambia and Tanzania have been partially induced by agricultural pricing and investment policies. The presence of such surpluses and deficits does not automatically imply a comparative advantage or disadvantage in maize production.

Koester also concludes that there is considerable potential for increasing intra-SADCC agricultural trade due to the high costs associated with transporting bulky low value food grains from developed countries to the SADCC countries -- six of which are landlocked. This analysis is based on a comparison of export and import parity prices and will be discussed in greater detail in Chapter V.

The strategy of using intra-regional trade as a vehicle to promote enhanced food security has its detractors. Lipton (1986) is pessimistic about the potential of intra-SADCC trade expansion to contribute to regional food security in any significant way. Citing the Michelsen study's statistics, he points out that if intra-SADCC trade is only 5% of total SADCC trade, and food and livestock trade is only one-quarter of intra-SADCC trade, then SADCC food security intra-trade is only about 1% of total SADCC trade with the world. Therefore, donors who finance studies of regional grain reserves and other researchers may have devoted too much energy to this issue. In his rather colorful words, "Trying to illuminate regional food security issues by analyzing food intra-trade is like trying to infer an elephant's size, position, and prospects by observing a small 'benign mark' on the tip of its tail." Moreover, such trade is residual in nature, resulting from variations in production and consumption in individual SADCC nations. He therefore concludes that increasing intra-SADCC agricultural trade can not be a leading strategy for enhancing regional food security, but can only follow strategies addressing production and consumption issues at the national level.

This argument has a number of weaknesses. First, while intra-regional agricultural trade constitutes only a small portion of overall SADCC trade, it may be more appropriate to examine proportions for specific commodities of strategic importance to food security. For the 1981-85 period, intra-SADCC trade in maize ranged from 11% to over 40% of total SADCC maize trade (see Table 4-6). Second, the fact that intra-regional agricultural trade has been modest in the past does not automatically preclude its expansion at some future date once key constraints are eased. Yet Lipton's caution that grain trade is essentially residual in the SADCC context is valid. This underscores the point made earlier that one can not separate an analysis of regional trade from an understanding of national agricultural markets.

2.4. Food Security and Agricultural Trade and Marketing Issues

The World Bank (1986) has defined food security as "the ability of a country or region to assure, on a long-term basis, that its food system provides the total population access to a timely, reliable and nutritionally adequate supply of food." Food insecurity may be either transitory or chronic. Transitory food insecurity results from short-term phenomena such as food production shortfalls or reductions in income which reduce the ability of vulnerable groups to acquire food in the marketplace. Chronic food insecurity is largely a product of entrenched poverty. Those suffering from chronic food insecurity have neither the resources (land, labor, and capital) to produce enough food nor sufficient income to purchase enough food to adequately maintain nutritional requirements. Food security research has been concerned

with food supply and access issues at three levels: international; national and sub-national (regional); and household.

At the international level, researchers have focussed on the design of mechanisms to deal with food insecurity emanating from two sources: temporary reductions in national food production; and temporary increases in international foodgrain prices. Valdes and Siamwalla (1980) define food security somewhat differently than the World Bank as "the ability of food-deficit countries, or regions or households within these countries, to meet target levels of consumption on a yearly basis." They limit their concept of food security to the short-term, considering chronic malnutrition and poverty to be beyond the scope of food security analysis. Drawing on previous work by Konandreas, Huddleston, and Ramangkura (1978), they choose a trend level of consumption as the operational target level for their analysis, thus emphasizing production and price variability as key components of food insecurity. After an examination of national production and world price data, they conclude that: the major portion of food import bill fluctuations is explained by production variability as opposed to international price variability; and foreign exchange availability is a critical factor constraining the ability of food-deficit LDC's to import enough food to assure adequate consumption levels on a year-to-year basis. A compensatory financing facility for food imports is recommended under which subscribers could draw on funds if "real export earnings" fell below acceptable levels [6].

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[6] Real export earnings are defined as deviations from the trend of foreign exchange earnings minus the excess expenditure over the trend in food imports for a given year. The IMF established a compensatory

At the national and regional level, analysts have keyed on assessing strategies for alleviating domestic marketing, transportation, and communications constraints (Eicher and Staatz, 1984). Researchers recognize that adequate aggregate supplies at the national level are not sufficient for assuring access and availability at the regional and local levels. Drawing on experience in Eastern and Southern Africa, Lele and Candler (1981) criticize the international food security literature as "unrealistic and non-operational" because it is based on a number of incorrect assumptions. First, in many African countries, data on consumption, production, marketings, and stocks are of such poor quality that trends and deviations from trend can not be accurately ascertained. Use of decision rules for triggering the release of grain reserves or compensatory funds based on such data is of dubious operational validity.

Second, most food transactions do not pass through official "monopoly" parastatal marketing channels, but rather through parallel markets. Therefore, the effectiveness of official pricing and marketing policies may be very limited.

Third, an understanding of the dynamic interactions of public and private participants in marketing systems is important to national policy-makers and has been virtually ignored in the international food security literature.

Finally, due to poor infrastructure and a political bias towards satisfying urban demands first, it is highly unlikely that resources

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financing facility for cereal imports in 1981.

emanating from the various international schemes will reach rural areas.

Alternative strategies for assisting rural populations to achieve food security are therefore required. Such strategies include: increased research and extension related to drought-resistant crop production; design of improved input delivery and produce marketing systems; improved communications between regions; establishment of effective farm household storage programs; and improved data collection on food production and distribution to facilitate more effective food security policy analysis.

Household food security research is concerned with the identification of micro-level coping strategies of at-risk populations. At the farm-level, such strategies may include: choosing food and cash crop mixes that assure not only adequate production, but also adequate income for the purchase of food; seeking off-farm employment; and planting drought-resistant insurance crops such as cassava, sorghum, millet, and beans. Effects of macro-policies (prices, credit, taxation, infrastructural investment, etc.) on the micro farm-level environment are also analyzed, and alternative policy scenarios that more effectively facilitate the achievement of food security may be outlined.

2.5. Implications

The preceding discussion identifies a number of issues that must be taken into account in any analysis of SADCC agricultural trade issues.

The scope for expanding intra-regional trade in agricultural commodities is still unclear. Patterns of comparative advantage are difficult to discern due to the widespread presence of government interventions which alter input and output prices from their economic opportunity costs and lack of reliable data on production costs and consumption parameters. From a practical standpoint, even if optimal trade patterns could be identified, it is doubtful that decision-makers in SADCC governments would pay much attention because improving allocative efficiency is not necessarily perceived as a high priority. The institutions that affect trade (price and non-price factors) also require examination.

It should not be taken for granted that expanding trade is automatically beneficial. Despite serious disagreements between neo-classical and dependency school theorists on the effects of economic integration, they would all agree on this point. The "Theory of the Second Best" (Lipsey and Lancaster, 1956) and the center-periphery framework (Vaitsos, 1978) both recognize that if distortions are only partially removed, this does not unambiguously improve welfare. Therefore, adopting an uncritical position that trade should be increased "for trade's sake" is conceptually invalid.

The extent to which SADCC decision-makers view intra-regional trade expansion as a priority is not clear. On one hand, summits are regularly held where the virtues of intra-regional trade are extolled by high officials. On the other hand, trade was not among the original set of sectoral portfolios assigned to member countries in 1981. More significantly, despite official pronouncements in favor of increased

intra-regional trade, few national policies have evolved in a way conducive to its promotion. However, SADCC has been successful with a number of regional initiatives and the desire of heads-of-state to reduce dependency on South Africa and the vagaries of international markets appears sincere. Yet pursuit of this objective without introducing concrete policy measures to facilitate intra-regional trade makes little sense.

Even if intra-regional trade can be expanded in a way that improves welfare at the national level, this does not necessarily enhance the food security position of vulnerable groups if they are unable to gain access to food imports, either because they lack political power or are geographically isolated. Moreover, food security-related official intra-regional trade constitutes a relatively small portion of total SADCC official trade, and is most often viewed as a residual to domestic agricultural policy considerations. These facts call into question the importance of intra-SADCC trade expansion relative to national-level food security strategies. Intra-regional trade must be viewed within the context of overall trade and the agricultural production and marketing policies of individual SADCC nations. In addition, analysis of the potential effects of official marketing and trade policy measures needs to take into account the existence of parallel markets in a number of SADCC countries (and in border countries such as Zaire).

CHAPTER III

FRAMEWORK OF ANALYSIS AND RESEARCH METHODS

3.1. Introduction

Constraints on SADCC agricultural trade are related to both price and non-price factors. This chapter begins by discussing techniques for analyzing agricultural pricing issues. A transactions cost framework is then outlined. Such an approach goes beyond neo-classical price analysis to incorporate non-price elements in the assessment of constraints on and potentials for SADCC agricultural trade expansion. The section on transactions costs begins with a discussion of market coordination issues. Although the market coordination perspective was originally developed for analyzing domestic marketing issues in the United States (Mighell and Jones, 1963), here it has been modified to examine import and export market coordination. The various categories of transactions costs that arise from market imperfections are then presented as well as a discussion of endogenous and exogenous transactions costs variables.

3.2. Price Analysis for Assessing SADCC Agricultural Trade Potential

From a pricing policy perspective, the most straightforward method for identifying the potential for increasing intra-SADCC agricultural trade is through comparison of import and export parity prices. The import/export parity price represents the opportunity cost of a given

country's tradable commodities (Scandizzo and Bruce, 1980). The import parity price is the CIF import price at a country's border, converted using an appropriate exchange rate, and adjusted for transport and handling to a relevant domestic market (or project boundary). If a commodity can be locally produced less expensively than it can be imported, then import substitution is efficient. The export parity price is the FOB export price adjusted from a given export market to the appropriate domestic market (or project boundary). If the export parity price is higher than the cost of producing a good and transporting it from the relevant domestic market, then that good is competitive in the export market under consideration. Government measures that influence costs such as taxes, subsidies, and overvalued exchange rates are included in the calculation of financial parity prices. As such, financial parity prices represent actual prices faced by market participants. In contrast, economic parity prices do not incorporate these costs and therefore represent the cost structure that would prevail if such government measures were not in effect. When economic and financial parity prices diverge, market participants are subject to incentives (disincentives) that lead them to choose different sets of resource allocation decisions.

The economic basis for trade can be assessed by comparing import parity prices with actual market prices. For example, if the free-on-rail (FOR) export price of Zimbabwean maize plus transportation and handling costs to Lusaka (the import parity price) is lower than the actual Lusaka market price, the hypothesis is that there is potential for trade.

When commodities are traded internationally, the determination of degrees of currency overvaluation may be critical for assessing the competitiveness of alternative sources of goods. If the currency of one potential exporting country is overvalued relative to the currency of another potential exporting country, this erodes the competitive position of the first country's exports. Similarly, if an exporting country's currency is overvalued relative to the currency of an importing country's currency, the exporting country's goods become less competitive against goods produced in the importing country.

In Chapters V and VII, relative degrees of currency overvaluation are determined by calculating and comparing real exchange rate indices and comparing parallel market exchange rate premiums. These measures, and their usefulness and limitations, are discussed more fully in those chapters.

Parity pricing analysis is static because it only deals with the short-run effects of pricing and exchange rate policies on incentives. The next section outlines a more dynamic approach which is employed to supplement the static analysis.

3.3. A Transactions Cost and Market Coordination Approach for Assessing SADCC Agricultural Trade Potential

A. Export and Import Market Coordination

In most cases, applied trade research has focussed heavily on existing relative resource endowments, and pricing and exchange rate issues. As such, analysts have devoted most of their energy to assessing comparative advantage for the array of commodities already produced by a given country or set of countries. The focus is largely

on the domestic and foreign exchange costs of producing a final good or set of goods. Since the focus has been on valuing goods already produced, there has been little analysis of the more fundamental process whereby goods are produced, transformed, and distributed locally and/or traded internationally.

To better understand existing trade patterns in Southern Africa and better assess possibilities for expanding agricultural marketing and trade, it is necessary to understand key factors affecting the process of producing and marketing goods. This requires a framework of analysis that includes the entire vertical production, processing, and distribution value-adding system, and the constraints and opportunities imposed by the array of organizations, resources, laws, and institutions presumed to have an influence on market participant decision-making.

To do this, a market coordination framework of analysis is proposed. Such a framework not only encompasses the horizontal dimensions of an industry (i.e. competitiveness among firms producing similar or potentially substitutable goods), but also includes the relationships between market participants arising from the vertical value-adding process. Mighell and Jones (1963) define vertical coordination as "all the ways of harmonizing the vertical stages of production and marketing." Marion (1986) considers a "stage" to be "any value-adding process, whether a change in location, time, or form of the commodity. It is any step that takes the commodity closer to final consumption."

Figures 3-1 and 3-2 show major elements relevant to import and export market coordination for agricultural commodities and inputs. Market coordinating functions (shown in the center of each figure) reside at the interface of supply and demand. Their role is to send signals that facilitate decision-making among market participants about production, marketing, and consumption responses. When markets are well coordinated, responses will be such that participants will be able to meet the objectives they seek from the economic system (profit maximization, risk minimization, satisficing, etc.).

Market coordination is brought about through coordination mechanisms which are defined as "the set of institutions and arrangements that are used to accomplish the harmonization of adjacent stages of commodity systems" (Marion, 1986) [1]. Coordination mechanisms constitute the structure of incentives facing economic agents. Adjacent vertical value-adding stages may either be contained within firms or involve transactions between a firm and agents outside the firm (other firms or government).

Although important in most cases, market prices and costs are only one market coordinating function that provide incentives to market participants. Much economic analysis assumes perfect information, perfect mobility of resources, and reasonably stable supply and demand. Under such ideal circumstances, transactions costs may be ignored, and

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[1] A "coordinating function" is a general category (such as prices and costs, or market information) while a "coordinating mechanism" is a specific instrument (such as taxes, subsidies, or publication of market prices) used by governments and market participants for achieving coordination.

Figure 3-1: Vertical Value-Adding Stages, Coordinating Functions, and Alternative Marketing Channels for Agricultural Commodity and Input Export Markets

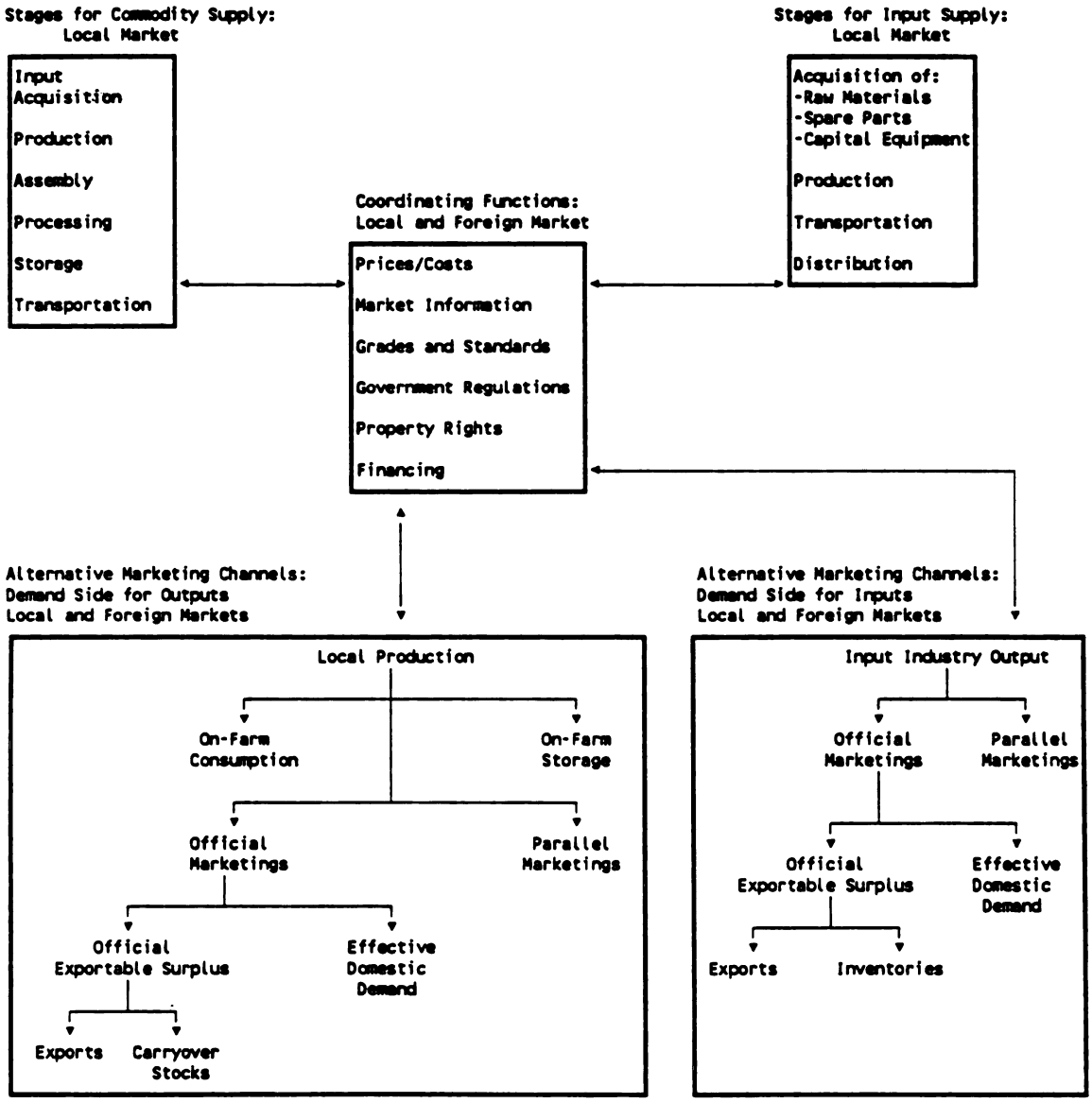
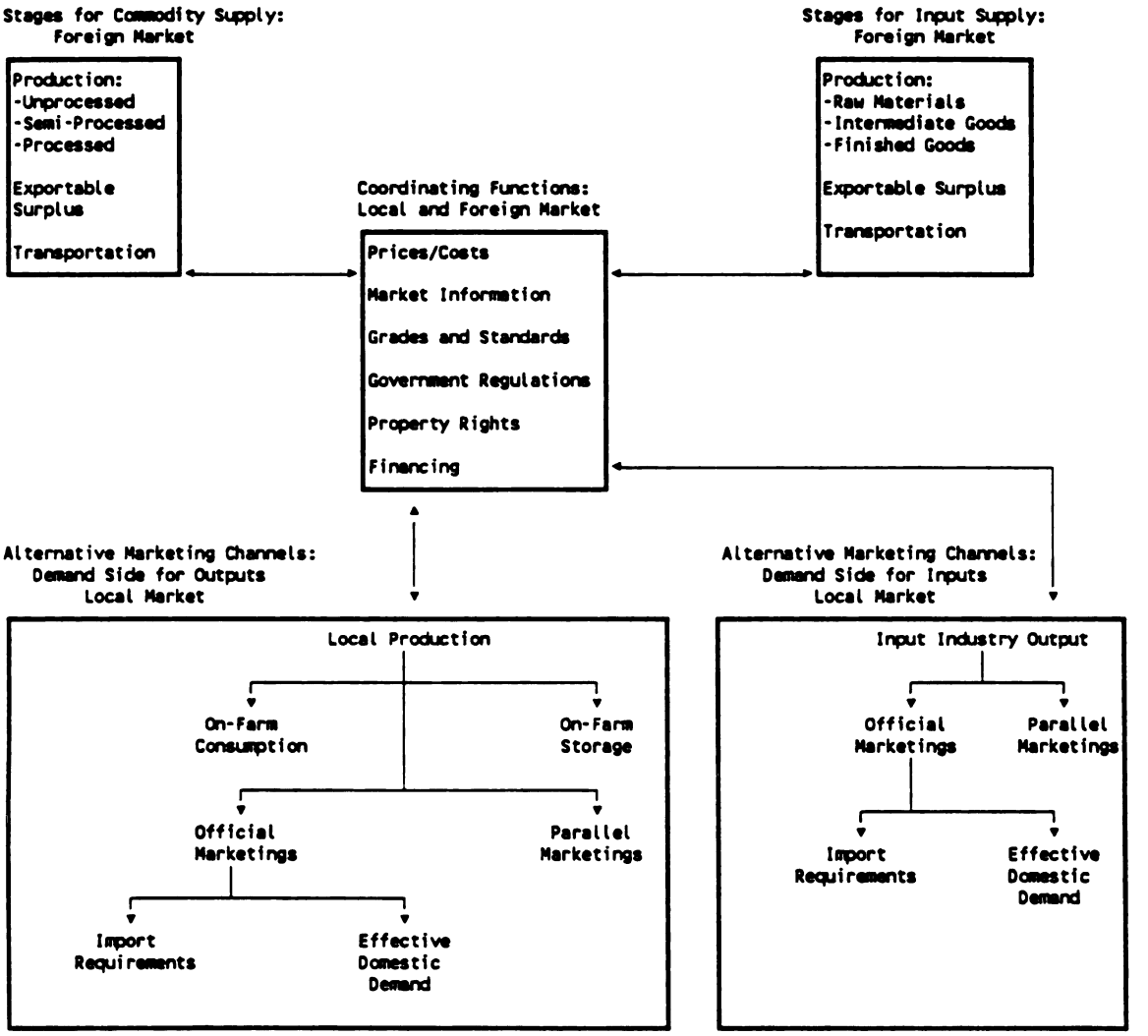


Figure 3-2: Vertical Value-Adding Stages, Coordinating Functions, and Alternative Marketing Channels for Agricultural Commodity and Input Import Markets



price signals alone may be sufficient to determine how resource allocation decisions are made.

However, the Southern African trading environment is more readily characterized by a paucity of market information (or vast differences in information availability from country to country), tight restrictions on capital movements, and large inter-annual fluctuations in export availability and import demand for staple food commodities like white maize. These imperfections tend to raise transactions costs. The remaining market coordination functions shown in Figures 3-1 and 3-2 are therefore very important in a Southern African setting.

How effectively the broad set of market coordination functions are performed, and how effectively they help achieve coordination between commodity suppliers and demanders, largely determine the level of transactions costs present in the trading environment. Inadequate market coordinating mechanisms may lead to high transactions costs which in turn reduce or even eliminate opportunities for engaging in trade. Alternative sets of market coordinating mechanisms may lower transactions costs in the short-run, and even lower physical production and marketing costs in the long-run, resulting in trade expansion.

One example of an alternative coordinating mechanism with the potential to lower both transactions and physical costs would be a government policy that eased access to foreign exchange for importers. If firms were allowed to import high priority intermediate goods or variable cost items when they wished and in the quantities they deemed appropriate with minimal bureaucratic delay, this could have several short and long-term effects. First, the transactions costs associated

purely with acquiring foreign exchange allocations and import licenses would quickly fall. This would lower administrative overheads and allow firm executives to divert more time to other important tasks such as interacting with clients. Second, firms operating at low capacity primarily due to import bottlenecks would be able to expand utilization of existing capacity in the short and medium-run. This would lower per unit production costs as fixed costs would be spread over a larger volume of output. Third, such a policy would reduce uncertainty about import availability and could result in increased investment and expansion of capacity in the long-run.

Figures 3-1 and 3-2 both include a supply side, which contains vertical production and marketing stages, and a demand side which maps out alternative output marketing channels. For locally-produced commodity supply, vertical value-adding stages include acquisition of inputs (either domestically-produced or imported), production, assembly, processing, storage, and transportation. For exportable commodities, processing may be either performed locally or in foreign countries. Some or all of the coordinating functions are critical to the harmonization of the adjacent physical links in the marketing chain.

Locally-produced (or assembled) inputs, raw materials, capital equipment, and spare parts may be either acquired locally or imported. As Chapters VI and VII indicate, the array of non-price market coordinating mechanisms governing import procedures in Southern Africa are very complex, and provide strong incentives (disincentives) to market participants.

For exportable goods, it is important to be aware of demand conditions in both foreign and local markets. Knowledge of local demand is important if the exportable commodity is also consumed locally. If the good is of strategic importance to the national economy, government may only permit export of residual quantities. In SADCC countries, this is often the case for staple foods such as maize and major agricultural inputs such as fertilizer and seed. If the good is essentially an export crop (tobacco, coffee, etc.), knowledge of local demand is less important.

Obviously, importers need to have a good working knowledge of the local market. Familiarity with domestic market conditions in major import source countries is also important because such factors affect the prices and timing of import availability.

As also shown in Figures 3-1 and 3-2, for potentially tradable commodities, interactions between official and parallel markets may also be critical in determining levels of exportable surpluses and import requirements. For example, Tanzania and Zambia have sometimes produced enough maize to achieve self-sufficiency, but were forced to import because large quantities of domestically-produced maize flowed illegally into neighboring countries.

B. Transactions Costs and International Markets

Williamson (1985) has characterized transactions costs as "the economic equivalent of friction in physical systems" and Arrow (1969) has defined them as "the costs of running the economic system." As such, they are distinctly different from and additional to production,

processing, and physical marketing costs. As Williamson and Arrow imply, transactions costs pervade the economic system. Excessive transactions costs impede the smooth functioning of markets and in some cases can completely block their formation.

In an analysis of Kenyan horticultural export markets, Jaffee (1986) has developed a useful typology of transactions costs and has also identified variables that have the potential to raise or lower the magnitude of transactions costs. Table 3-1 (adapted from Jaffee) presents six categories of transactions costs, and the variables that can have a substantial impact on the magnitude of each category of transactions costs. The direction in which those variables are expected to influence transactions costs levels are also noted in parentheses (positive signs for raising costs and negative signs for lowering costs).

According to Jaffee, market complexity refers to the degree of market segmentation with proxy indicators including income distribution disparities, the number of distinct marketing channels, and the degree of price transparency. Product complexity involves the degree of product standardization. Appropriate proxies are the number of grades, marketable varieties, and marketable forms or product lines.

Based on this typology, one can hypothesize that transactions costs generally increase when distance is greater, when products and markets become more complex, and when the concentration of buyers and sellers increases. Transactions costs are reduced when property rights are clarified, personal ties (trust) are stronger, and when the technology for measuring product quality (and quantities) improves.

Table 3-1: Categories of Transactions Costs and Related Independent Variables

Transaction Cost Categories	Independent Variables (and Signs)
Costs of a Transaction =	F (Information Imperfections(+))
Information Imperfections =	F (Distance(+), Time(+), Product/Market Complexity(+))
Search Costs =	F (Distance(+), Communications Modes(-), Number of Buyers and Sellers(+), Physical Concentration of Buyers and Sellers(-))
Screening Costs =	F (Market Complexity(+), Product Complexity(+))
Bargaining Costs =	F (Distance(+), Number of Buyers and Sellers(-), Size Concentration of Buyers and Sellers(+), Personal Ties(-), Clarity of Property Rights(-),)
Monitoring Costs =	F (Distance(+), Product Complexity(+), Technology of Measurement(-), Clarity of Property Rights(-))
Enforcement Costs =	F (Personal Ties(-), Clarity of Property Rights(-), Number of Buyers and Sellers(-), Size Concentration of Buyers and Sellers(+))
Evaluation Costs =	F (Distance(+), Market Complexity(+), Number of Buyers and Sellers(+))

Source: Adapted from Jaffee (1986).

Transactions costs for international trade will usually be much higher than for domestic trade.

Search and screening costs associated with international trade may be especially high due to the distances involved, lack of familiarity with foreign business practices, and limited access to information about potential trading partners and market conditions in foreign markets.

For international transactions, bargaining costs are raised if foreign exchange movements are restricted in one or both of the countries involved. This is because the clarity of rights governing capital flows is obscured. In many cases, highly restrictive letter of credit arrangements denominated in convertible currencies are required. If the buyer (or his government) is perceived by the supplier as a serious credit risk due to the possibility of non-payment or late payment, the supplier will usually demand and receive more stringent payment guarantees. This implies extensive interactions with commercial banks, central banks, and perhaps with international finance houses. Exchange rate risk may also enter the calculus of one or both parties to an international transaction.

Clarity of property rights includes contractual arrangements and official policy in the areas of macro-economics, agricultural marketing, and trade. Because governments play a central role in demarcating the property rights of parties to a transaction, discussion of this area figures prominently in this dissertation. For example, it is hypothesized that foreign exchange rationing by government reduces clarity of property rights with respect to when, and in what

quantities, firms have access to foreign exchange. Much of Chapter VII focusses on the nature of uncertainty associated with alternative foreign exchange allocation systems.

Monitoring costs may also be high as distance precludes face-to-face interactions between trading partners and physical examination of the commodities involved. If goods arrive late or damaged at the final destination, it may be difficult to apportion blame for poor performance.

Enforcement costs may be high due to a lack of legal remedies which can be applied in a timely and effective manner. Obviously, litigation costs in foreign courts will be much higher than in domestic courts due to distance and ignorance of foreign legal and administrative procedures. If there is even a possibility of one partner having to resort to litigation, this may prevent trade.

Finally, evaluation costs may be excessive because of some of the complications identified in the above paragraphs. Limited access to information about alternative trading partners and marketing strategies, and limited ability to assess performance of intermediaries (shippers, brokers, manufacturers, etc.) make it difficult to determine how future performance can be improved.

From a policy standpoint, it is useful to distinguish those variables identified in Table 3-1 that SADCC governments have the ability to affect (endogenous variables) and those variables that SADCC governments can not realistically be expected to influence through their interventions. This is done in Table 3-2.

Table 3-2: Transactions Costs Framework: Endogenous and Exogenous Variables

Endogenous	Exogenous
Time	Distance
Communications Modes	Product Complexity
Clarity of Property Rights	Technology of Measurement
Personal Ties	
Market Complexity	
No. of Buyers + Sellers	
Size Concentration of Buyers + Sellers	
Physical Concentration of Buyers + Sellers	

Of all the variables, only distance, product complexity and technology of measurement are viewed as exogenous. Although governments may invest in research to develop better technologies for measuring commodity quality and quantities, they are considered to be exogenous for purposes of this analysis. Likewise, product complexity may be altered by changes in government sanctioned grades and standards and investment in commodity marketing research and development. However once again, product standardization issues are largely considered beyond the scope of this research.

The ability of individual SADCC governments to alter structural characteristics of markets is limited to some extent. While governments have fairly wide latitude to participate in structuring their own markets, it is difficult to do so in the markets of other countries. Governments can (and often do) attempt to limit the number of buyers and sellers in domestic markets by designating a parastatal

marketing board as the sole domestic purchasing agent, importer, and/or exporter of a given set of commodities. Governments also frequently issue licenses to a limited number of market participants granting them the right to perform these and other marketing tasks.

In foreign markets, SADCC governments may sign international agreements that have the effect of changing the size and physical concentration and number of buyers and sellers. Examples are EC beef quotas held by Botswana and Zimbabwe and intra-regional bilateral agreements such as the sugar agreement between Malawi and Botswana. These assure multi-year outlets for a given annual quantity of exports. Commodity import programs sponsored by international donor agencies are also examples if the program designates that all imports must be sourced from the donor country. However in many instances, foreign market structure must be considered exogenous as Southern African governments have little scope for changing them.

While SADCC governments can not greatly influence technological change in communications modes, they do have the capacity to invest in more and better communications and travel services. Investment in improved satellite communications, telephone, telex, postal, and airline services all serve to facilitate contact between trading partners. In addition, governments may raise or lower restrictions on foreign travel by nationals engaged in trading. Increasing/decreasing communications investments and travel restrictions relates directly to the strength of personal ties which is why this variable is also viewed as endogenous.

Because societies grant property rights to groups and individuals largely through government, clarifying those rights is a key area where government policies and practices influence trade potential. In the context of Southern African agricultural marketing and trade, major areas where governments affect the clarity/obscurity of property rights are in the realms of import and export controls, contracting and methods of payment, and formulating policy as to who may produce, process, and market goods.

Performance essentially concerns "who gets what", given the range of alternative property rights structures that may be employed for transferring rights. As such, distribution of rights, privileges, and opportunities receives prominence in assessing alternative outcomes, along with more traditional performance goals such as efficiency and growth.

To examine transactions costs issues more closely, a survey of private and parastatal firms involved in agricultural trade was carried out in five of the nine SADCC countries [2]. Responses were analyzed to assess trader perceptions about which coordinating mechanisms need to be altered to improve marketing and trade performance. Additional work using various statistical techniques and comparative analysis across countries was performed to identify institutional innovations that would serve to lower transactions costs for market participants. Chapter VI presents survey procedures and results in detail. Information derived from the survey was also a major input in the analysis presented in Chapter VII.

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[2] Zimbabwe, Zambia, Malawi, Botswana, and Tanzania.

CHAPTER IV

CEREALS TRADE PATTERNS IN THE SADCC REGION

4.1. Introduction [1]

The primary objectives of this chapter are to describe current and historical patterns of staple grain trade: within the SADCC region; between SADCC countries and South Africa; and between SADCC countries and the rest of the world. To address these questions, a database was constructed on trade of three staple grains (maize, wheat, and rice) by destination and source for the years 1970-1985. Section 4.2 summarizes the evolution of cereals trade patterns, including import bill fluctuations and the role of food aid. The following section treats each commodity in greater detail. Section 4.4 examines the importance of trilateral food aid transactions in intra-SADCC agricultural trade. The final section briefly discusses implications of the evolution of SADCC agricultural trade patterns for regional food security. Readers interested in the technical details of the database may turn to Appendix A which provides an overview of data sources and methods employed in constructing trade matrices as well as strengths and limitations of the database.

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[1] This chapter is largely based on information contained in Kingsbury, Stackhouse, and Rusike (1988).

4.2. An Overview of Cereals Trade Patterns

A number of generalizations can be made for the three commodities surveyed. Overall regional imports of each commodity have grown substantially from an annual average of 800,000 MT in 1970-75 to an average of nearly 1.9 million MT during the 1981-84 period (Table 4-1). Most of this growth has taken place during the 1980's as drought, warfare, high population and urbanization growth rates, and (in some cases) agricultural and macro-economic policies have combined to make it increasingly difficult for most SADCC nations to feed themselves.

Table 4-1 indicates that in real terms, total cereals imports have nearly doubled in value from roughly US$ 220 million in the early 1970's to over US$ 426 million in the early 1980's [2].

Bilateral and multilateral donor organizations have been willing to fill part of this gap in import needs with food aid. The steady growth of food aid as a portion of total imports for all three commodities attests to this. From 1981-84, nearly half of all cereal imports were in the form of food aid (in value terms). This compares to only 13% during the 1970-75 period. However, such aid is not always reliable or adequate -- especially during periods of high world prices. In such periods, the SADCC commercial import bill has ballooned.

Table 4-2 presents FAO projections of 1988/89 commercial imports and food aid pledges for each SADCC country. While there is no significant overall change in import levels from the 1981-84 period

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[2] Throughout this chapter, nominal values are converted to real values using the US GDP deflator (unless otherwise indicated). 1982 is the base year, meaning that all real values are stated in constant 1982 dollars.

Table 4-1: Average Annual Quantities and Values of Cereals Imports by the SADCC Countries -- Selected Years

	1970-75	1976-80	1981-84
MAIZE			
Quantity:			
Commercial Imports	227.3	297.5	557.4
Food Aid Imports	47.9	166.7	334.3
Total Imports	275.3	464.3	891.7
Import Bill Value:			
Commercial Imports	47.5	57.3	90.0
Food Aid Imports	11.0	32.5	54.6
Total Imports	58.4	89.8	144.6
Food Aid as Percent of Total Imports (Qty.)	17.4%	35.9%	37.5%
WHEAT			
Quantity:			
Commercial Imports	443.5	351.8	378.0
Food Aid Imports	40.2	174.6	278.1
Total Imports	483.6	526.4	656.1
Import Bill Value:			
Commercial Imports	119.3	85.4	72.6
Food Aid Imports	13.3	41.4	53.1
Total Imports	132.6	126.8	125.7
Food Aid as Percent of Total Imports (Qty.)	8.3%	33.2%	42.4%
RICE			
Quantity:			
Commercial Imports	39.9	150.6	228.4
Food Aid Imports	4.0	45.2	108.3
Total Imports	43.9	195.8	336.7
Import Bill Value:			
Commercial Imports	26.0	66.0	50.9
Food Aid Imports	3.9	27.7	105.4
Total Imports	29.9	93.6	156.3
Food Aid as Percent of Total Imports (Qty.)	9.0%	23.1%	32.2%
TOTAL CEREALS			
Quantity:			
Commercial Imports	710.8	799.9	1163.8
Food Aid Imports	92.1	386.6	720.7
Total Imports	802.8	1186.5	1884.6
Food Aid as Percent of Total Imports (Qty.)	11.5%	32.6%	38.2%
Import Bill Value:			
Commercial Imports	192.7	208.6	213.5
Food Aid Imports	28.2	101.6	213.0
Total Imports	220.9	310.2	426.6
Food Aid as Percent of Total Imports (Value)	12.7%	32.8%	49.9%

Notes: Quantities are in thousand metric tons;
Import bill values are in millions of constant 1982 US dollars.

Sources: UZ/MSU SADCC Cereals Trade Database; FAO Trade Tapes;
FAO, "Food Aid In Figures," (various years).

Table 4-2: Projected Commercial Imports and Food Aid Pledges for SADCC Countries, 1988/89
(Thousand Metric Tons)

	Coarse Grains		— Wheat —		— Rice —		— Total Cereals —		
	Comm.	Pledge	Comm.	Pledge	Comm.	Pledge	Comm.	Pledge	Imports
Angola	52	87	89	64	64	26	205	177	382
Botswana	106	17	29	0	2	0	137	17	154
Lesotho	72	11	5	17	2	0	79	28	107
Malawi	0	235	25	0	0	4	25	239	264
Mozambique	0	366	0	146	0	60	0	572	572
Swaziland	38	6	9	14	0	0	47	20	67
Tanzania	0	0	20	40	10	23	30	63	93
Zambia	0	75	11	44	1	0	12	119	131
Zimbabwe	0	0	69	0	20	0	89	0	89
Total	268	797	257	325	99	113	624	1235	1859

Source: FAO, "Food Supply Situation and Crop Prospects in Sub-Saharan Africa," February 1989.

(1,885,000 MT in 1981-84 versus 1,859,000 MT in 1988/89), there is evidence of a further erosion of SADCC capacity to import on a commercial basis. Whereas anticipated commercial import volumes are only half of 1981-84 levels, food aid shipments are projected to rise 70% above 1981-84 yearly averages in 1988/89. This shift is largely attributable to continued deterioration of agricultural production and foreign exchange earning capacity in Mozambique, and secondarily to spillover effects into Malawi arising from the Mozambiquean refugee crisis. While the FAO anticipates no Mozambiquean commercial imports

and only 25,000 MT for Malawi, food aid donors will provide at least 811,000 MT of cereals to these two countries [3].

Production has not kept up with food needs in a number of the SADCC countries (Table 4-3). Cereals self-sufficiency and self-reliance ratios are calculated for all of the SADCC countries in four time periods [4]. The self-sufficiency ratio measures the extent to which a country met its food needs through domestic production during the period covered. The self-reliance ratio measures the extent to which a country met its food needs through a combination of domestic production and commercial imports. For all of SADCC, food self-sufficiency has fallen since the early 1970's from 91% in 1970-72 to a projected 82.5% for 1988/89, indicating that production has not kept pace with demand. However for somewhat better years (such as 1985/86), self-sufficiency approaches but does not quite attain early 1970's levels. Food self-reliance has also fallen substantially from nearly 100% in 1970-72 to only 86.4% for 1988/89.

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[3] Even with the large volume of food aid pledges, the FAO estimates additional Mozambiquean food aid requirements of more than 243,000 MT for 1988/89.

[4] Self-Sufficiency Ratio = $1 - \frac{TOTIM}{TOTPROD + TOTIM + LPSTOCK}$

Self-Reliance Ratio = $1 - \frac{FOODAIDIM}{TOTPROD + LPSTOCK + COMMIM + COMMSTOCK + FOODAIDIM}$

where: TOTIM=Total Imports
TOTPROD = Local Production
LPSTOCK = Locally-Produced Carryover Stocks
FOODAIDIM = Food Aid Imports
COMMIM = Commercial Imports
COMMSTOCK = Commercial Imports Held as Carryover Stocks

Table 4-3: Cereals Self-Sufficiency and Self-Reliance Ratios in the SADCC Countries, Selected Years (Percentages)

	1970-1972 (Average)	1979-1981 (Average)	1985/86	1988/89*
ANGOLA				
Self-Sufficiency Ratio	84.9	52.2	61.0	50.5
Self-Reliance Ratio	100.0	97.8	90.1	63.1
BOTSWANA				
Self-Sufficiency Ratio	78.9	22.4	9.5	30.5
Self-Reliance Ratio	94.5	91.7	83.8	84.1
LESOTHO				
Self-Sufficiency Ratio	80.9	54.8	46.5	72.1
Self-Reliance Ratio	91.3	89.8	84.2	92.8
MALAWI				
Self-Sufficiency Ratio	95.7	96.5	98.3	87.4
Self-Reliance Ratio	100.0	99.4	100.0	88.8
MOZAMBIQUE				
Self-Sufficiency Ratio	85.8	53.8	53.6	32.8
Self-Reliance Ratio	100.0	83.6	57.2	43.7
SWAZILAND				
Self-Sufficiency Ratio	NA	62.3	64.1	66.9
Self-Reliance Ratio	NA	99.3	100.0	92.4
TANZANIA				
Self-Sufficiency Ratio	93.1	91.4	97.9	98.9
Self-Reliance Ratio	99.5	95.5	98.6	98.9
ZAMBIA				
Self-Sufficiency Ratio	82.6	74.4	86.9	98.0
Self-Reliance Ratio	100.0	92.7	92.3	98.1
ZIMBABWE				
Self-Sufficiency Ratio	97.0	97.5	96.3	99.5
Self-Reliance Ratio	100.0	99.8	97.9	99.5
TOTAL SADCC				
Self-Sufficiency Ratio	91.2	82.9	88.3	83.7
Self-Reliance Ratio	99.6	95.6	94.0	86.4

Notes: All figures have been calculated on a quantity (not value) basis.
*Projected and based on estimated import requirements, not actual imports.

Sources: FAO, "Production Tapes," for 1970-72 production;
FAO, "Food Outlook," February 1987, for 1985/86 production projections;
FAO, "Food Supply Situation and Crop Prospects in Sub-Saharan Africa," February 1989, for 1988/89 production;
USDA/FAS, "Production, Suppply, and Distribution Tapes," for carryover stock levels;
UZ/MSU SADCC Cereals Trade Database, FAO Trade Tapes,
and FAO, "Food Aid in Figures," (various years) for commercial and food aid imports.

At the country level, four categories of performance are discernible: countries where both self-sufficiency and self-reliance have fallen significantly; countries where self-sufficiency has fallen while the ability to finance commercial imports has not deteriorated; countries where deterioration in the 1970's has partially been reversed in the 1980's; and countries which began the 1970's at high levels of self-sufficiency and self-reliance and have maintained these levels in most years.

In the war-torn countries of Mozambique and Angola, self-sufficiency and self-reliance ratios have fallen precipitously as both production and the ability to finance commercial imports with foreign exchange earnings have been severely disrupted.

The BLS countries have seen their self-sufficiency ratios shrink, implying falling per capita food production. However the ability to finance imports has not declined significantly. For Lesotho and Swaziland, this may be principally due to the substantial earnings of their citizens in the South African labor force. Much of these earnings are repatriated, enabling Lesotho and Swaziland to import food staples from South Africa. For Botswana, foreign exchange surpluses derived from diamond exports have increased that country's ability to finance imports.

Tanzania and Zambia saw a significant decline in the extent to which they met local needs through own-production and self-financing during the latter half of the 1970's and early 1980's. This was at least partially due to a systematic policy bias against the agricultural sector. This bias has been reversed somewhat in recent

years as their governments have adopted reform measures such as devaluation and pricing policies which (in combination with favorable rainfall and good harvests) appear to have encouraged agricultural production and increased marketings. This is reflected in higher self-sufficiency and self-reliance ratios for 1985/86 and 1988/89.

Finally Zimbabwe and Malawi started with relatively high ratios in the early 1970's and have largely maintained them at high levels. However in Malawi, the influx of Mozambiquean refugees has resulted in projected 1988/89 food aid imports being much larger than has historically been the case. Similarly, poor harvests are responsible for a slight decline in the Zimbabwean ratios for 1986/87. Yet high self-sufficiency and self-reliance ratios do not automatically imply that the entire population has sufficient access to food to assure minimum nutritional requirements. Food insecurity remains a serious problem for many low income households in these two countries.

4.3. Trade Patterns for Individual Cereals

The extent of intra-SADCC trade activity varies greatly between the three cereals included in the database. Whereas a number of countries have had exportable surpluses of maize during some of the years covered (Zimbabwe, Zambia, Tanzania, Malawi, and Angola), only one country (Malawi) has consistently exported some rice, and no country has ever exported appreciable quantities of wheat.

This section discusses the following questions for each of the commodities:

- Which of the SADCC nations are major importers and exporters?

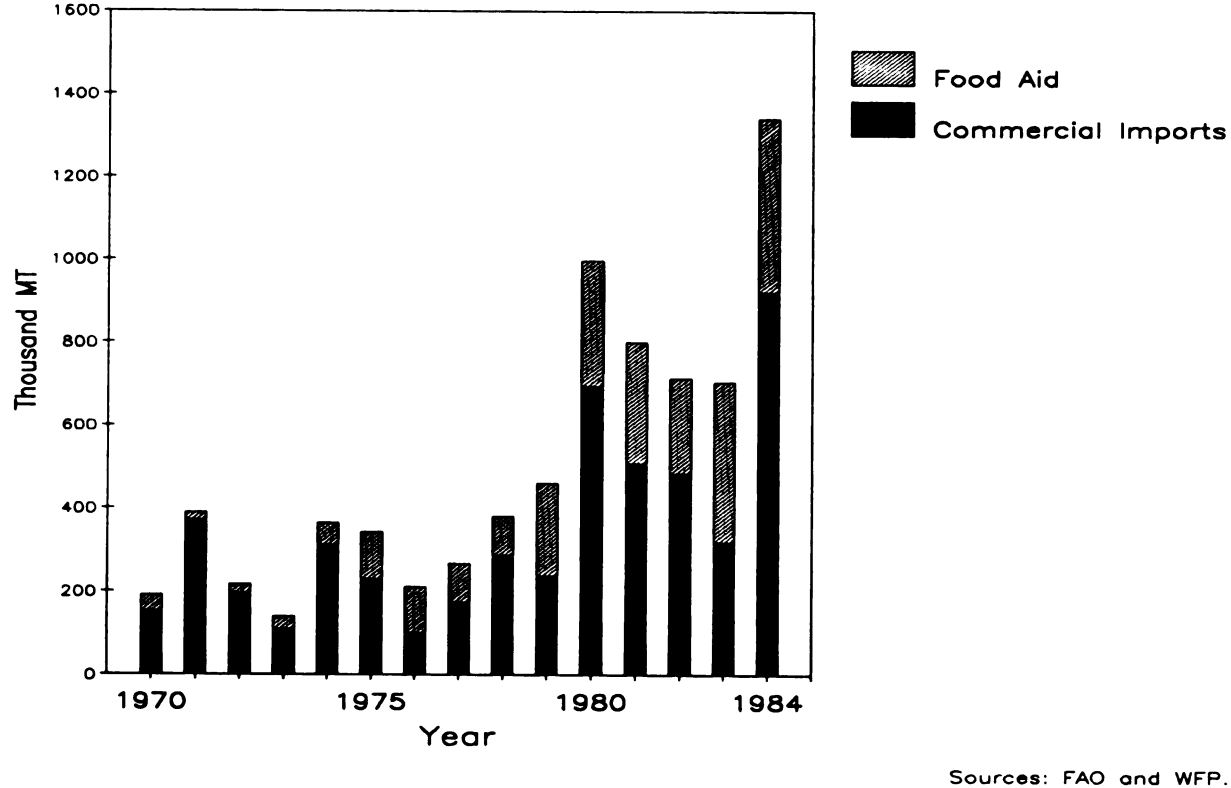
- What countries are major exporters to the SADCC nations?
- What is the proportion of intra-regional trade in total trade?
- What has been the role of food aid in facilitating cereals trade and how has the import bill evolved?

A. Trade in Maize

Maize imports have grown at a 6% average annual rate since 1970 (see Figure 4-1). Both commercial and food aid imports have grown steadily during this period. Food aid imports grew at a 7.3% annual rate. Up until 1978, volumes were relatively low, averaging only 65,700 MT annually for all of SADCC. However this picked up substantially in the late 1970's and 1980's, averaging 311,300 MT from 1979-1984. Commercial imports have also grown at a strong 5.6% rate. As with food aid, growth accelerated most rapidly during the post-1978 period.

Mozambique, Tanzania, and Zambia have been most responsible for the bulk of this growth in imports (Figure 4-2). However in the drought years of 1980 and 1984, other countries such as Zimbabwe, Angola, and the BLS countries imported large quantities of maize. Growth rates in the maize import bill closely parallel those of import quantities (Figure 4-3). The real import bill grew from a 1970-72 average of $US 43.6 million to a 1982-84 average of $US 464.7 million,

Figure 4-1: SADCC Maize Import Quantities (1970 - 1984)



Sources: FAO and WFP.

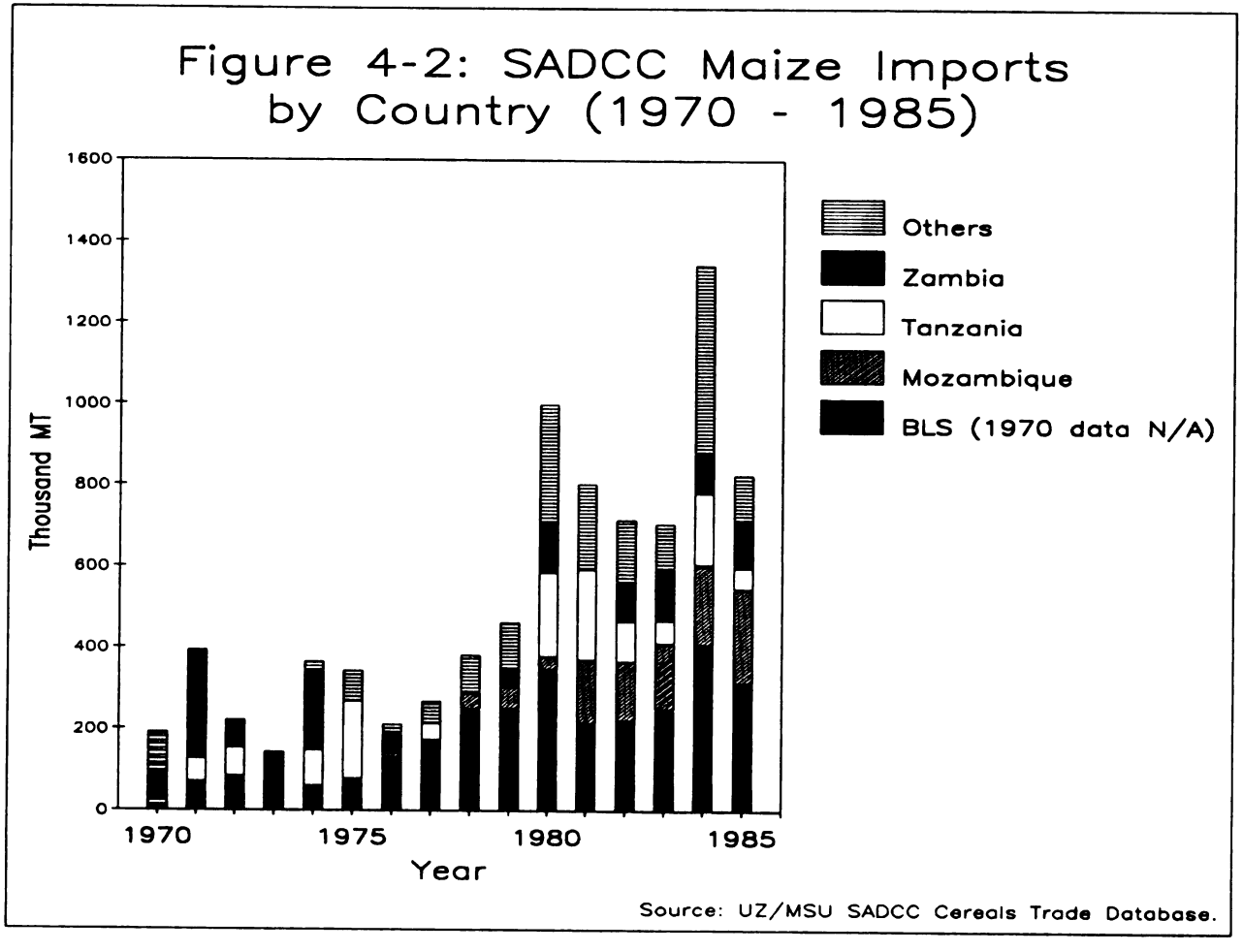


Figure 4-2: SADCC Maize Imports by Country (1970 - 1985)
1600
1400
1200
1000
800
600
400
200
0
Thousand MT
1970
1975
1980
1985
Year
Others
Zambia
Tanzania
Mozambique
BLS (1970 data N/A)
Source: UZ/MSU SADCC Cereals Trade Database.

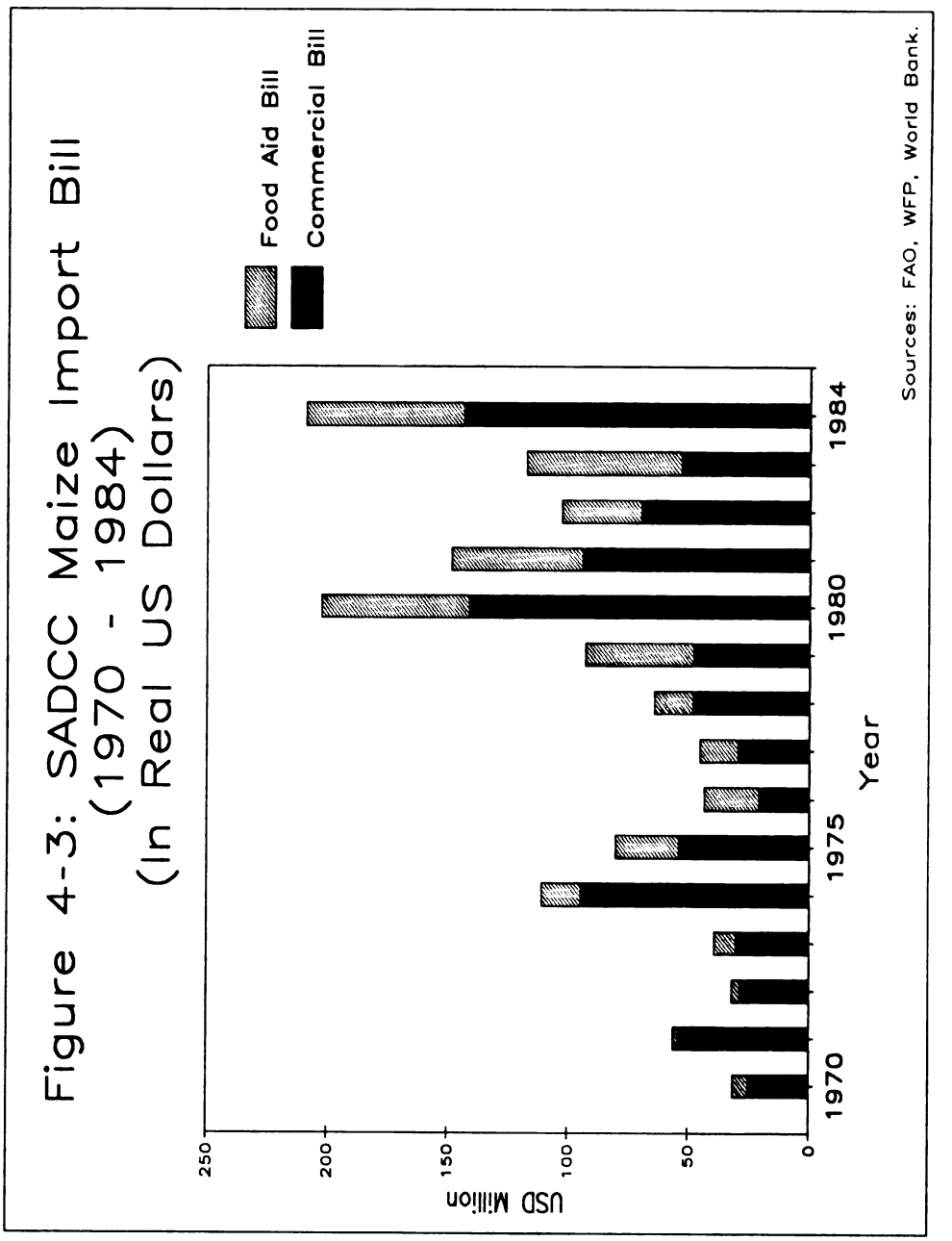


Figure 4-3: SADCC Maize Import Bill
(1970 - 1984)
(In Real US Dollars)
Food Aid Bill
Commercial Bill
USD Million
250
200
150
100
50
0
1970
1975
1980
1984
Year
Sources: FAO, WFP, World Bank.

an annual rate of 5.9% [5]. The commercial bill grew at a 5.4% rate while the food aid bill grew at a higher 7.1% annual rate. While the food aid bill has grown steadily, the commercial bill has tended to be very erratic, reflecting both fluctuating world prices (especially in the early 1970's) and high import requirements during drought years such as 1980 and 1984 [6].

Maize is the only cereal that has been exported in one year or another by several SADCC countries in significant quantities (over

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[5] Dollar figures need to be approached with caution for a number of reasons. First they are understated here because inland transportation costs have not been factored in due to the difficulty of doing calculations for nine countries. Only C+F rates from the US Gulf to Eastern and Southern Africa have been used. Secondly, average annual prices of No.2 US yellow maize have been used as opposed to a white maize price series. Although the exact relationship between white and yellow maize prices is difficult to pin down, the yellow maize price usually serves as a floor for the white maize price. In most years, white maize earns a slight premium over yellow maize in world markets. However in periods of white maize shortage, the premium can be quite high. In 1980, when world white maize harvests were poor, the premiums for US and South African white maize over US and South African yellow maize were 48 and 90% respectively (FAO, 1984). Therefore, import bill figures are again understated, but the exact amount can not be quantified. In addition, it is not possible to determine the proportion of yellow versus white maize imports.

[6] To the extent that SADCC exchange rates, inland transportation costs, and domestic inflation in SADCC countries fluctuate in ways that are not counter-cyclical to US dollar price changes, variability in the maize import bill in local currency terms is even greater. The coefficient of variation (a measure of variability around the mean whose value is between 0 and 1 and therefore scale-neutral) for the real US dollar yellow maize price C+F Durban was 0.27 over the 1970-85 period. Using a Zimbabwean example, when the coefficient of variation is calculated C+F Harare in local currency terms, it more than doubles to 0.62.

There is also evidence that white maize prices are more volatile than yellow maize prices due to the relative thinness of the world white maize market. The coefficient of variation for nominal South African white maize prices free alongside elevator (FAE) from 1970-82 was 0.36 while it was 0.30 for US yellow maize C+F Durban over the same period.

10,000 MT). Of the countries identified in Table 4-4, only Zimbabwe and Malawi have consistently exported maize to other SADCC countries. Except for the civil war years in the latter half of the 1970's and the drought year of 1984, Zimbabwe has dominated intra-regional trade in most years. In addition, only Zimbabwe and Malawi have remained exporters in the 1980's although export availability has fluctuated widely. Those countries which have most consistently imported from other SADCC countries are Mozambique, Tanzania, Zambia, and Malawi (Table 4-5). Due to the severe disruption of agricultural activity resulting from civil strife, Mozambique has dramatically increased maize imports from other SADCC nations during the 1980's. Zambia and Tanzania went from positions of occasional surplus in the 1970's to a state of consistent deficit in the first half of the 1980's [7]. The BLS countries have traditionally imported almost exclusively from South Africa. Malawi is the country that has switched most often between net surplus and deficit situations. This seems to happen in a cyclical fashion every three to four years [8].

Intra-SADCC trade as a proportion of overall trade of goods has been estimated at roughly 4-5% (Chr. Michelsen, 1986). However, Table 4-6 illustrates that the proportion for intra-SADCC maize trade is

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[7] However for 1987/88, Tanzania had exportable stocks of coarse grains of 115,000 MT. For 1988/89, the FAO estimates exportable coarse grain stocks at 30,000 MT (FAO, "Food Supply Situation and Crop Prospects", various issues).

[8] In 1986, Malawi achieved a net surplus for the fourth straight year. However, poor harvests and the worsening Mozambiquean refugee situation have combined to make Malawi a net importer of maize since 1986/87. The FAO estimates 1988/89 coarse grain import requirements at 202,000 MT.

Table 4-4: Intra-SADCC Maize Exports, 1970-1985
(Metric Tons)

Year	Angola	Malawi	Tanzania	Zambia	Zimbabwe	Total
1970	17,905	0	20,000	1	87,200	125,106
1971	10,176	4,652	26,344	100	92,492	133,764
1972	0	12,733	0	0	63,327	76,060
1973	0	1,172	0	0	86	1,258
1974	0	19,660	0	69,133	258	89,051
1975	0	15,962	0	0	20,549	36,511
1976	0	0	0	8,809	18,566	27,375
1977	0	0	0	22,139	0	22,139
1978	0	0	37,120	21,903	0	59,023
1979	0	13,350	0	14,400	5,600	33,350
1980	0	0	17	13	0	30
1981	0	0	0	0	107,184	107,184
1982	0	49	0	0	303,585	303,634
1983	0	76,342	0	0	220,417	296,759
1984	0	152,270	0	0	0	152,270
1985	0	57,722	0	0	154,317	212,039

Source: UZ/MSU SADCC Cereals Trade Database.

Table 4-5: Intra-SADCC Maize Imports, 1970-1985
(Metric Tons)

Year	Angola	Botswana	Lesotho	Malawi	Mozam-bique	Swazi-land	Tanzania	Zambia	Zimbabwe	Total
1970	0	0	0	87,200	7,705	0	0	30,200	0	125,105
1971	0	0	0	208	0	0	0	133,556	0	133,764
1972	0	0	0	117	0	0	12,733	63,210	0	76,060
1973	0	0	0	86	0	0	0	1,149	23	1,258
1974	0	0	0	258	0	0	88,793	0	0	89,051
1975	0	0	0	20,549	0	0	15,962	0	0	36,511
1976	302	0	0	18,566	8,507	0	0	0	0	27,375
1977	22,108	0	0	0	0	0	31	0	0	22,139
1978	21,903	0	0	5,600	37,120	0	0	0	0	64,623
1979	0	0	0	0	14,000	0	0	13,750	0	27,750
1980	0	0	0	0	17	0	0	0	13	30
1981	9,201	0	0	56,944	31,350	0	9,689	0	0	107,184
1982	32,016	14,400	0	942	86,662	12,700	61,459	95,700	0	303,879
1983	2,691	11,900	5,774	44	100,620	3,777	45,983	125,969	1	296,759
1984	0	0	0	0	5,000	0	0	97,270	50,000	152,270
1985	0	8,100	688	0	90,573	0	75	112,663	0	212,099

Source: UZ/MSU SADCC Cereals Trade Database.

Table 4-6: Intra-SADCC Maize Trade As A Percentage of Total Maize Trade, 1970-1985 (Quantity Figures in Metric Tons)

Year	SADCC Imports (A)	Total Imports (B)	(A) as % of (B) (C)	RSA Exports to BLS+N (D)	Total (B+D) (E)	(A) as % of (E) (F)	(D) as % of (E) (G)
1970	125,105	192,171	65.1%	NA	NA	NA	NA
1971	133,764	320,511	41.7%	70,000	390,511	34.3%	17.9%
1972	76,060	136,237	55.8%	83,000	219,237	34.7%	37.9%
1973	1,258	1,973	63.8%	139,000	140,973	0.9%	98.6%
1974	89,051	305,492	29.2%	60,000	365,492	24.4%	16.4%
1975	36,511	270,232	13.5%	73,000	343,232	10.6%	21.3%
1976	27,375	80,616	34.0%	131,000	211,616	12.9%	61.9%
1977	22,139	96,869	22.9%	171,000	267,869	8.3%	63.8%
1978	64,623	133,052	48.6%	248,000	381,052	17.0%	65.1%
1979	27,750	211,755	13.1%	250,000	461,755	6.0%	54.1%
1980	30	652,016	0.0%	347,000	999,016	0.0%	34.7%
1981	107,184	588,942	18.2%	214,000	802,942	13.3%	26.7%
1982	303,879	493,376	61.6%	222,000	715,376	42.5%	31.0%
1983	296,759	457,426	64.9%	248,000	705,426	42.1%	35.2%
1984	152,270	935,150	16.3%	408,000	1,343,150	11.3%	30.4%
1985	212,099	825,291	25.7%	447,000	825,291*	25.7%	54.2%*

Notes: (A) Represents total recorded intra-SADCC trade in maize;
(B) Represents total recorded SADCC trade in maize, regardless of source of imports;
(D) South African Exports to the BLS states and Namibia. These figures are recorded on an April/March basis. Figures are here entered in the first of the split years;
* BLS figures available for 1985.

Sources: UZ/MSU SADCC Cereals Trade Database for column (A) and (B) figures;
Lipton (1986) for column (D) figures.

considerably higher than this in most years. Because of the considerable gaps associated with BLS data (due to South African refusal to issue disaggregated figures on trade with these countries), intra-SADCC trade as a percentage of total maize imports is calculated twice: first with the available destination and source data, and; secondly, with South African aggregate export figures to the BLS nations and Namibia added to the total maize import figures. With the exception of four years, intra-SADCC trade as a proportion of total maize trade is above 10%. Percentages are very high for the years 1982, 1983, and 1985 due to large Zimbabwean surpluses. However, in eleven of the fifteen years covered, SADCC imports from South Africa exceeded imports from other countries [9]. Moreover, intra-SADCC maize trade grew at only a 1.5% annual rate during 1970-1985. At the same time dependence on South Africa increased, growing at an 11.8% rate. Most of this was due to increased imports by the BLS countries.

The leading suppliers of maize to SADCC include South Africa, the USA, and Zimbabwe (see Figure 4-4). While South Africa, the US, and Zimbabwe were more or less the only countries to export significant quantities of maize to SADCC in the 1970's, their market shares have eroded somewhat in the 1980's as a number of other countries have entered the Southern African market. Among these are Thailand, Argentina, Malawi, Kenya, and some of the EC countries (such as France). In 1984, a few of these countries dominated the maize trade.

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[9] Maize imports from SADCC as a percentage of total SADCC maize imports (Column F of Table 4-5) may be slightly higher due to the inclusion of Namibian imports in total SADCC imports (Column E). By the same token, the portion of SADCC imports which originate in South Africa may also be slightly overstated (Column G).

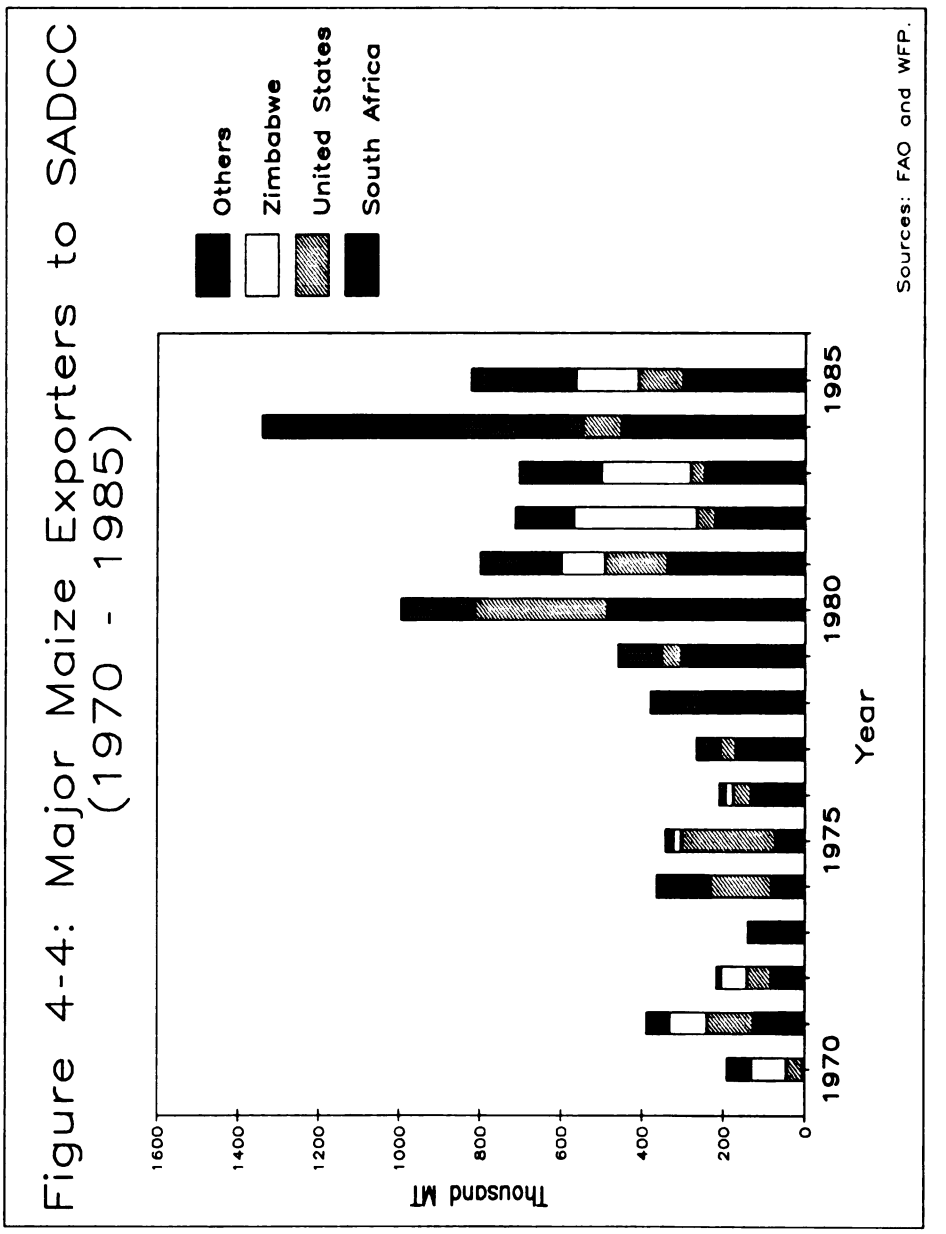
Figure 4-4: Major Maize Exporters to SADCC
(1970 - 1985)
Others
Zimbabwe
United States
South Africa
Thousand MT
1600
1400
1200
1000
800
600
400
200
0
1970
1975
1980
1985
Year
Sources: FAO and WFP.

Thailand (294,000 MT), Argentina (237,000 MT), and Malawi (152,000 MT) captured 51% of the market in that year.

South Africa still strongly dominates exports to the BLS countries. Leading US customers in the 1970's were Zambia and Tanzania. In the 1980's, most US exports have gone to Mozambique in the form of food aid. Except for 1984 when several countries received imports, all Argentinean SADCC maize exports have gone to Angola [10]. Angola in turn, relies almost exclusively on Argentina for its maize imports. The cutting of the Benguela rail line makes it difficult to conceive of there being much potential for increased SADCC exports to Angola in the near future.

EC, Kenyan, and Thai exports have each been distributed among several SADCC countries. Additional minor maize suppliers in the 1980's include Canada and Yugoslavia.

B. Trade in Wheat

Because none of the SADCC countries have achieved self-sufficiency in wheat production, intra-regional trade is virtually non-existent.

A number of countries have consistently exported fairly substantial quantities of wheat to the SADCC countries since the early 1970's (Figure 4-5). Australia was by far the leading exporter in the early 1970's. The US and EC nations (most notably France), Canada, and South Africa also exported fairly large quantities to SADCC in the

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[10] In 1983 and 1984, the US and Argentina also supplied very large quantities of yellow maize to South Africa. Over 2.4 million MT were supplied by the US in 1984, while Argentina exported more than 650,000 MT in 1983 to South Africa.

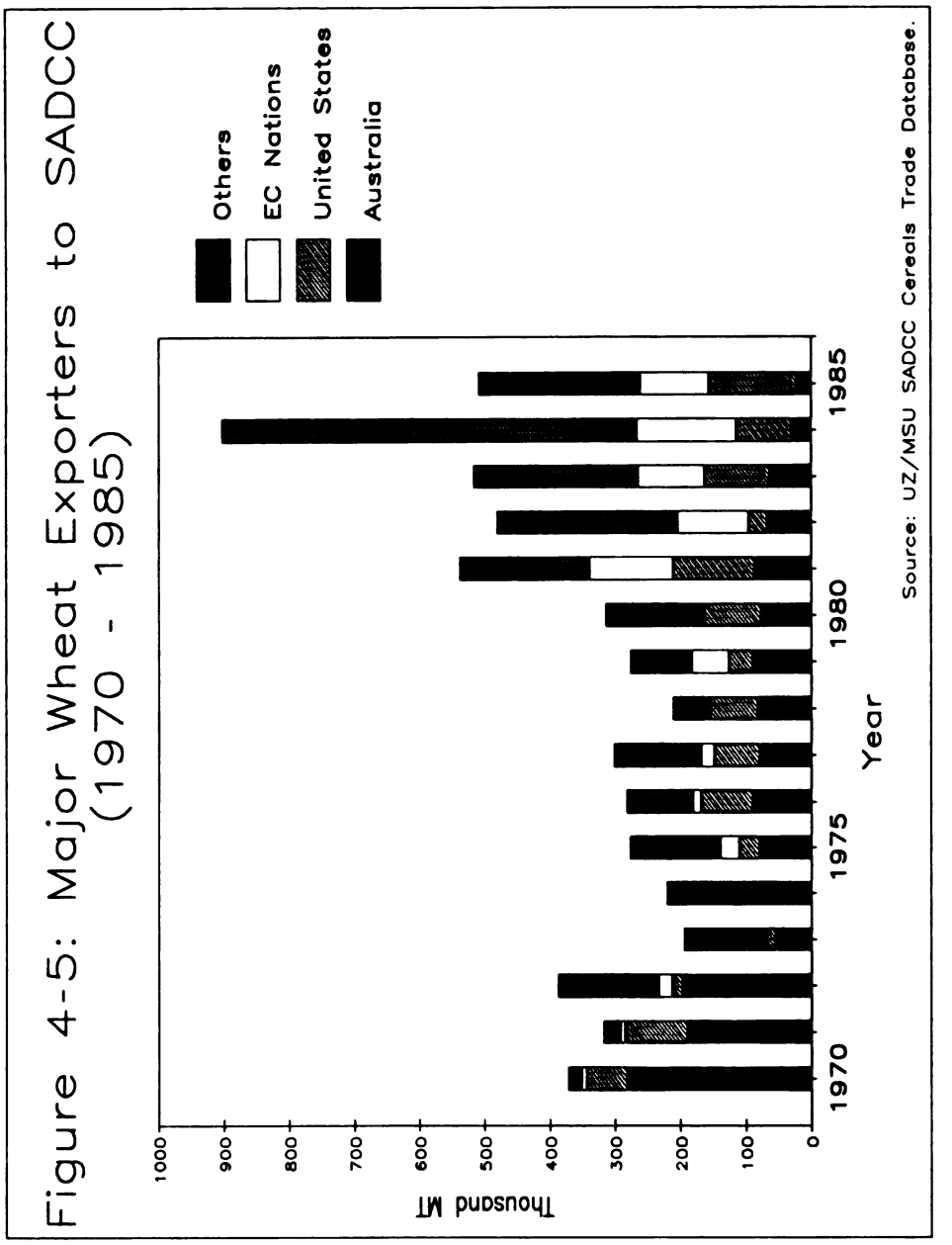
Figure 4-5: Major Wheat Exporters to SADCC
(1970 - 1985)
Others
EC Nations
United States
Australia
Thousand MT
1000
900
800
700
600
500
400
300
200
100
0
1970
1975
1980
1985
Year
Source: UZ/MSU SADCC Cereals Trade Database.

1970's [11]. In the 1980's, France and other EC countries have considerably increased their market share, largely at the expense of Australia. Overall wheat imports grew 2% annually from 1970-1984 (see Figure 4-6). While growth in commercial imports has remained virtually unchanged, the SADCC nations have been quite successful at getting donor countries to supply food aid. Food aid imports have grown from an annual average of only 5,500 MT in 1970-72 to 275,500 MT in 1982-84. This represents a food aid import growth rate of roughly 12.5% per year over this period.

While commercial import quantities have not varied too greatly, the commercial import bill has fluctuated widely (see Figure 4-7). The commercial import bill swelled substantially in times of international shortages such as the 1973-75 and 1979-80 periods. Although donors appear to be willing to bear some of the burden of the import bill during such periods, there is no question that SADCC national treasuries bear the brunt of these price swings.

C. Trade in Rice

Of the nine SADCC countries, only Malawi has consistently exported rice. However quantities are rather small -- usually less than 10,000 MT. Angola and Tanzania have also exported small quantities of rice on occasion -- in most cases less than 1,000 MT for a given year.

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[11] South Africa's exports were probably considerably higher than the figures in Figure 4-5 due to the fact that BLS data are not available.

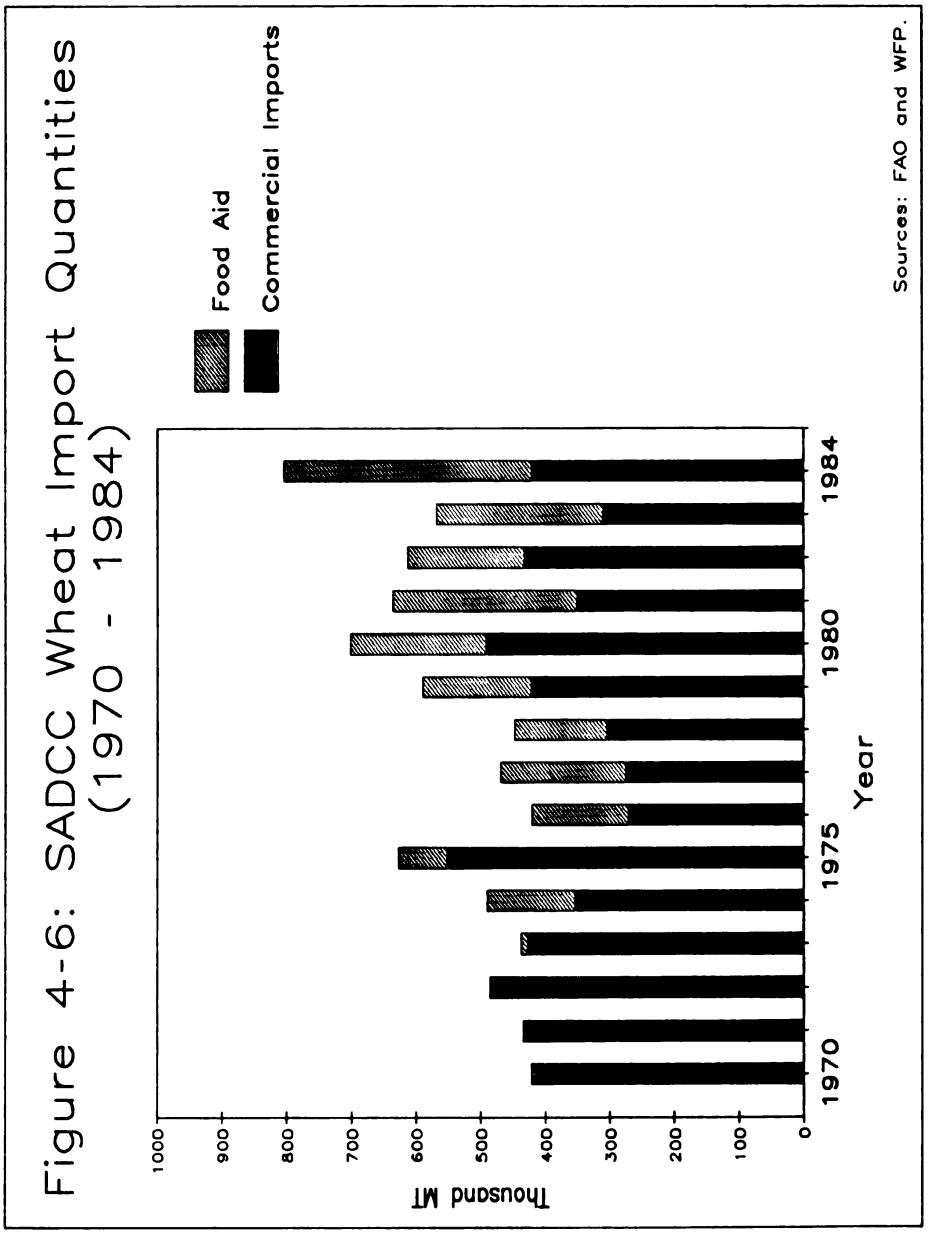
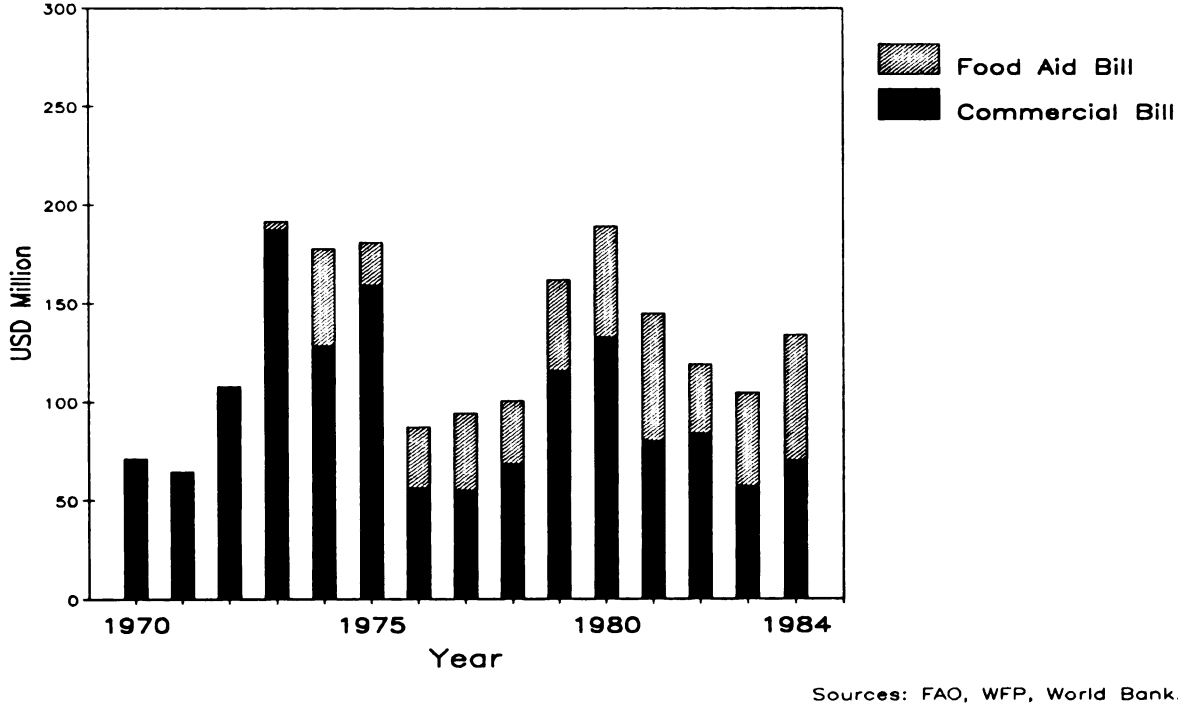


Figure 4-6: SADCC Wheat Import Quantities
(1970 - 1984)
Food Aid
Commercial Imports
Thousand MT
1000
900
800
700
600
500
400
300
200
100
0
1970
1975
1980
1984
Year
Sources: FAO and WFP.

Figure 4-7: SADCC Wheat Import Bill
(1970 - 1984)
(In Real US Dollars)



Sources: FAO, WFP, World Bank.

Zimbabwe and Zambia are the principal importers of Malawian rice [12]. Mozambique has also occasionally imported small quantities.

As with the other two commodities, SADCC imports of rice have grown significantly over the years surveyed (see Figure 4-8). From a 1970-72 annual average of 19,700 MT, imports grew at a 7.7% annual rate to over 250,000 MT in the 1982-84 period. Food aid imports grew at a 9.1% rate from 1974-84. From 1970-74, no food aid was received by the SADCC countries in the form of rice. The 1982-84 average was 113,500 MT.

During the 1970's, rice exports to the SADCC countries were dominated by the United States (Figure 4-9). However total quantities imported during the 1970's were small in comparison with maize and wheat import quantities. From 1980 to 1985, rice imports by SADCC countries grew by more than 600% as Thailand, a number of other Asian countries (Japan, Pakistan, China, and Burma), and the EC expanded exports. Tanzania, Mozambique, and Angola were primarily responsible for this huge rise in imports. For the 1970-85 period, annual import growth rates were 4.8, 5.6, and 7.2%, respectively (see Figure 4-10). As with wheat imports, this was probably due to a fall in world prices and more aggressive marketing by a number of countries which had not previously traded substantially with the SADCC countries.

The import bill has not grown as rapidly as have quantities imported (see Figure 4-11). The commercial bill grew at a 4.7% rate

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[12] South Africa also imported Malawian rice during the 1970's. Quantities were mostly in the 1,000-3,000 MT range.

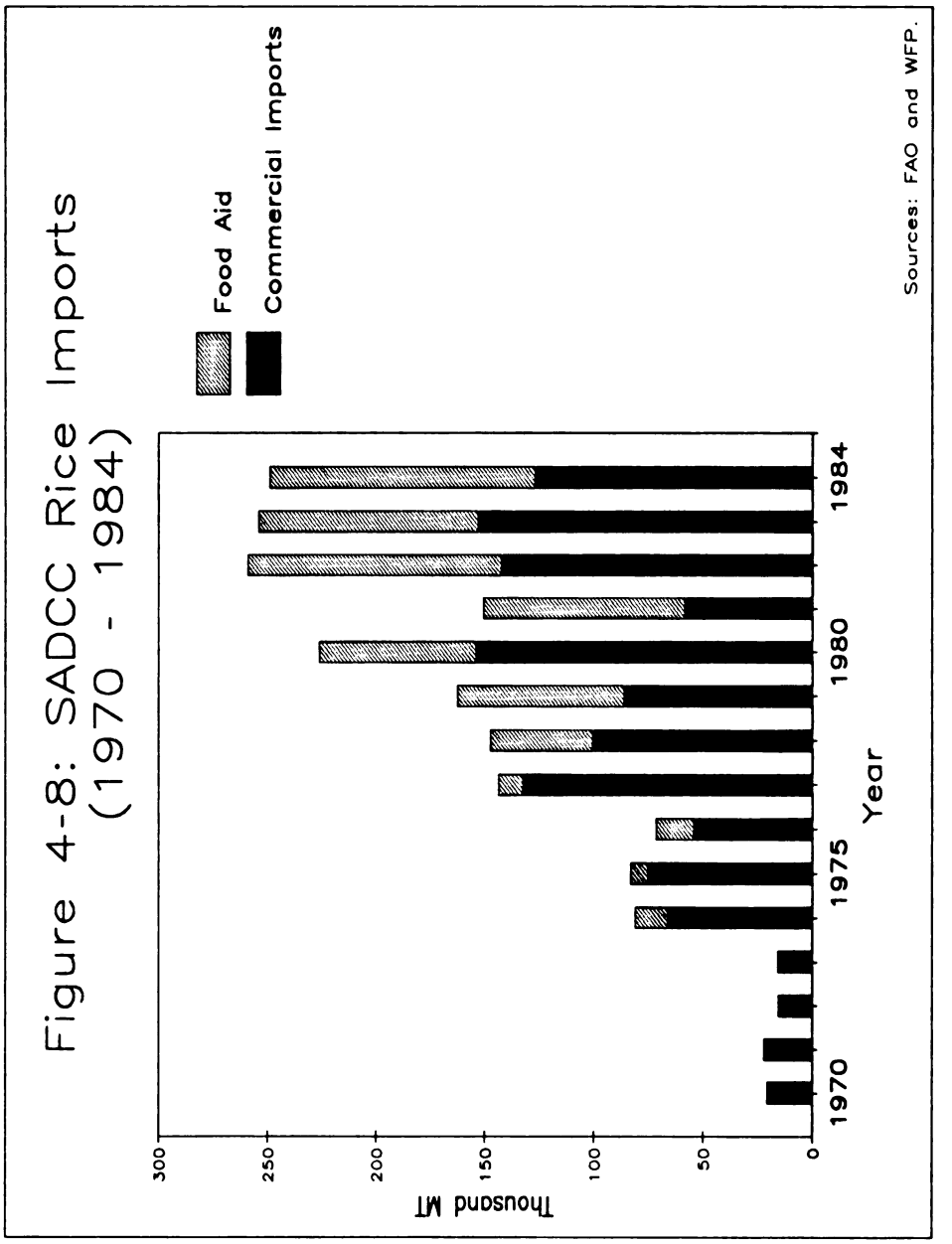


Figure 4-8: SADCC Rice Imports
(1970 - 1984)
Food Aid
Commercial Imports
Thousand MT
300
250
200
150
100
50
0
1970
1975
1980
1984
Year
Sources: FAO and WFP.

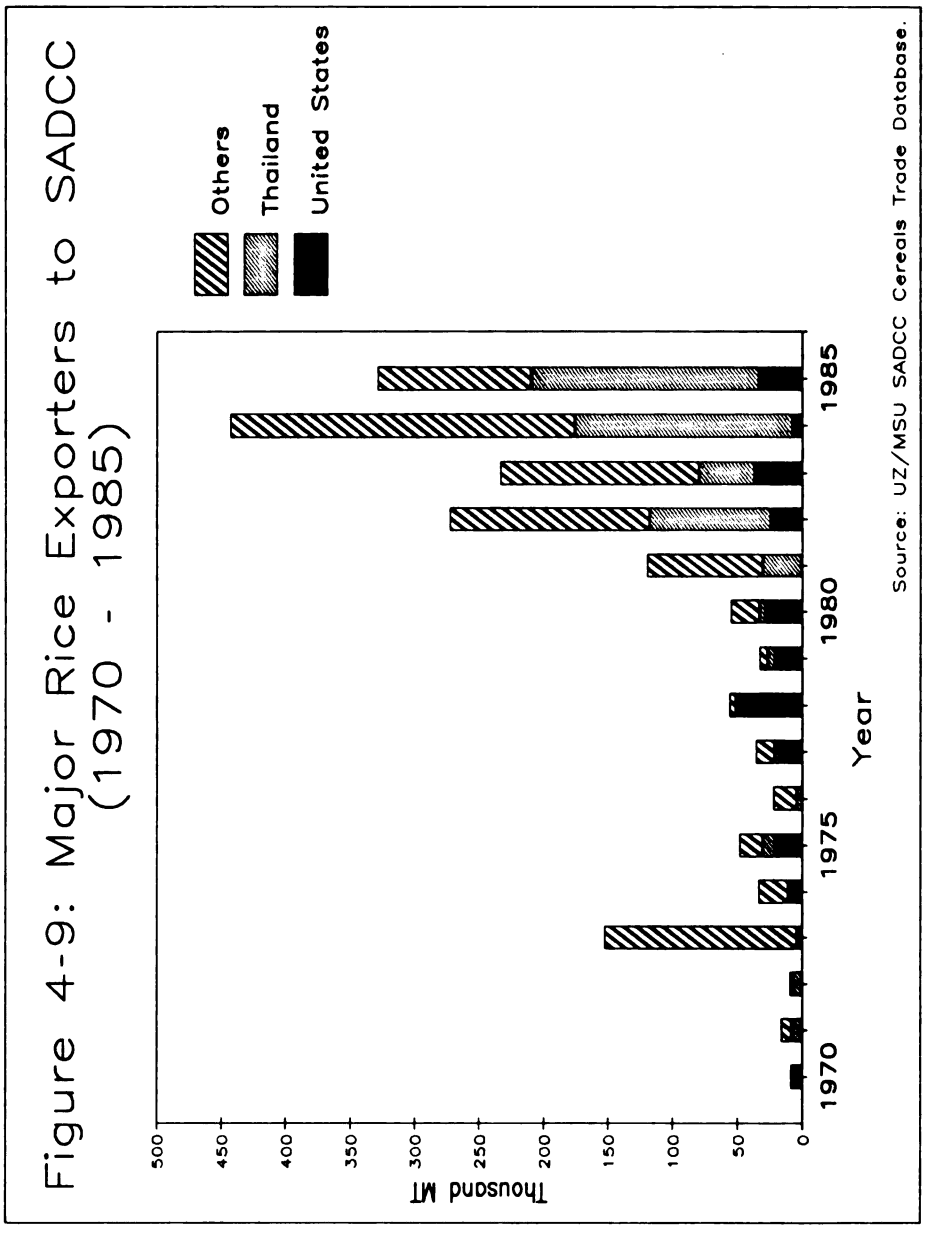


Figure 4-9: Major Rice Exporters to SADCC
(1970 - 1985)
Others
Thailand
United States
Thousand MT
500
450
400
350
300
250
200
150
100
50
0
1970
1975
1980
1985
Year
Source: UZ/MSU SADCC Cereals Trade Database.

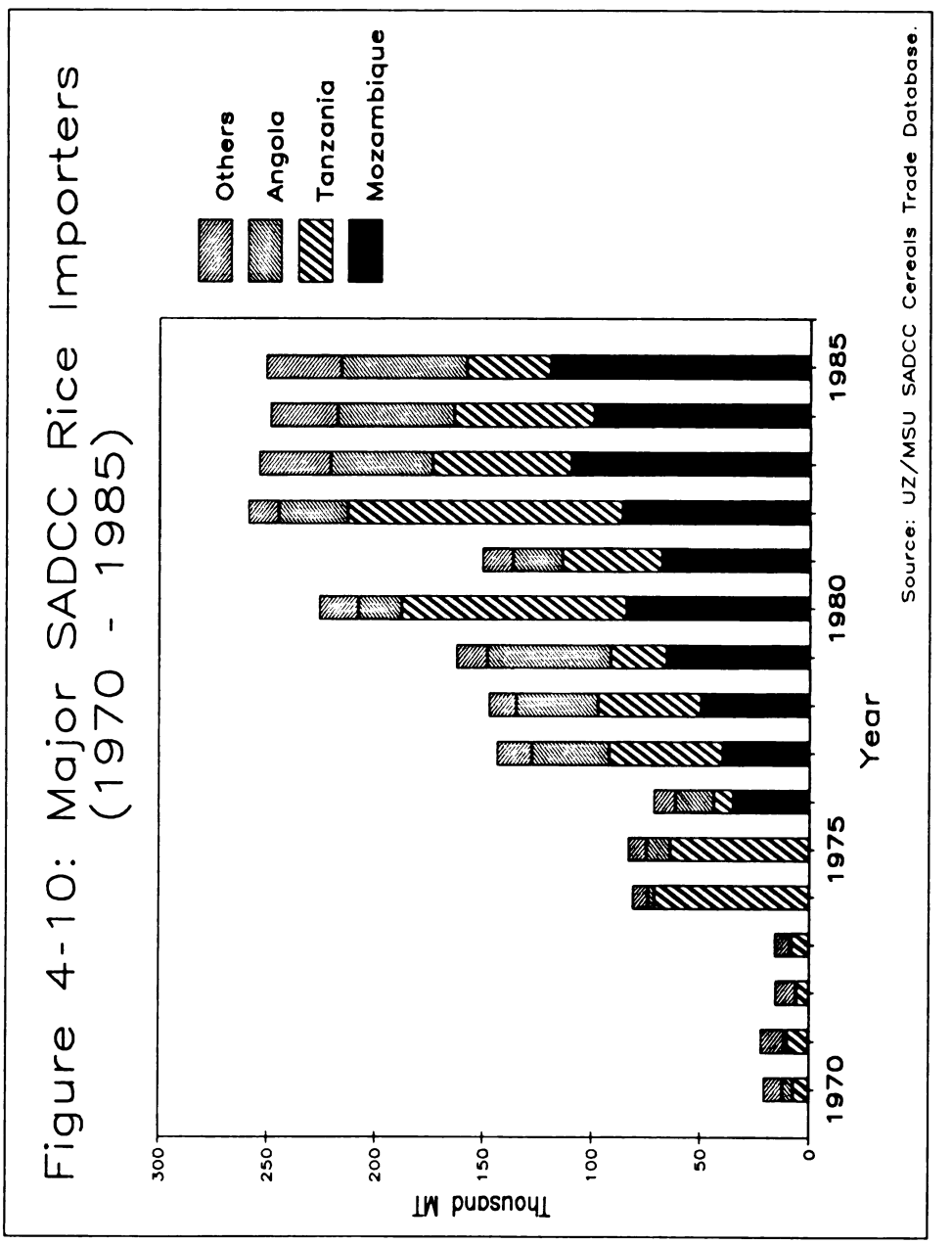
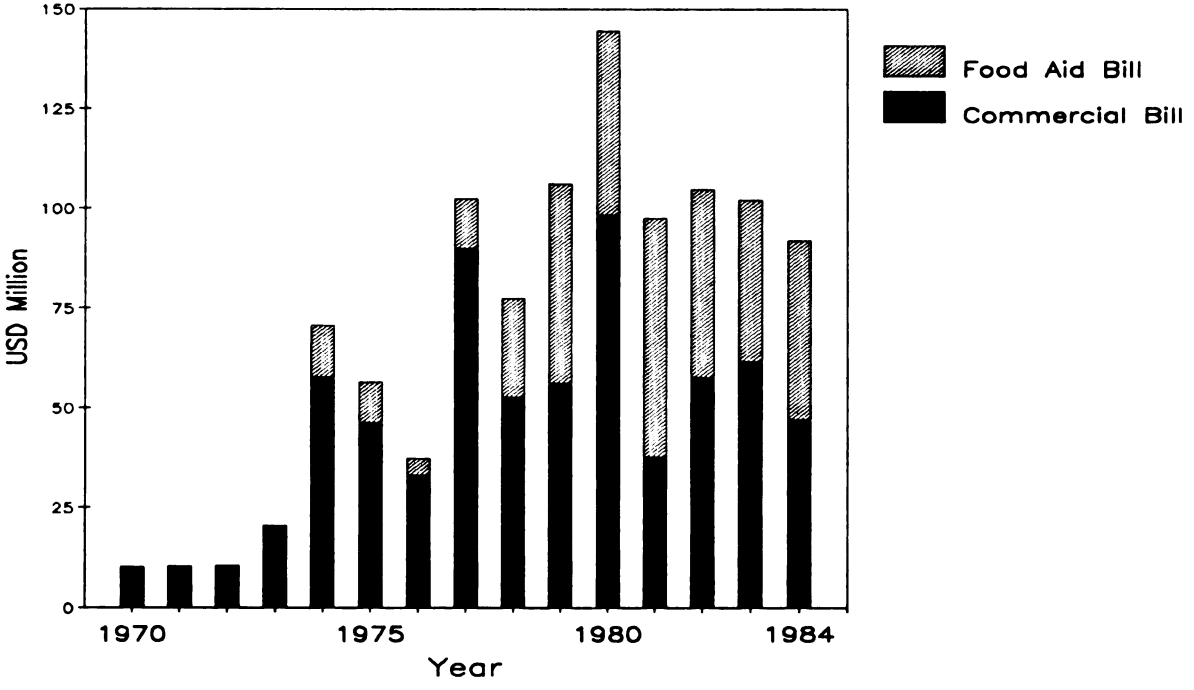


Figure 4-10: Major SADCC Rice Importers
(1970 - 1985)
Others
Angola
Tanzania
Mozambique
Thousand MT
300
250
200
150
100
50
0
1970
1975
1980
1985
Year
Source: UZ/MSU SADCC Cereals Trade Database.

Figure 4-11: SADCC Rice Import Bill
(1970 - 1984)
(In Real US Dollars)



Sources: FAO, WFP, World Bank.

from 1970-84 while the value of food aid grew by a slightly higher 5.3% rate for 1974-84 [13]. While import bill growth rates for rice are comparable to those for wheat and maize, the bill is somewhat lower in absolute terms, averaging US$ 99.4 million for 1982-84 in 1982 dollars (as opposed to US$ 154.9 million for maize and US$ 119.3 million for wheat). Again, this may be overstated by as much as 20% due to lower Thai prices.

4.4. The Role of Trilateral Food Aid Transactions in SADCC Trade

During the 1980's, trilateral food aid transactions [14] have taken on increasing importance in intra-SADCC trade. Such transactions usually involve a bilateral or multilateral development agency providing either cash or staple food commodities (usually wheat) to a developing country which in turn exports another commodity (most commonly white maize in the Southern African context) to a recipient developing country (Morton et al., 1987). While trilaterals do not constitute a large proportion of total donor food aid around the

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[13] Import bill growth rates may be overstated because the price series used for the entire period is that of Texas Medium Grain No.2 milled C+F Durban. This is reasonable for the 1970's when the US was the leading rice exporter to SADCC. However in the 1980's, Thailand has replaced the US as the leading exporter, making Thai 5% Milled Brokens a more representative price series. Thai FOB prices have averaged 20% lower than the US FOB price during the 1980's. The Thai price was not used here because a transportation cost series could not be obtained for Bangkok to an East or Southern African port.

[14] Also referred to as triangular transactions.

world [15], they do form a significant portion of intra-SADCC grain movements at present.

Table 4-7 summarizes SADCC trilaterals in coarse grains [16] for 1985/86 and 1988/89 (projected). In 1985/86, Zambia (45,714 MT) and Mozambique (37,150 MT) were the leading recipients while Zimbabwe (54,088 MT) and Malawi (48,100 MT) were the leading suppliers. The total quantity of trilateral movements represented 48% of total intra-SADCC maize trade and 12.4% of total 1985 SADCC maize imports. Donors financed approximately one third of Zimbabwean and over 80% of Malawian exports to other SADCC countries.

As a percentage of total cereals food aid imports, figures range from a high of 50% for Zambia to as little as 2% for Angola. When total cereals imports are considered, the importance of trilaterals in the overall food import picture is reduced quite a bit for countries like Botswana which can afford to acquire food imports on a commercial basis.

According to FAO projections, 1988/89 SADCC triangular food aid volumes will be more than double 1985/86 levels [17]. Mozambiquean triangular food aid needs continue to grow -- nearly tripling since 1985/86. The Mozambiquean refugee crisis has resulted in Malawi

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[15] In 1986, the year in which trilaterals reached their highest levels, they accounted for 90,000 MT of food aid, or only 8 to 9% of total food aid (WFP, 1987). For the US, which is the world's leading food aid donor in absolute terms, trilateral transactions made up only 0.15% of total PL 480 Title II emergency relief aid for 1983-86 (Morton et al., 1987).

[16] Close to 100% of this (if not all) is white maize.

[17] Detailed breakdowns of triangular flows by source and destination are not available for 1986/87 and 1987/88.

Table 4-7: SADCC Trilateral Transactions in Coarse Grains, 1985/86 and 1988/89

Recipient	Country of Purchase	1985/86 Quantity (MT)	1985/86 As % of Total Food Aid	1985/86 As % of Total Imports	1988/89 Quantity (MT) *
Angola	Malawi	300			
	Zimbabwe	934			5,000
Sub-Total		1,234	2.4%	0.6%	5,000
Botswana	Malawi	6,500			
	Zimbabwe	1,590			2,300
Sub-Total		8,090	24.5%	4.1%	2,300
Malawi	Zambia	0			7,100
	Zimbabwe	0			92,045
Sub-Total		0	0.0%	0.0%	99,145
Mozambique	Kenya	0			19,500
	Malawi	11,100			0
	Swaziland	0			1,900
	Zimbabwe	26,050			76,813
Sub-Total		37,150	10.9%	9.7%	98,213
Swaziland	Zimbabwe	0			1,022
Sub-Total		0			1,022
Tanzania	Malawi	10,000			0
Sub-Total		10,000	14.9%	8.3%	0
Zambia	Malawi	20,200			0
	Zimbabwe	25,514			55,130
Sub-Total		45,714	50.2%	27.9%	55,130
Total		102,188			260,810

Notes: Quantity figures refer only to coarse grains, whereas percentage figures in the last two columns refer to all cereals.
* Projected.

Source: Morton et al., "Study of Trilateral Food Aid Transactions", Ronco Consulting Corporation, 1987.
FAO, "Food Supply Situation and Crop Prospects in Sub-Saharan Africa: Special Report", various issues.

switching from being an important source of triangular supplies to becoming the largest projected recipient of triangular food aid for 1988/89. Zimbabwe is projected to be the only truly important source of triangular food aid commodities -- supplying 242,810 MT or 93.1% of all planned 1988/89 shipments.

For at least one of the leading recipients, maize imports financed as trilateral food aid have become quite important in recent years. Figures in Table 4-8 indicate that trilaterals have been an important element in Zambian maize imports from 1983-86, constituting more than two thirds of total maize imports in three of the four years. In all four years, trilaterals made up over 90% of total food aid imports of maize, and in two of these years maize aid was only received through trilateral programs. For 1988/89, the FAO projects no commercial maize imports while net triangular imports will total approximately 48,000 MT (see Table 4-7). Therefore, trilaterals will account for 100% of Zambia's total maize imports and food aid.

One must not overlook the increasing importance of trilaterals to supplying countries like Zimbabwe which benefit in two ways. First, trilaterals help to ease the storage cost burden resulting from large production surpluses. Secondly, foreign exchange is either earned (in the case of cash purchases in hard currency by donors) or saved (in the case of swaps where wheat is supplied by donors in exchange for maize).

Table 4-9 summarizes the foreign exchange benefits derived from trilateral transactions for Zimbabwe from 1982/83-85/86. Although these benefits have been substantial in years like 1982/83 when they

Table 4-8: Zambian Trilateral Food Aid Maize Imports, Selected Years
(Metric Tons)

Import Source	1983	1984	1985	1986	1988/89*
Zimbabwe (Commercial)	1,173	0	49,577	0	0
Malawi (Commercial)	40,200	29,853	37,666	0	0
Other (Commercial)	0	0	0	0	0
Sub-Total (Commercial)	41,373	29,853	87,243	0	0
Zimbabwe (Trilateral)	84,596	0	18,136	12,386	55,130
Malawi (Trilateral)	0	67,417	7,282	2,532	0
Other Food Aid	0	1,404	2,387	0	0
Sub-Total (Trilateral)	84,596	67,417	25,418	14,918	55,130
Sub-Total (Food Aid)	84,596	68,821	27,805	14,918	55,130
Total Imports	125,969	98,674	115,048	14,918	55,130
Trilateral as % of Total Maize Imports	67.2%	68.3%	22.1%	100.0%	100.0%
Trilateral as % of Total Maize Food Aid	100.0%	98.0%	91.4%	100.0%	100.0%

* Projected.

Sources: NAMBOARD for 1983-86 data;
FAO (1989) for 1988/89 projections.

Table 4-9: Zimbabwe Trilateral Maize Exports, Wheat Imports, and Foreign Exchange Gains, 1982/83 - 1985/86

	1982/83	1983/84	1984/85	1985/86
Trilateral Maize Exports (MT)	294,757	36,183	28,725	117,581
As Percent of Total Maize Exports	59.9%	14.4%	NA*	41.3%
F.E. Earned (USD millions)	36.6	2.5	0.0*	7.5
Trilateral Wheat Imports (MT)	31,403	19,224	23,704	7,333
As Percent of Total Wheat Imports	100.0%	35.1%	22.7%	8.5%
F.E. Saved (USD millions)	4.7	2.0	2.5	0.7

Notes: Maize prices are average for export price received by the GMB and wheat prices are import parity prices C+F Harare. Both are expressed in real 1980 US dollars deflated by the Zimbabwe CPI.
* Zimbabwe was a net maize importer in this year, so there were no foreign exchange gains.

Sources: FAO Commodities and Trade Division for trilateral maize export quantities;
Takavarasha (1987) for trilateral wheat import quantities, and total maize exports and wheat imports;
GMB (various years) for maize prices;
Morris (1987) for wheat prices used to calculate foreign exchange earnings and savings.

surpassed US$ 36 million (in real 1980 terms), they have also been highly variable. This variability is probably due to the fact that all of the following factors are involved in determining the extent of trilateral arrangements in any given year: Zimbabwean maize supplies and supplies in alternative source countries such as Malawi and Kenya; maize supplies in potential recipient countries; Zimbabwean supply of and demand for wheat; availability of intra-African transport facilities; world wheat and maize prices; and willingness to pay in either cash or kind on the part of the international donor community. While trilaterals have grown in importance during the 1980's, potential

for further expansion and regularization of trilateral programs may be seriously impeded by inability to control all these variables.

4.5. Implications

In overall terms, the capacity of the SADCC countries to either produce enough food to meet regional needs or earn enough foreign exchange to purchase adequate food imports has eroded substantially in the 1980's. While much of this erosion is attributable to continued civil war in Mozambique and Angola, persistent balance of payments deficits in several other SADCC countries indicate that these countries have the potential to become exposed to serious food insecurity in years of domestic production shortfalls. Moreover, regional dependence has increased in the latter half of the 1980's on two sources for maize imports -- Zimbabwe and South Africa. This is because Malawi's ability to produce maize for official export has been reduced as a result of the Mozambiquean refugee influx and domestic production shortfalls. Although it is possible that Tanzania and Zambia may once again become maize exporters to the region (as they were in the early and mid-1970's), this has not yet happened.

Clearly, strategies must be formulated for increasing the flow of food security-related staple foods and agricultural inputs into the SADCC region. Key constraints on increased agricultural marketing and trade must first be identified. It is likewise important to identify potential ways to relax some of these constraints. Identifying major constraints and their potential solutions are the general goals of the remaining chapters in this dissertation.

CHAPTER V

PRICE RELATED CONSTRAINTS AND OPPORTUNITIES FOR SADCC AGRICULTURAL TRADE

5.1. Introduction

Prices and exchange rates are among the most important coordinating mechanisms for agricultural marketing and trade. This chapter explores the implications of pricing, subsidy, and exchange rate policies in five Southern African countries on the marketing and trade of staple food commodities. Because white maize is the most important staple food consumed in most Southern African countries, analysis focusses primarily on this commodity. The countries examined are Zimbabwe, Zambia, Malawi, Tanzania, and South Africa. These countries were chosen because they are the largest producers and consumers of white maize in Southern Africa. They are also major actors in regional trade. Mozambique has not been included due to lack of reliable data. However, it is an important component of the trade equation because it is currently the largest food aid importer in the region. Its strategic role as an outlet to the sea for Zimbabwe, Zambia, and Malawi also greatly influences the costs of trading.

Section 5.2 presents an overview of recent maize pricing and subsidy policy developments in each of the five countries. The following section employs parity prices to analyze the competitiveness of alternative import sources in selected SADCC markets. Much of the analysis focusses on the role of transport costs in determining

comparative advantage. This section also discusses methodological issues related to choice of an appropriate reference price for white maize parity pricing. Section 5.4 extends the parity pricing analysis by incorporating parallel markets. Discussion centers on the effects on marketing and trade of exchange rate overvaluation, consumer and export subsidy policies, and lack of policy harmonization among regional neighbors. The final section summarizes the chapter's most important policy implications as well as identifying future data collection and research needs.

5.2. Recent Developments in Maize Pricing Policy in Southern Africa

While Southern African agriculture is diverse with regard to climate, soil conditions, structural characteristics, and the array of policy issues facing each government, maize marketing, pricing and subsidy policies are similar in a number of respects.

Of the five countries surveyed in this section, three (Zimbabwe, Zambia, and South Africa) maintain official monopsonies on purchasing maize from farmers [1]. The remaining two (Malawi and Tanzania) used to have officially-decreed single-channel marketing systems. In recent years however, they have embarked upon liberalization programs which permit private traders to compete with parastatal marketing boards. Governments in all five countries attempt to tightly control

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[1] This does not necessarily mean that governments are always effective at enforcing official monopsony positions. To varying degrees, unauthorized buying of maize has been practiced in Zimbabwe and Zambia.

international maize trade by authorizing their parastatals [2] to act as sole importers and exporters of unmilled maize.

Effectiveness in controlling market flows of maize varies widely among the governments. Table 5-1 shows the portion of total production that is officially marketed for the five countries since 1980/81. The share of official purchases in production is quite high (over 50%) in South Africa, Zimbabwe, and Zambia while it is very low in Malawi and Tanzania. In South Africa and Zimbabwe, this is largely due to the historical dominance of large white commercial farms in the agricultural economy. An additional factor in Zimbabwe is the successful integration of many communal farmers into the official market after Independence. In Zambia, a pricing structure that makes it attractive to sell maize to the marketing board or provincial cooperatives, and then buy back cheaper maize meal is largely responsible for the high percentage of official purchases.

Parallel marketings have historically been substantial in Tanzania and Malawi. In one sense, recent policy reforms allowing private sector participation may be viewed more as a belated recognition of reality than as a radical departure from previous marketing practices in these two countries.

For the most part, marketing boards either generated surpluses or relatively small deficits during the 1970's. However in the 1980's, the collapse of world prices for many commodities, a new awareness by

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[2] The maize marketing boards for each country are: Zimbabwe -- the Grain Marketing Board (GMB); Zambia -- the National Agricultural Marketing Board (NAMBOARD); Malawi -- the Agricultural Marketing and Development Corporation (ADMARC); Tanzania -- the National Milling Company (NMC); and South Africa -- the Maize Board.

Table 5-1: Production and Official Marketings of Maize in Selected Southern African Countries, 1980/81-87/88
(Thousand Metric Tons)

	Malawi			Zimbabwe			South Africa		
	Prod. (A)	Mkt. (B)	(B) as % of (A)	Prod. (A)	Mkt. (B)	(B) as % of (A)	Prod. (A)	Mkt. (B)	(B) as % of (A)
1980/81	1240	137	11.0%	1625	815	50.1%	10762	9994	92.9%
1981/82	1240	246	19.8%	2767	2014	72.8%	14656	13574	92.6%
1982/83	1370	245	17.9%	1786	1391	77.9%	8359	7511	89.9%
1983/84	1400	297	21.2%	844	617	73.1%	4083	3407	83.4%
1984/85	1360	273	20.1%	1283	942	73.4%	4393	3659	83.3%
1985/86	1300	111	8.6%	2960	1823	61.6%	7658	7133	93.1%
1986/87	1200	60	5.0%	2545	1677	65.9%	7937	7281	91.7%
1987/88*	1420	110	7.7%	NA	NA	NA	7371	6528	88.6%

	Tanzania			Zambia		
	Prod. (A)	Mkt. (B)	(B) as % of (A)	Prod. (A)	Mkt. (B)	(B) as % of (A)
1980/81	1839	105	5.7%	NA	693	NA
1981/82	1654	89	5.4%	935	510	54.6%
1982/83	1651	86	5.2%	935	531	56.8%
1983/84	1939	71	3.7%	872	569	65.3%
1984/85	2093	85	4.1%	1122	636	56.7%
1985/86	2211	178	8.1%	1215	955	78.6%
1986/87	2359	173	7.3%	1023	648	63.4%
1987/88*	NA	NA	NA	1385	1007	72.7%

Notes: In Tanzania, figures are for NMC purchases only. In 1985/86, cooperative unions were also alowed to purchase grain. Therefore, 1985/86 and 1986/87 figures understate total official purchases.
* Preliminary.

Sources: Tanzania - MDB, "Annual Review of Maize, Wheat, and Rice 1987," May 1987;
Zimbabwe - AMA, "Grain Situation and Outlook Report 1986-87," 1987;
South Africa - Dept. of Agricultural Economics and Marketing "Abstract of Agricultural Statistics 1988," 1988;
Malawi - Kandoole and Kaluwa (1988);
Zambia - MAWD, "Ag. Statistics Bulletin," (various issues), NAMBOARD, and NCDP, "Interim Progress Report #2," June 1988.

governments that their agricultural sectors needed stimulation in the form of higher prices, and increased pressure by urban constituents to keep food prices low, all contributed in varying degrees to substantial increases in direct government subsidy outlays for exporting, domestic marketing and consumption of maize in all five countries. A discussion of the recent evolution of pricing and subsidy policy in each country follows.

A. Zimbabwe

Because Zimbabwe is the largest and most consistent maize exporter of the SADCC nations, agricultural policy developments in that country greatly influence supply and demand conditions in the regional white maize market. Zimbabwe is cited by many observers as an African success story because of its government's ability to induce farmers to produce record harvests in the 1980's. Yet maize self-sufficiency has been costly as high producer prices and low selling prices in both domestic and export markets have combined to produce large maize account deficits for the Grain Marketing Board (Table 5-2).

GMB losses have been large because costs have not been covered by government-controlled domestic selling prices (which have not been raised since 1985) nor by export prices. Annual losses averaged Z$ 54.2 million for the 1985/86-87/88 period [3]. Most significant for SADCC food security, 60% of this deficit is attributable to losses from exporting. Other important elements of this deficit include transport

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[3] Average exchange rates were: 1985/86 - Z$0.619=US$1; 1986/87 and 1987/88 - Z$0.597=US$1.

Table 5-2: Zimbabwe Grain Marketing Board Maize Accounts
1985/86-87/88
(In Zimbabwe Dollars Per Metric Ton)

	87/88	86/87	85/86
Acquisition Costs (Grain and Bags)	198.40	175.56	196.14
GMB Costs:	63.49	76.70	75.19
Handling	13.94	15.71	17.61
Internal Transport	10.73	7.01	5.85
Administration	3.79	4.13	4.18
Interest Charges	35.03	49.85	47.55
Cost of Maize Sold:	261.89	252.26	271.33
Sales:			
Gross Export Realizations -- Grain	204.26	183.50	228.50
Less Transport and Other Export Costs	22.89	25.95	20.73
Net Export Realizations	181.37	157.55	207.77
Deficit on Export Sales	80.52	94.71	63.56
Local Realizations -- Grain Only	219.62	217.24	205.80
Deficit on Local Sales	42.27	35.02	65.53
Total Deficit on Trading (Weighted Average)	39.52	47.47	54.75
Total Losses (Z$ Millions)	58.9	57.3	46.3
Exports (Thousand MT)	393.3	494.5	285.0
Export Losses (Z$ Millions)	31.7	46.8	18.1

Note: All figures on per MT basis, except for the last three rows.

Source: GMB, "Report and Accounts," various years.

subsidies arising from pan-territorial producer pricing and storage subsidies resulting from pan-seasonal pricing (Muir and Takavarasha, 1988). Although some analysts have argued that net foreign exchange benefits accrue from such transactions (Murphy, 1988), it is questionable whether Zimbabwe should continue to encourage excess maize production and stock accumulation if the fiscal costs of exporting are so high. Such a policy may be sensible in the short-run if Zimbabwe possesses a comparative advantage in maize production, but maize exports are implicitly taxed by exchange rate overvaluation. In this case, a maize export subsidy would reduce the effect of the implicit tax. In the long-run however, to the extent that financial losses from maize trading contribute to persistent government budget deficits, inflation is fueled. This results in real exchange rate depreciation. If the nominal exchange rate is not devalued accordingly, this leads to greater overvaluation which requires additional subsidies to make Zimbabwean maize competitive in international markets. Therefore, this vicious cycle is best alleviated by removing the implicit tax (i.e. devaluing) rather than continuing explicit export subsidies.

B. Zambia

While Zambia was a net maize exporter to SADCC during five years in the 1970's (see Tables 4-4 and 4-5), it has been a net maize importer since 1980. Many observers believe that Zambia has the agronomic potential to surpass Zimbabwe as the "bread basket" of Southern Africa. However, a combination of unattractive producer prices, poorly functioning input delivery systems, and very low maize

meal consumer prices which encourage over-consumption and large-scale smuggling into neighboring countries (primarily Zaire and Namibia) have combined to make food self-sufficiency an elusive goal.

Table 5-3 presents total subsidies paid by the government of Zambia since 1982 as a percentage of revenues and GDP. These subsidies include payments to NAMBOARD to cover transport and handling losses and consumer price subsidies which are currently paid to millers. Subsidy outlays are now approaching 20% of government revenues. Maize subsidies make up a large portion of total subsidies. Of estimated 1988 total subsidies, subsidies on maize handling and milling alone have been allocated ZK 948.3 million from the government budget. This represents 82% of all projected subsidy expenditures (Sipula et al., 1988).

Pan-territorial pricing for maize was first instituted in 1973 and has significantly increased NAMBOARD transport costs over the years. Data contained in Table 5-4 provides evidence that this policy has resulted in significant shifts of officially marketed maize production away from the Central and Southern provinces (which are much closer to the major consumption centers of Lusaka and the Cooperbelt) to the more distant Eastern and Northern provinces.

Maize meal subsidies have grown because consumers pay less than half the costs of marketing and milling maize (Table 5-5). While producer prices and marketing costs have risen substantially since 1985/86, the official retail price has remained virtually unchanged. As such, the 1987/88 official retail price for breakfast and roller meal covered only 38% of marketing and processing costs. Because retail

Table 5-3: Subsidy Payments by the Government of Zambia
as a Percent of Government Revenues, 1982 - 1988
(Millions of Zambian Kwacha)

Calendar Year	Govt. Revenues (Mill. ZK)	Subsidy Payments (Mill. ZK)	Subsidies as % of Revenues	Subsidies % of GDP	Subsidies % of Deficit	Total as % of Expend.
1982	841	154	18.3%	4.28%	23.05%	10.93%
1983	1016	82	8.1%	1.96%	25.08%	6.09%
1984	1092	91	8.3%	1.85%	21.98%	6.32%
1985	1547	188	12.2%	2.67%	17.85%	7.62%
1986	3022	536	17.7%	4.43%	27.10%	9.89%
1987	4985	676	13.6%	3.74%	33.33%	11.95%
1988 (est.)	5972	1156	19.4%	NA	NA	NA

Note: Subsidies include payments to NAMBOARD to meet transport and handling cost shortfalls, as well as subsidies to consumers.

Sources: Revenue and subsidy figures from Sipula et al. (1988);
GDP, deficit, and expenditure figures from IMF, "International Financial Statistics," (various issues), and NCDP, "Economic Report 1987" (1988).

Table 5-4: Regional Structure of Official Zambian Maize Marketings, 1974-76 to 1983-85
(Three-Year Averages in Thousand Metric Tons)

	Major Producing Provinces Near Consumption Centers			Major Producing Provinces Far From Consumption Centers		
Years	Central	Southern	% of Total Zambia	Eastern	Northern	% of Total Zambia
1974-76	315	225	85.7%	72	9	12.9%
1977-79	189	225	77.1%	63	18	15.1%
1980-82	171	189	68.2%	90	36	23.9%
1983-85	198	108	52.8%	153	63	37.3%

Source: Mwanaumo (1988).

Table 5-5: Structure of Official Zambian Breakfast and Roller Meal Retail Prices, 1985/86 and 1987/88 (In Zambian Kwacha per Metric Ton)

	Breakfast Meal		Roller Meal	
	1985/86	1987/88	1985/86	1987/88
NAMBOARD/PCU Costs:				
Producer Price (MT Unmilled)	611.00	888.80	611.00	888.80
Transport and Handling	193.00	240.12	193.00	240.12
Total Costs	804.00	1128.92	804.00	1128.92
Selling Price	367.00	888.80	367.00	888.80
NAMBOARD/PCU Deficit	-437.00	-240.12	-437.00	-240.12
Miller Costs:				
Buying Price	367.00	888.80	367.00	888.80
Minus: by-Product Value	18.79	45.50	6.20	15.00
Net Purchase Price (650 kg)	348.21	843.30		
Net Purchase Price (900 kg)			360.80	873.80
MT of Unmilled Maize for 1 MT of Meal	1.54	1.54	1.11	1.11
Cost Prior to Milling for 1 MT of Meal	536.24	1298.68	400.49	969.92
Processing and Overheads	192.43	337.60	139.03	293.20
Total Costs Per MT of Meal	728.67	1636.28	539.52	1263.12
Plus: 3% Margin	21.86	49.09	16.19	37.89
Full Cost at Retail Level (Inc. NAMBOARD/PCU Subsidy)	1187.53	1925.49	992.70	1541.13
Official Retail Price (MT)	746.40	754.80	575.40	583.60
Govt. Profit/Loss	-441.13	-1170.69	-417.30	-957.53
Official Retail Price as % of Cost	62.9%	39.2%	58.0%	37.9%

Note: Breakfast meal is the most refined meal, sold in Zambia, with an extraction rate of 65% from maize grain. Roller meal is coarser, with an extraction rate of 90%.

Sources: All 1985/86 data from Snell (1987);
1987/88 NAMBOARD and PCU costs from Ministry of Cooperatives (1988);
Breakfast and roller meal conversion factors and miller and retail margins from Zambian Prices and Incomes Commission (1988).

maize meal prices are lower than producer prices, producers are provided with a strong incentive to sell their output through official channels and buy back subsidized meal.

In November 1988, the Zambian government announced that a new coupon system for rationing subsidized maize meal would begin in January 1989. With this program, officials expect to halve the maize meal subsidy in 1989 and fully eliminate it by 1992 [4]. It is not yet clear what the fiscal effects of the program will be. If consumer prices are not raised substantially in 1989 however, subsidy levels will be even higher than in previous years as the 1988/89 pre-planting producer price was raised by 38% over the 1987/88 price and record marketings of 15.3 million 90 KG bags are anticipated [5].

C. Malawi

Like Zimbabwe, Malawi's agricultural sector is bimodal. Estate farms are largely producers of flue-cured and burley tobacco, tea, and coffee for export while smallholders produce fire-cured tobacco, maize, cotton, and groundnuts. Until very recently, ADMARC was officially the sole authorized buyer of all these smallholder crops. In 1987, private competition was officially permitted in maize marketing.

While estate farms are allowed to sell their tobacco directly on the auction floors, smallholders are obliged to sell to ADMARC who then resells at auction. Table 5-6 shows ADMARC profits and losses from

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[4] "Times of Zambia," November 15, 1988 and February 4, 1989.

[5] Personal communication from NAMBOARD officials, November 1988.

Table 5-6: ADMARC Profits and Losses on Maize, Tobacco, and Total Operations, 1971/72-87/88 (Millions of 1980 Malawi Kwacha)

Year	Tobacco	Maize	Total
71/72	11.3	-0.1	15.6
72/73	7.8	-0.1	10.5
73/74	4.9	3.0	12.4
74/75	7.9	0.4	13.4
75/76	15.8	-4.3	14.8
76/77	21.3	-2.2	30.6
77/78	30.8	-2.8	33.4
78/79	5.0	-4.0	5.0
79/80	3.1	-4.8	0.1
80/81	3.2	-4.5	0.3
81/82	7.9	-4.4	7.7
82/83	NA	NA	9.6
83/84	NA	NA	4.7
84/85	9.8	0.7	8.0
85/86	-3.8	-3.1	-9.7
86/87	1.9	-5.2	-8.2
87/88	4.9	0.0	1.5

Note: Profits and losses converted into constant prices using the Malawian GDP deflator.

Sources: For nominal profits/losses, ADMARC Annual Reports, various years;
For Malawi GDP deflator, IMF, "International Financial Statistics Yearbook," (1988).

tobacco, maize, and overall trade for the period 1971/72-87/88. Due to high world tobacco prices, ADMARC earned profits in the 1970's and early 1980's by effectively taxing smallholder tobacco and using profits to cross-subsidize its maize accounts which were consistently in deficit (Kydd and Christiansen, 1982).

In 1985, a series of events converged to produce a financial crisis for ADMARC [6]. In 1981/82, as part of Malawi's first Structural Adjustment Loan agreement with the World Bank, maize producer prices were raised by 44% in real terms (Table 5-7). Other producer prices also registered substantial increases in subsequent years. For example, real tobacco and groundnut prices rose by 54% and 29% respectively from 1981/82 to 1985/86.

In 1985, auction floor prices for tobacco fell by approximately one-third, export prices for other commodities also fell, and maize export markets in neighboring countries dried up due to good harvests. These, combined with high maize producer prices and a bumper harvest, imposed heavy costs on ADMARC which was no longer able to cross-subsidize maize account losses with tobacco account profits. This led to overall nominal deficits of MK 17.8 million and MK 16.6 million for the 1985/86 and 1986/87 marketing years (MK 9.7 and MK 8.0 million in 1980 Malawi kwacha) and calls for streamlining ADMARC's operations -- including maize marketing liberalization which began in the 1987/88 marketing year.

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[6] The following discussion is partially based on personal communications with Lee Ann Stackhouse who served in 1987 as a UNDP consultant on Malawian maize marketing liberalization.

Table 5-7: Real Official Producer Prices Paid by ADMARC, 1979/80-87/88
(Tambala per kg., 1980 = Base Year)

Year	Maize	Rice	Ground-nuts	Tobacco	Cotton
79/80	7.7	11.7	38.5	68.8	26.8
80/81	6.6	10.0	33.0	59.5	23.0
81/82	9.5	8.6	31.8	51.2	24.5
82/83	8.7	9.0	43.3	80.3	29.9
83/84	8.6	10.6	42.3	79.0	29.6
84/85	7.6	10.6	43.5	90.1	28.6
85/86	6.7	10.4	40.9	79.1	27.3
86/87	6.0	10.8	37.0	71.5	NA
87/88	6.6	10.7	NA	NA	NA

Note: Nominal producer prices are converted into constant prices using the Malawian GDP deflator.

Sources: For prices, ADMARC Annual Reports, various years; For the Malawian GDP deflator, IMF, "Financial Statistics Yearbook," (1988).

As mentioned at the beginning of section 5.2, ADMARC does not dominate domestic maize marketing to the same degree as parastatal marketing boards in several other Southern African countries. This is because the government has been either unwilling or financially unable to offer producer prices that are competitive with open market prices. Figure 5-1 compares open market retail prices [7] with the official producer and retail selling prices offered by ADMARC from April 1984 to August 1988. Unfortunately, open market producer prices are unavailable. Yet the wide spread between official producer prices and open market retail prices makes it unlikely that official markets are

[7] Computed as the average price for four Malawian markets -- Lilongwe, Blantyre, Zomba, and Mzuzu. See Appendix B for data.

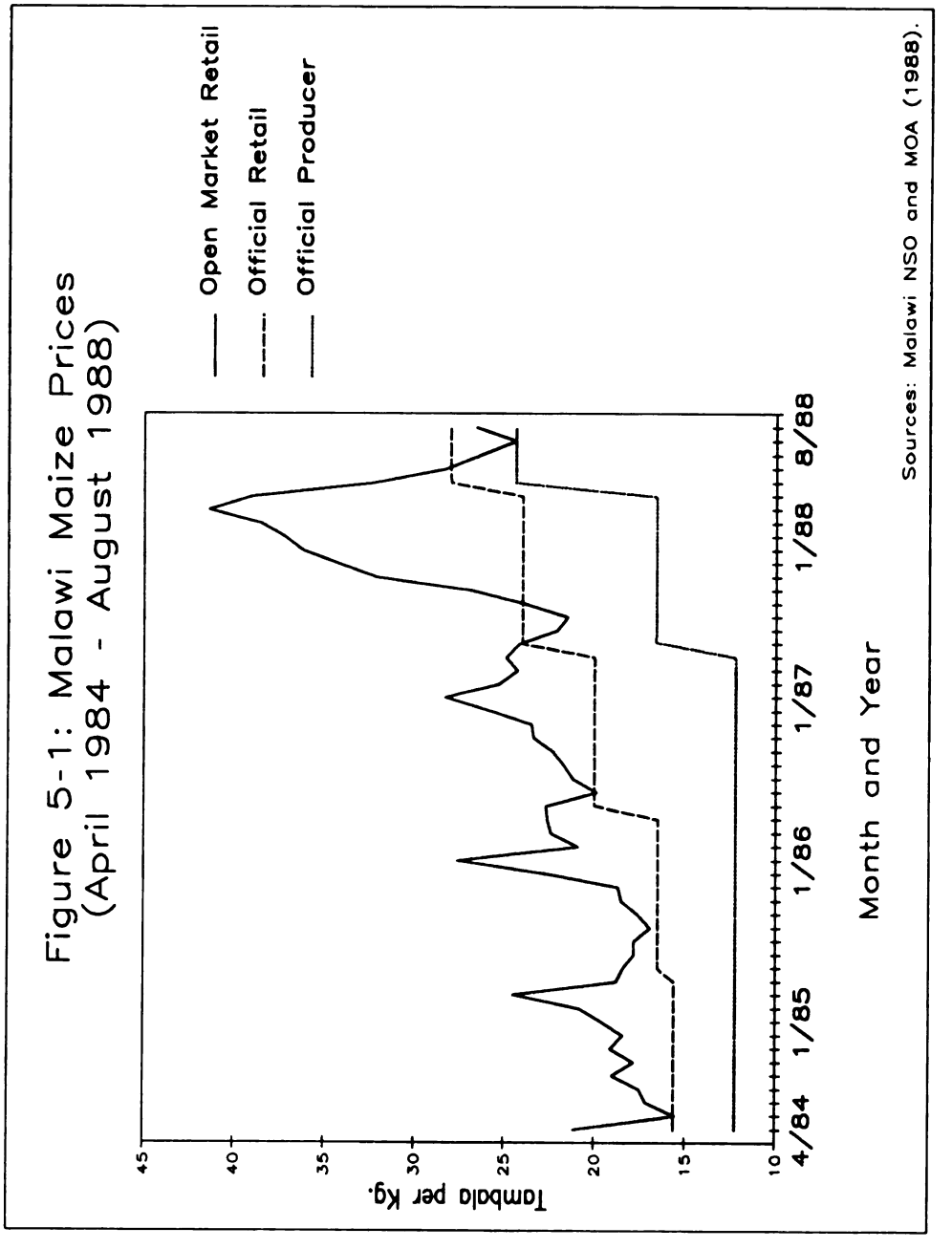
Figure 5-1: Malawi Maize Prices
(April 1984 - August 1988)
Open Market Retail
Official Retail
Official Producer
Tambala per Kg.
45
40
35
30
25
20
15
10
4/84
1/85
1/86
1/87
1/88
8/88
Month and Year
Sources: Malawi NSO and MOA (1988).

competitive with informal markets in buying from producers, except during the immediate post-harvest period (April to May).

Official selling prices only approach open market prices during the period shortly after harvest. There is anecdotal evidence that private traders buy from ADMARC and resell in the open market when there is a wide margin between the ADMARC selling price and prevailing open market prices. Incentives for doing this appear particularly strong in late 1987 and early 1988. For example, the February 1988 official retail price is only 58% of the open market price.

D. Tanzania

Like Malawi, Tanzanian official maize markets have historically been quite thin. On average, only 5.6% of estimated maize production passed through official channels from 1980/81 to 1986/87 (see Table 5-1). The Marketing Development Bureau (1987) of the Ministry of Agriculture estimates that about 25% of total production is marketed, and of this, 65-75% is sold on parallel markets.

Maize marketing liberalization began in 1984. Prior to liberalization, an official single-channel system operated with the NMC as sole authorized buyer and seller. This system was ineffective for a number of reasons. Producer prices offered by the NMC did not keep pace with inflation. By 1983/84, the official real producer price was equal to only 54% of the 1975/76 producer price. NMC purchases fell to only 71,000 MT in that year (MDB, 1986). Meager official purchases and restrictions on inter-provincial parallel trade resulted in large

foreign exchange outlays for maize imports to feed the large coastal populations.

NMC maize sales were subsidized but it has been alleged that little subsidized maize reached the urban and rural poor for whom it was originally intended (Amani et al, 1987). Those unable to gain access to NMC maize were forced to buy from the parallel market where prices were much higher.

NMC operations were costly because of pan-territorial pricing policies, overstaffing, and imposition of selling prices that failed to cover costs. Pan-territorial pricing for maize and a number of other commodities was first adopted in 1974. This policy has been very expensive for Tanzania because the most fertile maize-producing districts are located in the Southern Highlands area which is very far from Dar es Salaam -- the main consumption center (Suzuki and Bernard, 1987). In 1982/83, a 17% premium was added to the producer price for regions that had an agronomic "comparative advantage" in maize production. Distance from consumption centers was not factored in as the Southern Highlands regions all qualified for the premium.

Table 5-8 shows that producers in distant regions have responded to the implicit transport subsidy that arises from pan-territorial pricing. As a result, Tanzania has become increasingly dependent on districts far from consumption centers for the bulk of its domestic maize production. NMC purchases from the Southern Highlands accounted for an average of only 17.1% of total purchases over the 1970/71-72/73 period. By the time economic liberalization began in 1984, this figure had risen to 76%.

Table 5-8: Southern Highland Regional Shares of NMC Purchases
1970/71 - 1986/87
(Percentage Share)

Marketing Years *	Iringa	Mbeya	Rukwa	Ruvuma	Total Reg. Share
70/71-72/73	16.7	0.9	0.0	0.7	18.3
73/74-75/76	13.7	2.3	2.0	9.0	26.9
76/77-78/79	11.2	4.3	4.6	8.7	28.8
79/80-81/82	23.0	5.4	14.3	14.7	57.5
82/83-84/85	30.7	10.1	18.3	28.6	87.7
85/86-86/87	21.2	7.9	16.4	14.6	60.1

* Percentage shares are three year averages except for 85/86-86/87 which is a two year average.

Sources: Suzuki and Bernard (1987) for 1970/71-79/80 regional purchase figures;
MDB (1987) for 1980/81-86/87 figures.

The combined effects of all these forces produced large losses and significant subsidy payments from the government. In the three years prior to the advent of liberalization, government support for NMC marketing losses were: US$ 48.9 million for 1981/82; US$ 23.3 million for 1982/83; and US$ 28.6 million for 1983/84 [8].

Although begun in 1984, maize marketing liberalization continues to evolve. To date, major elements of liberalization have been: an easing of restrictions on private inter-regional transfers of maize; reintroduction of cooperatives as first handlers in the rural areas within administrative regions; restricting the NMC's role to inter-regional distribution (in competition with private traders), urban

[8] Exchange rates used for these calculations are: TSH8.28=US$1 for 1981/82; TSH9.28=US$1 for 1982/83; and TSH11.14=US$1 for 1983/84.

grain storage and marketing, milling, maintaining the Strategic Grain Reserve, and international trade of grain (Gordon, 1988).

Despite liberalization, cooperative union and NMC maize marketing continues to generate losses. The structure of official maize marketing costs for 1985/86 and 1987/88 is presented in Table 5-9. Costs have risen substantially in the areas of purchase price from producers, transport, bagging materials, and interest payments. Producer prices have been increased to stimulate official marketings. Large devaluations since 1985 are responsible for the rise in costs of import-intensive line items such as transport and bagging. Interest costs have risen due to higher interest rates and the steady accumulation of CU/NMC debt to the National Bank of Commerce in recent years [9]. As a result, controlled selling prices have not generated sufficient revenues to meet CU/NMC costs. This problem has been recently compounded by the fact that good harvests in the last two years have lowered open market prices to the point where they are undercutting the NMC selling price. As such, the NMC risks accumulating stocks which will increase its financial burden.

E. South Africa

Although not a member of SADCC, an understanding of the issues facing the South African maize sub-sector is important because South Africa has historically been the largest exporter of white maize to SADCC and the world (see Chapter IV). While it is likely that South

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[9] NMC's accumulated overdraft for the 1987/88 marketing year totalled roughly 4% of Tanzania's GDP (Gordon, 1988).

Table 5-9: Tanzanian Cooperative Union and National Milling Company Maize Marketing Costs, 1985/86 and 1987/88 (Shillings per Metric Ton)

	1985/86	1987/88
CU Costs:		
Producer Price	5226	8077
Various Levies/Taxes	984	1290
Transport	1200	2079
Bags and Twine	330	1020
Insurance	100	70
Interest	64	1449
Handling	0	50
Fumigation	0	30
Shrinkage	105	247
Union Margin (Sub-Total)	2783	6235
Into-Store Union Cost	8009	14312
Cost Reduction (87/88)	0	2000
Into-Store Price	8009	12312
NMC Costs:		
Purchase from Unions	8009	12312
Transport	1457	1250
Interest	138	1020
Handling and Overheads	1211	530
NMC Margin (Sub-Total)	2806	2800
Total CU and NMC Costs	10815	17112
NMC Sale Price	NA	10900
Official Retail Price	7600	NA
Profit/Loss on Sales	-3215	-6212

Sources: MDB (1988) for all CU costs and 1985/86 NMC costs;
Gordon (1988) for 1987/88 NMC costs.

Africa will continue to supply maize to the BLS states in the foreseeable future, it is questionable whether white maize will be available for export to countries outside SACU because of recent government pricing policy decisions intended to discourage maize production. South Africa has not exported white maize to non-SACU countries since 1983 (Maize Board, 1987). It is even possible that South Africa will become dependent on other African nations such as Zimbabwe for white maize imports [10].

In the face of depressed world maize prices, domestic producer and consumer pricing policies have resulted in large treasury losses for the South African government. The government operates a Maize Stabilization Fund which uses proceeds on domestic sales and exports in profitable years to offset losses in poor years. From 1954/55 to 1979/80, this fund registered a positive closing balance in all years except two as receipts from domestic sales, contributions by producers, and exports generated surpluses. However, Table 5-10 indicates that the fund has been operating at an increasingly large negative balance since 1980/81 -- mainly due to large export losses in 1981/82, 1982/83, and 1986/87. In 1986/87, large harvests and very low world prices resulted in massive export losses of R478 million or R193/MT for white maize and R158/MT for yellow maize.

The government has traditionally covered all Maize Board shortfalls on storage, handling, fumigation, and financing costs of domestic marketings. In recent years, payments have also been made to

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[10] As noted in Chapter IV, South Africa imported 206,000 MT of white maize from Zimbabwe in 1986.

Table 5-10: South African Maize Stabilization Fund Balances, 1980/81 - 1986/87
(Millions of Rand)

	Contributions by:			Previous	Profit/ Loss on	Surplus/ Deficit on		Dom.Sales	Sundry	Closing
	Government	Producers	Consumers	Year Adj.	Exports	Dom.Sales	Interest	Subsidy	Settlements	Balance
80/81	10.0	59.9	0.0	-0.1	-111.1	9.6	-0.3	0.0	0.1	-26.7
81/82	14.6	237.3	0.0	-0.1	-277.4	-4.7	2.7	0.0	0.5	-53.8
82/83	0.0	157.8	0.0	-0.1	-273.0	0.0	-8.7	0.0	3.7	-174.1
83/84	0.0	2.8	0.0	1.4	-29.6	14.8	-17.0	0.0	0.0	-201.7
84/85	0.0	0.0	0.0	-1.6	0.0	0.0	-24.0	0.0	-2.5	-229.8
85/86	40.0	0.0	0.0	-1.4	-28.6	0.0	-30.6	0.0	0.4	-250.0
86/87	39.0	325.3	19.5	0.0	-478.5	-9.4	-17.7	-39.4	-0.2	-411.4

Source: Maize Board, "Report on Maize and Buckwheat," various years.

reduce accumulated stabilization fund debt. These payments have risen substantially over the last several years. In 1980, the government paid a direct subsidy to the Maize Board of R 44.7 million. By 1986, this had risen to R 250 million.

To remedy this situation, the government decided that the Maize Board would have to reduce subsidy needs by either raising selling prices to millers or increasing levies deducted from the producer price. Increased borrowing was not permitted. As a result, the government opted to maintain selling prices more or less unchanged for the 1987/88 season while lowering the maize producer price, but increasing levies to pay for stabilization and other services. In 1987/88, deliveries to the Maize Board fell by 10% compared to the year before and the direct subsidy paid by the government totalled R 100 million. Yet the potential for large financial losses on exports remains and a recent committee of inquiry recommended that the maize sub-sector become increasingly subject to market forces. If world prices continue to be relatively low, this may result in the continued setting of low producer prices, and hence, lower export availability in the future. Because South Africa has historically been the leading exporter in the world white maize market, there is a strong possibility that the market will become even thinner and hence more volatile in the future. The following section analyzes this issue further.

5.3. Assessing SADCC Maize Trade Competitiveness

For bulky low-value commodities such as cereals, transportation costs to and from relevant markets are important determinants of

comparative advantage (Koester, 1986). This is especially true for SADCC in light of the fact that six of the nine countries are landlocked and transportation costs to overseas markets are high.

To assess the potential transportation cost advantages of intra-SADCC trade, import and export parity prices are calculated and compared. The import/export parity price represents the opportunity cost of a given country's tradable commodities (Scandizzo and Bruce, 1980). The import parity price is the CIF import price at a country's border, converted using an appropriate exchange rate, and adjusted for transport and handling to relevant domestic markets. For example, if a commodity can be locally produced less expensively than it can be imported, import substitution may be profitable.

The export parity price is the FOB export price adjusted from a given export market to the appropriate domestic market. For example, if the export parity price is higher than the cost of locally producing a good and transporting it to the relevant domestic market, then that good may be competitive in the export market under consideration.

In the context of assessing intra-SADCC trade potential, examination of import and export parity prices is useful for several reasons. First, the lower the export parity price, the more difficult it will be for a country to profitably export, as high transportation costs outweigh any production cost advantage that the country might enjoy. Second, if import sources are distant, import parity prices will be high because transportation costs make up a large part of the CIF price. This provides greater latitude for import-substituting domestic production. Third, the larger the spread between import and

export parity prices, the greater the potential to produce locally and export to nearby markets, or alternatively, to import from nearby sources. Large import/export parity price spreads can therefore be used to indicate potential for intra-regional trade.

Where markets are thin, choice of an appropriate reference price for calculating parity prices is often problematic. For prospective importers, availability of exportable stocks from various source countries may fluctuate widely from year to year. For exporters, what was an attractive market one year may dry up in subsequent years as harvests in that country improve or the government creates a more favorable policy environment which has the effect of boosting official marketings. In thin international markets, risk-reducing institutions such as futures markets rarely operate. As a result, inter and intra-annual price fluctuations may also be quite large. The world white maize market is very thin and, as pointed out in the last section, policies are in a state of flux in South Africa which is the most important white maize trading country.

South Africa has historically been the world's leading exporter, accounting for roughly two-thirds of recorded world exports during the 1975-1983 period (Table 5-11). Moreover, as noted in Chapter IV, South Africa has traditionally dominated the SADCC maize market with an average market share of 43% over the 1970-1985 period (see Figure 4-4). South Africa has not exported maize to non-SACU countries since 1983 however, and actually imported 200,000 MT from Zimbabwe in 1986 [11].

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[11] South Africa considers the BLS states and Namibia as part of its domestic market because of their membership in SACU. White maize exports to these states totalled 403,000 MT in 1985/86 and 162,000 MT

Table 5-11: Estimated World Exports of White Maize, 1975 - 1983
(Thousand Metric Tons)

	1975	1976	1977	1978	1979	1980	1981	1982	1983
South Africa	1779	1142	1096	1574	971	700	2060	2265	400
Zimbabwe	758	297	420	554	265	86	305	492	251
United States	271	213	49	88	111	323	149	170	111
Kenya	121	113	8	23	120	0	5	45	77
Tanzania	0	0	0	37	16	0	0	0	0
Zambia	17	9	26	61	0	0	0	0	0
El Salvador	0	4	1	1	2	20	10	0	0
Malawi	0	0	0	15	15	0	0	90	100
Total Exports	2946	1778	1600	2353	1500	1129	2529	3062	939
South Africa as % of Total	60.4%	64.2%	68.5%	66.9%	64.7%	62.0%	81.5%	74.0%	42.6%

Notes: For the period, South African exports accounted for 67.2% of total world exports.

Source: FAO, (1984).

United States yellow maize prices are often used for calculating import and export parity prices for Southern African markets, either unadjusted or with some premium attached to account for the preferred nature of white over yellow maize for human consumption. In the Southern African context, use of the US price series is misleading for three reasons.

First, although there is a degree of substitutability between white and yellow maize, they are qualitatively different commodities in most SADCC countries. The political costs of forcing consumers to purchase imported yellow maize are high. SADCC governments are very sensitive to this and only import yellow maize for human consumption in

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in 1986/87 (see Table A-3 in Annex A).

times of severe production shortfalls when commercial or food aid imports of white maize are unavailable.

Second, the US has been the leading maize exporter to SADCC in only two years since 1970 (1974 and 1975) and has not exported large volumes of maize to SADCC since 1981 (see Figure 4-4).

Third, while it might make sense to attach a premium to yellow maize prices in world markets (say on the CIF Rotterdam price) to derive a proxy for the white maize price, this is inaccurate if the maize never leaves Sub-Saharan Africa. Figure 5-2 plots US yellow maize prices transported to Eastern/Southern African ports and South African white maize prices (free-alongside-elevator at Durban) from 1970/71 to 1987/88 [12]. For trade within the region, it is clear that attaching a premium to the US price is an erroneous way to approximate the white maize price. In most years, use of this method substantially overstates the potential returns of regional maize trade because even before a premium is added, CIF yellow maize prices are higher than white maize prices.

Because of the uncertain nature of white maize markets, three reference prices (South African and Zimbabwean white maize, and United States yellow maize) are used in the calculation of import and export parity prices for a number of SADCC markets (Table 5-12). Averages from two three-year periods are formulated as prices from a single year are apt to provide only a snapshot which may not be representative of market conditions over time.

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[12] South African prices from 1983/84 are actually domestic selling prices.

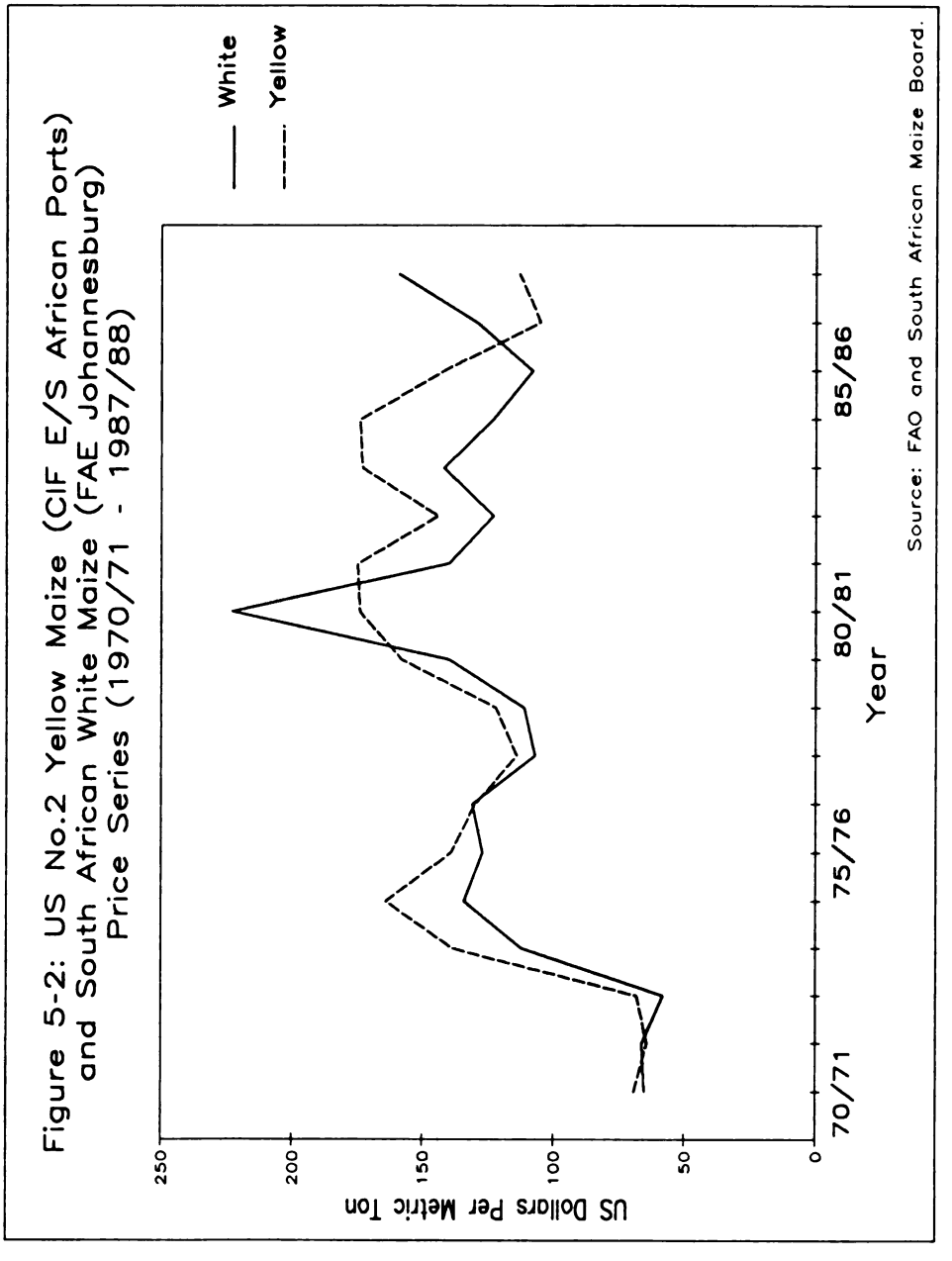

Figure 5-2: US No.2 Yellow Maize (CIF E/S African Ports) and South African White Maize (FAE Johannesburg) Price Series (1970/71 - 1987/88)

Table 5-12: SADCC Import (IPP) and Export (EPP) Parity Prices for Maize Using Different Price Series, 1980/81-82/83 and 1985/86-87/88 (US Dollars per Metric Ton)

	US #2 Yellow (FOB Gulf)		White Maize (FOR Johannesburg)		White Maize (FOR Harare)	
	IPP	EPP	IPP	EPP	IPP	EPP
1980/81-82/83:						
FOB/FOR Price	125		162		182	
Gaborone, Botswana	203	50	171	153	199	165
Maseru, Lesotho	195	58	174	150	219	145
Francistown, Botswana	209	44	177	147	193	171
Bulewayo, Zimbabwe	207	47	179	145	196	168
Harare, Zimbabwe	199	55	187	137	182	182
Lusaka, Zambia	226	29	206	118	217	147
Ndola, Zambia	225	30	219	105	230	134
Tete, Mozambique	217	37	222	102	217	147
Kassama, Zambia	212	43	226	98	237	127
Blantyre, Malawi	253	2	235	89	233	131
Lilongwe, Malawi	247	8	245	79	246	118
Mbeya, Tanzania	198	57	250	74	248	116
1985/86-87/88:						
FOB/FOR Price	88		134		111	
Gaborone, Botswana	151	28	143	125	128	94
Maseru, Lesotho	143	36	146	122	148	74
Francistown, Botswana	157	22	149	119	122	100
Bulewayo, Zimbabwe	155	25	151	117	125	97
Harare, Zimbabwe	147	33	159	109	111	111
Lusaka, Zambia	174	7	178	90	146	76
Ndola, Zambia	173	8	191	77	159	63
Tete, Mozambique	165	15	194	74	146	70
Kassama, Zambia	160	21	198	70	166	56
Blantyre, Malawi	201	-20	207	61	162	60
Lilongwe, Malawi	195	-14	217	51	175	47
Mbeya, Tanzania	146	35	222	46	177	45

Notes: No overland handling charges have been included; All overland transport charges are low-value rail tariffs, unless only road transport available;
For US No.2 yellow maize: Durban is port of transit for Gaborone, Francistown, and Maseru; Beira is port of transit for Bulewayo, Harare, and Tete; Dar es Salaam is port of transit for Lusaka, Ndola, Mbeya, Lilongwe, and Blantyre.

Sources: For transport, border and port charge data, Louis Berger (1986);
For U.S. prices, FAO (1988);
For South African prices, Maize Board (1986), and Dept. of Agricultural Economics and Marketing (1988);
For Zimbabwean prices, GMB, "Report and Accounts," various years;
For exchange rates used in converting South African and Zimbabwe FOR prices, IMF, "International Financial Statistics," various issues.

US FOB yellow maize prices and shipping costs from the US Gulf to Eastern and Southern African ports were obtained from the FAO's "Food Outlook" series. Zimbabwe and South African white maize prices were obtained from their marketing board annual reports and converted into US dollars using average annual official exchange rates from the IMF.

For both time periods, data from a regional transport model developed by the Louis Berger consulting firm are used for calculating overland transport, border, and port charges. For rail transport, Louis Berger collected tariff schedule data for low, medium, and high value commodities shipped on a US dollar per MT/kilometer basis [13]. Table 5-12 uses low value rail tariffs for maize and it is assumed that maize will be shipped by rail wherever there are rail links. Otherwise, more expensive trucking costs are used in the calculations.

Although the Technosynesis consultants generated a regional transport cost database which would have been suitable for estimating 1980/81-82/83 parity prices, there are problems in reconciling it with the Louis Berger database. First, no effort was made by Technosynesis to collect data for rail shipments by value. Because the purpose of Technosynesis' efforts was to construct a regional model for maize storage, one might assume that low value rail cost data were collected. The Technosynesis final report gives no explanation of which data were collected and when one compares Louis Berger low value shipment data with Technosynesis data, Technosynesis costs are often higher. The

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[13] It is common practice for rail companies to cross-subsidize less profitable low value loads with proceeds from more lucrative high value shipments.

opposite would make greater sense because inflation has been substantial for Southern African transport in the 1980's.

In addition, Technosynesis collected no rail and road link data to South Africa, making it difficult to compare South African parity prices with those from other sources.

Because the Louis Berger data are used for both time periods, 1980/81-82/83 import parity prices in Table 5-12 are probably overstated, export parity prices are understated, and the spread between import and export parity is narrower than would be the case if a more appropriate transport cost data set were available for this period.

Because transportation costs average 45.7% of the CIF price of maize originating in the United States over the 1985/86-87/88 period, import/export parity price spreads are large for US maize. They range from US$ 107 for Maseru to US$ 221 for Blantyre. Simply comparing these price spreads with those for Zimbabwean maize, it is possible to conclude that Zimbabwe's transportation cost advantage for trade within SADCC is significant. The import/ export parity price spread is substantially lower for South Africa, but is still larger than that of Zimbabwe for all destinations except Maseru and Gabarone. Therefore, Zimbabwe possesses a transportation cost advantage for SADCC trade in most instances.

However, for the 1980/81-82/83 period, South Africa is the least expensive source as import parity prices for South African maize are

lowest for 11 of the 12 markets [14]. This is due to South Africa's bumper harvests in 1980/81 and 1981/82 and a political willingness to heavily subsidize exports. Export losses totalled over R 600 million during this two year period.

For similar reasons, competitiveness shifts to Zimbabwe for the 1985/86-87/88 period as subsidies averaged 44% of export prices received. As mentioned above, South Africa did not have stocks of white maize available for export outside of SACU during these years. If there had been such stocks, past practice indicates that the South African government would have also been willing to export at substantial losses if necessary. For 1985/86 alone, losses on yellow maize exports totalled R 478.5 million or R155/MT (Maize Board, 1987).

Low export parity prices for US maize indicate that it is not feasible to export Southern African maize to overseas markets because transportation costs would constitute a prohibitively large portion of the CIF price in such markets. However, export parity prices are substantially higher when the South African maize price is used for calculating parity prices. In the latter period, subsidized maize from Harare is only US$ 2 more expensive than South African maize sold in Johannesburg. If nearby non-SADCC markets (such as South Africa or Zaire) are attractive, this substantially raises the opportunity costs of intra-SADCC trade over what they would be if export parity price calculations were based solely on the US price.

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[14] Use of more appropriate transport cost data for this period would only enhance South African competitiveness because it would lower the transport cost portion of South African parity prices more than for Zimbabwean parity prices.

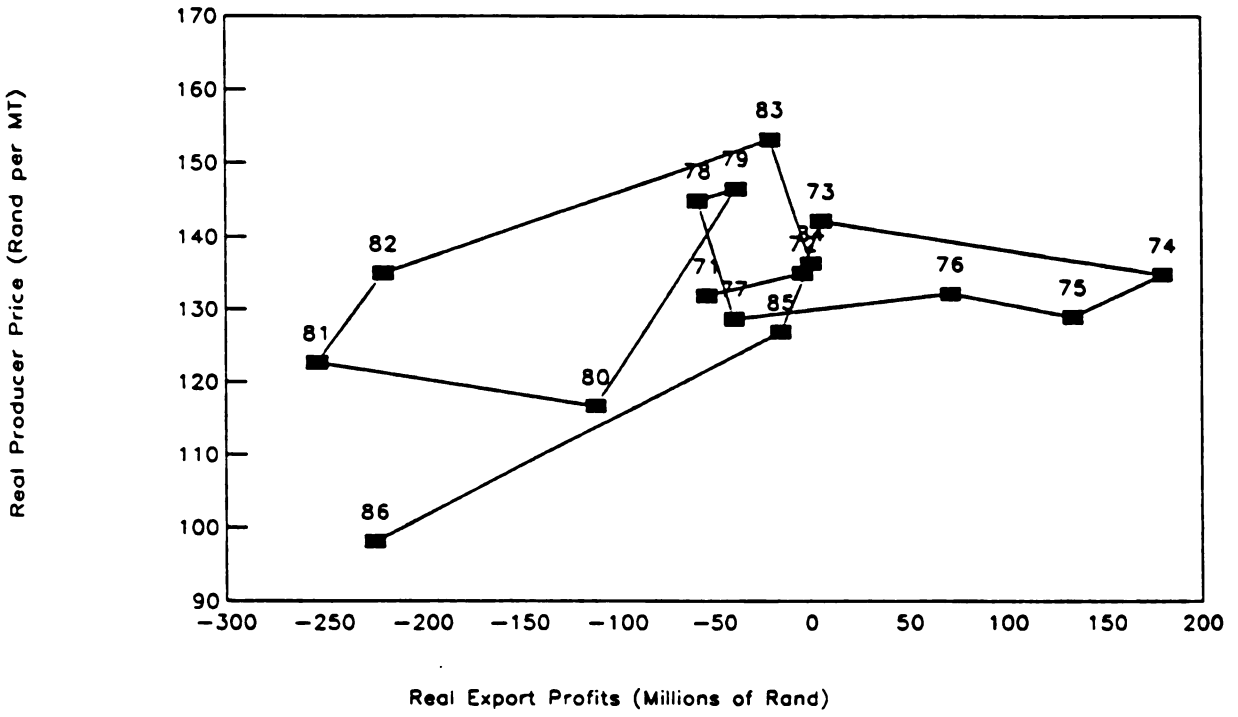
The preceding discussion indicates that competitiveness in regional trade is driven to some extent by transportation costs. Yet in practice, willingness on the part of stock-holding governments to export at large losses is a more important factor determining whether a country exports in the SADCC maize market.

At present, there is considerable debate in both Zimbabwe and South Africa about the desirability of reorienting pricing policy so as to discourage maize production relative to other crops. Proponents of this view wish to avoid accumulating excessive stocks which are costly to maintain. Yet concluding that current efforts to lower maize producer prices will take on an air of permanence lacks historical perspective.

Muir and Blackie (1988) posit that producer price determination in four Southern and Eastern African countries (Kenya, Malawi, Tanzania, Zambia) follows a distinctive cob-web cycle. Production shortfalls result in imports which subsequently lead to the setting of higher prices. If rainfall is good, bumper harvests, large official purchase volumes, and selling domestically or for export at subsidized prices, all pose a heavy fiscal burden that in subsequent years requires the reduction of producer prices.

To determine whether there is a cobweb pattern for South African producer price setting, real producer prices are plotted against real profits and losses on exports in Figure 5-3. Export gains and losses are used instead of production because the major source of financial profits and losses to the South African government in most years is on the export side -- not domestic subsidies. Favorable world prices

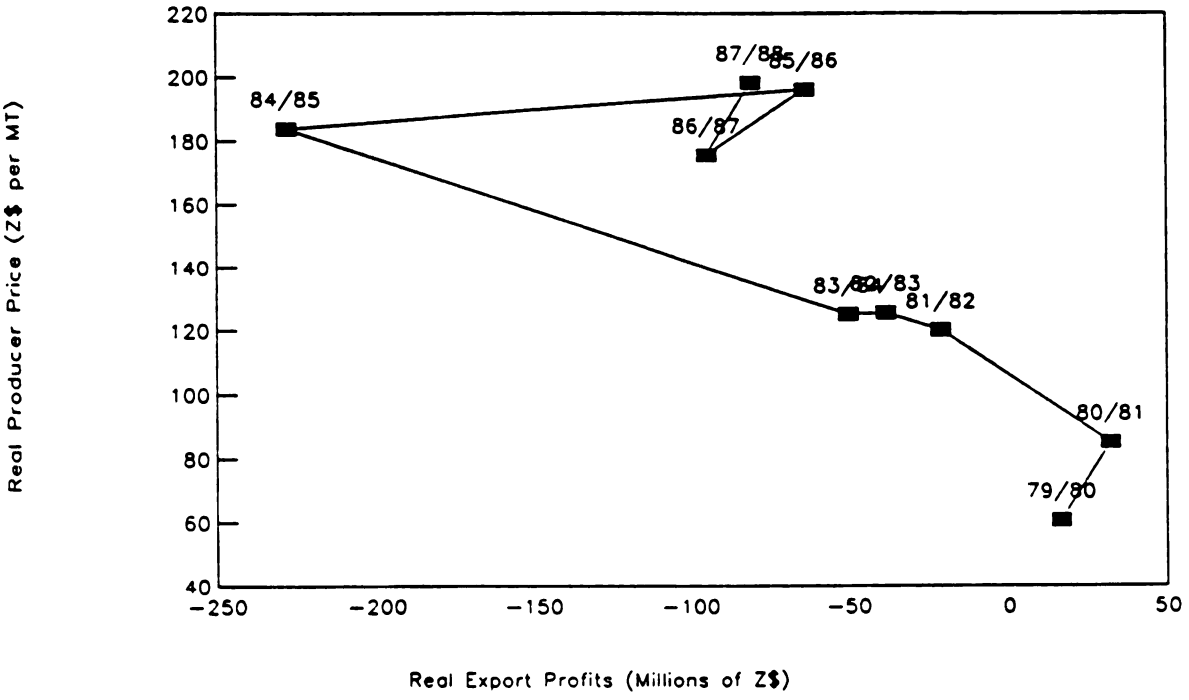
Figure 5-3: South African Maize Export Profits and Producer Prices (1971 - 1986)



allowed the Maize Board to achieve surpluses on international trade throughout most of the 1970's. One result was that the producer price was fairly stable -- registering a coefficient of variation of .034 from 1971 to 1978. The cobweb phenomenon is not evident during this period. However, as losing years become more frequent in the late 1970's, price volatility increases. The coefficient of variation more than triples to .124 from 1977 to 1986 and an explosive cobweb cycle is clearly present. The 1986 real producer price is lower than at any point in more than 30 years. If recent history is any guide, it is likely that South African maize producer prices will remain volatile (but not necessarily low) for as long as world prices are depressed. If producer prices rise again and good harvests follow, South Africa will once again be a force to be reckoned with in non-SACU white maize markets.

Figure 5-4 repeats this exercise for Zimbabwe over the 1979/80 to 1987/88 period (data are unavailable for the 1970's). There is evidence of a cobweb pattern, although the short length of the time series renders such a conclusion tentative. Real producer price increases from 1979/80 to 1981/82 were partially responsible for the significant supply response of 1982/83 which resulted in large official stock accumulation and heavy export losses for the GMB. The real producer price was subsequently lowered but then raised again in 1984/85 following production shortfalls in the drought year of 1983/84. In 1986/87, the real producer price was lowered by 28%, its sharpest decline during the period surveyed. This had more to do with expenses arising from stock accumulation than export losses. Closing stocks in

Figure 5-4: Zimbabwean Maize Export Profits and Producer Prices (1979/80 - 1987/88)



1985/86 stood at 1.4 million MT while opening stocks had only been 460,000 MT. The real producer price remained unchanged in 1987/88 while an additional 400,000 MT of stocks were acquired. For the current year, the nominal producer price has risen by 8.3% (from Z$ 180/MT to Z$ 195/MT) which will probably signify a real decrease if the inflation rate runs near its 12% trend since 1979/80.

It appears that the GMB maize account deficit may be more modest than in recent years. The GMB anticipates exports of 450,000 MT [15] (which approaches 1986/87 levels), but international maize prices are significantly higher than they have been in the past several years. Although anticipated export volumes are large, more remunerative prices should significantly reduce total losses on exports. In addition, no further stock accumulation is foreseen as they are expected to be drawn down modestly from an opening balance of 752,800 MT to a closing balance of 740,000 MT. These developments may reduce financial pressure on the GMB, in turn lessening pressure for further real producer price reductions.

5.4. Agricultural Pricing Policy and Parallel Markets

To this point, discussion has been limited to official trade flows at observable international prices. Such an approach has several limitations.

First, unofficial cross-border trade may be very important for some SADCC countries -- especially for regions that are distant from

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[15] The information source in this paragraph for GMB exports and stock levels is Government of Zimbabwe (1988). For the world maize price situation, the source is FAO, "Food Outlook," March 1989.

large urban centers. Zambia's borders with Zaire, Namibia, Malawi and Tanzania are often mentioned as being particularly porous [16].

Second, official imports (including food aid) may rarely reach isolated provincial centers and villages because of poor transport and marketing infrastructure, and/or lack of political influence in gaining access to food aid (Lele and Candler, 1981). As such, international food security schemes may have little relevance to populations residing in these areas.

Third, food commodities that are sold through official channels are usually purchased by marketing boards at fixed producer prices and then sold at fixed wholesale or retail prices. These prices may not accurately reflect the true costs of production, storage, processing, and distribution. This can result in the establishment of parallel markets. Even if official prices accurately reflect costs, marketing boards may not have sufficient funds at their disposal to purchase all the output offered by farmers. In countries such as Tanzania and Malawi, the domestic parallel market handles larger volumes than the official market. Therefore analysis of official flows can give an incomplete picture of the actual structure of agricultural marketing and trade (Lele and Candler, 1981, Renkow, Leonard, and Franklin, 1983).

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[16] Zairian and donor officials estimate illegal flows of Zambian maize meal into southern Shaba province at 30,000 to 60,000 MT annually (Ariza-Nino and Mueller, 1988). Zambian estimates are far greater, exceeding 300,000 MT ("Times of Zambia," March 17, 1988).

A. An Overview of Possible SADCC Parallel Market Trade Flows

There is considerable informal interview evidence that a wide range of agricultural commodities and consumer goods flow between adjacent Southern African countries through parallel markets. Table 5-13 identifies some of these flows. Information was gleaned from interviews with government officials, agricultural company representatives, researchers, and several traders in informal markets. Newspaper and magazine articles also provided information. Quantities traded are not known, but the widespread availability of some of these goods in border towns indicates that some of these commodity movements may be quite large.

Flows may also vary over time. A wide variety of consumer goods are now believed to flow from Tanzania to Zambia. Prior to the advent of Tanzania's economic liberalization program in 1985 however, consumer goods either were not traded between the two countries, or flowed in the opposite direction. In addition, some of these trade patterns are induced by lack of harmonization of adjacent country's subsidy policies. This makes spatial arbitrage profitable as heavily subsidized goods are exported from one country to another country where they are not subsidized to the same extent. In recent years, this has been the case for unofficial Zambian exports of maize meal, fertilizer, and grain bags. If such policies were to change, the nature of trade flows in these goods would also be altered.

It is quite difficult to analyze parallel market activity in Southern Africa because there are no reliable trade volume data. Making matters worse, only two SADCC governments (Tanzania and Malawi)

Table 5-13: Parallel Market Commodity Flows Between Selected Southern African Countries

To: \ From:	Botswana	Malawi	Mozambique	Namibia	Tanzania	Zaire	Zambia	Zimbabwe
Botswana							Maize meal, green mealies, groudnuts, fresh fruit/vegetables	Fresh fruit/vegetables, handicrafts
Malawi			Salt, beans, peas, kerosene		Radios, textiles, plastic shoes		Maize grain, grain bags, fertilizer, dyed cloth, cement	
Mozambique		Maize, rice, beans						Maize meal, cooking oil, bread, butter, sugar, soft drinks, soap, textiles, shoes, blankets
Namibia							Maize grain, other consumer goods	
Tanzania		Maize grain, millet, cassava, groundnuts, sugar, dried fish					Maize grain, grain bags, day-old chicks, fertilizer, some of goods listed for Zaire	
Zaire							Maize meal and grain, wheat flour, sugar, salt, cooking oil, fertilizer, small livestock, emeralds, stolen vehicles	
Zambia	Soap, textiles, canned fish, autos and spares, electrical items, womens' cosmetics, digital watches	Maize, rice beans, groudnuts, soft drinks, beer, dried fish, hoes		Clothing, blankets, shoes, South African consumer goods	Rice, various consumer goods	Simba[a] beer, second-hand clothing, shoes watches		Cooking oil, sugar, butter, bread, soft drinks, soap
Zimbabwe	Soap, textiles, canned fish, digital watches, electrical items		Dried fish, salt					

Sources: Interviews with government officials, agricultural trading firms, researchers, small traders in various Southern African countries, newspaper/magazine articles.

currently collect parallel market price data. As such, it is not possible to provide a comprehensive picture of physical flows and participant behavior for SADCC parallel markets. One way to begin is by identifying as many markets as possible where flows are thought to be present and then proceed to look in greater detail at cases for which some data are available.

To aid in the identification of geographical areas where parallel market activity in agricultural staples may be taking place, Table 5-14 and Figure 5-5 show adjacent cereals surplus and deficit zones of SADCC [17]. A total of 15 intra-country and 8 inter-country pairings are identified. Of the intra-country pairings, 7 are rather dubious indicators of current surplus/ deficit status. This is because some of the data on which surplus/deficit designations were based are out-of-date. For example, it would be hard to believe that any region in Mozambique and Angola is currently in surplus due to war-related disruptions in agricultural production [18]. In addition, the designation of Francistown as a surplus zone is based on data prior to the six-year drought of the 1980's. For similar reasons, two of the eight inter-country pairings are questionable.

Closer examination of two of the inter-country pairings may shed some light on the constraints on and potential for expanding intra-SADCC trade when parallel markets are also taken into account. Mbeya

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[17] The zones are roughly homogeneous agro-climatically. Zonal designations are from Technosynesis (1984).

[18] However, if civil order were restored to Mozambique and Angola, these regions could possibly regain their position as net cereals exporters.

Table 5-14: Adjacent SADCC Surplus/Deficit Zones in Cereals Production

Within Individual Countries: Surplus Zone	Deficit Zone(s)
Luena	Luanda, Huambo, Menongue
Francistown	Gaberone, Maun
Lilongwe	Blantyre
Lichinga	Nampula, Tete
Tabora	Arusha
Mbeya	Arusha
Dar es Salaam	Arusha
Morogoro	Arusha
Chipata	Kassama
Lusaka	Ndola, Mongu

Across Borders: Surplus Zone	Deficit Zone
Luena	Mongu
Francistown	Bulewayo
Rumphi	Kassama
Lilongwe	Tete
Mbeya	Kassama
Chipata	Tete
Lusaka	Bulewayo
Harare	Tete

Note: In Figure 5-5, broken lines represent national boundaries, while solid lines represent zonal boundaries within countries.

Source: Technosynesis (1984), for designations of surplus/deficit zones.

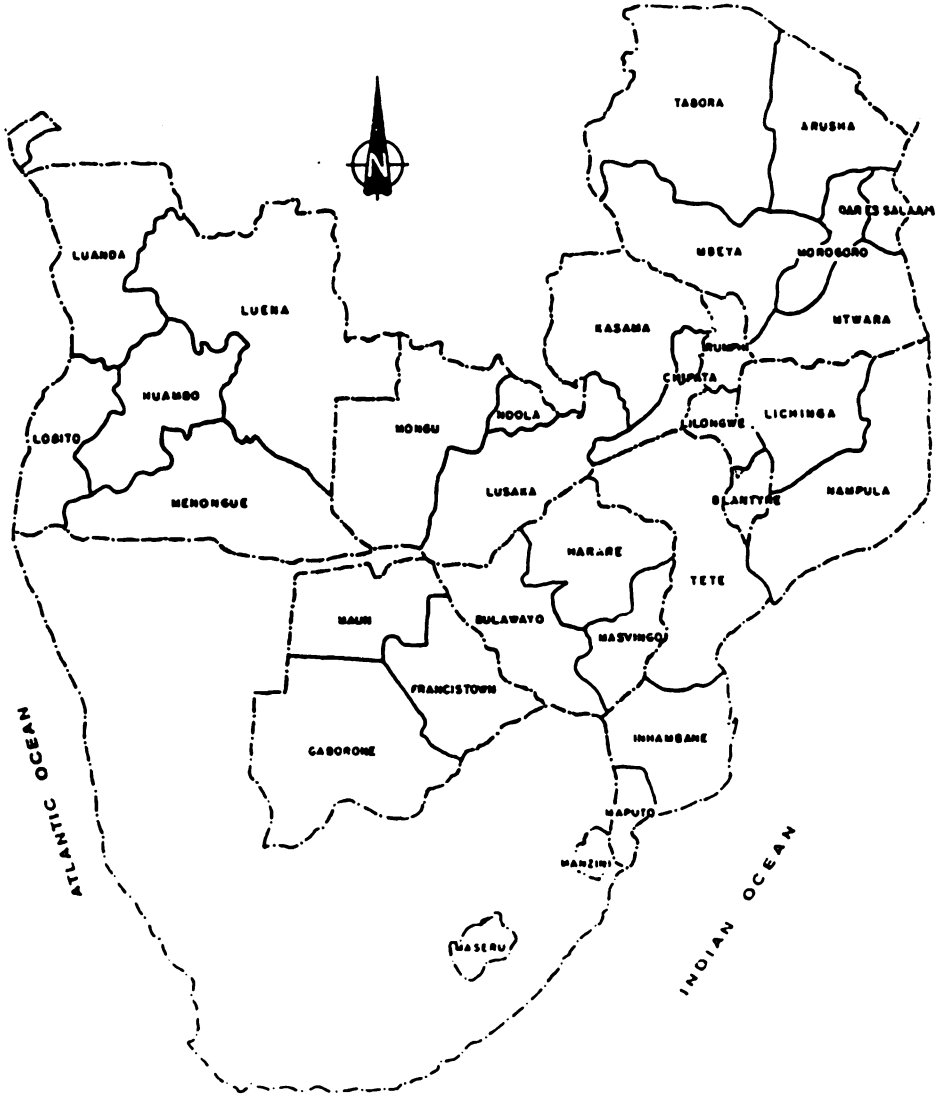

Figure 5-5: SADCC Cereals Production Zones

(south-western Tanzania) and Kassama (north-eastern Zambia) will be examined first to draw out the implications of official pricing policy on agricultural trade potential. Then open market prices for Mzuzu (northern Malawi) and three Southern Highlands region markets of Tanzania will be analyzed to assess factors influencing trade potential in informal channels.

B. Southwestern Tanzania and Northeastern Zambia

Although Mbeya and Kassama are adjacent, they are dissimilar in a number of ways which could indicate trade potential. While Mbeya typically produces surpluses of maize, rice, millet/sorghum, and beans, Kassama's less favorable soils have made it an historically deficit cereals producer. Leading staples produced in northern Zambia have traditionally been sorghum/millet, cassava, and rice. However, government subsidies in combination with low official producer prices for traditional crops have encouraged maize production and consumption, despite a comparative disadvantage in maize relative to more traditional crops and great distances to maize consumption centers such as Lusaka and the Copperbelt (World Bank, 1985) [19]. Mbeya and Kassama are also linked by the TAZARA railway and the TANZAM highway so circulation between the two markets may not be as serious a problem as it is for many other regions of SADCC that are located far from national capitals. Moreover, distance from other maize exporting

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[19] For the 1988/89 agricultural season, Early Warning System personnel in Zambia have estimated that Northern Province will be in a food deficit position, requiring net imports of 40,600 MT in maize equivalents. The Early Warning System team in Tanzania estimates that Mbeya will enjoy a surplus of 144,240 MT in maize equivalents.

countries such as South Africa and Zimbabwe indicate a potential transportation cost advantage for trade between these two regions.

Table 5-5 presented the structure of Zambian breakfast and roller meal subsidies in 1987/88. Treasury losses per ton were substantial as consumers paid less than 40% of costs. The full cost-price is ZK1926/MT for breakfast meal and ZK1541/MT for roller meal. Because official consumer maize meal prices are pan-seasonal and pan-territorial, this also adds an element of subsidy (which is not quantified).

In Table 5-15, import parity prices at Kassama for various official and parallel market sources have been calculated for comparison with the full cost and subsidized Zambian official consumer prices. Among the official sources, Zimbabwe is the least expensive. Zimbabwean maize is less expensive than South African maize because the overland transportation distance is substantially shorter. Although Tanzanian maize (from Mbeya) enjoys a transportation cost advantage over maize from Zimbabwe (the distance from Mbeya to Kassama is only 300 km. while Harare to Kassama is 1340 km.), two factors render Tanzanian maize uncompetitive. First, Zimbabwean maize exports are heavily subsidized (with a loss of Z$ 80.52/MT) while South African and Tanzanian prices reflect only domestic consumer subsidies. These usually tend to be lower than export subsidies.

Second, the Tanzanian shilling was overvalued relative to the Zambian kwacha in 1987. If parallel market exchange rates are used as a basis for comparison, the shilling was 93% overvalued against the kwacha whereas the Zimbabwe dollar was only 14% overvalued against the

Table 5-15: Import Parity Prices for White Maize at Kassama, Zambia from Various Sources

From Various Official Sources, 1987/88:

	Johannesburg		Harare		Mbeya	
Export Price (free-on-rail)	R	310.00	Z$	181.37	TSH	10900.00
Transport to Border	R	51.82	Z$	38.18	TSH	192.78
Border Charge	R	2.04	Z$	3.32	TSH	64.26
Total	R	363.86	Z$	222.87	TSH	11157.04
Official Exchange Rate	ZK/R1	4.36	K/Z$1	5.36	ZK/TSH1	0.14
Border Price	ZK	1586.43	ZK	1194.58	ZK	1543.02
Internal Transport	ZK	368.94	ZK	288.93	ZK	33.34
Import Parity Price (IPP)	ZK	1955.37	ZK	1483.51	ZK	1576.36
IPP for 1 MT Breakfast Meal*	ZK	3348.87	ZK	2622.21	ZK	2765.19
IPP for 1 MT Roller Meal*	ZK	2463.66	ZK	1939.90	ZK	2042.96

From Parallel Market Sources at Mbeya, Tanzania:

	October 1987		April 1988	
Producer Price	TSH	11944.00	TSH	13333.00
Handling	TSH	350.00	TSH	350.00
Transport to Border	TSH	343.94	TSH	343.94
Total	TSH	12637.94	TSH	14026.94
Parallel Exchange Rate	ZK/TSH1	0.07	ZK/TS	0.11
Border Price	ZK	859.38	ZK	1472.83
Internal Transport	ZK	33.34	ZK	33.34
Import Parity Price (IPP)	ZK	892.72	ZK	1506.17
IPP for 1 MT Breakfast Meal*	ZK	1712.39	ZK	2657.10
IPP for 1 MT Roller Meal*	ZK	1284.12	ZK	1965.05

Notes: Unmilled maize is converted to breakfast and roller meal with conversion factors of 1.54 and 1.11 respectively. Transport of Harare maize is by road and rail, Johannesburg maize and Mbeya maize by rail. Local currencies are: South African rand (R); Zambian kwacha (ZK); Zimbabwe dollar (Z$); and Tanzanian shilling (TSH).
*Includes miller/retail margins of ZK 337.60/MT for breakfast meal and ZK 293.20/MT for roller meal.

Sources: Transport, border, and port charges from Louis Berger (1986);
Breakfast and roller meal conversion factors and miller and retail margins from Zambian Prices and Incomes Commission (1988);
Official exchange rates from IMF "International Financial Statistics," various issues;
Parallel exchange rates from International Currency Analysis, Inc. (1989);
Tanzanian official and parallel market prices and parallel market handling charges from Gordon (1988);
South African selling price from Dept. of Agricultural Economics and Marketing (1988);
Zimbabwe export price from Grain Marketing Board (1988).

kwacha [20]. If officially marketed Tanzanian maize were to be exported at parallel market exchange rates, the import parity price of unmilled maize at Kassama would fall from ZK 1543/MT to ZK 811/MT, making it much more competitive.

Unlike official prices, parallel market prices include a seasonal element. The October 1987 producer price at Mbeya is 10% lower than the April 1988 price. While the April Mbeya price is just slightly lower than the Zimbabwe price, the October Mbeya import parity price is far lower than any of the other parity prices. The end result is that government-to-government trade may inhibit informal trade as the seasonal element is subsidized in official trade, either by the source government that pays interest and handling charges for storage to make its exports more competitive, or by the importing government through its pan-seasonal producer and consumer pricing policies.

The high level of subsidies to consumers for staple food commodities such as maize meal is a substantial barrier to regional trade in some cases [21]. Even the extremely inexpensive October 1985 Mbeya maize can not compete with subsidized Zambian maize meal.

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[20] Calculated as follows:

	Official Exch.Rate (OER)	Parallel Exch.Rate (PER)
Shilling per kwacha	7.14	13.76
Zim. dollar per kwacha	0.187	0.214

Percentage overvaluation: (PER/OER - 1) x 100

Overvaluation of the shilling relative to the kwacha = 92.7%
Overvaluation of the Zim. dollar relative to the kwacha = 14.4%.

[21] Consumer subsidies sometimes create incentives for trading. Section 5.4.D discusses the illegal export of subsidized Zambian maize meal to Zaire.

However the magnitude of the subsidy encourages over-consumption. Zambia's recent history of maize meal shortages (especially in provinces off the line-of-rail) makes it highly unlikely that the official retail price is the actual market price facing consumers in many parts of the country, except perhaps during the period just after harvest when supplies are most plentiful (Borton and Shoham, 1985). This suggests the possibility of informal border trade between Zambia and Tanzania during periods of shortage in northern Zambia. Yet given the absence of open market price data in Zambia, it is not possible to assess incentives facing traders.

C. Southwestern Tanzania and Northern Malawi

Because the Tanzanian and Malawian governments collect open market price data [22], it is possible to compare prices between markets to determine whether spatial arbitrage is possible.

Mzuzu is located in northern Malawi and has historically consumed more maize and rice than it has produced. Section 5.2.4 identified Mbeya and Ruvuma as two regions of Tanzania that are major suppliers to Dar es Salaam and other distant cereals deficit regions. These two regions are also net exporters of rice to other parts of Tanzania.

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[22] Since 1984, the National Statistical Office (NSO) of Malawi has been collecting monthly price data for a variety of consumer goods in four urban centers -- Lilongwe, Blantyre, Zomba, and Mzuzu. Data are used for national CPI calculations. The Tanzanian effort began in 1982 and is coordinated by the Marketing Development Bureau (MDB) of the Ministry of Agriculture. The MDB collects monthly open market producer and consumer retail prices for a wide range of agricultural commodities in over thirty cities throughout the country.

The major city in the Ruvuma region is Songea and one secondary urban center is Mbinga, near Lake Malawi (Figure 5-6). Mbeya is approximately 600 kilometers from Mzuzu by road. To reach Mzuzu from Songea and Mbinga, both road and lake transport are necessary. The distance from Songea to Mzuzu is roughly 250 kilometers -- 140 kilometers by road to Mbamba Bay, 60 kilometers on Lake Malawi, and another 50 kilometers by road from Nkhata Bay to Mzuzu. The distance from Mbinga to Mzuzu is about 160 kilometers.

Figures 5-7 and 5-8 [23] show monthly consumer prices of maize and rice in Malawian kwacha per metric ton for Mzuzu, Malawi, and Mbeya, Songea, and Mbinga, Tanzania, for the period January 1986 to August 1988. Reliable data on parallel market handling costs are not available. Four percent has been added to the Tanzanian market prices to approximate these charges. Tanzanian prices have been converted into Malawian kwacha using monthly parallel market exchange rates [24].

Except for early 1986 and the latter part of 1988, Mzuzu maize prices are consistently higher than prices for maize in the three Tanzanian locations. Songea is the least expensive of the Tanzanian cities, with Mbeya and Mbinga alternating as the second least expensive. The largest price gap between Mzuzu and the Tanzanian cities are in late 1987. In November of that year, the gap was MK 290, MK 266, and MK 231 for Songea, Mbinga, and Mbeya respectively.

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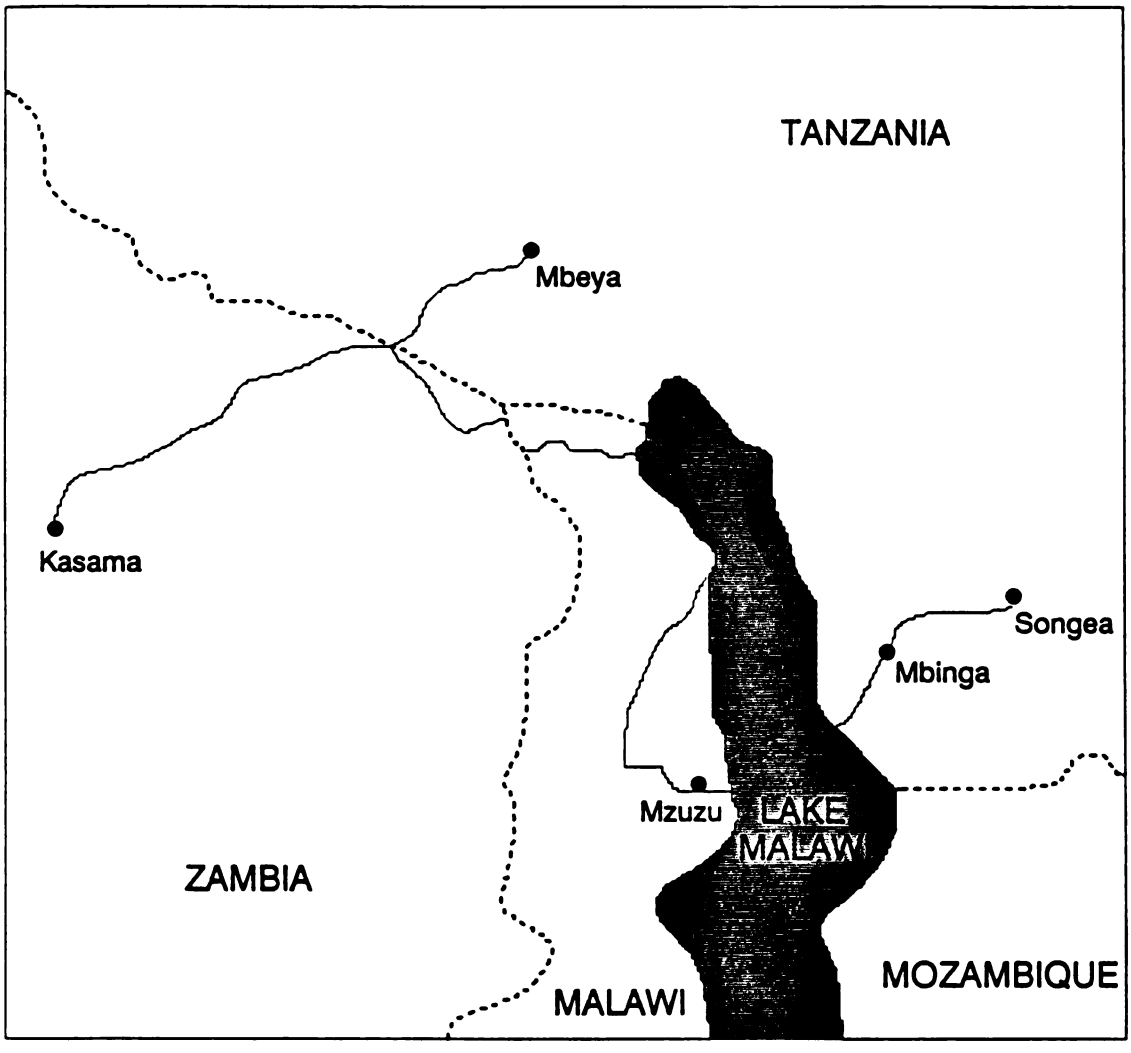
[23] See Appendix B for data on which these figures are based.

[24] Parallel market exchange rates were obtained from International Currency Analysis, Inc., Brooklyn, N.Y.

Figure 5-6: Map of Northern Malawi and the Southern Highlands of Tanzania



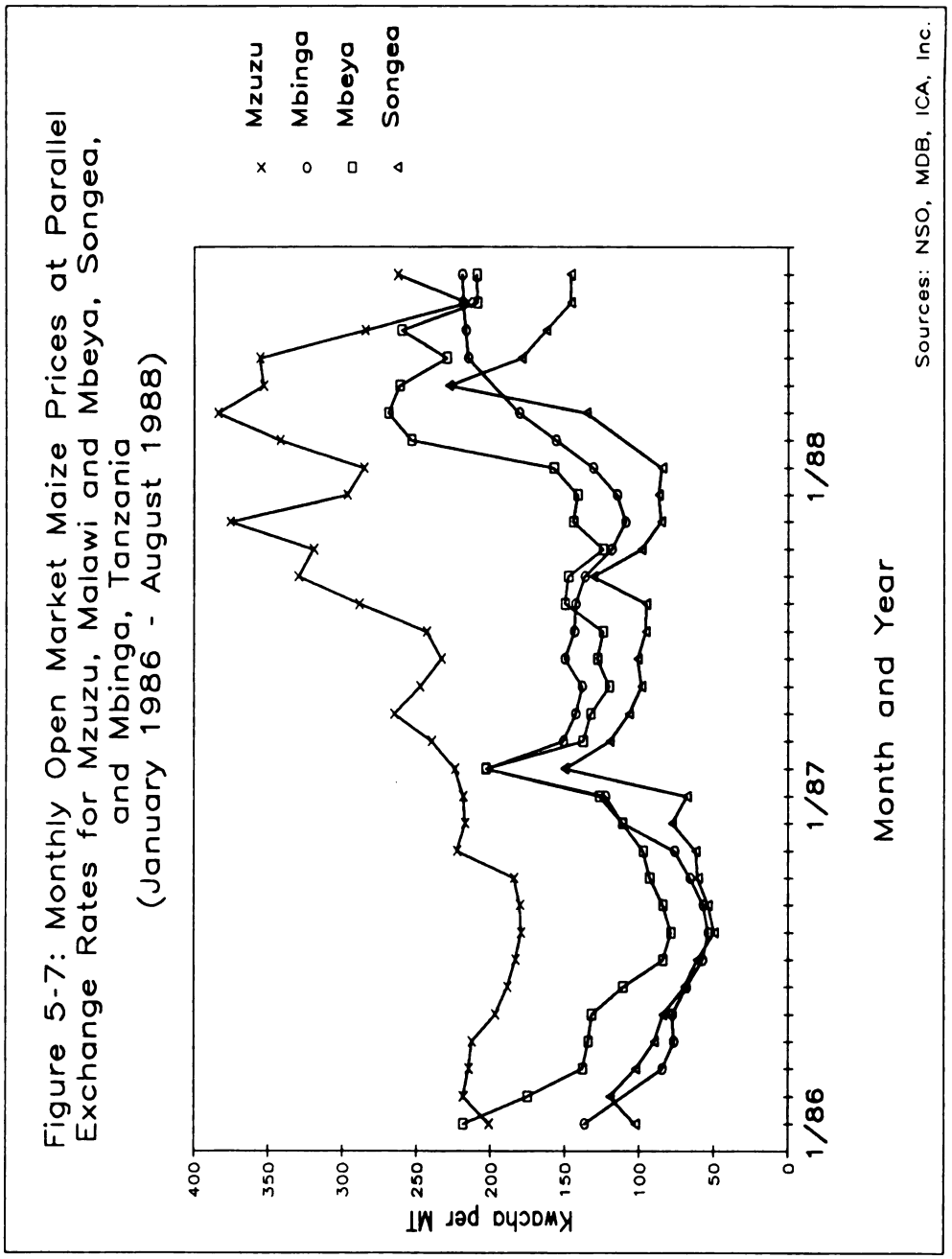


Figure 5-7: Monthly Open Market Maize Prices at Parallel Exchange Rates for Mzuzu, Malawi and Mbeya, Songea, and Mbinga, Tanzania (January 1986 - August 1988)
Mzuzu
Mbinga
Mbeya
Songea
Kwacha per MT
400
350
300
250
200
150
100
50
0
1/86
1/87
1/88
Month and Year
Sources: NSO, MDB, ICA, Inc.

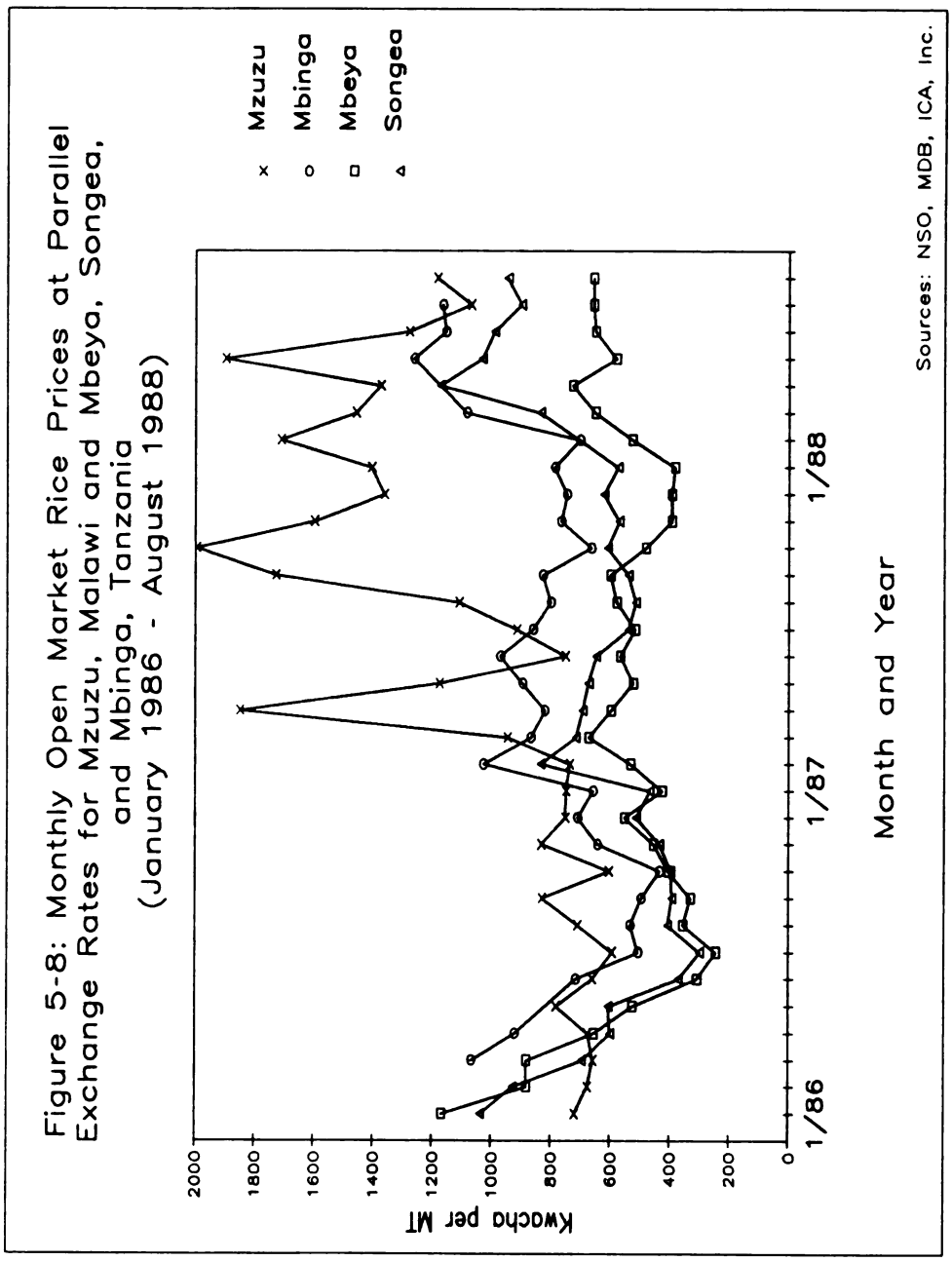


Figure 5-8: Monthly Open Market Rice Prices at Parallel Exchange Rates for Mzuzu, Malawi and Mbeya, Songea, and Mbinga, Tanzania (January 1986 - August 1988)
Mzuzu
Mbinga
Mbeya
Songea
Kwacha per MT
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1/86
1/87
1/88
Month and Year
Sources: NSO, MDB, ICA, Inc.

For rice, Mzuzu prices are slightly higher than Tanzanian prices through most of 1986, but rise substantially beginning in 1987. In late 1987 and early 1988, rice price gaps were even more pronounced than for maize. From September 1987 to February 1988, price gaps with Mzuzu average MK 1179, MK 1036, and MK 885 for Mbeya, Songea, and Mbinga, respectively.

To determine whether these price differences are sufficient to allow spatial arbitrage, it is necessary to add transportation and handling charges to the export price from Tanzania. Because transportation costs between the various markets are only available in US dollars, price differences shown above between markets are converted into dollars at Malawian parallel exchange rates. Dollar figures are then deflated by a transportation cost index for Mzuzu that the Malawian NSO generates as part of its CPI exercise [25]. Table 5-16 shows these calculations for both maize and rice on a metric ton basis.

Road transport costs from Mbeya to Mzuzu were approximately US$ 42 in 1986 [26]. For maize, this figure is surpassed in 11 of the 32 months -- indicating that spatial arbitrage is feasible during those months. Arbitrage is possible in 28 months for rice -- with price gaps far greater than US$ 42.

Transport costs between Songea and Mzuzu are estimated at US$ 18 in 1986 terms. Mbinga to Mzuzu is US$ 11. Price differences for

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[25] Figures are deflated because transportation cost data are only available for 1986 (Louis Berger data are again used) and Malawi has experienced significant inflation in transport costs over the last few years.

[26] Derived from transportation cost data from Louis Berger (1986).

Table 5-16: Open Market Price Differences Between Mzuzu, Malawi and Selected Tanzanian Markets for Maize and Rice
January 1986 - August 1988
(In Real US Dollars per Metric Ton: January 1986 = Base)

		Maize From:			Rice From:		
		Mbeya	Songea	Mbinga	Mbeya	Songea	Mbinga
1986	January	-8.15	46.42	30.37	-211.29	-149.47	NA
	February	21.92	50.13	NA	-104.32	-127.83	NA
	March	38.05	55.63	64.43	-110.30	-17.87	-202.50
	April	40.22	62.96	69.62	9.63	39.13	-125.87
	May	31.09	54.15	57.13	123.04	83.87	NA
	June	40.24	61.51	62.21	181.26	149.62	-29.15
	July	52.82	64.97	67.03	186.15	157.37	46.99
	August	47.53	61.24	59.31	167.23	143.29	83.57
	September	44.23	58.15	56.62	230.62	201.51	154.04
	October	35.62	48.26	46.26	77.88	81.04	66.62
	November	51.05	65.51	59.75	153.96	162.60	77.52
	December	42.20	55.32	42.20	79.40	95.21	16.70
1987	January	38.91	63.63	40.58	136.31	118.79	38.39
	February	6.88	24.92	6.88	69.58	-32.56	-97.96
	March	37.90	44.61	33.04	102.38	86.26	29.64
	April	47.09	56.18	43.45	444.61	410.50	365.20
	May	44.08	51.60	37.77	225.90	174.06	97.20
	June	34.61	43.47	27.47	60.62	34.05	-72.24
	July	35.49	44.07	29.77	118.87	112.48	16.16
	August	40.26	56.12	42.33	154.14	172.76	89.85
	September	52.36	57.13	55.43	324.62	342.17	259.00
	October	58.95	66.70	60.74	458.38	419.28	402.73
	November	73.37	92.11	84.56	382.80	326.65	264.46
	December	50.53	68.19	59.09	315.26	240.86	200.44
1988	January	40.10	62.84	48.31	319.90	260.57	193.63
	February	24.60	NA	51.77	330.29	NA	281.40
	March	25.93	55.90	45.74	181.77	139.99	84.13
	April	19.69	26.84	NA	139.23	43.36	NA
	May	26.28	36.74	29.27	274.25	180.21	132.37
	June	4.94	24.59	13.67	126.87	58.26	25.21
	July	1.30	13.51	-0.57	79.72	32.64	-18.64
	August	9.82	21.50	8.03	97.36	44.02	NA

Notes: Dollar figures have been converted from Malawian kwacha at parallel exchange rates and deflated using a transportation cost index for Mzuzu.

Sources: Tanzanian open market prices from MDB (1988);
Mzuzu open market prices and deflator from NSO (1988);
Parallel market exchange rates used in calculations from International Currency Analysis Inc. (1989).

Songea maize are greater than US$ 18 for all months except July 1988. In only three months is the Mbinga-Mzuzu maize price difference lessthan US$ 11. As is the case for Mbeya, Songea and Mbinga rice price differences are much greater than maize price differences in a number of months. Spatial arbitrage also appears possible during most of the months.

In Figures 5-9 and 5-10 [27], the same Tanzanian open market shilling prices for maize and rice are converted into kwacha at official exchange rates. For the duration of the period, the gap between parallel and official exchange rates was much larger for Tanzania than for Malawi. The effect of Tanzania's relatively greater overvaluation is to seriously reduce the competitiveness of Tanzanian maize and rice in the Mzuzu market. Although arbitrage is still possible for rice in late 1987 and early 1988, the price gap has been narrowed substantially. Maize trade is no longer profitable.

The preceeding analysis graphically demonstrates within the SADCC context the potential for exchange rate overvaluation to adversely affect a country's competitiveness in export markets and reinforces the discussion of overvaluation in earlier sections on official trade. Given prevailing official exchange rates, there appears to be little scope for border trade between Malawi and Tanzania. Removal of relative currency overvaluation (as approximated by use of parallel exchange rates) creates incentives for exchange during many of the months observed.

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[27] See Appendix B for data on which these figures are based.

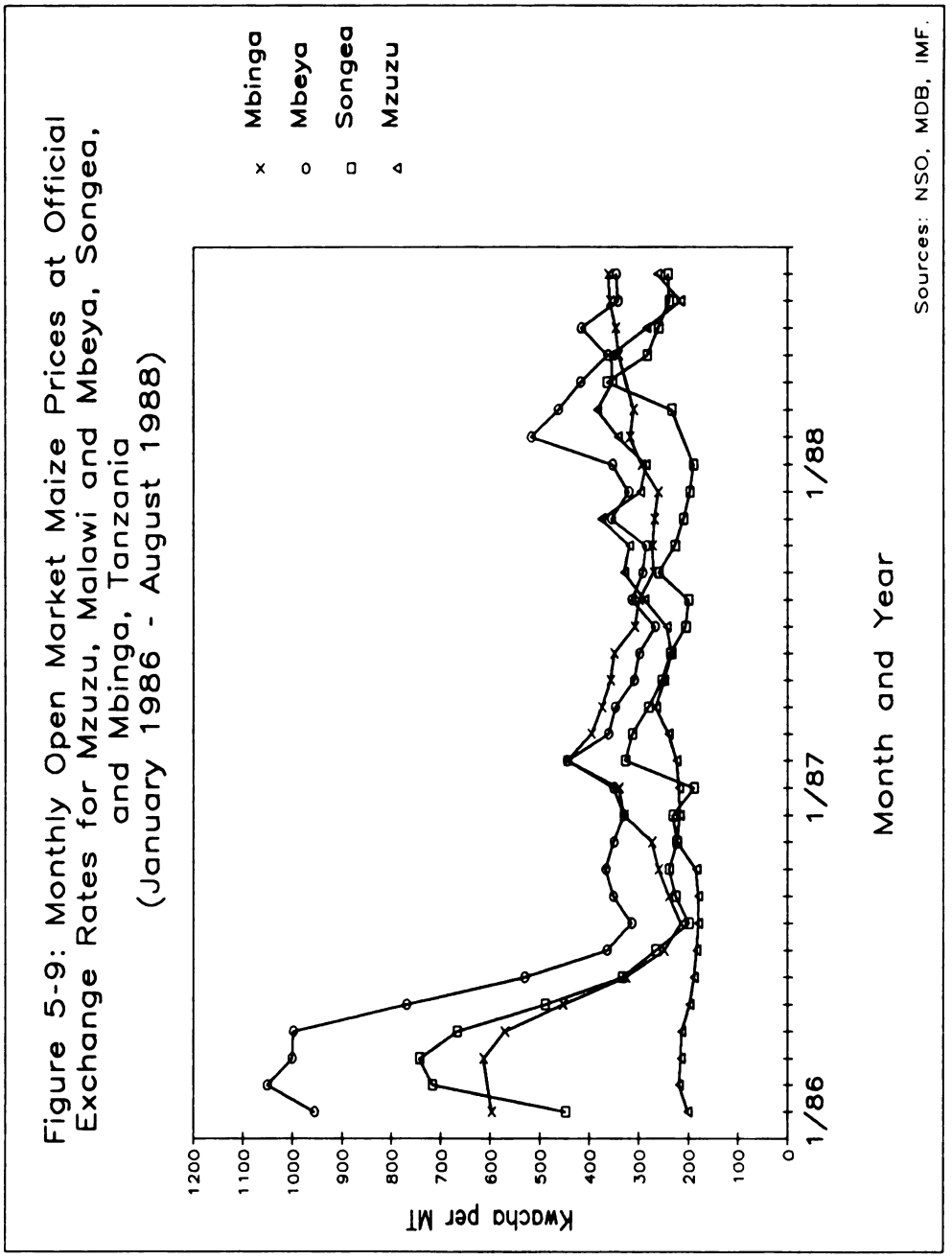

Figure 5-9: Monthly Open Market Maize Prices at Official Exchange Rates for Mzuzu, Malawi and Mbeya, Songea, and Mbinga, Tanzania (January 1986 - August 1988)

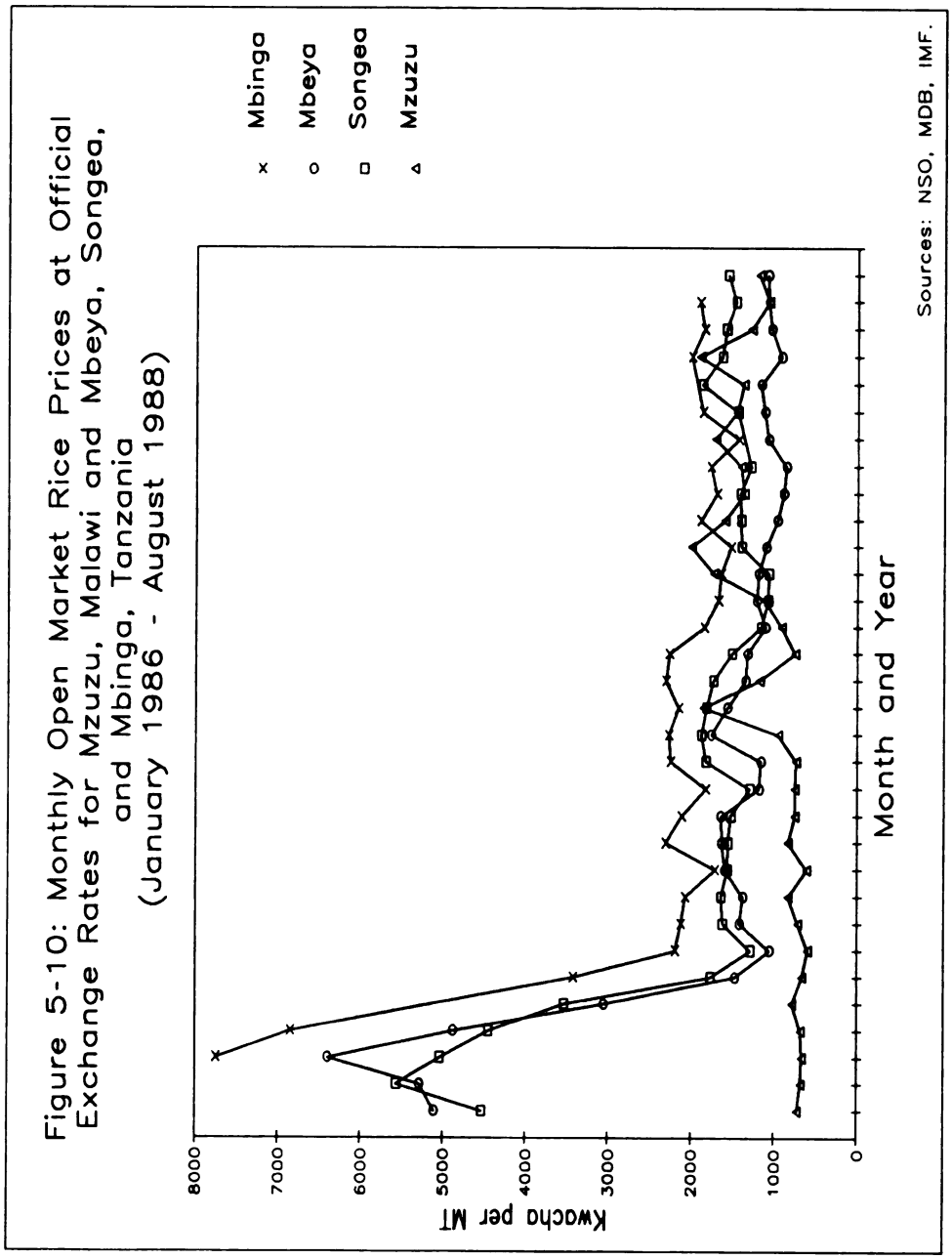
Figure 5-10: Monthly Open Market Rice Prices at Official Exchange Rates for Mzuzu, Malawi and Mbeya, Songea, and Mbinga, Tanzania (January 1986 - August 1988)
Mbinga
Mbeya
Songea
Mzuzu
Kwacha per MT
8000
7000
6000
5000
4000
3000
2000
1000
0
Month and Year
Sources: NSO, MDB, IMF.

D. Subsidy Leakages From Zambia to Zaire

Cross-border trade may also develop because of subsidy leakages. Although Zaire is not a member of SADCC, no analyis of SADCC parallel market trade would be complete without discussing the extensive smuggling of Zambian maize meal into the southern Shaba province of Zaire [28]. Maize consumption in Shaba province is estimated at approximately 470,000 MT annually with local production meeting only about two-thirds of these requirements. The most important Zairian market is the city of Lubumbashi whose 600,000 inhabitants consume roughly half of all maize disappearance in Shaba.

Zairian estimates of smuggled Zambian maize meal into Shaba range from 30,000 to 60,000 MT annually. Informal importers generally operate on a small scale, paying lorry owners to transport their bags or alternatively crossing the border by rail with their merchandise. Most consignments are in the 1 to 2 MT range. At informal depots on the Zairian side of the border, consignments are consolidated for trucking to the major Lubumbashi wholesale market. Despite diseconomies of scale and risks from occasional crackdowns by Zambian officials, informal trade with Shaba is very lucrative.

Table 5-17 provides estimates of marketing margins for illegally exported maize meal from Ndola in the Copperbelt to Lubumbashi. Potential profit margins of over 400% on both breakfast and roller meal provide a very powerful incentive to traders and are almost certainly

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[28] The following discussion of the Zambia/Zaire maize trade is largely based on Ariza-Nino and Mueller (1988).

Table 5-17: Marketing Margins for Subsidized Zambian Maize Meal Exports to Shaba Province, Zaire: December 1987 (Per Metric Ton)

From Ndola to Lubumbashi, Zaire:

	Breakfast Meal	Roller Meal
Retail Price, Ndola	ZK 750	ZK 570
Parallel Exchange Rate	Z/ZK1 8	Z/ZK1 8
Zaire Border Price	Z 6000	Z 4560
Internal Transport	Z 3360	Z 3360
Import Parity Price	Z 9360	Z 7920
Actual Parallel Mkt. Price	Z 48000	Z 46000
Profit Margin	412.8%	480.8%

Notes: All transport by road; Because Ndola is located on the Zairian border, no internal Zambian transport charges are included;
Local currencies are: Zambian kwacha (ZK); Zairian Zaire (Z).

Sources: Road transport charges from Louis Berger (1986);
Zambian breakfast and roller meal retail prices from Zambian CSO (1988);
Parallel exchange rates from Ariza-Nino and Mueller (1988).

adequate to cover any risk premium needed as an inducement to engage in illegal trade.

While such trade can contribute to the food security of recipient-country populations, it can hardly be viewed favorably by governmentsin countries who subsidize the food consumption of neighboring populations. From a political perspective, such smuggling also exacerbates shortages in the subsidizing country which can lead to unrest.

By all accounts, the Zambian maize meal subsidy leakage to Zaire is significant. Using 1987/88 subsidy figures from Table 5-5, and assuming (conservatively) that 30,000 MT of maize meal are smuggled annually into Shaba (50% breakfast meal and 50% roller meal), the Zambian maize meal subsidy leakage can be roughly estimated at ZK 32 million or about US$ 4 million (at the December 1987 official exchange rate of ZK8=$US1). The leakage figure may be much higher because unofficial exports may be greater than 30,000 MT.

E. Other Price Barriers to Trade

Even if the price barriers discussed above were lowered or eliminated, resulting trade patterns would still not reflect differences on costs of production if the policy of pan-territorial pricing were continued. As mentioned earlier, although Zambia's Northern Province is not climatically suited to maize production, pan-territorial pricing and attractive producer prices for maize relative to traditional crops have contributed to making the Northern Province a surplus maize-growing region. Land and labor have been pulled out of

sorghum and cassava to produce surpluses for consumption in the distant Copperbelt and Lusaka markets. Because pan-territorial pricing directly implies subsidized transportation, the already over-burdened trucking fleet is further strained. Moreover, trade with nearby cross-border markets is discouraged while trade with far-away domestic urban markets is encouraged.

In a number of SADCC countries, the structure of official relative producer prices appears to have discouraged production of traditional drought-resistant crops such as sorghum or crops with high nutritive value such as groundnuts. In Table 5-18, indices of official producer prices of selected crops relative to maize are presented for several SADCC countries. The structure of relative prices in 1975 serves as the base.

The pricing policies of Zambia, Zimbabwe, and Tanzania have evolved since the 1970's so as to discourage official marketings of sorghum relative to maize (Jansen, 1982, Jansen, 1986). Zimbabwean and Zambian pricing policies have also discouraged groundnut production while Malawian policy has favored groundnuts [29]. Tanzania appears to have encouraged beans and cassava relative to maize. However, official producer prices are often not competitive with parallel market prices in Tanzania, so only small volumes pass through official channels (MDB, 1988).

Beyond pricing policy, development of marketing infrastructure and agricultural research policy in most SADCC countries have historically

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[29] Malawian Ministry of Agriculture data in Lele (1987) indicate that farmers responded by increasing groundnut hectarage by 30% between 1982 and 1987.

Table 5-18: Indices of Official Producer Prices for Selected Crops Relative to Official Maize Producer Prices for Four SADCC Countries, 1970 - 1986

	Zambia		Zimbabwe		Malawi	Tanzania		
Year	Groundnut	Sorghum	Groundnut	Sorghum	Groundnut	Sorghum	Beans	Cassava
1970	85.71	111.90	NA	100.63	100.14	NA	NA	NA
1971	75.00	97.92	64.51	114.83	120.34	NA	NA	NA
1972	69.77	91.09	74.79	143.35	114.92	123.08	NA	NA
1973	86.18	91.09	62.92	102.39	108.22	161.62	NA	187.88
1974	116.28	96.90	70.99	92.25	121.71	117.33	90.67	144.00
1975	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1976	116.71	79.37	74.14	130.10	106.55	120.00	133.33	125.00
1977	116.71	79.37	78.49	128.47	122.18	125.49	219.61	141.18
1978	123.70	73.53	82.38	126.04	182.49	125.49	219.61	152.94
1979	104.58	55.56	80.73	117.78	143.09	106.67	186.67	130.00
1980	87.98	42.74	62.68	110.03	143.57	106.67	186.67	130.00
1981	93.03	55.56	48.11	85.36	96.02	71.11	124.44	93.33
1982	88.24	46.88	51.80	85.36	142.98	97.52	106.67	102.86
1983	88.40	72.86	55.50	89.07	143.77	96.97	121.21	109.09
1984	85.83	63.44	47.57	89.07	164.58	80.00	106.67	100.00
1985	95.20	79.15	41.11	89.07	177.50	81.27	121.90	114.29
1986	70.24	64.77	61.67	89.07	176.63	NA	NA	NA

Notes: Producer price of selected crops relative to maize producer price in 1975 serves as base.

Sources: For Zambian prices, Jansen (1986);
For Zimbabwean prices, Morris (1987);
For Malawian prices, Lele (1988);
For Tanzanian prices, MDB (1986).

been oriented towards maize and export crops at the expense of more drought-resistant crops such as sorghum and cassava. While this appears to be changing in the realm of agricultural research, storage construction, cooperative organization, and rural distribution networksare still largely developed with maize in mind (Lipton, 1986). As a result, the bulk of drought-resistant crop surpluses tend to be marketed through informal channels in a number of SADCC countries.

5.5. Limitations of the Analysis

Three caveats are in order concerning the information presented in this chapter.

First, the analysis highlights the importance of exchange rate and subsidy policies in determining trade competitiveness. Because these policies are in a perpetual state of flux, the parity pricing exercises are to some extent "snapshots", and therefore subject to large changes in relatively short periods of time.

Second, the parallel market rate is not an entirely reliable indicator of the exchange rate that would prevail if exchange rates were market-determined. This is because suppliers and demanders of parallel market currencies require a risk premium due to the possibility of getting caught and punished by the authorities (Roemer, 1984). In addition, parallel currency markets are much thinner than would be the case if such transactions were brought back into the formal economy under an official floating regime. Yet the goal here is not to indicate the exact magnitude of overvaluation. Rather it is to demonstrate that in a region where most currencies are overvalued to

some extent, if the magnitude of overvaluation differs significantly among the currencies, this can seriously inhibit trade as countries with relatively more overvalued currencies price themselves out of regional markets. This obtains regardless of whether payments are made in local or convertible currencies (Koester, 1986). Over time, trade is further inhibited as export earnings and incomes are reduced in those countries with overvalued exchange rates. This results in decreased effective demand for imports.

Third, transportation costs may be much higher than the figures indicate and availability at any price may be a serious constraint for private traders in a number of SADCC countries where trucking fleets have seriously deteriorated due to spare parts shortages. This problem is also related to trade and exchange rate policies.

5.6. Implications

While there is evidence of a basis for intra-SADCC trade in staple food commodities, there are significant policy-related constraints impeding the expansion of official trade. Among the most difficult constraints to overcome are overvalued exchange rates which have the potential to greatly impede intra-regional trade if SADCC currencies are greatly overvalued with respect to one another. Analysis in sections 5.3 and 5.4 demonstrates that even if a country's potential exports are competitive in nearby markets in terms of relative prices adjusted for transport and handling costs, competitiveness can be negated if one country's exchange rate is substantially overvalued relative to that of another country.

The structure of current food and agricultural pricing policy is another major barrier to increased official trade. Analysis in section 5.3 shows that the competitiveness of maize exports from competing sources (South Africa and Zimbabwe) is often largely a function of which governments are most willing to export at a loss. In such cases, comparative advantage has little relevance for predicting actual trade flows. Export quantities are instead residuals emanating from government pricing policies that alternately raise and lower incentives (in a cobweb fashion) for production of crops such as maize.

The widespread presence of consumer subsidies and pan-seasonal and pan-territorial prices prevent both the private sector and parastatal bodies from engaging in profit-generating official trade. Under the present array of price-related policies, it is hard to see how continued government-to-government trade (much of which is underwritten by food aid donors) can lead to greater SADCC food self-reliance. Such trade is not sustainable if source country governments consistently lose money in the form of export subsidies and importing country governments lose money through consumer subsidies.

However, it must be recognized that SADCC governments often have very compelling reasons for maintaining overvalued exchange rates and intervening extensively in food and agricultural markets. Policy-makers often view food self-sufficiency, price stability, affordable food for urban wage earners, and maintenance of farm sector income and employment as far more important objectives than the promotion of allocative efficiency through "getting prices right." If, however, the objective of increasing food security-related intra-regional trade is

important to SADCC governments, expansion of official trade in commodities that are important to food security can not be sustained at current or expanded levels if governments do not first deal with these larger issues of macro-economic and agricultural policy reform.

This chapter provides evidence that the incentives for engaging in informal intra-regional trade may be far greater than for official trade. Informal trading networks may have the potential to serve remote provincial markets more effectively than official networks, thus improving the food security of those populations. However, at present, we know little about how parallel markets operate in SADCC countries. This holds for domestic as well as cross-border markets. It is therefore hard to generate any solid conclusions about the relative efficacy of alternative trading networks or which specific policies need encouragement.

Only two SADCC governments collect open-market price data. However, numerous studies point out that parallel market activity is widespread in SADCC countries, particularly in rural areas not well served by official markets (Renkow et al., 1983, Child, Muir, and Blackie, 1984, Malambo, 1987). For agricultural policy analysis to be more reliable at the national and regional levels, such data need to be collected by more SADCC governments. Collection of open-market price data for staple food commodities could be an appropriate activity for the SADCC Regional Early Warning System to promote. Collection and timely analysis of open-market price data can also provide useful information to Early Warning System personnel on the potential

vulnerability of populations at risk from drought (Borton and Shoham, 1985).

In addition, more work needs to be done on the structure, conduct and performance of parallel trading networks. The employment effects of these markets may be important contributors to food security. In addition, if the risk premiums involved in trading are found to be quite high, official encouragement of this trade, or at least acceptance, could lead to a reduction of these premiums, resulting in lower food prices to consumers.

Although price barriers have the potential to significantly impede increased intra-SADCC trade, "getting prices right" alone will not automatically lead to its expansion. A number of non-price barriers which result in high transactions costs may also inhibit trade. Among the most serious of these barriers are shortages of foreign exchange and the operation of foreign exchange rationing systems in a number of SADCC countries. Even if the price is "right" for some agricultural commodity or input, government may prohibit its importation in the quantities and at the time desired because other goods are believed to be of higher priority. Other important factors that may increase the transactions costs of marketing and trade include: bureaucratic controls on importing and exporting; lack of market information; inadequate regional transport and communications infrastructure; and complicated methods of payments procedures. The following two chapters address these and other non-price issues.

AN ANALYSIS OF PRICE AND NON-PRICE BARRIERS TO AGRICULTURAL MARKETING AND TRADE IN SOUTHERN AFRICA

VOLUME II

By

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CHAPTER VI

TRADER PERCEPTIONS OF POTENTIALS AND NON-PRICE CONSTRAINTS FOR SADCC AGRICULTURAL TRADE

6.1. Introduction

Major coordinating functions for domestic marketing and international trade of agricultural commodities and inputs include: prices of goods and costs of production; market information; grades and standards; government regulations; property rights; and financing (see Figures 3-1 and 3-2). While the previous chapter dealt with the first of these, discussion in this chapter focusses on the remaining coordinating functions which are largely of a non-price nature [1]. Analysis in chapter V concentrated on staple food commodities. The focus of this chapter is primarily on agricultural inputs.

Chapter III also identified key exogenous and endogenous variables for assessing levels of transactions costs involved in agricultural marketing and trade. Where applicable, this chapter analyzes findings of the trader survey in light of those endogenous variables whose manipulation have the potential to significantly lower traders' transactions costs [2].

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[1] There is little discussion of grades and standards here because the study is not commodity-specific. If the study involved detailed assessments of trade potential in individual commodities, grades and standards would undoubtedly receive more prominence.

[2] The survey was conducted in collaboration with Joseph Rusike of the University of Zimbabwe. Information presented in several sections of this chapter (especially section 6.4) is based on Rusike (1988).

The next section discusses methods employed in the survey of traders from which much of the information for this chapter was gleaned. The structure of firms interviewed and limitations of the sample are outlined in section 6.3. Section 6.4 discusses trader perceptions about specific commodities and inputs which may have potential for expanded trade within the SADCC region. Section 6.5 provides a broad overview of constraints to trade as viewed by firm representatives who completed questionnaires in Zimbabwe and Zambia. The following section discusses a number of marketing and trade issues in greater depth. These issues were consistently cited by respondents as being of great importance. Section 6.7 synthesizes results by identifying four broad themes that emerge from information presented in the chapter.

Foreign exchange constraints are alluded to throughout the chapter, but not dealt with at length because a detailed case study of SADCC foreign exchange allocation systems follows in chapter 7.

6.2. Format and Procedures for the Trader Survey

Much of the information presented in this chapter was obtained from in-depth structured interviews with 80 agricultural trading companies in Zimbabwe, Zambia, Malawi, Botswana, and Tanzania (Table 6-1). A checklist of open-ended discussion questions served to guide these interviews. In addition, 40 Zimbabwean and 24 Zambian companies completed detailed questionnaires [3].

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[3] Appendices B and C contain the questionnaire and the checklist of open-ended questions administered for the trader survey.

Table 6-1: Structure and Timing of the UZ/MSU Trader Survey in Five SADCC Countries

Country	Number of Questionnaires Completed	Number of Interviews	Dates of Interviews
Zimbabwe	40	20	3/88 - 11/88
Zambia	24	26	3,7,11/88
Malawi	NA	15	7,11/88
Botswana	NA	10	7/88
Tanzania	NA	9	11/88
Total	64	80	

Notes: NA = Not applicable -- questionnaire survey not implemented in these countries.

Source: UZ/MSU survey of SADCC agricultural trading companies.

The survey effort was carried out intermittently over a nine month period from March to November 1988. Follow-up interviews of especially informative respondents were done in Zimbabwe, Zambia, and Malawi. Additional interviews were carried out with government officials in ministries of agriculture, trade, commerce, finance, and reserve banks. Donor representatives, chamber of commerce and export promotion board officials, and experts from commercial banks, credit insurance agencies, and consulting firms also provided useful background information on trading procedures and current agricultural, macroeconomic, and trade policy issues.

Prior to visiting each country, a list of agricultural trading firms was compiled from export/import directories furnished by trade missions based in Harare. Upon arrival in-country, knowledgeable officials in agriculture and trade ministries, donor agencies, chambers of commerce, and export promotion boards identified additional companies involved in agricultural trade. Traders themselves also aided in identifying companies as they named their major local competitors.

6.3. Profile of Sample Firms

On the agricultural input side, the survey included firms involved in the manufacture and distribution of agricultural machinery, implements, irrigation equipment, agricultural and veterinary chemicals, seeds, and fertilizers (Table 6-2). Companies involved in growing, processing, wholesaling, retailing, and broking grains, livestock, dairy, and horticultural products were also interviewed.

Both private and parastatal businesses were included in the survey. Representatives of locally-based as well as multinational concerns were also interviewed (Table 6-3). The number of parastatal companies interviewed was highest in Zambia, reflecting the predominant role of public enterprises in the economy there. The low number of parastatals interviewed in Zimbabwe reflects the difficulty of gaining access to upper echelon agricultural parastatal officials, as well as the fact that there are only four agricultural sector parastatals in the country (the Grain Marketing Board, Cotton Marketing Board, Dairy Marketing Board, and Cold Storage Commission).

Table 6-2: Principal Activities of Firms Surveyed in Five SADCC Countries (Number of Firms Surveyed)

Activity	Zim.	Zam.	Mal.	Tanz.	Bots.	Total
Large equipment mfg./dist.	12	11	3	3	2	31
Ag. + vet. chemicals mfg./dist.	3	6	0	2	2	13
Food mfg./dist.	3	3	1	2	4	13
General brokers/agents	5	0	2	0	0	7
General input wholesaler	2	0	2	0	1	5
Seed mfg./dist.	2	1	1	0	1	5
Horticultural prod./export	1	3	0	0	0	4
Irrigation mfg./dist.	1	1	1	1	0	4
Livestock prod./processing	3	0	1	0	0	4
Ag. implements mfg./dist.	2	0	1	0	0	3
Fertilizer mfg./dist.	2	0	1	0	0	3
Non-food mfg./marketing *	0	1	1	1	0	3
Dairy prod./processing	2	0	1	0	0	3
Total	38	26	15	9	10	98

Notes: Zimbabwe firm totals do not correspond to Table 6-1 totals because of non-response by two firms to this question.
* Cotton and tobacco.

Source: UZ/MSU survey of SADCC agricultural trading companies.

Table 6-3: Distribution of Sample Firms by Ownership Type (Number of Firms Surveyed)

Ownership Type	Zim.	Zam.	Mal.	Tanz.	Bots.	Total
Parastatal	2	9	3	3	3	20
Multinational	10	9	7	5	2	33
Local private	26	6	5	1	4	42
Cooperatives	3	0	0	0	1	4
Total	41	24	15	9	10	99

Note: Figures include both interview and questionnaire respondents.

Source: UZ/MSU survey of SADCC agricultural trading companies.

Most respondents categorized their companies as medium or large relative to other companies in the same line of business in their country (Table 6-4). Only one Zambian company classified itself as small while more than half called themselves large. The Zimbabwean sample was more balanced with 25% of the respondents listing themselves as small, 40% as medium, and the remaining 35% calling their firms large.

Table 6-4: Distribution of Sample Firms by Size in Four SADCC Countries (Number of Firms Surveyed)

Size	Zim.	Zam.	Mal.	Tanz.	Total
Small	10	1	2	0	13
Medium	16	10	2	2	30
Large	14	13	10	7	44
Total	40	24	14	9	87

Source: UZ/MSU survey of SADCC agricultural trading companies.

Two factors help to explain this skew towards large firm size. First, in countries with underdeveloped manufacturing sectors, there are usually monopolies and oligopolies for strategic agricultural inputs such as seed, fertilizer, chemicals, and equipment. For example, Zimbabwe and Zambia only have one fertilizer plant, and Zambia, Malawi, and Tanzania have a single parastatal seed company while Zimbabwe only has two. Agro-chemical manufacture and distribution are dominated by a handful of multinationals (Shell, Hoecsht, ICI, and a few others) in each of these countries. Second,

trade directories published by chambers of commerce or trade ministries are more apt to include firms from the established business community, often failing to include smaller firms. Also, because most trade directories have not been updated for two or three years, recently created companies do not appear.

Because of Zimbabwe' relatively mature private manufacturing sector, it is more common for small firms to compete with larger firms than in Malawi whose industrial base is small, and in Zambia or Tanzania whose manufacturing sectors have historically been dominated by parastatals.

To obtain a more objective measure of firm size, respondents in Zimbabwe and Zambia furnished information about annual import and export volumes (Table 6-5). The distribution of annual import turnover varies quite a bit between Zimbabwe and Zambia with more than half of the Zimbabwean companies importing less than US$ 500,000 annually while the bulk of Zambian firms import more than US$ 1,000,000 each year. In the case of Zambia, this makes sense due to the preponderance of large companies in the sample. The greater balance in the Zimbabwe sample, coupled with the greater availability of locally-produced raw materials and intermediate goods, may partially explain the larger number of relatively small-volume importers. On the export side, only 58% of the companies had exported. There was a skew towards lower volume of exports although this skew was not strongly pronounced.

More than half the firms have been operating since before Independence in Zambia and prior to UDI in Zimbabwe while slightly over

Table 6-5: Distribution of Sample Firms by Value of Annual Imports and Exports, Zimbabwe and Zambia
(In US Dollars)

	Zimbabwe		Zambia		Total	
	Dist.	Percent	Dist.	Percent	Dist.	Percent
Value of Annual Imports:						
1-100,000	13	32.5%	1	4.2%	14	21.9%
100,001-250,000	6	15.0%	2	8.3%	8	12.5%
250,001-500,000	2	5.0%	0	0.0%	2	3.1%
500,001-1,000,000	2	5.0%	3	12.5%	5	7.8%
1,000,001-5,000,000	7	17.5%	13	54.2%	20	31.3%
More than 5,000,000	3	7.5%	2	8.3%	5	7.8%
Total	33	82.5%	21	87.5%	54	84.4%
Non-Importers (or Missing)	7	17.5%	3	12.5%	10	15.6%
Value of Annual Exports:						
1-100,000	8	20.0%	4	16.7%	12	18.8%
100,001-250,000	6	15.0%	1	4.2%	7	10.9%
250,001-500,000	1	2.5%	2	8.3%	3	4.7%
500,001-1,000,000	4	10.0%	1	4.2%	5	7.8%
1,000,001-5,000,000	5	12.5%	2	8.3%	7	10.9%
More than 5,000,000	2	5.0%	1	4.2%	3	4.7%
Total	26	65.0%	11	45.8%	37	57.8%
Non-Exporters (or Missing)	14	35.0%	13	54.2%	27	42.2%

Note: Exchange rates used are US$1=Z$1.66 and US$1=K8.00.

Source: UZ/MSU survey of SADCC agricultural trading companies.

30% of the companies were established within the last ten years (Table 6-6). A skew towards older companies is expected for reasons cited above.

The distribution of companies by the number of years they have been importing roughly parallels the distribution of years of operation with over 60% of the companies having imported for more than 10 years. However, many of the firms have only recently begun to export. For example, of the 12 Zambian companies that export, 10 began within the last 5 years. In a number of cases, companies cited foreign exchange shortages for importing as a powerful incentive to export. If a company exported, this was likely to bolster its case for additional foreign exchange allocations from the rationing authorities. In addition, in Zambia and Tanzania, a portion of hard currency earnings could be retained by exporters, thus enabling them to bypass the cumbersome administrative allocation procedures. Finally, as the balance of payments of a number of SADCC countries have deteriorated in recent years, an array of export incentive programs have been introduced for stimulating non-traditional exports. To varying degrees, these programs provide incentives for export which did not previously exist.

6.4. Perceptions of Intra-SADCC Trade Potential

Many survey participants believed there to be considerable potential for increasing intra-SADCC trade volumes in a number of agricultural inputs and commodities if barriers to trade could be lowered. Table 6-7 identifies agricultural inputs and commodities

Table 6-6: Distribution of Sample Firms by Years of Operation, Importing, and Exporting, Zimbabwe and Zambia

	Zimbabwe		Zambia		Total	
	Dist.	Percent	Dist.	Percent	Dist.	Percent
Years of Operation:						
1-5	7	17.5%	4	16.7%	11	17.2%
6-10	6	15.0%	3	12.5%	9	14.1%
11-20	4	10.0%	7	29.2%	11	17.2%
More than 20	23	57.5%	10	41.7%	33	51.6%
Total	40	100.0%	24	100.0%	64	100.0%
Years Importing:						
1-5	6	15.0%	3	12.5%	9	14.1%
6-10	5	12.5%	3	12.5%	8	12.5%
11-20	5	12.5%	8	33.3%	13	20.3%
More than 20	19	47.5%	9	37.5%	28	43.8%
Total	35	87.5%	23	95.8%	58	90.6%
Non-Importers	5	12.5%	1	4.2%	6	9.4%
Years Exporting:						
1-5	13	32.5%	10	41.7%	23	35.9%
6-10	6	15.0%	2	8.3%	8	12.5%
11-20	8	20.0%	0	0.0%	8	12.5%
More than 20	7	17.5%	0	0.0%	7	10.9%
Total	34	85.0%	12	50.0%	46	71.9%
Non-Exporters	6	15.0%	12	50.0%	18	28.1%

Source: UZ/MSU Survey of SADCC agricultural trading companies.

Table 6-7: Trader Perceptions in Five SADCC Countries of Agricultural Inputs and Commodities with Potential for Expanded Intra-SADCC Trade

Item	Exporter	Importer
Inputs:		
Agricultural equipment and machinery	Zimbabwe	Malawi, Mozambique
Agricultural tools and implements	Malawi, Swaziland, Zambia, Zimbabwe	Botswana, Lesotho, Malawi, Mozambique, Tanzania, Swaziland, Zambia, Zimbabwe
Agro-chemicals (insecticides, fungicides, herbicides)	Zimbabwe, Swaziland	Malawi, Zambia
Animal health and livestock remedies	Botswana, Zimbabwe	Botswana, Malawi, Zambia, Zimbabwe
Cattle genetic material *	Zimbabwe	Rest of SADCC
Contract harvesting	Zimbabwe	Botswana
Fertilizer and fertilizer raw materials	Zambia, Zimbabwe	Malawi, Zambia
Livestock Feed	Zambia	Tanzania
Livestock scales and handling equipment	Zimbabwe	Malawi, Zambia
Locally-assembled tractors	Botswana, Zimbabwe	Malawi, Zambia
Packaging materials	Swaziland, Zimbabwe	Malawi, Zambia
Seed (maize, sorghum, sunflower, soybean, barley, wheat, vegetable)	Botswana, Malawi, Zambia, Zimbabwe	Angola, Botswana, Malawi, Mozambique, Swaziland, Tanzania, Zambia
Tea processing machinery *	Malawi, Zimbabwe	Tanzania
Tractor spares	Botswana, Zimbabwe	Malawi, Zambia, Zimbabwe
Tropical fruit seedlings *	Zimbabwe	Botswana
Commodities:		
Cola nuts	Mozambique	Botswana
Edible oils	Zimbabwe	Botswana, Mozambique, Zambia
Fish and fish products	Malawi, Mozambique	Botswana, Zambia, Zimbabwe
Fruits and vegetables (fresh, dried, canned)	Botswana, Zambia, Zimbabwe	Angola, Botswana, Zimbabwe
Groundnuts	Malawi	Mozambique, Zambia, Zimbabwe
Leather goods *	Botswana	Rest of SADCC
Maize and maize products	Zimbabwe, Zambia	Botswana, Mozambique, Tanzania, Zambia Zimbabwe
Malt	Zimbabwe	Botswana, Mozambique, Zambia
Milk and milk-related products	Zimbabwe	Mozambique, Zambia
Molasses	Zambia	Zimbabwe
Processed groundnut products	Malawi, Zambia, Zimbabwe	Botswana
Processed meat products	Botswana	Zimbabwe
Pulses	Malawi	Botswana, Mozambique, Zambia, Zimbabwe
Rice	Malawi, Tanzania	Mozambique, Zambia, Zimbabwe
Spices	Malawi	Zimbabwe
Sugar	Malawi, Zambia, Zimbabwe	Botswana, Mozambique, Tanzania
Tea	Malawi	Zambia
Textiles (grey cloth)	Malawi	Zimbabwe

* Goods which have not yet been traded, but which respondents were interested in importing or exporting.

Source: Adapted from Rusike (1988).

which survey participants have either traded intra-regionally already, or have not yet traded but which traders expressed an interest in importing or exporting within SADCC.

Traders based their perceptions on past trading experience before balance of payments problems were so acute as well as on current supply and demand conditions. Often inquiries had been made, but trade had been prevented by the refusal of the importing party's government to grant foreign exchange for the transaction. For some commodities, intra-SADCC trade volumes have fallen significantly from previous levels due to political disputes. For example, textile manufacturers and spice traders from Malawi held that cancellation of the Open General Import Licensing (OGIL) agreement with Zimbabwe in 1983 has led to greatly reduced exports to that country (see section 6.6.C).

The array of traded or potentially tradeable products is much more diverse than those listed in the Michelsen report (see Tables 2-2 and 2-3). This may be partly because the Michelsen report was more oriented towards identifying goods whose potential trade volumes could be large and therefore suitable for inclusion in bilateral agreements. Many of the items cited in Table 6-6 would only flow in small quantities. Also the Michelsen team was not specifically concerned with agricultural trade, so the array of agricultural traders interviewed was probably less extensive than for the present study.

According to survey participants, promising areas for expanded intra-regional trade involve those inputs which do not require overly sophisticated technologies to produce, but for which similar soils,

climates, and cultivation practices render technologies developed in one SADCC country appropriate for use in other SADCC countries. Seed, farm implements, and machinery for certain cash crops are examples of such potentially tradeable agricultural inputs. By contrast, there is probably little potential to expand intra-regional trade in inputs involving highly advanced technologies (most agro-chemicals, large machinery) because it would be difficult to compete with well-established industries in developed countries and South Africa.

A more detailed discussion of respondent perceptions about the potential for greater intra-SADCC trade in several agricultural inputs follows.

A. Seed

There is already a substantial volume of trade in seed among the SADCC countries. Zimbabwe, Zambia, and Malawi have all exported seed to other SADCC countries (Mozambique, Angola, Tanzania, and Botswana) with some frequency -- usually within the context of a donor-funded project.

The Zimbabwe Seed Cooperative, the country's largest seed supplier, averages an annual export turnover of over Z$ 5 million. Maize seed is the primary export, but the company has also exported sorghum, sunflower, soybean, barley, and wheat seed. The bulk of these exports have gone to SADCC and PTA countries.

According to experts at the Zambia Seed Company (ZAMSEED), the company boasts the widest array of maize seed varieties in the region, fourteen as opposed to only seven or eight in Zimbabwe. This enables

them to export to countries in the region with diverse agronomic conditions.

Although Malawi's seed industry is not as developed as those of Zimbabwe and Zambia, the National Seed Company of Malawi regularly exports maize seed to Tanzania. The firm can meet local seed requirements with only one third of its capacity, and is therefore eager to develop export markets.

Seed firm representatives cited a number of reasons why they believe their products to be competitive in regional markets. These reasons go well beyond standard notions of static comparative advantage. The Zimbabweans believed that a long tradition of investing in agricultural research, mastery of skills in maize breeding, irrigation, and seed storage, as well as providing sufficient incentives to contract farmers were key to the success of their seed industry. The Malawians believed that inadequate incentives to contract farmers in Tanzania gave them an opening in that particular export market. As mentioned above, Zambia's widely varied agronomic conditions made it necessary for that country to develop a large number of maize seed varieties, thus placing ZAMSEED in a better position to export a number of well-adapted varieties to the region.

B. Agricultural Implements and Machinery

Manufacturers of implements and hand tools in Zimbabwe and Malawi felt they had potential to increase exports to the region. Because Zimbabwe has a steel industry, its implements industry is in the best position to export to other SADCC countries. However, a representative

of Malawi's only agricultural implements manufacturer (AGRIMAL) believed that some of his products could compete in Zimbabwe, as well as in other SADCC/PTA countries.

At least one Malawian machinery distributor regularly imports plows, disc harrows, and tobacco ridging equipment from Zimbabwe. According to this machinery dealer, Zimbabwean equipment is designed to suit environments like that of Malawi. For that reason, such goods are superior to comparable equipment from South Africa and elsewhere. These items are very robust and need few repairs and spare parts. Such considerations are very important in a country like Malawi where transportation problems make spare parts deliveries time-consuming and expensive.

A representative of a Tanzanian tea estate expressed interest in importing tea cultivation machinery from Zimbabwe or Malawi because of a similar reputation for robustness and suitability to local conditions.

Most heavy equipment distributors felt that intra-regional trade in machinery such as tractors was not feasible. Although Zimbabwe is capable of producing a number of components such as fenders, bonnets, and some other spare parts, most value-added in tractor manufacturing is contained in the production of gear boxes and hydraulic systems. Nobody contended that Zimbabwe could manufacture these items. Therefore, development of indigenous regional tractor manufacturing and exporting capabilities with significant value-added (as opposed to local assembly of imported kits) is unlikely in the foreseeable future.

Moreover, the number of steel products manufactured in Zimbabwe is

limited, requiring continued importation of a wide range of machinery in the foreseeable future.

C. Chemicals and Fertilizers

According to several agro-chemical company representatives, it is not economically feasible to have chemical manufacturing plants located in a SADCC country because such plants are very expensive and involve advanced technology. Currently, the large chemical multi-nationals each have one or two centrally-located factories which manufacture many different chemicals in small quantities. These raw materials are then shipped to their subsidiaries' formulation plants which have the capacity to adapt them to conditions in various parts of the world. Although chemicals formulated in SADCC countries could conceivably be traded within the region, 80-85% of the value-added in finished chemicals is embodied in the production of raw materials. This technical consideration largely limits the scope for expanding intra-SADCC trade in most agro-chemicals.

The situation is different for fertilizers, because only a few products need to be produced. Also because fertilizer is a low value bulky commodity, there are significant transportation cost advantages to producing and trading within the region. However, high production costs currently reduce the competitiveness of fertilizers produced in Zimbabwe and Zambia. By contrast, South African fertilizer companies use more efficient technology and are therefore more price competitive in Southern African markets.

D. Contracting and Services

Due to the varying levels of expertise in the production and marketing of various agricultural commodities in the SADCC countries, there may be opportunities for expanded trade in services such as consulting by irrigation engineers, seed industry scientists, and livestock processing specialists. For example, one Zimbabwean firm already provides contract harvesting services in Botswana and another company specializing in the design of irrigation systems is interested in becoming involved in short-term consulting projects. A representative of the Malawian livestock processing industry expressed an interest in gaining access to expertise from the more developed Zimbabwean and Botswanan livestock industries on refrigeration techniques and export marketing.

6.5. A General Overview of Constraints on Trading

Respondents in Zimbabwe and Zambia were queried as to what they considered important non-price constraints to trading with other SADCC countries and the rest of the world (Table 6-8). On the import side, by far the most important constraint was own-country foreign exchange shortages, regardless of whether one was importing from SADCC or from the rest of the world. Cumbersome local regulations ranked second for SADCC imports and third for imports from the rest of the world. For the most part, this had to do with the lengthy administrative process involved in acquiring foreign exchange from the authorities.

The second most important constraint on non-SADCC imports was fluctuating exchange rates. This reflects concern over the recent

Table 6-8: Major Constraints on Importing and Exporting, Zimbabwe and Zambia
(Number of Firms Surveyed)

Constraint	From/To SADCC: VI	SI	NI/NA	NR	From/To the Rest of the World: VI	SI	NI/NA	NR
Importing:								
Local foreign exchange shortages	36	4	18	6	50	3	9	2
Cumbersome local regulations	24	14	21	5	23	24	16	1
Lack of info. on foreign supply	16	15	27	6	14	13	35	2
High local import duties	16	13	29	6	21	16	25	2
Fluctuating exchange rates	14	20	23	7	29	19	14	2
Cumbersome foreign regulations	14	12	32	6	8	11	43	2
Lack of info. on local demand	13	8	35	8	14	13	34	3
Lack of port facility availabilty	12	13	32	7	20	16	25	3
Foreign supply fluctuations	12	10	35	7	14	14	33	3
Transport availability	12	10	37	5	13	16	33	2
Unreliable product quality	11	12	35	6	10	9	43	2
Own-firm credit availabilty	10	9	38	7	14	11	36	3
Changes in local govt. policies	8	13	36	7	15	15	31	3
Complicated payments procedures	7	18	33	6	7	21	34	2
Theft and pilferage	7	17	32	8	5	20	35	4
Changes in foreign govt. policies	6	6	45	7	6	10	45	3
Domestic demand fluctuations	3	13	40	8	4	16	39	5
Exporting:								
Foreign hard currency shortages	28	9	8	19	5	3	37	19
Lack of info. on foreign demand	22	12	13	17	16	11	20	17
Delays in payment	20	9	16	19	11	6	29	18
Cumbersome foreign regulations	17	15	14	18	4	11	31	18
Cumbersome local regulations	17	15	14	18	13	12	21	18
Transport availability	17	12	15	20	12	8	25	19
Fluctuating exchange rates	16	12	17	19	15	11	20	18
Complicated payments procedures	15	12	17	20	8	4	34	18
Changes in foreign govt. policies	14	9	20	21	7	12	25	20
Foreign demand fluctuations	13	17	14	20	14	10	20	20
Partner firm credit availabilty	13	13	19	19	5	11	30	18
Lack of port facility availabilty	12	13	19	20	11	11	23	19
Local supply fluctuations	12	13	28	11	11	10	23	20
Changes in local govt. policies	12	12	19	21	10	9	25	20
Theft and pilferage	9	13	21	21	2	12	30	20
Unreliable product quality	9	9	25	21	9	9	28	18
Lack of info. on local supply	8	10	26	20	11	6	29	18
High foreign import duties	7	12	24	21	6	10	29	19

Notes: VI=Very important; SI=Somewhat important; NI/NA=Not important/Not applicable;
NR=No response.

Source: UZ/MSU survey of SADCC agricultural trading companies.

volatility of the US dollar as well as anxiety on the part of many firm representatives about official devaluations of the local currency. This concern appeared to be somewhat less important for SADCC trade as it ranked fifth and got only half as many "very important" responses as non-SADCC trade. However, because most transactions are quoted and paid in US dollars, SADCC trade should be equally constrained by exchange rate fluctuations. One possible explanation for this seeming anomaly may be that traders saw other constraints such as foreign exchange shortages as overriding problems for SADCC trade and therefore perceived exchange rate fluctuations as only a secondary problem.

Regulations of other SADCC governments (presumably also related to foreign exchange controls) also ranked high as a constraint to importing. In contrast, this did not appear to be a significant constraint to importing from the rest of the world as it ranked only thirteenth.

One constraint that ranked fairly high for non-SADCC trade was port facility availability. Many Zambian respondents were vociferous about inefficiencies at the port of Dar es Salaam, but felt powerless to rectify the situation due to physical distance from the port, poor communications, and a lack of political clout to put pressure on the Tanzanian government to improve performance.

Among those constraints to importing viewed as relatively unimportant were theft and pilferage and domestic demand fluctuations. Most importers took the precaution of containerizing their consignments whenever possible. Containers would arrive in port and be off-loaded onto rail wagons or trucks, thus minimizing handling. But when firms

were unable to order sufficiently large volumes to fill an entire container, arrival in-country was often delayed considerably because all items in the container had to be cleared at customs before the container could move out of the port. A number of companies regarded domestic demand fluctuations as an insignificant constraint because shortages of most agricultural inputs meant that anything that was imported could be easily sold. If foreign exchange shortages were to ease, demand fluctuations would almost certainly become a more acute problem as it would be less of a seller's market.

There was a much higher rate of non-response for export firms, reflecting the fact that only about half the companies participating in the survey were exporters as well as importers. Partner-country foreign exchange shortages was the most important constraint for exporting to SADCC countries while it was among the least significant constraints for exporting to the rest of the world. Lack of information on foreign demand ranked highest for exporters to the rest of the world and second for SADCC exports. This is consistent with the earlier finding that roughly half of the firms that export have been doing so for five years or less (see Table 6-5). It is likely that such firms have not yet had enough time to develop strong international contacts. Moreover, the relative complexity of agricultural export marketing over domestic marketing makes the gathering of market information a more formidable task.

In general, company representatives perceived that exporting to SADCC countries was more difficult than exporting to the rest of the world. The following constraints received roughly twice as many "very

important" responses (or more) for SADCC trade than for non-SADCC trade: foreign hard currency shortages; delays in payment; cumbersome foreign regulations; complicated payments procedures; foreign government policy changes; partner-firm credit availability; and theft and pilferage. With the exception of theft and pilferage, all of these can be at least partially traced to the transcendent issue of foreign exchange shortages in the majority of SADCC countries.

Interestingly, foreign import duties ranked lowest for SADCC trade and only fourteenth for exports to the rest of the world. This lends credence to the position that non-tariff barriers are often far more serious constraints to trade than tariff barriers. To some extent, this finding also calls into question the potential effectiveness of the current PTA emphasis on negotiating tariff reductions among member countries unless non-tariff barriers are reduced at the same time.

6.6. Detailed Discussion of Selected Marketing and Trade Issues

This section examines in detail several of the more important issues related to agricultural marketing and trade. The previous section drew primarily on the detailed questionnaire administered in Zimbabwe and Zambia. For the most part, information presented below comes from open-ended interviews conducted in all five countries. Some of the issues presented here were alluded to in section 6.5 (cumbersome regulations, market information, transportation, methods of payment), while others were not mentioned (protectionism through non-tariff barriers, export promotion schemes, donor programs) either because their importance was not anticipated during questionnaire design or it

was not feasible to incorporate them into the questionnaire without making it excessively time-consuming to fill out.

Because the sections are organized around broad themes, sub-headings also appear identifying more specific topics. Where applicable, these sub-headings summarize major findings and policy implications.

A. Cumbersome Regulations

Overwhelmingly, the most time-consuming task involved in trading was obtaining foreign exchange for imports.

Open-ended interview respondents in all five countries were asked to identify the most time-consuming activities they had to perform when engaging in trade. On the import side, respondents in those countries with balance of payments problems (Zimbabwe, Zambia, Malawi, and Tanzania) almost without exception claimed that negotiating with government for foreign exchange was by far the most time-consuming task. Although not possible to rigorously quantify, a few respondents attempted to estimate the effects of import control procedures on their operations. The general manager of one tobacco input supply company in Malawi judged that he now spent one third of his time dealing with government officials on questions of foreign exchange allocation. Prior to 1986 (when the Malawian balance of payments deficit became acute), he spent much more time with customers. Another Malawian general manager stated that he had to hire additional personnel whose principal tasks were to fill out import control forms, hand deliver them to the appropriate authorities, and closely monitor where the

numerous documents were in the bureaucracy so that they would proceed without major delays and not get lost.

A number of Zimbabwean firm representatives pointed out that it currently takes twice as long to obtain import allocations as it did five years ago, resulting in lost opportunities for both domestic sales and exports [4]. Several Botswana company spokesmen corroborated this, citing irregular supply and delayed deliveries as among the major reasons for why it is very difficult for Zimbabwe to effectively compete with South Africa in the Botswana market.

Excessive documentation requirements also hinder the ability of some firms to export.

Although it is official policy to encourage exports in most SADCC countries, a number of traders in Zimbabwe believed that excessive bureaucracy impeded export performance. Exporters must process a large number of forms and distribute them in multiple copies to several ministries, banks, transporters, and client firms. One company representative estimated the number of required forms to be between fifteen and twenty. Most of these forms say essentially the same thing -- only in slightly different ways. Among the required documents for exporting from Zimbabwe are: an export pro forma invoice; an export invoice (the actual invoice); a CD1 (for exchange control); the bill of entry (indicating the final destination for exports and their tariff schedules); consignment notes; certificate of origin (to be submitted to the government of the destination country); certificate of payment

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[4] Chapter VII deals with other effects of import licensing and foreign exchange rationing on firm-level performance.

(for certifying that the goods have been paid for); export incentive forms (paid by government in local currency as 9% on the free-on-rail value at Harare); duty drawback form (manufacturers get reimbursed the actual duty paid in local currency on imported goods if they can prove that those imports were used in the production of exported finished goods).

One exporter was convinced that it would be possible to put all the information on a single page and have multiple copies sent to the various offices involved. Because all the forms ask for more or less the same information, there is a lot of duplication of effort in filling them out. If for a particular consignment, firms were not applying for export incentive or duty drawback refunds, they could simply leave that section of the form blank.

A Zimbabwean agro-chemical company representative explained that her firm had to go through a lengthy administrative process to justify that domestic demand was satisfied before receiving an export license. This often resulted in delays and lost export opportunities because of the seasonal nature of agro-chemical sales and the fact that chemicals were often required on short notice to combat sudden pest infestations. The general manager of a Zambian agro-chemical firm confirmed this, stating that although he would like to import chemicals from Zimbabwe because geographical proximity would make transportation less costly and delivery more rapid, the Zimbabwean export licensing procedures forced him to look elsewhere (usually South Africa) when chemicals were needed in emergency situations.

Horticultural exporters in Zimbabwe and Zambia cited the unique nature of their products and markets as a source of contention with their reserve banks. Because fresh produce is perishable and supply and demand conditions vary on a daily basis in European markets, most payments take place on a cash on delivery basis. As such, prices quoted on export pro forma invoices often differ markedly from actual prices received. The perishability problem is exacerbated by the undependable availability of air cargo space. According to these respondents, reserve bank officials do not appreciate the uncertain nature of European fresh fruit and vegetable markets and automatically suspect under-invoicing by exporters. In Zimbabwe, this results in time-consuming justification of export earnings, considerable delays in receipt of the export incentive, and possible delays in clearing new exports for shipment to Europe. In Zambia, receipt of 50% foreign exchange retentions are often held up. Exporters emphasized that consistent quality and continuity of supply were critical factors for building a reputation of reliability among potential European buyers. Excessive bureaucratic interference worked against this.

Clearing customs is complicated by non-uniform procedures established by SADCC governments and arbitrary decisions on the part of customs officials.

Whether importing or exporting, companies complained about difficulties in dealing with customs officials. One Zimbabwean firm representative explained that he gets lots of documents rejected, but the customs agents refuse to indicate their reasoning. Once an export consignment was rejected because he had abbreviated Zambia as "ZA" when

the correct form was "ZM". Often the company gets one or two things wrong, but customs officials fail to indicate that there are more mistakes until the forms are submitted a second time.

For border crossings, firms reported that customs formalities, road tolls, and duties varied widely among SADCC countries. Often, governments required payment of transit charges in hard currency, significantly driving up transport costs and serving as a disincentive for regional trade. At certain borders, transit was sometimes delayed several weeks. This problem became critical when perishable goods were held up and several companies gave examples of consignments which had been completely spoiled because of border delays.

SADCC governments substantially raise transactions costs by obscuring property rights and increasing the time it takes to make a trade.

Access to foreign exchange is the most important area where property rights are unclear. Timing and adequacy of allocations are major sources of uncertainty for importers in countries currently experiencing foreign exchange shortages. One effect is to raise search costs as imports can not be ordered in a systematic way that allows for sufficient inventories and a smooth cash flow. Instead, orders are made when foreign exchange becomes available. Often imports which could have been transported by sea must be air-freighted since large delays in the foreign exchange allocation process force companies to use the quickest transport means possible.

The more time it takes to complete a transaction, the greater the information imperfections, and the higher the transactions costs.

Additional costs were often incurred by SADCC traders as a result of risk premiums charged by foreign suppliers, importer risk premiums to cover the threat of devaluation, and large administrative overheads. Although importers may have to suffer losses in the short-run, most of these costs are eventually passed on to customers.

While governments can marshall legitimate arguments in favor of tight foreign exchange controls (see Chapter VII), the large amount of paperwork required for importing, exporting, and crossing borders is more difficult to defend. There appears to be a great deal of duplication of effort as a number of government agencies feel that they must each have a role in controlling the flow of trade. This is compounded by arbitrariness and frequent delays in reviewing and approving documentation. This raises the costs of monitoring transactions as documents inevitably get lost or held up in their progress through the various agencies responsible for overseeing agricultural trade.

B. Methods of Payment

Zimbabwean and Zambian company representatives were asked to list the three most frequently employed methods of payment for importing from SADCC and the rest of the world, and for exporting to SADCC and the rest of the world. The distribution of responses about the first most frequently used methods of payment is presented in the top half of Table 6-9 and distribution of methods of payment employed, regardless of frequency of use, appears in the bottom section of the table.

Table 6-9: Methods of Payment Employed by Sample Firms, Zimbabwe and Zambia

	Imports From:				Exports To:			
	SADCC		Rest of World		SADCC		Rest of World	
	Dist.	Percent	Dist.	Percent	Dist.	Percent	Dist.	Percent
First Most Frequently Used Method of Payment:								
Confirmed Irrevocable L/C	6	26.1%	25	43.1%	14	38.9%	7	21.9%
Irrevocable L/C	11	47.8%	15	25.9%	14	38.9%	9	28.1%
Letter of credit	5	21.7%	7	12.1%	4	11.1%	3	9.4%
Cash against documents	0	0.0%	4	6.9%	1	2.8%	4	12.5%
Cash on delivery	0	0.0%	1	1.7%	2	5.6%	2	6.3%
Cash in advance	0	0.0%	0	0.0%	1	2.8%	0	0.0%
Open account	0	0.0%	4	6.9%	0	0.0%	6	18.8%
Other	1	4.3%	2	3.4%	0	0.0%	1	3.1%
Methods of Payment Used Regardless of Frequency of Use:								
Confirmed Irrevocable L/C	18	78.3%	29	50.0%	17	47.2%	9	28.1%
Irrevocable L/C	15	65.2%	21	36.2%	16	44.4%	11	34.4%
Letter of credit	10	43.5%	15	25.9%	9	25.0%	8	25.0%
Cash against documents	5	21.7%	16	27.6%	8	22.2%	10	31.3%
Cash on delivery	2	8.7%	3	5.2%	4	11.1%	5	15.6%
Cash in advance	0	0.0%	3	5.2%	7	19.4%	0	0.0%
Open account	0	0.0%	13	22.4%	1	2.8%	8	25.0%
Other	3	13.0%	5	8.6%	2	5.6%	1	3.1%
No. of Firms Responding	23	35.9%	58	90.6%	36	56.3%	32	50.0%
No Response	41	64.1%	6	9.4%	28	43.8%	32	50.0%

Note: Percentages in the first 16 rows are percentages for those firms responding;
Percentages in the last 2 rows are percentages of the total number of firms surveyed.

Source: UZ/MSU survey of SADCC agricultural trading companies.

Methods are roughly ordered by how stringent they are in terms of credit guarantees.

Types of Methods of Payment

Letters of credit are issued by commercial banks for their clients and are addressed to one or more correspondent banks in other countries. They are extensively used in international trade because they eliminate the need for transferring funds to banks in different countries (Ammer and Ammer, 1977).

Irrevocable letters of credit can not be cancelled before a pre-specified date unless the party receiving payment is in agreement. A confirmed irrevocable letter of credit carries the additional stipulation that the credit line be guaranteed by a large well-established commercial bank. For SADCC countries, these tend to be large international banks based in the United Kingdom such as Barclay's or Standard Chartered.

The confirmed irrevocable letter of credit is the most exigent method of payment commonly used in international transactions, but also less risky than other methods because payment is guaranteed by reputable international banks as opposed to local banks or individual governments.

Cash against documents, cash in advance, and cash on delivery are all methods of payment which do not involve establishing credit lines through commercial banks. As such, they are less time-consuming to establish and are free of finance charges. However, more risk is attached because payment is not assured by a third party. Such arrangements are most commonly employed in transactions between parties

with long-standing trading relationships where an element of trust exists. Cash on delivery is also commonly used for horticultural exports because it is necessary for the buyer to visually inspect the produce for quality, freshness, and damages before paying.

Open account transactions are also used by trading partners who have a well-established relationship. An exporter (or importer) will have a bank account in the partner country. Upon receipt of goods, the importer simply transfers funds from his bank account to the exporter's account. Such arrangements are found primarily in countries with convertible currencies such as western European countries, North America, Japan, and South Africa. In countries with non-convertible currencies, the exporter would refuse to accept such currencies as payment and would also be restricted from shifting capital out of the country as most governments with non-convertible currencies strictly regulate capital flows.

Most Frequently Used Methods of Payment

Letter of credit arrangements are the most commonly used methods of payments for international transactions, regardless of import source or export destination. Of those companies which had imported from other SADCC countries (only 50% of the firms interviewed), all except one cited various letter of credit arrangements as the most frequently used methods of payment. Cash against documents and cash on delivery were also used on occasion. However, cash against documents was only used by Zimbabwean firms. Open account arrangements were never used.

For importing from the rest of the world, letters of credit still dominated, but there was a slightly greater degree of flexibility as

cash against documents, cash on delivery, and open account procedures were most frequently used by 14% of responding companies. Cash against documents and open account arrangements had been used by 28% and 22% of responding firms respectively, although not necessarily as the most frequent form of payment. Once again however, Zimbabwean firms were most apt to use such arrangements as 14 of the 16 companies having used cash against documents were from Zimbabwe and no Zambian company had used open account arrangements. This is largely because of the current poor reputation of Zambia in international business circles.

For export exchanges, once again letters of credit arrangements dominated, but there was a far greater degree of diversity for exports to non-SADCC countries as opposed to those to other SADCC countries. Nearly 90% of those firms that had exported to SADCC cited letter of credit arrangements as the most frequently used forms of payment. This figure was only about 60% for exports to the rest of the world as open account and cash against documents respectively accounted for 19% and 13% of most frequently used payment methods. Again, the more flexible procedures were used almost exclusively by Zimbabwean firms. For cash against documents, all non-SADCC export reportings and 7 of the 8 SADCC export reportings were attributable to Zimbabwean companies. Concerning cash in advance payments for exports to SADCC, 6 of the 7 responses emanated from Zimbabwe. In addition, all simple letter of credit arrangements for SADCC and non-SADCC exports came from Zimbabwean firms.

There is less flexibility in methods of payment alternatives for intra-SADCC trade than for trade with the rest of the world. This results in higher transactions costs for intra-regional trade.

Trading with non-SADCC firms (most of which are located in Europe, South Africa, and North America) appears to be easier as there is somewhat more flexibility in methods of payment employed. Because trade links are more strongly established between SADCC firms and firms in developed countries and South Africa than they are intra-regionally, simpler payment systems based partially on trust are used with more frequency for extra-regional transactions. Moreover, reserve banks in SADCC countries are less likely to insist on letter of credit arrangements for trade with European companies than for trade with other SADCC countries. Therefore, the transactions costs related to making payments tend to be higher for intra-SADCC trade than for much trade with European countries or South Africa.

Transactions costs for Zambian firms are probably higher than for Zimbabwean companies for two reasons. First, with the deterioration of the Zambian economy, suppliers insist on more stringent, less risky payment procedures. Several Zambian respondents maintained that there was greater flexibility in arranging payments during the auction period when Zambia had a better reputation in international business circles. Secondly, there is less of a tradition of exporting for Zambian companies due to the historical dominance of the copper sector and a lack of incentives for non-traditional exporters. As such, non-traditional exporters have not been able to build up networks of established international buyers. As a result, the few Zambian firms

that export view it as more prudent to use low risk, but high transactions costs payment procedures.

Lack of confidence about the ability of an importer to pay promptly raises perceived enforcement costs. Suppliers attempt to cover such costs during the bargaining stage by insisting on confirmed irrevocable letters of credit or by building risk premiums into the FOB price.

Where market power is asymmetric, the weaker party to a transaction may be exposed to potential losses which can not be covered through a payments safeguard.

This appears to be the case with fresh produce exports to Europe because SADCC exporters are forced to accept cash on delivery settlements. Although establishing COD payment is not as costly as drafting and implementing letters of credit, the exporter is exposed to financial losses if produce spoils, there is collusion among European wholesalers, agents are opportunistic, or there are adverse price movements. Because SADCC exporters are price takers, they are not able to pass on these costs to consumers.

C. Protectionism and Prospects for Improved Regional Cooperation

Traders generally believed that SADCC governments were overly protectionist and this was harming the prospects for increased trade and cooperation. Most serious were non-tariff barriers related to

import licensing and administrative delays in approving PTA allocations [5], and protection of infant industries in small fragmented markets.

SADCC traders appear willing to more actively use the PTA clearinghouse, but question the sincerity of government support of this facility.

Of those respondents who filled in the questionnaire, 25% of Zimbabwean importers and 57% of Zambian importers had used the PTA facility. There was a keen interest on the part of many open-ended interview participants in all countries [6] to expand use of the PTA for clearing intra-regional payments. Yet these same respondents voiced skepticism about the sincerity of governments to do what was necessary to make the PTA succeed, despite all the official pronouncements extolling the virtues of the PTA. In short, traders were willing to take the PTA clearinghouse concept seriously if only their governments would do the same.

Several Malawian businessmen stated that trade with Zimbabwe has actually fallen since the establishment of the PTA. According to them, Zimbabwe used the creation of the PTA as an excuse to cancel its OGIL agreement [7] with Malawi in 1986. Zimbabwe justified its withdrawal from the OGIL on a technicality. The PTA treaty stipulates that all signatories are entitled to Most Favored Nation status. Zimbabwe

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[5] Under the PTA treaty, governments are required to set aside foreign exchange for settling clearinghouse obligations.

[6] With the exception of Botswana which is not a member of the PTA.

[7] Under such bilateral accords, licenses from importing from a partner country are automatically granted and the two governments agree to periodically settle their accounts in hard currency.

claimed that this implied that they would have to grant OGIL status to all PTA countries and this was not feasible. However, Zimbabwe's move ran counter to Article IV of the PTA treaty which requires member governments to make every effort to encourage open trade.

Prior to annulment of the OGIL, one Malawian textile manufacturer had averaged annual exports of MK 10 million to Zimbabwe. Since then, his company's exports have fallen to around MK 100,000 per year. An exporter of pulses and spices had had a well-established network of customers in Harare and Bulewayo during the OGIL period and regularly exported MK 500,000 annually. Although his customers are still interested in importing comparable quantities, the Zimbabwean central bank's refusal to grant import licenses has led to a steady decline in trade volumes. Presently, exports to Zimbabwe are only in the MK 120-150,000 range and this trader anticipated continued decline unless there is a change in Zimbabwean trade policy.

The potential for unequal distribution of gains from cooperation is a source of mistrust in the region. Because its economy is the most advanced in the region and its government is perceived as highly protectionist, Zimbabwe is especially mistrusted.

Some traders are pessimistic about the prospects for improved regional cooperation. First, there is a danger that gains will not be distributed evenly, with countries possessing relatively more developed industrial bases like Zimbabwe benefitting disproportionately while the less industrially developed countries suffer. Second, there is a lack of trust between SADCC governments, partly because of concern over the distributional consequences of increased cooperation, but also because

of political differences over how to deal with South African economic and military might in the region. Third, the strong desire on the part of most SADCC governments to obtain export earnings in the form of hard currency is a serious barrier to expanded trade and cooperation in the region.

According to several respondents in Malawi, regional cooperation will only survive on the goodwill of the traditional surplus trade countries in the region -- Zimbabwe and Kenya.

For cooperation to have relevance, there must be confidence and a spirit of goodwill between governments and among traders. Liberalization of trade between PTA members must somehow be more effectively managed because it is presently unbalanced. If trade were completely free, Zimbabwe would inundate the other countries with their goods due to the economies of scale that go with having the most developed industrial sector. Zimbabwe would therefore be required to take the first initiative in making concessions to the other countries because of its economic dominance in the region.

The Government of Zimbabwe garnered a great deal of criticism for its perceived reticence to import from the region while at the same time actively promoting exports. Criticism not only came from traders in neighboring countries, but also from Zimbabwean businessmen who had been refused import licenses for sourcing goods within SADCC. They were quite concerned about their country's negative image in surrounding nations and believed that some measure of trade liberalization was required. In the words of one exporter, "You have

to give a little to get a little." Otherwise, SADCC receptiveness towards Zimbabwean suppliers would eventually disappear.

Establishment and protection of infant industries which duplicate effort in adjacent countries further reduce the potential for regional trade and also lead to inefficient resource use as many national industries run well below capacity.

One respondent cited Zambia's development of an agricultural implements industry as an example of such an infant industry. Because Zambia does not presently have any operating iron mines, all raw materials must be imported. It is therefore doubtful whether Zambia will ever be competitive with neighboring Zimbabwe which has a well-developed farm implements industry employing locally produced steel. Respondents identified similar circumstances in fertilizer and food processing, as well as in non-agricultural industries such as cement, energy, and state-owned airlines.

One solution proposed by advocates of economic integration is to rationalize regional industries by apportioning individual industries to different SADCC countries. Regional industries would capture benefits from economies of scale due to fuller capacity utilization because they would serve a unified regional market instead of fragmented national markets.

Consolidation of markets is undoubtedly a long-run necessity for industrial development in Sub-Saharan Africa. Yet there remain a number of significant problems with coordinating investment where potential exists to achieve economies of scale.

Plant location creates two forms of positive externality. First, multiplier effects are generated by forward and backward linkages to other industries. Secondly, "learning by doing" results in a more highly skilled work force. To the extent that workers circulate between industries and skills are transferrable, the productivity of the work force rises. It is difficult for regional partner countries to enjoy these externalities unless capital and labor are completely mobile within the region.

Complications also arise when there are significant investment indivisibilities (also called cost discontinuities). Schmid (1987) illustrates this with the example of a country considering expansion of its steel industry. If capacity could be doubled, prices could be significantly reduced. However, investors will not finance expansion unless increased sales volumes are assured. At the same time, steel users refuse to expand their own investment unless they are sure to get steel at the lower price. Differences in start-up lags between industries further complicate the situation.

In the SADCC context, these problems take on a slightly different form. While cost discontinuities for capacity expansion is a potential problem, the more immediate concern is how to expand use of existing capacity in some countries while closing plants in other countries. This is both a political and an economic problem. Even if cost discontinuities are not large and the issue is largely one of better utilization of existing capacity, investors must be reasonably sure of access to sufficient volumes of raw materials and intermediate goods as well as market outlets for increased future production. In SADCC

countries where foreign exchange is rationed, this condition does not hold as business planning is hampered by allocation uncertainties. If price controls are in effect at the same time, manufacturers are also uncertain about whether they will be able to sell their future output at prices that cover new investment costs.

Multinational Corporation Resistance

Transnational corporation resistance to regional integration is another factor occasionally mentioned by respondents, but frequently referred to by knowledgeable observers of Southern African political economy (Hanlon, 1986) and economic cooperation in general (Vaitsos, 1978). One of the potential effects of freer movement of goods in regional markets may be to increase competition, thus reducing the monopoly power of MNC subsidiaries in segmented regional markets. MNC subsidiaries have also received criticism for having primary allegiance to their headquarters and not to the country in which they are operating. One trader cited the case of a large London-based company whose Malawian subsidiary purchased tea on the Blantyre auction floor, sent it to Britain for processing, and then shipped some of the finished product to Lusaka for retailing. Malawian (or Zambian) processors therefore lost the opportunity to add value and Zambia lost foreign exchange on unnecessary transport and handling from Britain.

Tariffs are also occasionally important barriers to regional trade and development.

Firm representatives considered tariffs as significant barriers to intra-regional trade in two instances: the SACU accord reduced ability to compete for BLS markets due to duties imposed on imports of non-SACU

origin; and own-country tariff barriers on some raw materials had the inadvertent effect of discriminating against local manufacturing or were otherwise considered exorbitant.

For finished goods, SACU duties are often very high. One agricultural machinery and irrigation equipment supplier in Botswana cited tariffs of 100 to 200% on complete units imported from outside the customs union, effectively barring this company from sourcing from anywhere but South Africa.

Several agro-chemical dealers in Zambia expressed concern over their own government's tariff structure that discriminates against local manufacture. If raw materials are imported and chemicals are locally formulated, the final retail product is subject to sales tax. However, if fully-formulated agro-chemicals are imported, they are allowed in duty-free and no sales tax is levied. This clearly acts as a disincentive to local manufacture.

In Malawi, a number of input suppliers believed that import duties were too high because they were assessed on CIF values. These respondents were of the opinion that it would be fairer to calculate tariffs on FOB prices because transport costs to Malawi had risen so dramatically in the last few years with the closing of the Nacala rail line.

D. Transportation

As mentioned in section 6.5, transport and port facility availability ranked fairly high as constraints on both intra-SADCC trade and trade with the rest of the world. Traders most commonly

expressed concern over: delays and inefficiency at the ports of Dar es Salaam and Beira; the high cost and frequent unavailability of in-land transport; losses due to poor road quality, frequent truck breakdowns, border delays, and theft; and inadequacy of air transport services. These are discussed below.

Port Facility Problems

The Zambian government prohibits transit through South Africa unless goods are sourced there. As a result, the bulk of Zambian imports and exports pass through the port of Dar es Salaam and along the TAZARA rail line or the TANZAM highway. Small volumes also enter and exit through Beira. When asked about the biggest risks faced by their companies when trading, 40% of the Zambian respondents cited problems at the port of Dar es Salaam as the biggest source of worry. Problems arose at the ports due to congestion, poor handling facilities, rolling stock shortages, locomotive breakdowns, a lack of tarpaulins, and theft by port employees.

Because of frequent congestion, governments decide which goods will receive priority for rapid shipment. On the export side, Zimbabwe assigns highest priority to steel and tobacco and Zambia prioritizes copper. As a result, low priority commodities such as Zimbabwean maize take approximately twice as long to reach Beira. During the pre-planting period, Zambia attaches highest priority to fertilizer imports. This often causes substantial delays in the arrival of commercial and donor-financed food imports. An FAO official spoke of a 16,000 MT Canadian food aid shipment of wheat in 1987 whose arrival from Dar es Salaam was delayed eight months, resulting in exorbitant

storage charges at the port [8]. Such delays also make it very difficult to plan the appropriate timing of food aid arrivals so that local markets are not unnecessarily disrupted.

Zambian importers also complained about losses at the port and during transit from the port to Zambia. If goods were containerized, losses were less likely, although respondents reported some instances of containers being burglarized. With bulk shipping however, losses could be quite serious. Table 6-10 provides information on NAMBOARD fertilizer deliveries for the 1987/88 season. For that year, Zambia imported 200,000 MT of fertilizer on both commercial and concessionary terms. Of the 41,000 MT shipped by rail from South Africa, only one third of one percent was lost due to spoilage or theft. By contrast, of the 159,000 MT shipped through Dar es Salaam, over 7% was lost. Although some of these losses may have been sustained prior to reaching Dar es Salaam, NAMBOARD officials believed that most of the losses were attributable to inefficiencies at the port and along TAZARA.

Although most traders insure against transit losses, companies remain risk averse as it often takes a considerable amount of time to obtain payments from insurers, possibly leading to cash flow problems. In addition, losses are only reimbursed in local currency, forcing firms to once again engage in time-consuming negotiations with the

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[8] To provide an indication of how expensive port delays can be if importers are forced to store goods while waiting for rail wagons, ZAMCARGO (the Zambian shipping and handling parastatal) provided quotations for using their storage facilities at the port of Dar es Salaam as of May 1988. The first 21 days are free, but thereafter charges are US$5/MT per week. Eight months of storage would therefore total approximately US$145/MT, nearly doubling the import price of wheat from US$152/MT CIF Dar es Salaam (FAO, "Food Outlook", October 1988) to US$297/MT ex port.

Table 6-10: Fertilizer Shipments to Zambia and Losses in Transit, 1987/88 (in Metric Tons)

Import Source	Total Shipment	Losses	Deliveries	Losses as % of Shipments
South Africa	41,276	136	41,140	0.33%
Rest of World	159,334	11,622	147,712	7.29%
Total	200,610	11,758	188,852	5.86%

Note: All imports from the rest of the world came in through the port of Dar es Salaam.

Source: NAMBOARD.

authorities in countries where foreign exchange is rationed. Finally, failure to make deliveries results in dissatisfied customers and possible loss of future business.

Malawian traders cited the undependable nature of the Dar es Salaam port and the poor state of Tanzanian roads as reasons why they prefer to transport goods through Durban even though this is very expensive. One input agricultural machinery dealer stated that he had recently imported 20 tractors through Dar es Salaam and another 20 through Durban. Even though the first consignment of tractors reached Dar es Salaam six weeks before the second shipment reached Durban, the Durban tractors arrived in Malawi one month before the Dar es Salaam tractors.

Access to the sea is a critical problem in Malawi. Disruption of the Nacala rail line has resulted in a 40% rise in CIF prices as goods

from Europe, North America, and the Orient must now pass through either Durban or Dar es Salaam.

Lack of access to Nacala has also seriously eroded export profitability. To ship a ton of tea to the United Kingdom, one broker quoted sea freight as costing MK 2,000 from Durban, while the road tariff from Blantyre to Durban was an exorbitant MK 5,000 [9]. A textile manufacturer stated that it cost US$ 3,500 to send a 120 foot container holding 40-60,000 square meters of cloth to the United States whereas it would only cost a South African firm US$ 1,000 to send a similar container from Durban. This high cost was not only due to distance, but also to the much longer time necessary for renting the container.

Road and Rail Transport

Several traders in Malawi and Zimbabwe vehemently opposed the practice begun by the WFP and USAID in late 1987 of paying above-market rates to truckers for moving maize from Zimbabwe to southern Malawi for distribution to Mozambiquean refugees as food aid. According to the Zimbabwean businessmen, this practice had severely disrupted trade because with no road transport available (or only available at prohibitive cost), they had not been able to fill export orders to Zambia. In some cases, Zambian firms had then gone to South African companies to source imports.

Traders also commented that rail infrastructure was biased against intra-regional trade because most rail lines lead to either South Africa or the sea. At the same time, there are no direct rail links between Harare and Lusaka or Harare and Blantyre. Malawi is especially

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[9] US$ 797 and US$ 1,992 at the March 1988 exchange rate.

isolated, possessing no uninterrupted rail links with any SADCC country except for the currently non-operational Nacala line to Mozambique. As a result, most intra-SADCC trade moves by truck which raises transport costs and reduces the attractiveness of regional trade. Although a great deal of investment has been earmarked for improving regional transport infrastructure, most funds have gone to rehabilitating corridors used primarily for non-regional trade (port improvements at Dar es Salaam Beira, and Maputo, rail improvements along the Beira Corridor and TAZARA, and the Northern Corridor project linking Malawi with TAZARA).

Air Transport

Horticultural exporters in Zambia unanimously identified inadequate and undependable air transport infrastructure as a key constraint to expanding fresh produce exports to Europe. Flights are frequently delayed or cancelled and refrigerated storage facilities at the Lusaka airport are insufficient. The recent banning of landing rights to Boeing 707's in all EC countries except the Netherlands has further aggravated this problem as Zambia's air cargo fleet is made up solely of 707's. As a result, Zambian exporters have been forced to either risk increased losses by landing produce in the Netherlands before proceeding on to other European markets, or shifting their freight to more expensive airlines such as British Caledonia and UTA.

One Zimbabwean exporter stated that it is risky to attempt long range planning exercises for specific European markets because Air Zimbabwe does not yet have a well-formulated strategy pertaining to which routes it will be developing or phasing out in the future.

Because of over-dependence on Air Zimbabwe, fresh fruit and vegetable exporters would be quite vulnerable to sudden changes in flight routings. This trader advocated establishment of an open-skies policy whereby any carrier could land in Harare. According to him, such a policy would aid horticultural exporters by leading to increased competition between the airlines and a potentially greater variety of market openings if new carriers found it profitable to open up routes between Harare and Europe.

The feasibility of expanding SADCC air-freight capacity by introducing new carriers or augmenting cargo space on airlines currently operating in SADCC countries is a complex issue. First, it is dubious whether potential passenger and cargo volumes are large enough to enable new carriers to attain minimum optimal scale. Second, even if more airlines were to service regional airports, it is unlikely that this would result in atomistic competition. Instead, each flight route would continue to be dominated by an oligopoly of two or three carriers. Third, if charter flights on SADCC national airlines were expanded, it would be necessary to calculate net foreign exchange benefits. Although increased horticultural exports would raise foreign exchange earnings, many SADCC parastatal airlines are large net consumers of foreign exchange. Net foreign exchange losses of SADCC airlines have been estimated at US$ 200 million annually. In 1986, Air Zambia alone consumed US$ 29 million more hard currency than it brought in [10].

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[10] "A Time Has Come for SADCC to Stretch Its Wings", The Southern African Economist, April/May 1988, pp. 3-13.

E. Market Information

Respondents to the Zimbabwe and Zambia questionnaire were requested to evaluate the importance of a number of sources of market information (Table 6-11). The most important market information source for finding out about trading opportunities, long-run demand, and sources of supply are communications with potential clients and in-house analysis. Most medium to large-size firms had marketing divisions whose principal tasks included customer liaison and assessing demand for existing as well as new products. Some companies had branch offices in the more important agricultural districts in their countries. Personnel in these branches had important roles to play in gathering information from farmers on agronomic conditions, potential sales volumes, and special needs of commercial farmers. Some large companies (including most parastatals) also had separate import and export divisions. Import division responsibilities included identification of import needs, aiding the general manager in lobbying government for foreign exchange allocations, procurement, and arranging for transport and payment. Export divisions were responsible for identification of potential foreign buyers, negotiating sales, and export promotion. In such cases, international business contacts were also valuable sources of market information.

Trade missions and embassies were important secondary sources of information on potential trading opportunities and legal procedures for trading. With varying degrees of effectiveness, trade missions provide fairly up-to-date export/import directories and trade promotion newsletters which allow firms to identify possible buyers and sellers.

Table 6-11: Importance of Various Sources of Market Information, Zimbabwe and Zambia (Number of Firms Surveyed)

Information Source	Zimbabwe: VI	SI	NI	NR	Zambia: VI	SI	NI	NR
For Finding Out About Possible Trading Opportunities:								
Communications with potential clients	39	0	0	1	12	9	3	0
International business contacts	19	11	8	2	12	9	3	0
Published tenders for bid	14	9	16	1	10	6	8	0
Trade missions or embassies	13	18	7	2	9	10	5	0
Ministry/marketing board contacts	13	12	14	1	10	12	2	0
Communications with competitors	5	14	18	3	8	7	8	1
For Finding Out About Long-Run Demand for Your Products:								
Communications with potential clients	33	5	0	2	19	4	1	0
Analysis by your firm	31	2	4	3	19	4	1	0
Past experience	23	15	1	1	14	9	0	1
International business contacts	18	7	11	4	14	5	5	0
Ministry/marketing board contacts	9	10	17	4	10	10	4	0
Communications with competitors	7	15	15	3	7	6	11	0
Analysis by parent firm (if subsidiary)	6	4	15	15	7	8	9	0
For Finding Out About Sources of Supply:								
Communications with potential clients	31	5	2	2	15	5	3	1
Analysis by your firm	28	5	3	4	16	3	4	1
Past experience	27	7	3	3	15	5	3	1
International business contacts	22	8	7	3	11	8	4	1
Published tenders for bid	8	5	21	6	4	3	16	1
Ministry/marketing board contacts	7	13	15	5	6	8	9	1
Analysis by parent firm (if subsidiary)	6	6	12	16	6	7	10	1
Communications with competitors	5	5	24	6	4	9	10	1
For Finding Out About Legal Procedures for Trading:								
Past experience	31	6	0	3	15	2	6	1
Contacts in local financial institutions	21	14	3	2	14	7	2	1
International business contacts	18	14	6	2	11	6	6	1
Trade missions or embassies	18	13	5	4	10	7	6	1
Ministry/marketing board contacts	14	10	13	3	10	9	4	1
Published tenders for bid	13	18	8	1	17	2	4	1
Communications with competitors	4	10	21	5	1	11	11	1

Notes: VI=Very important; SI=Somewhat important; NI=Not important;
NR=No response.

Source: UZ/MSU survey of SADCC agricultural trading companies.

Companies would then follow-up by sending out telexes to make initial contact with potential trading partners or inquire about specific trading opportunities. The key role of trade missions (and other trade information services such as export promotion boards) is therefore to facilitate communications between potential trading partners. Trade information services are probably more important to newer firms than to more established ones which have already developed strong links with foreign suppliers and buyers.

Contacts in ministries and marketing boards were generally more important sources of market information in Zambia than in Zimbabwe, reflecting the more dominant role of parastatals in the Zambian economy. A number of private firm representatives in Zambia mentioned that it was virtually impossible to receive foreign exchange allocations without a supporting letter from a parastatal or ministry stating that the firm's imports were destined for a government-sponsored project. Only 2 Zambian respondents claimed that such contacts were not an important source of information on trading opportunities whereas 14 Zimbabwean respondents viewed parastatal and ministry contacts as unimportant.

Past experience counts heavily in acquiring information on legal procedures for trading, clearly dominating all other information sources in Zimbabwe. Interestingly, 6 Zambian firms viewed past experience as unimportant. When asked why, several respondents explained that policies change so frequently that experience counts for less as a result.

Dependence on government contacts by Zambian firms is also reflected in the importance of published tenders for bid as a source of information on legal procedures as nearly all tenders originate from government or parastatals.

Open-ended interview respondents in all five countries were asked to identify key sources of market information and whether they perceived themselves as having problems in obtaining market information. Table 6-12 reports results in four of the countries.

Table 6-12: Distribution of Responses to Market Information Questions in Four SADCC Countries

Does your firm have problems obtaining:	Zim. Y	Zim. N	Zam. Y	Zam. N	Mal. Y	Mal. N	Tan. Y	Tan. N	Total Y	Total N
Trade-related market information?	5	10	6	15	2	13	0	9	13	47
Information related to domestic markets?	0	15	5	16	3	12	3	6	11	49

Source: UZ/MSU survey of agricultural trading companies.

Approximately 80% of respondents did not believe they had serious problems obtaining market information. For importing, many companies had strong ties to a network of foreign suppliers either because they were a multinational subsidiary, local agent for a foreign concern, or had developed international contacts over time. Most companies subscribed to trade journals which supplied information about relevant markets. For goods traded on international commodity markets such as sugar, tea, cotton, and coffee, some larger companies (mainly

parastatal marketing boards) also subscribed to electronic information services which provided information on a daily basis.

As mentioned earlier in this section, many firms had marketing divisions and branch offices whose responsibilities included customer liaison and assessing demand for the company's products and services. As such, these companies did not feel there were significant gaps in their access to information on domestic market conditions. Company representatives stressed however that market information collection and analysis were time-consuming activities, requiring constant effort and therefore constituting an integral part of their work.

Official restrictions on business travel reduce opportunities for customer contacts and export promotion.

A number of respondents cited restrictions on ability to travel as a significant constraint to effectively gathering information about import sources, promoting their products for export, and providing follow-up service to customers. This appeared to be especially true for regional markets as access to market information in Europe or South Africa was usually considered less of a problem because telephone, telex, and other forms of communication were generally more reliable than in nearby SADCC/PTA countries.

The Government of Zimbabwe only allocates the foreign exchange equivalent of Z$ 100 per day [11] for travel, irrespective of variations in costs in different countries. This sum is supposed to cover all costs except for airline tickets. It normally takes two weeks to receive government approval for travel which prevents much travel that

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[11] US $58 at the average exchange rate for March 1988.

may be necessary on short notice. Businessmen in Zimbabwe and Botswana believed that this was one factor which reduced the competitiveness of SADCC companies in Botswana.

In contrast, the South African government offers tax credits for sales trips abroad as part of its export promotion program. According to Hanlon (1987), these credits are so generous that business travel effectively becomes free. As a result, South African businessmen were free to travel whenever they wished and had far more contact with their Botswanan clientele than did SADCC businessmen.

SADCC governments should place greater emphasis on implementing measures that promote information exchange between businessmen rather than attempt to collect and analyze detailed technical information on foreign markets.

A number of respondents questioned the propensity of governments to organize frequent official trade delegations and conferences where few members of the private sector were invited to attend. In their view, these efforts rarely generated any new trade. Instead, they claimed, more resources should be devoted to facilitating contacts between businessmen as only they had the expertise to evaluate trade opportunities and make decisions on whether or not to buy and sell. Travel-related strategies suggested by respondents for facilitating information exchange included: easing of travel restrictions by reducing bureaucracy and accelerating the approval process; setting aside more foreign exchange for business-related travel; discounts on national airlines; waiving of airport departure fee payments for SADCC/PTA businessmen or allowing payment in local currencies;

continued and expanded sponsorship of regional trade fairs; establishment of a SADCC chamber of commerce to serve as an advocate for expanded regional trade and act as a trade information clearinghouse; and reciprocal hotel arrangements whereby hotels in partner countries would be allowed to accept local currencies from PTA lodgers.

Horticultural exporters explained that the complex nature of European fresh produce markets required sophisticated knowledge of frequently changing supply and demand conditions. While one Zambian exporter criticized the passivity of Zambian trade mission personnel in Europe in promoting Zambian products and suggested that more dynamic people be recruited, another exporter from Zambia questioned whether governments could realistically be expected to provide the detailed type of information required by those seeking to export produce to Europe. Questions that are most important for exporters to highly specialized developed country fruit and vegetable markets concern: what to grow; quality standards; clearing and handling cost structures in Europe; and packing requirements. According to this exporter, these market information issues are probably the biggest barrier to entry of new Zambian firms into fresh produce export and significantly impeded entry even during the foreign exchange auction period when conditions were far more attractive for exporters due to favorable exchange rates.

In addition, countries and individual firms had to work hard at building reputations for quality and reliability among European wholesalers. Kenya was cited as a country with a good international reputation for fresh produce exports. Because Zambia did not yet have

an established positive image in Europe, individual Zambian exporters had to build their own reputations. Respondents viewed this promotional aspect of marketing to be as important for effective exporting as detailed knowledge of the markets.

South African exporters possess significant market information advantages over SADCC exporters in BLS markets.

Botswanan respondents offered an interesting perspective on SADCC market information problems for two reasons. First, unlike the other survey countries, Botswana is currently enjoying a balance of payments surplus. Therefore it is useful to enquire about what problems may arise when foreign exchange is not the overriding concern. Secondly, given South African pre-eminence in Botswana's agricultural and consumer markets, it is important to identify differences in South African and SADCC marketing strategies that further illuminate market information problems which need to be overcome if intra-regional trade is to increase.

Because of its membership in the South African Customs Union (SACU), Botswana is almost fully integrated into the South African economy. Absence of tariff barriers and the ease of crossing borders between South Africa and Botswana render it very difficult for SADCC countries to compete effectively in Botswana. Such integration also has significant consequences for market information. South African consumer goods advertising permeates Botswana because South African television is beamed into Botswana. In addition, 60 to 90% of the newspapers, magazines, and agricultural trade journals circulating in Botswana are of South African origin. As a result, Botswanan consumers

have established strong brand loyalties with a wide variety of South African goods. By contrast, SADCC consumer goods are virtually unknown in Botswana. One trader imported biscuits from Zimbabwe which he felt were of high quality and price competitive compared with South African brands. However, because consumers had never heard of this Zimbabwean brand, the biscuits sold poorly. SADCC governments rarely, if ever, grant foreign exchange to businesses for promotional activities in foreign countries (the sole exception perhaps being participation in trade fairs), but without significant advertising to introduce unfamiliar products, SADCC goods are unlikely to break the South African hold on Botswana consumer markets.

The absence of extensive border controls makes it much easier for South African businessmen to service the Botswana market. Goods can often be delivered within several days of ordering and Botswanan businessmen also find it much simpler to maintain frequent contact with their South African counterparts because telephone and telex services are more dependable and the travel problems detailed above do not exist for South African businessmen.

Several Botswanan respondents also noted that South African packaging was superior to that of goods from SADCC countries. They identified labelling, variety of package sizes, and general attractiveness as reasons why retailers and consumers prefer South African packaging. By comparison, retailers considered Zimbabwean packaging to be rather shoddy, and frequent packing materials shortages in Zimbabwe often prevented trade.

A few interview participants doubted whether the benefits of promoting new products would exceed the potentially high costs of market entry for prospective SADCC exporters, given the small size of the Botswanan market. Nevertheless, they were receptive to the idea of developing an alternative network of import sources as one strategy for moving away from a precarious over-reliance on South Africa.

Other Market Information Issues

Several input dealers who mainly supplied smallholders in Zambia, Malawi, and Tanzania mentioned the rudimentary state of official data collection on production, demand, and agronomic conditions as an area where information was unreliable. Because most input suppliers primarily serve the commercial farm sector where accurate information is more readily available, few respondents viewed domestic market information as a problem.

As stated earlier in this section, another reason why firms did not feel a need for additional domestic market information was that severe agricultural input shortages in most of these countries reduced uncertainty about demand fluctuations as most imported items could easily be sold. As SADCC economies become healthier, there will be a greater need for more of this market information.

Foreign exchange shortages impede customer contact and export promotion efforts of SADCC companies.

Traders cited communications with clients as the most important source of information for learning about possible trading opportunities, long-run demand, and sources of supply. However, many traders maintained that negotiating with government for foreign

exchange now consumes much time previously devoted to developing and maintaining client contacts. Therefore, many SADCC firms are not able to devote sufficient time to attending to customer needs. This reduces competitiveness with non-SADCC firms which are not operating under the same set of constraints.

There is evidence that poor communications infrastructure has also hampered intra-regional trade as it is often easier for a trader in Harare to telephone London or Johannesburg than Lusaka, Lilongwe, or Dar es Salaam. In the long-run, the solution may be to increase investment in communications networks. In the short-run, lowering restrictions on foreign travel by businessmen can generate increased exports by facilitating establishment of new trading relationships and strengthening existing ones. Although this will involve increased foreign exchange outlays, greater travel flexibility may potentially result in net foreign exchange benefits. Without such changes, it will be difficult for SADCC firms to compete against South Africa in regional markets due to the tax credits South Africans receive for export promotion.

F. Donor Programs

Firm representatives expressed a degree of ambivalence towards donor-funded commodity import programs (CIP's) [12], agricultural input purchases, and food aid shipments.

While quite a few respondents appreciated donor programs for helping them to maintain acceptable levels of imports and sales volumes, many of these same businessmen wanted to move away from dependence on donors because availability of funds was unreliable, and therefore made planning ahead for more than a single year difficult. Other problems related to donor activities were: commodity and food aid import programs occasionally disrupt the smooth functioning of recipient country food and agricultural input markets; "tied" CIP's [13] usually result in imports being more expensive than if recipient country firms had been free to import competitively; lack of flexibility in the implementation of CIP's make it difficult for smaller firms to participate due to cash flow constraints.

Despite the numerous problems associated with CIP's, many company representatives believed they would have difficulty surviving without them, due to the severe foreign exchange shortages faced by importers. This holds in four of the five countries where interviews were carried out. Donor-supported projects that purchased locally manufactured hand

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[12] Under CIP's, donors provide recipient governments hard currency for importing intermediate goods and variable cost inputs. Importers exchange local currency for the foreign exchange. Local currency is then usually employed by recipient governments to finance development projects.

[13] Those CIP's which only allow import sourcing from the donor country.

tools and seed for use by smallholders were cited as efforts that should be expanded. These possess the multiple benefits of stimulating SADCC manufacturing sectors and smallholder production, while at the same time indirectly spurring broad-based effective demand.

<u>While CIP's aid importers to cope with foreign exchange shortages, several elements of these programs reduce their effectiveness as development tools.</u>

Several Zimbabwean respondents whose companies had participated in "tied" CIP's were of the opinion that such programs often lead to higher input prices to recipient country farmers as importers can not source goods on a competitive basis. If the national requirements of a particular input during a given foreign exchange quota period can be met entirely through CIP's, then the government only grants licenses for import of that input through the CIP's. One agro-chemical company representative estimated that chemicals imported through tied CIP's are usually 10-20%, and sometimes as much as 50%, more expensive than chemicals imported on a least cost basis. All of these costs are passed on to customers.

Donor administrative procedures for implementing CIP's tend to favor large companies because of the cash flow requirements they imply. In Zimbabwe (and presumably in most other countries in which these donors operate), the minimum value of applications for participation in CIP's can be quite substantial. The Japanese and the Dutch have US$ 200,000 minimums and the Italians have a US$ 500,000 minimum (this was originally US$ 1 million but was halved after numerous complaints were received). This clearly limits participation to only a few large

companies. USAID is much more flexible as the minimum allowable application is only US$ 10,000.

In general, donors prefer to disburse funds in a single lump-sum payment as multiple payments are more administratively burdensome. However for some small companies, CIP's may be responsible for up to one full year's import requirements. If, as is often the case, such firms normally purchase a few months' requirements at a time, participation in CIP's forces them to pay for an entire year's requirements all at once. There may also be a seasonal problem unique to agricultural input suppliers. If a CIP comes on line in January, and firms are obliged to place all their import orders at that time, this hurts their cash-flow and financing situation because most sales are during the October-December (pre-planting) period. One Zimbabwean CIP participant spoke favorably of a French program because the foreign firm was unable to supply in a single consignment. Although the French government did not like this, it worked out much better for the Zimbabwean importer as it coincided more closely with the timing of how he would normally manage imports.

There is also frequently a danger that aid funds will be used by governments to displace treasury moneys that would have otherwise gone to agriculture, resulting in no net gains for the sector. Several Zimbabwean firms mentioned applying for ad hoc CIP allocations, receiving them, and subsequently getting a letter from the government reducing their quota period foreign exchange allocation -- the justification being that they had recently received aid funds. A number of Zambian company representatives complained that their

allocations had been reduced after receipt of an EC grant of US$ 7 million targeted for agricultural input imports in March 1988.

Several input suppliers had suffered from donor programs which they consider to have been thinly-veiled dumping exercises. One Zimbabwean manufacturer of backpack sprayers cited a NORAD [14] donation of 11,000 sprayers several years ago. Because Zimbabwe's annual demand for sprayers is only 12,000 units, this severely affected the company. They were forced to lay off a substantial part of their work force and move to three day work weeks (from a normal five day week). Most of these donated sprayers are now lying idle as no spares were furnished.

NORAD has also given knapsack sprayers to Zambia and this has hurt the company's export business. According to the Zimbabwean manufacturer, India is also responsible for dumping sprayers in LDC's at below-market prices.

CIP's may also have negative effects on local firms if goods are imported on more favorable terms than commercial imports. For example, in late 1988 several Tanzanian agricultural machinery distributors complained about a proposed EC CIP that would import spare parts on a duty-free basis. These firms were then holding stocks of spares which had been subject to standard tariff schedules (10-20% of landed costs). Company representatives were concerned that they would have great difficulty selling their stocks if the EC program was allowed to proceed as planned.

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[14] The Norwegian government's international aid agency.

A number of CIP design issues arise from this discussion.

The fewer restrictions placed on the range and source of commodities to be imported, the greater the potential for imports to be appropriate for a country.

Clearly, local industries have been disrupted on occasion by donor-assisted dumping. Restrictions on import sources also allow suppliers to extract monopoly rents -- especially if the export country's agricultural input industries are not competitive domestically or are highly protected from foreign competition.

In late 1988, the World Bank was trying to persuade bilateral donor agencies operating in Tanzania to relax CIP restrictions so these programs could contribute more effectively to trade liberalization and BOP deficit reduction efforts. CIP funds would be used to support the Open General Licensing system for importing (see Chapter VII for further discussion). In this case, CIP's have the potential to actively facilitate structural adjustment if donors are willing to be more flexible.

A number of CIP's discriminate against small firms by requiring large lump sum payments.

This is exacerbated in countries undergoing structural adjustment as credit ceilings are often elements of such reform packages. In Tanzania, a number of firms experienced difficulty in participating in CIP's because donors stipulated that all local currency counterpart funds had to be deposited with the treasury prior to importing. This created problems due to the scarcity of credit for private sector transactions.

Although disbursing funds in tranches would raise administrative costs for donors, the developmental effect on countries with fledgling industrial sectors could be substantial.

Conditionality should be incorporated into CIP's targeted to specific sectors stipulating that funds are additional.

Recipient governments should be required to provide documentation of sectoral foreign exchange allocations before, during, and after implementation of a CIP.

Food Aid Issues

One Zambian interviewee believed strongly that concessional wheat imports harmed incentives for local production. First, he argued that Zambian producers could export wheat to nearby countries while importing at the same time and achieve net foreign exchange gains. However they were barred from doing so because wheat donors such as the United States prohibit giving food aid in commodities which are simultaneously exported by the recipient country. If USAID waived this stipulation in the case of Zambia, wheat production would become more attractive to Zambian commercial farmers. In addition, it was alleged that food aid imports had eased the pressure on the Zambian government to stimulate local wheat production and, as a result, producer prices were not as remunerative as they would have been if Zambia had to import most of its wheat on commercial terms.

A representative of the National Milling Company [15] disagreed with this position on a number of grounds. First, commercial farmers are

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[15] A parastatal that is the only authorized importer of wheat and also the largest maize and wheat miller in Zambia.

not currently capable of supplying more than three months of domestic wheat requirements. Without food aid imports, Zambia would face wheat shortages and milling capacity would be under-utilized. Given Zambia's balance of payments problems and the fact that domestic producers will not be able to fully satisfy local demand for a number of years, the NMC must obtain food aid whenever it becomes available. The NMC spokesman also disagreed with the net foreign exchange gains argument for permitting exports. Any gain would probably be minor and would be negated for the government if exporters were granted their 50% foreign exchange retention while the NMC was forced to import additional tonnage on a commercial basis.

Among the arguments commonly cited in favor of trilateral food aid programs is that it is logistically simpler and quicker to transport food aid to recipients from neighboring countries with available stocks than from distant donor nations. For land-locked SADCC countries like Zambia, this position is reinforced by the Dar es Salaam port congestion problems detailed in section 6.5.C. However as also mentioned earlier, trilateral food aid shipments from Zimbabwe to Malawi have severely strained an already over-extended regional trucking fleet and may have also had the unintended consequence of disrupting commercial intra-regional trade.

Unfortunately, the refugee situation in southern Malawi continues to grow worse. In November 1988, the WFP Zimbabwe director stated that 180,000 MT of food aid would have to be moved by road from Zimbabwe to Malawi in the space of the following six months to feed 520,000

Mozambiquean refugees [16]. This implies that roughly 6900 MT must be delivered weekly, requiring full-time use of well over 200 thirty-metric ton capacity trucks. The dire transport situation is compounded by the fact that no Zambian trucks are available to assist in this effort because record official marketings will fully utilize the Zambian fleet during this entire period. Therefore, serious transport shortages for commercial intra-regional trade are likely to continue in the near future.

SADCC governments are confronted with a difficult dilemma. While it is clear that commercial activity has been severely affected, it is equally evident that many Mozambiquean refugees in Malawi would starve without massive food aid shipments. South African exporters appear to be the only beneficiaries of this situation as they pick up orders that can no longer be filled by SADCC firms.

G. Export Promotion Programs (EPP'S)

To varying degrees, all countries except Botswana have established programs designed to increase incentives to exporters. Objectives of the various programs include: generation of hard currency receipts to ease foreign exchange shortages and reduce balance of payments deficits; enhancing the price competitiveness of local industries in export markets; export diversification; creation of more local value-added in the composition of exports; easing of access to foreign exchange for companies while maintaining a degree of official control

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[16] Remarks of Peter Simpkin at the University of Zimbabwe-sponsored conference on "Food Security Research in Southern Africa" held in Harare.

over the import process; and diffusing information about export opportunities.

Often, governments do not establish EPP's until a balance of payments crisis develops. Zimbabwe, Zambia, and Tanzania have all had EPP's in one form or another since at least the early 1980's. Such programs were introduced in response to deteriorating balance of payments positions which accompanied falling primary commodity prices and rising oil import bills in the latter half of the 1970's. In contrast, Malawi only began having serious balance of payments problems in 1986. As of November 1988, programs for stimulating exports had been designed, but were not yet operating. Due to its large foreign exchange surplus, Botswana's government currently has no plans for initiating EPP's. Several Botswanan respondents saw this as shortsighted, citing forecasts of declining diamond reserves in the 1990's and the need to develop alternative sources of export earnings in the near future.

Table 6-13 shows the various EPP's which are currently operating in Zimbabwe, Zambia, and Tanzania and envisaged to begin soon in Malawi. In countries with acute foreign exchange shortages, retention programs and export revolving funds can serve as powerful incentives to export as a critical concern of firms is maintenance of a sufficient level of imports to continue producing. In Zambia, non-traditional exporters (exporters of all commodities except copper and a few other minerals) may retain 50% of their hard currency earnings. In Tanzania, non-traditional exporters may also retain 50% while traditional exporters are allowed to hold 10% of their foreign exchange earnings.

Table 6-13: Export Promotion Programs in Four SADCC Countries

Program	Zimbabwe	Zambia	Malawi(1)	Tanzania
Foreign exchange retention		X		X
Export revolving fund	X		X	
Duty drawback	X		X	X
Tax rebate on exports			X	
Direct rebate on exports (2)	X			
Export promotion board	X	X	X	X

Notes: (1) Proposed and soon to be implemented;
(2) The Export Incentive Scheme.

Zimbabwe is the only country with operating export revolving funds (ERF's). In 1983, an ERF for the manufacturing sector was introduced. In 1987, additional ERF's for the mining and agricultural sectors were established. The proposed Malawian ERF is not sector-specific but will almost certainly be dominated by agriculture as this sector accounts for more than 90% of Malawian export earnings.

Duty drawbacks, tax rebates, and direct rebates on exports all seek to enhance the attractiveness of exporting by increasing the local currency return to exporters. Duty drawback programs currently function in Zimbabwe and Tanzania and will soon be instituted in Malawi. Under such programs, exporters receive full rebates on tariff duties on imported inputs used in the manufacture of exported goods. This may be problematic for some companies as it may be hard to trace the use of a particular imported input in the manufacture of a specific exported item. This is often the case when a company manufactures for both domestic and export markets.

In Malawi, a 4% rebate on gross export profits is proposed. This rebate will be paid upon submission of tax returns and documents certifying that payment for exports has been received.

In Zimbabwe, exporters of processed and semi-processed commodities receive a 9% rebate on the FOB value of exports through the Export Incentive Scheme which was initiated in 1984. This program is designed to increase the price competitiveness of Zimbabwean exports and provide incentives for local value-adding. For example, maize grain does not qualify for the Export Incentive Scheme, while maize meal and maize seed are eligible. A minimum local content of 25% is also required. Zimbabwean traders viewed this as a powerful incentive to export and traders in other countries considered it a significant constraint on their ability to compete with the Zimbabweans.

All four countries have established export promotion boards which are attached to their trade ministries. Among the activities of these boards are: provision of information on potential export markets through publication of newsletters and maintaining resource centers; training programs for prospective exporters; organization and sponsorship of national delegations at regional trade fairs and other trade conferences; publication of exporter directories; and liaison with government officials to present the views of exporters on existing policy and pending legislation on trade-related matters.

Traders, government officials, and other experts interviewed in the five countries identified several factors critical to the success of EPP's.

EPP's should be established prior to the onset of balance of payments difficulties.

As discussed above, Malawi has been slow to implement EPP's while Botswana has not even begun to design such programs. Because exports are not very diversified in these two countries, both economies can be seriously disrupted by downturns in world prices for just two or three commodities. Well-designed EPP's which seek to diversify exports can possibly cushion the blow of such external shocks.

For EPP's to be effective, they must operate within a macro-economic environment conducive to exporting.

If key macro-economic constraints are not being addressed, the success of EPP's in stimulating exports will be limited. Probably the most important macro-economic variable for exporters is the exchange rate. A seriously over-valued exchange rate raises import demand as the local currency price of imports becomes lower. At the same time, export incentives are reduced as the local currency returns per unit of foreign exchange earned fall. The combined effect exacerbates foreign exchange shortages. The various local currency rebate schemes all effectively alter exchange rates in favor of exporters. For example, the Zimbabwean Export Incentive Scheme is an effective 9% devaluation benefitting exporters. However, if such measures are not sufficient to compensate for overvalued exchange rates, exports will not be greatly stimulated.

Large government borrowing to fund budget deficits often squeezes domestic credit availability to potential exporters. This problem is either addressed by expanding the money supply which increases

inflation and leads to deterioration in the exchange rate (as some observers believe happened in Zambia during the foreign exchange auction period) or by imposing strict credit ceilings with high nominal interest rates (as is currently the case in Tanzania). Either way, firms may not respond to EPP's as they are unable to borrow enough local currency to purchase the requisite inputs needed for production of exportable commodities. In Tanzania, most respondents considered the lack of credit availability (as well as an inefficient national banking system) to be a serious constraint on their ability to import, export, and buy and sell in the domestic market.

EPP's should not be too expensive for governments to finance.

All EPP's imply costs to government either in the form of direct subsidies (the Zimbabwe Export Incentive Scheme), reduced tariff and tax revenues (duty drawbacks and tax rebates), start-up costs (export revolving funds), or provision of salaries and operating budgets (export promotion boards). Ideally, the present value of the increase in export earnings attributable to establishment of a given EPP should be greater than or equal to the present value of the costs of implementing the program.

A number of complications may arise when employing such a simple formula. First, causality may be difficult to determine, especially if EPP's are being carried out within the context of a rapidly changing macro-economic policy climate.

Second, governments and companies may place a greater social value on the marginal unit of foreign exchange than on the equivalent marginal unit of local currency. A number of respondents indicated

that they export at break-even prices or at a loss in order to increase their access to foreign exchange, either through retention programs or because their applications may be viewed in a more positive light by rationing authorities.

Third, EPP's may possess public goods attributes. Programs that aim to diversify exports can lower the vulnerability of fragile economies to external shocks. Employment may also be created as industries expand or existing capacity is more fully utilized. Market information programs may lead to greater equity in access to information on potential export market outlets. Yet such effects are difficult to quantify in benefit/cost calculations.

Export revolving funds may be most attractive from a fiscal point of view. If they function properly, such funds become self-financing as participants reimburse hard currency credits when payment is received for exports. However, start-up costs may be quite high and initial seed capital must often be furnished by donor agencies. One way to lower seed capital requirements is to target individual sectors as has been done in Zimbabwe. If export diversification is an important objective, sectors which have not traditionally been export-oriented may be targeted.

At the same time as EPP's must be affordable to governments, financial incentives must be significant enough to cause firms to export more than they would have in the absence of such programs. In addition, establishing firm eligibility must not be too burdensome administratively. For example, a number of Malawian traders expressed skepticism over the potential attractiveness of the proposed 4% tax

rebate on gross export profits, stating that a possible rebate as distant as 12 or more months from the date of export provides little incentive to export. In their view, the tax rebate scheme will only be used by those who would have exported anyway -- simply conferring windfall profits to traditional exporters. In other words, the rebate scheme does not provide strong enough inducement to cause firms to reorient their production in any significant way toward exporting. Potential monetary rewards are not that great and the paperwork necessary to apply for the rebate and negotiate with government may be too time-consuming to make the effort worthwhile.

It may also be very difficult for SADCC governments to match South Africa's generous export promotion efforts. The South African government offers a tax deduction scheme whereby exporters are allowed to reduce their taxable income by: 10% of the total locally-generated value added of exports; a 50% duty drawback on locally-produced inputs; and up to 200% of the costs of "maintaining and developing export markets" (i.e. travel and sales promotion). In addition, many food exports receive direct subsidies. Hanlon (1987) claims that in 1986 the government covered Meat Board export losses of R 370 to R 690 per MT. As shown in Chapter V, maize export losses have also been substantial in recent years.

<u>"Beggar thy neighbor" EPP's may result in short-term gains, but also have long-run disadvantages.</u>

The Export Incentive Scheme is very popular among Zimbabwean exporters, but is a source of resentment on the part of competitors in other SADCC countries. Because it is a direct export subsidy, it is

also in violation of GATT. None of the other EPP's discussed in this section can technically be viewed as direct subsidies to exports. Although duty drawbacks and tax rebates increase the attractiveness of exporting, they do so by eliminating or lowering existing government-imposed disincentives such as import duties and corporate taxes. Foreign exchange retention programs and export revolving funds ease access to hard currency and do not alter prices at which traders import and export. Therefore, unlike Zimbabwe's Export Incentive Scheme, such programs are not vulnerable to charges of dumping and do not carry the risk of leading to trade disputes.

Participation in EPP's should be administratively simple and flexible, and any payments should be made with minimal delays.

As mentioned above, if participation in EPP's is overly time-consuming, incentives are reduced. While acknowledging that the Export Incentive Scheme and the duty drawback programs provide significant inducement to export, several Zimbabwean respondents complained of occasional difficulties in receiving timely reimbursement. One Zimbabwean manufacturer cited an instance when he exported merchandise to Zambia. When he applied for Export Incentive and duty drawback funds, the Ministry of Trade and Commerce indicated that at the time of importation of inputs, the company had not informed the ministry that they would be used in the manufacture of exports. As such the company was not eligible for reimbursement under the two programs. The respondent was unaware that he would be exporting prior to importation of the inputs at issue. Eventually the company received payment from government, but only after lengthy negotiations.

Another problem with the Zimbabwean duty drawback is that it must be claimed within 30 days of export, and in theory one can not claim it until payment has been received. If creditors are allowed 60-90 days to pay for purchases (as is often the case), this is not possible. In practice, the government does not publicize the fact that firms can claim the duty drawback before payment has been received. More seriously, the duty drawback can not be claimed without first submitting the bill of entry (into the destination country) and invoice forms which are completed at the border by transporters and customs officials (four copies are circulated to the exporting firm, the client, the transporter, and customs). If an exporting company does not receive these forms within 30 days, they can not apply for the duty drawback. Such delays may result in substantial losses to exporters. One company representative claimed that the duty drawback typically amounted to as much as 30% of the FOR export price and cited instances of losing the duty drawback because of delays in processing documentation.

Export revolving funds (ERF's) are attractive to companies as they ease the burden of applying for foreign exchange allocations through traditional channels. Several Zimbabwean respondents applauded the new ERF for the agricultural sector, stating that the application process was not overly complicated, priorities were clear, and payments were made promptly.

Yet there are a number of potential problems related to planning and distribution of benefits. One respondent cautioned that care must be taken to rationalize import priorities. For example, if funds are

generously allocated to agro-chemicals and new tractors without a commensurate increase in allocations for agro-chemical applicators and tractor spares, bottlenecks will result. This problem is eased somewhat if export revolving funds are sector-specific and the allocating ministry has a good working knowledge of sectoral import needs. Because the proposed Malawian ERF is not sector-specific, rationalization of import priorities may become a significant problem.

How to effectively allocate foreign exchange is less straightforward for ERF's targeted to agriculture than for manufacturing sector ERF's. In most instances, the manufacturing concern that imports raw materials and intermediate goods is the same entity that exports. This is rarely the case in agriculture as input manufacturers and distributors import while producers, processors, and brokers do most of the exporting. Channelling hard currency earnings of exporters to appropriate importers may therefore be a difficult task to accomplish and requires an intimate knowledge of the agricultural sector on the part of fund administrators.

6.7. Summary

A number of broad themes emerge from the information presented in this chapter. First, while analysis in Chapter V demonstrated that price barriers are significant constraints on expanded SADCC agricultural marketing and trade, non-price barriers of a transactions costs nature are also of considerable importance. Many traders firmly believe that high transactions costs arising from SADCC government

restrictions on trading may be substantially lowered if these governments possess the will to do so.

Second, transactions costs are often higher for intra-regional trade than for trade with the rest of the world. Because regional trade links are not as developed as those with Europe and South Africa, the costs of negotiating transactions are raised as uncertainty is greater. Moreover, mistrust and lack of confidence in the ability of SADCC governments to facilitate prompt payments are widespread in the region. Due to these problems, payments procedures for intra-regional trade are generally more stringent than for trade with the rest of the world. In addition, information pertaining to regional trading opportunities is rarely readily available so search costs are high.

Third, in a number of instances, the direct beneficiary of regional economic and political disarray is South Africa. The extent to which the South Africa government actively promotes such destabilization has long been a topic of considerable debate among political scientists, historians, and economists. The Malawian refugee crisis has forced some SADCC importers to source goods from South Africa because SADCC exporters are no longer able to secure transport.

In a passage on Zambia which applies equally to other SADCC countries where business planning has become difficult, Hanlon states:

> South Africa has been the main beneficiary, first because in a crisis it is always the quickest source of supply. For example, the soap company is not able to import essential raw materials, so production stops; with no soap on the market, there is a political scandal, and an urgent order is placed in South Africa. Grain bags are imported from South Africa after the harvest has begun, to keep the maize from rotting on the ground, when a local company has been refused the foreign exchange to mend bags.

> Secondly, South Africa often appears to be the cheapest source. Zambia now requires government and parastatals to buy from the 'cheapest' source. With planning and finance, that could be Japan, India, or even Europe. But on short notice, it is always cheaper to buy in South Africa than to airfreight from Europe or Asia.

Fourth, survey information revealed a wide range of agricultural inputs and outputs that have either been traded or firm representatives expressed an interest in exchanging within the region. While non-price barriers to regional marketing and trade are numerous at present, SADCC governments have the potential to lower a number of them.

In the area of market information, government has an important role to play by designing policies and administrative procedures that facilitate information exchange among prospective trading partners. Continued sponsorship of SADCC and PTA trade fairs and expansion of export promotion board activities are possible avenues for better diffusing market information. Governments can also promote their countries' products in foreign markets, either through direct advertising or provision of tax credits to exporter organizations who do their own foreign promotion. Relaxation of certain restrictions on business travel would also facilitate information flows.

Governments must also decide on the right balance between trade controls and allowing traders some flexibility. While some controls are necessary, too much import regulation ultimately raises producer costs and consumer prices in domestic markets. Excessive controls on exports eventually erodes hard currency earnings if foreign competitors are subject to fewer restrictions and can thus exercise greater flexibility in serving clients.

Governments and donors must both carefully monitor the effects of CIP's on the local business environment. If well designed, such programs can serve as development tools through their stimulation of infant industries as well as agricultural production. Alternatively, CIP's can become thinly veiled dumping exercises, disrupting development by undercutting indigenous firms and creating dependency on inappropriate agricultural inputs.

Finally, the foreign exchange constraint is the root cause of many of the marketing and trade barriers outlined in this chapter. To some extent, excessive documentation, official reluctance to use the PTA clearinghouse, restrictions on travel for export promotion, poor transport and communications infrastructure, and inability to achieve benefits from economies of scale all emanate from foreign exchange shortages. Because this issue is so important, the following chapter is exclusively devoted to examining SADCC foreign exchange rationing systems.

CHAPTER VII

ANALYSIS OF THE FOREIGN EXCHANGE ALLOCATION SYSTEMS IN FOUR SADCC COUNTRIES

7.1. Introduction

This chapter provides in-depth analysis of one of the most important barriers to SADCC trade -- official rationing of foreign exchange. At present, six SADCC governments ration foreign exchange -- Zambia, Zimbabwe, Malawi, Tanzania, Mozambique, and Angola. The remaining three countries (Botswana, Lesotho, and Swaziland) are members of SACU. They have no barriers for internal customs union trade and adhere to the South African tariff structure for trade with countries outside SACU.

It is incorrect to classify foreign exchange rationing as a purely non-price barrier to trade because it is really a direct consequence of a fundamental pricing issue -- prolonged exchange rate misalignment. Section 7.2 clarifies the link between overvalued exchange rates and rationing, and identifies the wide array of possible objectives that foreign exchange allocation systems may be meant to satisfy. In addition, a general classification of exchange control systems is presented. The following section is a case study of the Zambian experience with two markedly different foreign exchange allocation systems -- an auction and an administrative system. The general objectives of the Zambian analysis are to: identify the distributional

effects of the alternative systems on sectors, firm types, and categories of goods imported, and outline implications of the two systems on agricultural trading company performance.

Section 7.4 broadens the analysis by incorporating insights from the experiences of three other SADCC countries where foreign exchange is rationed -- Malawi, Zimbabwe, and Tanzania. Each country's allocation procedures are briefly described and lessons learned about the effects of rationing on each country's agricultural trading environment are identified. The analysis draws on insights gleaned from interviews of public and private sector representatives in each country, analysis of relevant secondary data and previous studies.

The chapter concludes with specific recommendations on how to improve foreign exchange allocation system design, keeping in mind that there may be conflicts between public and private sector objectives, and import control policies can not be separated from larger macro-economic issues. The emphasis is on extracting lessons from individual country experiences that may provide insights about alternative methods for allocating foreign exchange in other countries.

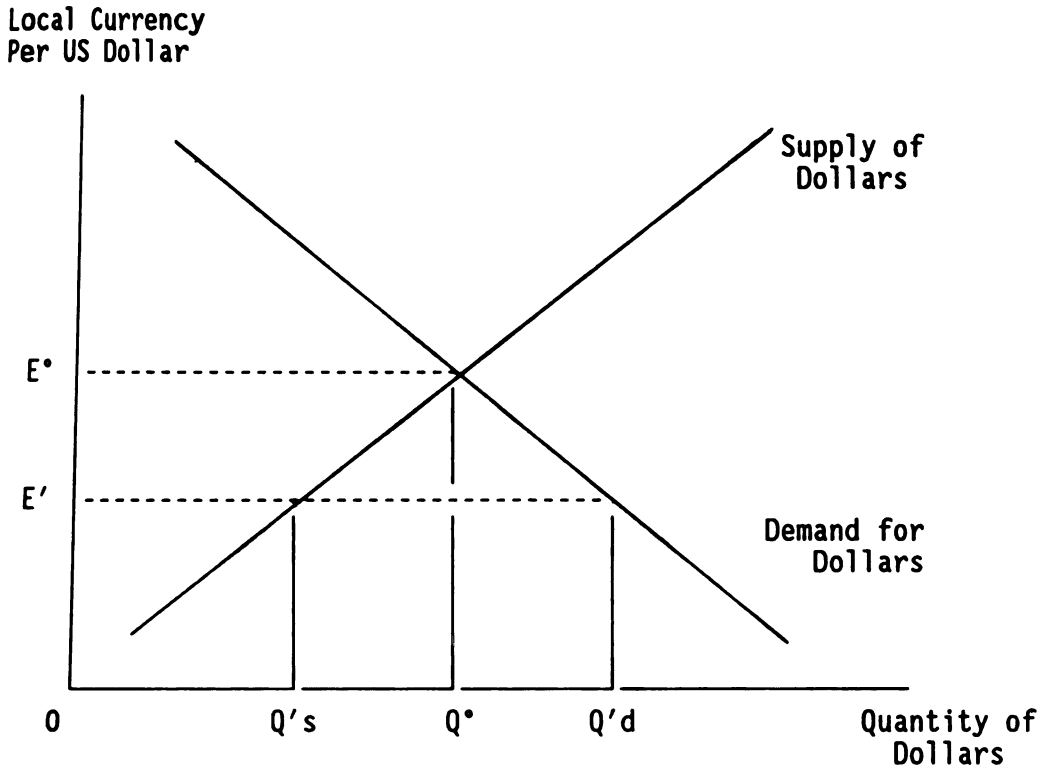
7.2. The Macro-Economic Context of Foreign Exchange Allocation

A. Foreign Exchange Allocation and Exchange Rate Misalignment

By definition, "rationing" implies a shortage of foreign exchange. n Figure 7-1, short-run demand for US dollars exceeds short-run supply Qd' - Qs' at the official exchange rate E' [1]. This in turn implies

[1] This is the flow model of short-run exchange rate determination. shortcoming is that it only treats the goods market, while tracting from capital flows. This omission may not be serious in

Figure 7-1: Overvalued Exchange Rates and Foreign Exchange Rationing



that the local currency is overvalued relative to convertible currencies such as the US dollar. If the exchange rate were allowed to float, the local currency would depreciate until it reached a market-clearing short-run equilibrium exchange rate E° with Q° dollars supplied and demanded. Governments may also opt for discrete devaluations which ease import demand somewhat. But if the currency is not devalued to E°, shortages continue as supply is still insufficient at any exchange rate below E°. If the government decides against devaluation, it has several options. It can increase the supply of dollars by drawing down reserves or borrowing externally. It can also

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e context of foreign exchange rationing because capital flows are rictly controlled.

resort to rationing the Qs' dollars available, leaving the remaining demand unsatisfied.

Empirical identification of the short-run equilibrium exchange rate is exceedingly difficult, especially for countries with long histories of foreign exchange rationing because the import demand schedule is not readily observable.

To understand the meaning of "equilibrium" in the context of long-run exchange rate determination, it is first necessary to introduce the concept of the real exchange rate (RER). While the nominal exchange rate measures the relative prices of two currencies, the real exchange rate measures the relative price of domestic versus foreign goods. It is often defined as the relative price of tradable to nontradable goods for a particular country [2]. Edwards (1988) identifies the RER as a good proxy for the degree of competitiveness of a country in relation to world markets because it measures the cost of domestically producing tradable goods. For empirical calculations, the RER often appears as:

$$RER = \frac{E^{*}P_t}{P_{nt}}$$

where:

E = the nominal exchange rate (with the foreign currency serving as numeraire);

P_t = world price of tradables (typically either the United States wholesale price index or a weighted average of the country's trading partners' WPI's);

P_{nt} = domestic price index of nontradables (often defined as the home country's CPI).

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[2] See Edwards (1988) for a discussion of alternative definitions the RER.

Fluctuations in the RER are caused by movements of fundamental variables such as the terms of trade, international transfers like foreign aid, international interest rates, trade policies of a country and its trading partners, exchange controls, and fiscal and monetary policies.

The long-run equilibrium RER is defined as "the relative price of tradables to nontradables that for given long-run equilibrium values of fundamental variables, results in simultaneous achievement of internal and external equilibrium" (Edwards, 1988) [3]. For this to happen, the nontradable goods market must clear in the current period with expectations of equilibrium in the future. For external equilibrium, present and future current account balances must be compatible with long-run capital flows. The probability of all these achieving simultaneous equilibrium for some country at a given point in time is very low. Therefore the choice of an appropriate base period for RER index computation is problematic.

Because there are no commonly accepted empirical techniques for rigorously identifying equilibrium values of the RER, it is not possible to calculate levels of RER overvaluation with complete confidence. One can however use proxies to roughly determine whether a currency is undervalued, equal to the equilibrium value, or overvalued. If, for example, a country's inflation rate is much greater than those of its trading partners, and the nominal exchange rate has not adjusted to reflect this, the result is overvaluation. The existence of

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[3] In cases where there are permanent changes in values of undamental variables, this results in a path of equilibrium RER's as pposed to a unique equilibrium RER value.

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exchange controls and parallel markets in foreign exchange indicates overvaluation. The parallel market premium can be used as a rough proxy for the degree of overvaluation, although it overstates the true level because of the risk premium inherent in illegal transactions.

Table 7-1 presents RER indices calculated with both official and parallel nominal exchange rates for Malawi, Tanzania, Zambia, and Zimbabwe. The United States WPI is used to represent the price of tradables while individual country CPI's are used as proxies for nontradable price levels. Nominal and real parallel market premiums are also shown.

Exchange rate developments in these four countries have some similarities. While the two indices are misaligned to varying degrees through 1975 for each country, divergence between the two series increases substantially for all countries after 1975. Prior to 1975, the Zimbabwean and Malawian currencies are moderately overvalued as indicated by parallel premiums. The Tanzanian shilling and Zambian kwacha are somewhat more overvalued, especially from 1972 to 1975. Accelerated exchange rate misalignment after 1975 is largely attributable to deteriorating terms of trade as prices fell for a wide range of Southern African export products while oil import bills rose substantially (Pinto, 1986). In Zimbabwe, intensification of the civil war and international trade sanctions were also major factors.

Since 1980, currency overvaluation has been highest for Tanzania official and parallel RER indices have differed by more than 100% in l years. Although data necessary to compute 1988 RER's are not yet ailable, the 1988 average nominal parallel premium has fallen to

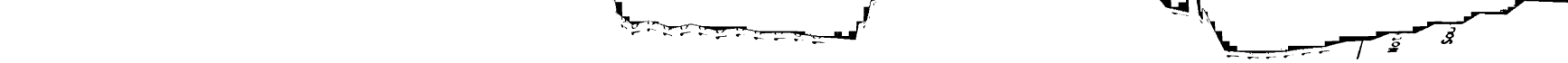

Table 7-1: Official (ORER) and Parallel (PRER) Real Exchange Rate Indices and Nominal Parallel Market Premiums for Four SADCC Countries, 1966 - 1988

	Malawi				Tanzania			
Year	ORER Index	PRER Index	Index Diff.	Parallel Premium	ORER Index	PRER Index	Index Diff.	Parallel Premium
1966	100.0	100.0	0.0%	7.7%	79.1	75.5	4.7%	21.0%
1967	96.0	74.8	28.2%	38.1%	88.5	82.8	6.9%	23.5%
1968	77.8	77.5	0.4%	8.1%	100.0	100.0	0.0%	15.5%
1969	80.0	73.6	8.7%	17.1%	112.2	101.7	10.3%	27.4%
1970	75.8	70.4	7.7%	15.9%	112.0	98.8	13.3%	30.9%
1971	72.0	56.6	27.1%	36.9%	113.2	80.6	40.4%	62.2%
1972	75.9	57.3	32.4%	42.5%	116.8	63.3	84.4%	113.0%
1973	79.7	76.9	3.7%	11.7%	116.1	64.8	79.2%	107.0%
1974	80.0	78.6	1.7%	9.6%	114.7	70.2	63.3%	88.7%
1975	73.5	55.0	33.6%	43.9%	128.8	53.3	141.8%	179.3%
1976	69.9	46.6	50.1%	61.7%	115.4	50.9	126.7%	161.8%
1977	72.0	48.0	50.1%	61.7%	122.7	54.7	124.2%	159.0%
1978	76.5	44.3	72.4%	85.7%	136.3	91.1	49.5%	72.7%
1979	80.1	46.6	72.0%	85.2%	129.3	102.4	26.2%	45.8%
1980	77.2	42.8	80.3%	94.2%	148.0	66.7	122.0%	156.4%
1981	68.3	35.1	94.8%	109.8%	168.6	58.5	188.1%	232.8%
1982	53.8	33.8	59.2%	71.5%	190.2	62.6	204.0%	251.2%
1983	43.1	29.8	44.6%	55.7%	198.8	64.6	207.8%	255.6%
1984	30.6	21.5	42.4%	53.4%	192.6	59.6	223.1%	273.3%
1985	22.7	16.6	36.7%	47.3%	225.7	68.5	229.5%	280.7%
1986	17.8	17.2	3.2%	11.2%	164.6	38.6	326.3%	392.4%
1987	12.3	11.8	4.7%	12.7%	106.0	46.2	129.4%	164.9%
1988	NA	NA	NA	21.5%	NA	NA	NA	112.5%
	Zambia				Zimbabwe			
1966	100.0	100.0	0.0%	5.7%	102.0	100.0	2.0%	11.1%
1967	95.2	88.0	8.2%	14.3%	100.0	100.0	0.0%	8.9%
1968	88.3	63.3	39.5%	47.4%	101.0	96.3	4.9%	14.3%
1969	89.5	60.8	47.2%	55.6%	104.5	99.6	4.9%	14.3%
1970	90.4	61.4	47.2%	55.6%	53.1	50.4	5.3%	14.8%
1971	88.1	62.4	41.1%	49.1%	53.4	39.6	34.7%	46.8%
1972	87.5	44.6	96.0%	107.1%	58.6	48.6	20.5%	31.3%
1973	102.3	56.5	81.2%	91.4%	72.3	62.6	15.6%	25.9%
1974	113.3	69.3	63.4%	72.7%	80.0	65.8	21.6%	32.5%
1975	112.2	64.0	75.3%	85.2%	82.3	64.4	27.8%	39.2%
1976	89.4	36.1	147.6%	161.6%	70.7	28.8	145.5%	167.5%
1977	71.6	26.4	171.4%	186.7%	67.7	22.7	197.7%	224.3%
1978	65.4	25.9	152.6%	166.9%	64.0	30.3	111.2%	130.1%
1979	67.7	39.5	71.7%	81.4%	60.8	27.8	118.3%	137.9%
1980	69.5	43.4	60.2%	69.3%	69.5	45.6	52.6%	66.3%
1981	60.4	39.4	53.3%	62.0%	62.5	39.3	59.1%	73.3%
1982	51.3	37.2	37.9%	45.7%	52.5	36.1	45.3%	58.3%
1983	32.2	25.9	24.4%	31.4%	32.3	14.8	118.0%	137.5%
1984	19.2	15.9	20.6%	27.4%	22.4	10.7	108.3%	126.9%
1985	9.2	5.5	67.2%	76.7%	15.9	11.6	36.4%	48.6%
1986	2.2	1.7	26.4%	33.6%	13.0	10.7	22.3%	33.2%
1987	1.3	1.0	31.7%	39.2%	NA	NA	NA	59.5%
1988	NA	NA	NA	264.5%	NA	NA	NA	75.3%

Notes: Base years are: 1966 for Zambia and Malawi; 1967 for Zimbabwe; and 1968 for Tanzania.

Sources: IMF, "International Financial Statisitcs," (various issues), and ICA, "World Currency Yearbook," various years.

112.5% and should be below 100% for 1989 because of the 20% official devaluation that took effect in November 1988.

At the same time, overvaluation of the Zambian kwacha greatly increased in 1988 as the nominal parallel premium rose to 265%. Unless major economic policy reforms are soon introduced, the 25% devaluation of November 1988 and the switch from a peg based on the US dollar to the SDR will have little effect on reducing this premium.

Zimbabwe dollar overvaluation as measured by the 1988 nominal parallel premium is modest compared to Zambia and Tanzania, but still quite high. In Malawi, frequent devaluation since IMF-sponsored reform measures began in 1981 have resulted in the Malawian kwacha being the least overvalued of the four currencies since 1985.

B. A Classification of Foreign Exchange Control Regimes

To better understand the evolution of import and exchange controls, and the government rationale for imposing them, Bhagwati's (1978) delineation of phases of exchange control regimes is summarized here.

In Phase I, quantitative restrictions are placed on imports and capital movements are tightly regulated. In Bhagwati's words, foreign exchange allocation decisions at this stage are "crude and unsophisticated." Governments have not yet developed detailed criteria for determining which imports are most important and which firms are best qualified to bring them into the country.

Such policies are typically established in response to an unsustainable balance of payments deficit. In the cases of Zambia,

Malawi, and Tanzania, balance of payments problems beginning in the mid-1970's were largely the result of adverse terms of trade developments combined with expansionary fiscal policies. For Zimbabwe, imposition of international sanctions severely reduced that country's access to international borrowing facilities, thus requiring strict controls on current account transactions for the duration of UDI.

During Phase II, quantitative restrictions become institutionalized and import license priority-setting becomes more complex. Governments also realize the need for supplementary measures to offset negative aspects of the exchange control system such as import bottlenecks, reduced incentives to exporters because of overvaluation, and high costs for downstream producers (finished goods, farmers, etc.) which result from heavy protection to intermediate industries (agricultural input manufacturers, packaging firms, etc.). Export incentive schemes, duty drawbacks, and some of the other programs discussed in chapter VI are introduced.

During Phase III, efforts begin to ease quantitative restrictions through increased use of tariffs, official devaluations, and exemption of some goods from the import licensing system. Such measures are meant to ease import demand pressure. They may also signal a tentative shift to trade liberalization, but the depth of government commitment is uncertain. Governments may revert to Phase II if no strong political constituency develops for liberalization or external shocks, such as adverse shifts in the terms of trade, significantly increase the current account deficit.

Phase IV is essentially a continuation of Phase III wherein import and exchange control relaxation becomes institutionalized and pro-liberalization interest groups have formed. Producers have responded to devaluation and other adjustment measures by increasing exports and substituting local factors of production for imports. The net effect is to reduce the balance of payments deficit which facilitates the easing of trade and capital flow restrictions.

Under Phase V, there is complete trade liberalization with full convertibility on all current account transactions. Quantitative restrictions are no longer employed to control the balance of payments. The exchange rate regime is still flexible, or monetary and fiscal policies are used to control the balance of payments. There may still be some currency overvaluation, but the parallel market premium is so modest that only a small amount of transactions pass through informal channels.

Although lines of demarcation separating the various phases are not absolutely clear, the current trade regimes of Malawi and Tanzania may be characterized as Phase III. The governments of both countries appear to be strongly committed to macro-economic and trade policy liberalization as witnessed by frequent devaluations, tighter fiscal and monetary policies, agricultural marketing reform, and current plans for the gradual relaxation of import licensing procedures. However, it is still unclear whether liberalization efforts will take on the permanence associated with Phase IV.

The current Zimbabwean regime probably falls in the Phase II category as there have been few efforts at trade liberalization in the

past few years. There appears to be a strong commitment to continued maintenance of tight import and exchange controls while simultaneously providing an array of programs that serve to mitigate the effects of trade policy (export incentives and revolving funds, duty drawbacks, etc.).

Zambia was in Phase V during the auction period, but reverted to Phase II in May 1987 when the IMF agreement was cancelled. Although it is too early to tell, the November 1988 devaluation of the kwacha and January 1989 announcement of several modest import liberalization measures [4] may signal a shift to Phase III.

C. Foreign Exchange Allocation System Objectives

Table 7-2 identifies a number of foreign exchange allocation system objectives. Several are discussed below while others receive attention later in this chapter. A number of the objectives conflict or are at least partially negated if a government chooses to ration foreign exchange.

The previous section mentioned that exchange controls are most often imposed in response to balance of payments problems. In the short-run, administrative allocation is the most effective method for tightly controlling capital flows. However, in the medium and long-run, there are significant costs associated with foreign exchange rationing due to persistent overvaluation. Rationing alters incentives because those economic agents who are successful in obtaining foreign

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[4] Times of Zambia, January 21, 1989, "Import Curbs on Goods Go: Procedures Liberalized," p.1.

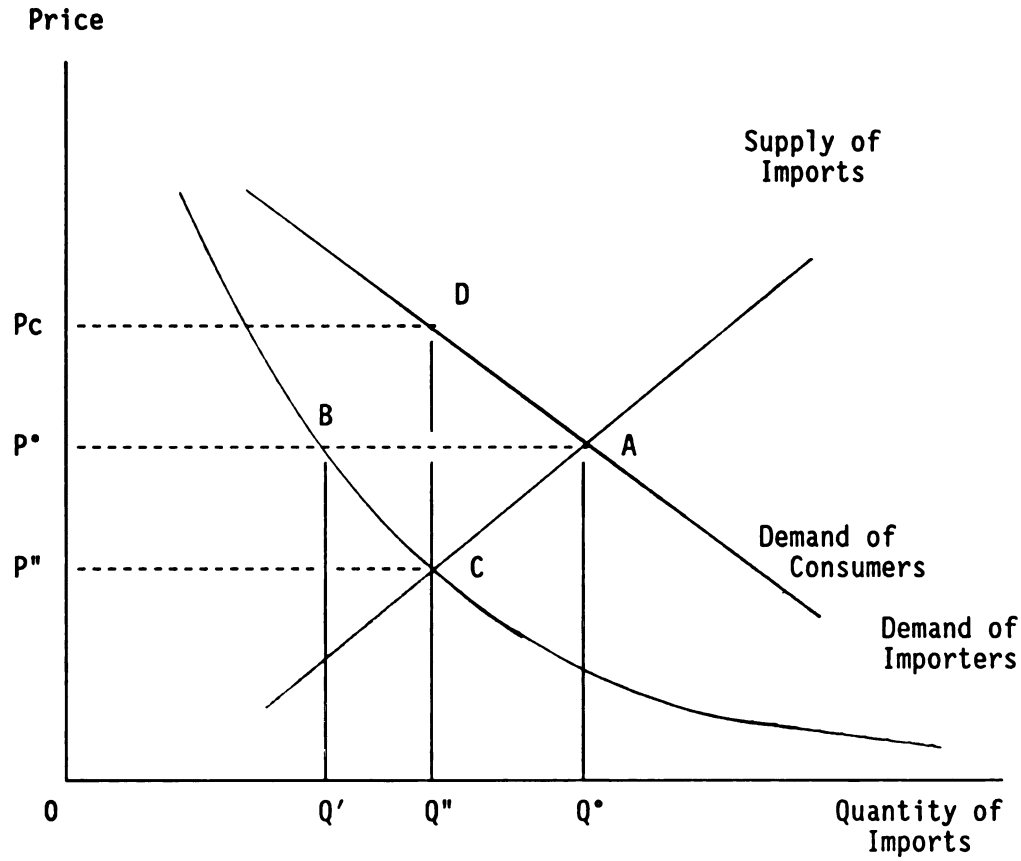
Table 7-2: Objectives of Foreign Exchange Allocation Systems

General Area	Specific Objectives	Performance Indicators
Macro-Economic Policy	Government is able to control and match foreign exchange inflows/outflows.	Data from national accounts.
	The exchange rate is stable so that governments and firms can forecast import costs and export revenues.	Exchange rate trends, coefficients of variation, frequency and size of devaluation.
Economic/Financial Planning	Government is able to facilitate the importation of goods which contribute to economic development and employment.	Comparison of officially-decreed priorities laid out in national development plans and actual allocations.
	Firms are able to set priorities and import goods most important for continued financial viability.	Financial statements, net foreign exchange earnings, business failures, temporary plant closings.
	Allocations are timely with minimal delays between submission of documents and receipt of foreign exchange.	Average time between submission of documents and receipt of foreign exchange.
	Government appreciates the uniqueness of sectoral and individual firm requirements. In countries where agriculture is important, awareness of seasonal needs is critical.	Comparison of monthly allocations to agriculture with seasonal requirements.
Allocative Efficiency	Foreign exchange is allocated to the most efficient sectors and firms.	Comparison of capital/labor ratios of firms with national resource endowments, firm financial statements.
	Importers pay the true economic cost of foreign exchange.	Extent of local currency overvaluation.
	Excessive monopoly rents do not accrue to importers.	Comparison of local and inpternational prices adjusted for transportation costs.
	Trade is fully integrated into the formal economy.	Extent of black market activity in foreign exchange, goods, and services.
Corruption	Officials do not use their positions to solicit bribes from prospective importers.	Problematic - publication of allocations may reduce potential for abuse.
	Those allocated foreign exchange do not resell it at a higher price.	Extent of black market activity in foreign exchange.
Income Distribution Effects	Foreign exchange recipients reinvest earnings in the local economy (i.e. capital flight minimized).	Allocation shares by firm type (parastatal, TNC,etc.), but hard to determine extent of capital flight.
	Imported goods are those most effective at generating employment and meeting basic needs.	Allocation shares by commodity type.
	Priority imports are available to consumers at reasonable prices.	Price data for strategic goods, growth rate of low-income CPI.

exchange do not pay the market-clearing price. In Figure 7-2, import supply and demand curves are drawn. In the absence of import controls, Q* would be imported at a price of P*, implying a foreign exchange outflow of OP*AQ*. If foreign exchange is rationed and the government decides to allocate only half as much to the importation of a given commodity, foreign exchange expenditures are cut to OP*BQ'. An importers' demand curve is represented by a rectangular hyperbola. The area below this curve is equal to OP*BQ' at all points along the curve. Q" of the commodity is imported (the intersection of the importers' demand and import supply curves) with per unit import costs of P". However, recipients of import licenses are able to exercise monopoly power which results in a consumer price of Pc. Monopoly profits are represented by the area P"PcDC. The more inelastic (steeper) the consumer import demand curve, the greater the monopoly profits. This would be the case with items such as agricultural spare parts where often cost is no object if a piece of machinery breaks down during critical planting or harvesting periods.

Because official intervention in import markets leads to monopoly rents, governments often feel obliged to impose price controls in an effort to force importers to charge the non-rent extracting price of P", plus some fixed percentage profit margin that represents a "fair" return to capital. In practice, governmental determination of the fixed margin tends to be arbitrary as officials rarely possess sufficient time or expertise to properly identify what constitutes a "fair" margin. In addition, those firms subject to price controls have

Figure 7-2: Effect of Foreign Exchange Rationing on Domestic Prices



little incentive to minimize costs if their maximum allowable margin is calculated as a percentage of costs.

Increased ability of government to set sectoral and commodity import priorities can reduce the latitude of firms to set their own priorities. Market participants sometimes view the import process as a "zero-sum game" where greater government control implies less firm-level control and vice versa.

7.3. The Zambian Case

A. Background and Issues to be Addressed

In October 1985, the Government of the Republic of Zambia (GRZ) established a system of foreign exchange auctioning. This replaced quarterly rationing by an inter-ministerial committee which by many accounts had become inefficient and corrupt (Sanderson, 1987). The auction, and the host of accompanying reforms, had enormous short-run consequences for Zambian political and economic stability, and had long-run potential for profound structural transformation until its cancellation by President Kaunda in May 1987.

Because the auction was terminated only recently and the Foreign Exchange Management Committee (FEMAC) which rations foreign exchange has been operating for less than two years, little has been written comparing economic performance and the business climate under the alternative systems.

The focus of the Zambian analysis is on examining the effects of these different foreign exchange allocation systems on agriculture. The following questions are addressed in section 7.3.D at the level of the general economy:

1. What types of companies classified by ownership pattern (private Zambian, transnational corporations (TNC's), parastatals and mixed parastatal/private) have been relatively more successful in acquiring foreign exchange?

2. Have there been significant differences related to which sectors obtained foreign exchange under the two systems?

3. Has the composition of commodities imported differed between the auction and FEMAC?

Sections 7.3.E and 7.3.F examine in greater detail the effects of alternative foreign exchange allocation systems on agriculture by treating the following questions:

4. What types of companies within the agricultural sector classified by ownership pattern have been relatively more successful in acquiring foreign exchange?

5. Has the composition of commodities imported by agricultural enterprises differed between the auction and FEMAC?

6. What types of companies involved in agriculture classified by economic activity (commercial farms, input manufacturers and distributors, food processors) have been relatively more successful in obtaining foreign exchange under the two systems?

7. What was the trading environment like during the auction for private and public companies and how is it different now?

Before proceeding to these issues, foreign exchange auctioning is placed in a wider context, the history of exchange controls in Zambia is described, and case study methods and procedures are outlined.

B. The Context of Foreign Exchange Auctioning

Movement to some form of a flexible exchange rate system is often a major element of IMF reform programs carried out with member country governments which have previously maintained overvalued exchange rates. In recent years, a number of Sub-Saharan African countries have adopted IMF-sponsored reform packages which have included as one component movement from foreign exchange rationing at fixed or tied exchange rates to auctioning of foreign exchange at floating exchange rates (Table 7-3).

Table 7-3: IMF-Sponsored Programs Which Include Interbank and Auction Arrangements in Sub-Saharan Africa

	Form of Arrangement	Exchange Rate Determination	Role of Central Bank Intervention	Foreign Exchange Surrender Requirements
The Gambia	Interbank (*)	Negotiable between banks and their clients	No intervention to influence the exchange rate	100% of goods and services to commercial banks except for some tourism proceeds; receipts of Marketing Board to the central bank
Ghana	Auction (weekly) (*)	Dutch auction	Possible by adjusting the amount of foreign exchange supplied to the auction	100% of all receipts to the central bank
Guinea	Auction (weekly) (*)	Marginal auction	Possible by adjusting the amount of foreign exchange supplied to the auction	Joint ventures in the mining sector pay a special export tax amounting to 40% of export proceeds; partial surrender requirements apply to other exports
Nigeria	Interbank (auction for oil receipts) (*)	Negotiable between dealers and their clients; marginal price for successful bidders at auction	None in interbank; possible by adjusting the amount of foreign exchange supplied to the auction	100% of all receipts to commercial banks
Sierra Leone	Interbank	Negotiable between banks and their clients	None	100% of all receipts to commercial banks
South Africa	Interbank (*)	Negotiable between banks and their clients	Smoothing operations	100% of goods and services to commercial banks
Uganda	Auction (weekly)	Marginal auction	Possible by adjusting the amount of foreign exchange supplied to the auction	100% of goods and invisibles
Zaire	Interbank (*)	Negotiable between banks and their clients	Some intervention on the interbank market	Receipts of mining and oil companies to the central bank; all other export and invisible proceeds to commercial banks
Zambia	Auction (weekly)	Began as marginal auction, but later moved to Dutch auction	Possible by adjusting the amount of foreign exchange supplied to the auction	All export and invisible proceeds to the central bank through commercial banks, except for the retention of privileges of the mining company and exporters of "non-traditional" goods

(*) Still in effect as of December 31, 1987.

Source: Quirk, Peter, et al, "Floating Exchange Rates in Developing Countries: Experience with Auction and Interbank Markets," IMF Occasional Paper No. 53, May 1987.

Foreign exchange auctioning is basically carried out in two ways. One way is through use of an interbank market (such as in The Gambia, Nigeria, Sierra Leone, South Africa, and Zaire) where the exchange rate is negotiated between commercial banks and their clients [5]. The central bank's role is limited to smoothing operations such as regulating monopolistic behavior and setting floor and ceiling bidding limits. The second way is an auction system (such as in Ghana, Guinea, Uganda, and Zambia) where the central bank plays a more direct role. Export receipts are surrendered to the central bank which then auctions foreign exchange on a regular basis (daily or weekly). The central bank decides how much foreign exchange will be offered on auction (after some amount has been set aside for meeting foreign debt obligations and other essential hard currency transactions). The exchange rate for a given auction period is determined in one of two ways: a "marginal system" whereby all bidders pay the lowest rate which exhausts that period's supply of foreign exchange; or a "Dutch auction system" where each bidder exchanges local currency for dollars at the actual rate bid.

The policy choice of moving from a fixed or heavily managed exchange rate regime to a floating regime (which an auction implies) is controversial. Among the reasons commonly cited by proponents of a floating system are:

• Domestic resource allocation will become more efficient and international competitiveness of the country will improve as producers

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[5] Developed countries with floating exchange rate regimes also use interbank systems for conducting foreign exchange transactions.

and consumers respond to market signals resulting from a more realistic exchange rate. This will result in a healthier export climate (especially for the agricultural sector which has historically been heavily taxed by many African governments), greater incentives for import substitution, and an improved balance of payments position;

• By moving from an arbitrary and slow-moving bureaucratic system to a market-determined one, those commodities which are most critical for the domestic economy (spare parts and capital goods) will receive a share of foreign exchange commensurate with the value that society attaches to them. The bureaucracy can not hope to match the performance of the market in determining these values and allocating foreign exchange accordingly;

• A float reduces incentives for parallel market activity. This serves to bring such activities back into the mainstream economy, broadening access to foreign exchange receipts to the entire economy and adding to the tax base;

• By moving to a float (as opposed to an officially-decreed single devaluation), the government may avoid some of the negative political fallout that invariably accompanies the decision to devalue.

Arguments typically made against floating exchange rate regimes are:

• They are inequitable. The urban and rural poor suffer greatly from the severe inflation that accompanies exchange rate adjustment while well-heeled speculators and foreigners such as TNC's and international banks capture most of the benefits;

• Shocks are so acute in the short-run that reform efforts become politically unsustainable;

• Exchange rate instability greatly reduces the ability of public and private enterprises to plan future activities. Due to speculation, the volatility of expectations, and sticky wages and prices, the market-determined exchange rate may cycle between under and overvaluation. Exchange rate instability may also result from transitory and permanent fluctuations in fundamental variables. Such instability sends unclear signals to market participants about efficient resource allocation;

• Without the government regulating what is imported, the local economy is flooded with luxury items which are a waste of scarce foreign exchange.

Eight of the nine SADCC countries are currently members of the IMF and five SADCC governments (Zambia, Zimbabwe, Malawi, Mozambique, and Tanzania) have signed agreements so far in the 1980's [6]. As mentioned above, six SADCC governments ration foreign exchange. Establishment of an auction or interbank system is a possible element of future reform packages for these countries and an improved knowledge of the Zambian experience is of potential value to any government faced with a number of foreign exchange management alternatives.

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[6] Angola is not a member at present although the government has recently begun negotiations to enter the IMF.

C. A Brief History of Foreign Exchange Controls in Zambia

Prior to 1975, Zambian controls on imports were limited to a differentiated tariff structure that placed high duties on luxury consumer goods and low duties on capital and intermediate goods to encourage import substitution. With the large fall in copper prices which began in 1975 and subsequent balance of payments difficulties, import licensing was instituted and foreign exchange was allocated by an inter-ministerial committee which met quarterly (Colcough, 1988). This system lasted until the establishment of the auction in October 1985.

Upon its inception, payments for oil, International Air Transportation Association (IATA) charges, TAZARA and TAZAMA (the Trans-Zambian railroad and fuel pipeline), ZCCM (Zambian Consolidated Copper Mines), and the GRZ were excluded from the auction. The weekly supply of dollars was fixed at US$ 5 million. In February 1986, oil, TAZARA, and TAZAMA were included in the auction and the weekly supply of dollars was increased to US$ 9 million.

The GRZ and the Bank of Zambia (the reserve bank) soon became alarmed at the steady depreciation of the kwacha (see Figure 7-3). From a pre-auction (October 3, 1985) base of ZK2.2=US$1, the currency had fallen in value by 72.7% by mid-July 1986 to ZK8.07=US$1 [7]. This caused the Bank of Zambia to institute several changes in an effort to stabilize the exchange rate. New documentation requirements were introduced, restrictions on the use of bank overdraft facilities were

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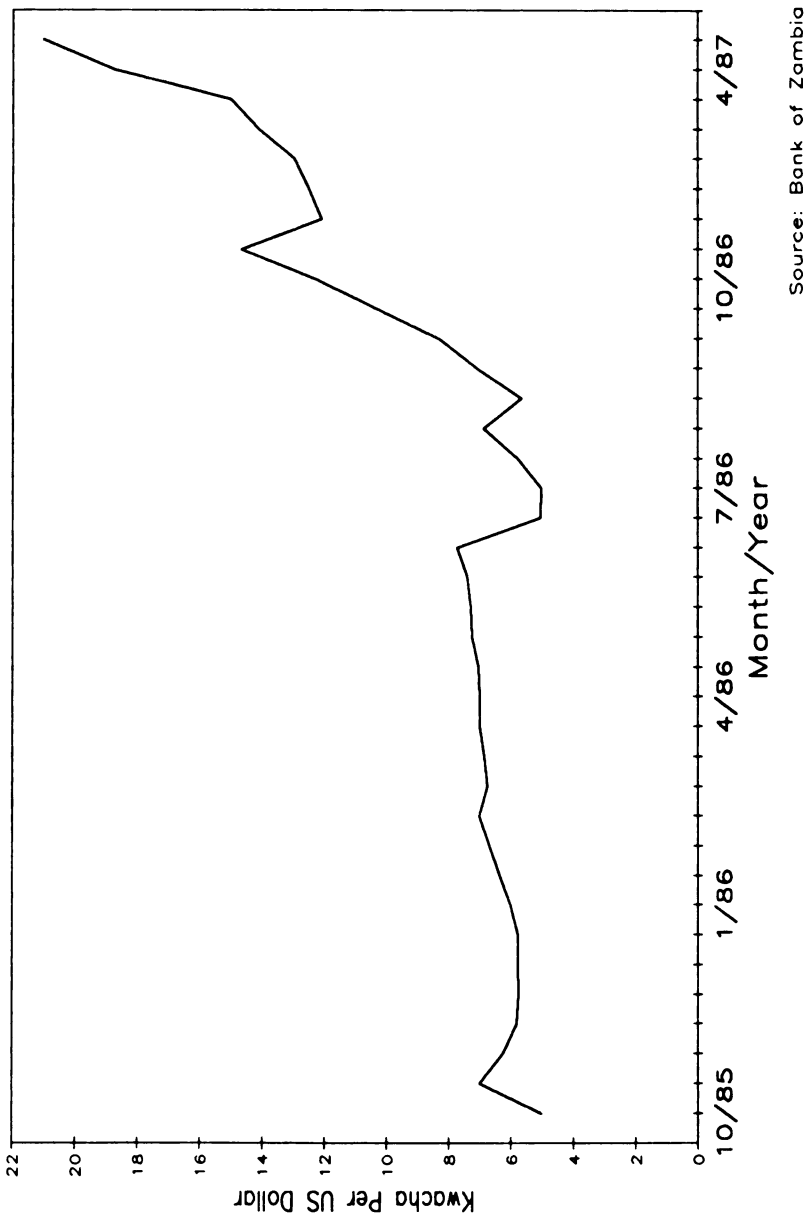
[7] Calculated as 1 - $\frac{\text{Base Rate}}{\text{New Rate}}$.

Figure 7-3: Exchange Rate Movements During the Zambian Auction (October 1985 - April 1987)



Source: Bank of Zambia

put in place, and overdue tax payments had to be paid up before bids would be considered. Most significantly, the reserve bank moved from a marginal system to a Dutch auction to discourage high bidding [8] (Bank of Zambia, 1986).

Despite these attempts at stabilization, exchange rate depreciation accelerated until the auction was terminated in May 1987. The exchange rate reached its lowest point in April 1987 when it fell to ZK21.01=US$1 -- representing a fall in value of 89.5% against the dollar from the pre-auction rate.

A number of factors appear to have been responsible for the failure of the exchange rate to stabilize. Copper and cobalt prices continued to decline in 1986, further constricting the already tight supply of dollars for the auction. On the demand side, the money supply increased at a 60% annual rate during the auction period, fueling the demand for dollars and exerting more downward pressure on the kwacha. This was due to the government's apparent unwillingness to raise interest rates to finance the budget deficit. Instead the deficit was financed by putting more money into circulation (Harber, 1988).

In addition, some observers believe actions by the Bank of Zambia, which began in July 1986, influenced the outcome. Most serious was the temporary but unsustainable infusion of more dollars into the auction which eventually led to delays in the release of funds to successful

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[8] Reserve bank officials were of the opinion that the marginal system encouraged traders to bid in excess of their willingness to pay, because they only had to exchange local currency for dollars at the cut-off rate. If this strategy was widespread, officials believed it had the effect of ratcheting up the exchange rate.

bidders (because the reserve bank "auctioned" more funds than it had), the move to the Dutch auction, and the wholesale disqualification of bids which were judged to be too high. These measures alienated the donors who were providing substantial financial support to the auction, and damaged public confidence in the auction. These moves, in combination with a constant barrage of negative publicity against the auction in the government-controlled national press, fueled fears that the auction would soon be abolished. This may have been partially responsible for additional deterioration of the exchange rate as participants bid high to get foreign exchange while the auction still operated (Sanderson, 1987).

In his May Day speech of 1987, President Kaunda announced Zambia's renunciation of the IMF agreement. Among other measures, the auction was terminated, the exchange rate was fixed at ZK8.00=US$1, and foreign exchange would once again be centrally allocated by an inter-ministerial committee. FEMAC would meet every two weeks to allocate dollars to companies which had submitted the necessary documentation through their commercial banks to the FEMAC secretariat. It is this system which is currently operating in Zambia.

D. Methods Employed for Analysis of Foreign Exchange Allocations Under the Auction and FEMAC

Data Sources. - Foreign exchange allocations under the auction and FEMAC were published in the Times of Zambia for much of the auction and for all bi-weekly FEMAC allocations to date. The Bank of Zambia decided to put detailed auction results in the newspaper beginning in June 1986 to insure fairness and to let the public know who exactly was

receiving foreign exchange. This practice has been continued during the FEMAC period and is widely applauded as a significant deterrent to the corruption that was alleged to be rampant under the pre-auction foreign exchange allocation system.

Newspaper clippings were available for auctions 37-58, and 60-68. This covers the period between June 20, 1986 and January 24, 1987. Allocations from FEMAC 1 through FEMAC 22 (May 16, 1987 to March 10, 1988) were also acquired. During each allocation period, lists of successful applications for foreign exchange included the following information for each entry: name of the applicant; amount of dollars granted; the bid rate of kwacha for dollars; the sector of the company receiving the allocation; and a brief description of the item(s) to be imported [9].

An additional variable for company ownership pattern was also included. Designations were: private Zambian company; trans-national corporation; agricultural cooperative; parastatal (100% GRZ-controlled); and mixed parastatal/private company. Designations for individual companies were acquired by consulting records and officials at the Ministry of Commerce and Industry, the Export Promotion Board, annual reports of ZIMCO and INDECO (the two largest Zambian parastatal holding companies), and representatives of private companies.

Random Sampling Procedures and Statistical Analysis. - Random samples of the auction and FEMAC periods were taken (Table 7-4). To

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[9] The bid rate varied during the auction but has been fixed at ZK8.12=$1 under FEMAC. In addition, the company's sector was not identified during the auction. However this can be inferred by cross-checking with the FEMAC designation for each company.

Table 7-4: Structure of Random Samples Taken from the Auction and FEMAC Foreign Exchange Allocation Lists

	Decision Rule for Inclusion in the Sample	% of Population Sampled	Number of Observations	Period Covered
All Sectors:				
- Auction	Every 50th allocation	2%	275	20/6/86-24/1/87
- FEMAC	Every 25th allocation	4%	241	16/5/87-10/3/88
Ag. Sector Only:				
- Auction	Every 5th ag. firm listed	20%	268	20/6/86-24/1/87
- FEMAC	Every 5th ag. firm listed	20%	269	16/5/87-10/3/88

Source of Data: "Times of Zambia" (various issues).

address cross-sectoral questions, observations were taken from the entire set of listings of foreign exchange allocations during the two periods. For issues related solely to the agricultural sector, an additional sample was taken of only those companies which were engaged in agriculture and related industries [10].

Cross-tabulation analysis which employs the Chi-Square statistic was performed to measure the strength of association between foreign exchange allocation shares to sectors, firm types, and commodities during the auction and under FEMAC. It is important to note that because the figures generated are the products of random sampling, one can only imply that they correct within a certain margin of error.

[10] For this sample, the designation of "agriculture" was extended to include food processing companies and input manufacturers/ distributors. These are usually classified as "manufacturing" companies by the Bank of Zambia.

Where corresponding figures are available from the GRZ, statistics have been cross-checked for consistency.

E. Comparison of Allocation of Foreign Exchange to the General Economy Under the Auction and FEMAC

Allocation by Company Legal Status. - Historically, parastatal enterprises have played a prominent role in the Zambian economy. As of 1980, parastatal companies accounted for more than 50% of annual gross domestic product (GDP) in the food, textile, wood, chemical, and mining industries (Table 7-5) and for almost three quarters of overall manufacturing and mining sector GDP. When mining is excluded, the public contribution to manufacturing sector GDP is still a substantial 65%.

As a result, one would expect that the parastatal share of foreign exchange allocations would be quite high and this is indeed the case under both the auction and FEMAC (Table 7-6). The share of foreign exchange that went to 100% GRZ-owned parastatals and mixed companies (parastatals with some private ownership was roughly half of total funds allocated under the auction. Somewhat surprisingly, this share has remained unchanged during the FEMAC period. Similarly, for 100% GRZ-owned companies and mixed companies examined separately, there is no statistically significant difference in their percentage shares between the two foreign exchange allocation systems.

The widespread pre-auction fear that the parastatal sector would fare very poorly if forced to compete against the private sector for hard currency did not come to pass. Parastatal performance was decidedly mixed. In terms of exports, foreign exchange earnings rose

Table 7-5: Public/Parastatal and Private GDP by Branch of Formal Sector Industry, 1972 - 1980
(Millions of Constant 1977 Kwacha)

Industry Branch	Total, All Sectors			Public/Parastatal			Private		
	1972	1975	1980	1972	1975	1980	1972	1975	1980
Mining *	591.4	293.5	310.1	538.6	229.6	258.0	52.8	63.9	52.1
Food, Beverages, Tobacco	180.6	163.5	147.3	135.8	114.7	106.0	44.8	48.8	41.4
Chemicals	38.1	61.9	43.4	18.7	36.7	26.9	19.4	25.2	16.7
Textiles and Leather	25.2	33.1	42.0	0.4	5.8	24.2	24.8	27.3	17.8
Paper and Printing	12.1	14.8	13.2	1.1	2.9	3.5	11.0	11.9	9.7
Wood and Furniture	8.8	14.1	9.9	3.0	4.7	5.1	5.8	9.4	4.8
Other	0.4	1.7	0.9	0.0	0.0	0.0	0.4	1.7	0.9
Total	856.5	582.6	566.8	697.6	394.4	423.7	159.0	188.2	143.4

(*) Public/parastatal figrues include only copper mining. From 1970-84, copper accounted for 86.1% of total value of Zambian mineral production.

Sources: World Bank, "Zambia: Industrial Policy and Performance," June 1984;
CSO Zambia, "Country Profile: Zambia 1985," September 1986.

Table 7-6: Allocation of Foreign Exchange Under the Auction and FEMAC
By Company Ownership Type
(Percentage Shares)

Company Ownership Type	% of Foreign Exchange Allocated During Auction	% of Foreign Exchange Allocated During FEMAC
Mixed Parastatal/Private	29.8%	33.9%
Private Zambian	29.1%	33.1%
Parastatal (100% GRZ)	21.8%	20.6%
Transnational (**)	18.7%	12.0%
Other (1)	0.7%	0.4%

Notes: Calculations are products of random sampling and are thus estimated percentage shares.
(1) Comprised of agricultural cooperatives and educational institutions.
(**) Chi-square statistic significantly different at 95% level.

Source: "Times of Zambia" (various issues) and author's calculations.

during the auction for parastatals engaged in manufacturing, agriculture, transport, communications, trading, and hotels (Table 7-7). Overall parastatal foreign exchange earnings fell, but this is mostly attributable to reduced mining sector earnings resulting from falling copper prices. Parastatal foreign exchange earnings net of mining rose by more than 30% from 1984/85 to 1986/87.

The difference in combined private shares (locally-owned companies and TNC's) under the auction (46.6%) and FEMAC (45.1%) is also statistically insignificant. However when this is broken down, one finds that the share of foreign exchange allocated to TNC's fell significantly under FEMAC. There are three possible explanations for

Table 7-7: Sectoral Foreign Exchange Earnings of Parastatals
1984/85-1986/87
(Millions of US Dollars)

Sector	1984/85	% of Total	1985/86	% of Total	1986/87	% of Total
Mining	829.0	90.0%	763.7	88.4%	688.0	85.1%
Transport	26.0	2.8%	34.8	4.0%	46.3	5.7%
Manufacturing	11.7	1.3%	19.1	2.2%	26.9	3.3%
Energy	39.4	4.3%	30.0	3.5%	26.5	3.3%
Communications	5.3	0.6%	6.2	0.7%	9.7	1.2%
Trading	1.8	0.2%	4.2	0.5%	4.4	0.5%
Hotels	2.4	0.3%	5.0	0.6%	4.2	0.5%
Finance	4.8	0.5%	1.0	0.1%	1.6	0.2%
Agriculture	0.2	0.0%	0.1	0.0%	1.1	0.1%
Construction	0.0	0.0%	0.0	0.0%	0.0	0.0%
Total	920.6	100.0%	864.1	100.0%	808.7	100.0%

Source: NCDP, "Economic Report 1987," January 1988.

this: 1) during interviews, a number of TNC representatives stated that the GRZ is actively discriminating against TNC's under FEMAC; 2) many government officials, the national press, and some businessmen expressed the view that the main beneficiaries of the auction system were expatriate companies because they were better able to marshall financial resources and management expertise to operate in the difficult economic environment created by the auction; and 3) a combination of the above two.

Allocation by Sector. - Prior to the auction, the manufacturing sector dominated foreign exchange allocations, receiving as much as 46%

of the value of import licenses in 1981 (see Table 7-8) [11]. Although there was a fair amount of variation, transport/ communications was generally a distant second, followed by mining, agriculture, and food imports. Manufacturing's share of imports seems to have risen substantially during the auction (see Table 7-9). This may be partially due to a desire to rehabilitate plants which had not received substantial investment in a number of years due to lack of foreign exchange availability. Moreover, with the decontrol of prices, the manufacturing sector was able to pass on higher hard currency costs to consumers and thus generate sufficient kwacha to bid for foreign exchange in subsequent auctions (Bank of Zambia, 1986).

Table 7-8: Value of Import License Authorizations by Sector: 1979 - 1982
(Millions of Constant 1977 Zambian Kwacha)

Sector	1979		1980		1981		1982	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Manufacturing	104.1	28.7%	122.8	28.7%	127.5	46.4%	88.5	39.1%
Transport/Communications	92.1	25.4%	103.8	24.3%	20.2	7.3%	35.9	15.9%
Mining Suppliers	51.7	14.3%	68.4	16.0%	16.7	6.1%	26.4	11.6%
Agriculture and Fertilizer	41.0	11.3%	57.0	13.3%	55.5	20.2%	21.5	9.5%
Food	31.7	8.8%	31.6	7.4%	12.0	4.4%	19.4	8.6%
Trading/General Consumers	16.6	4.6%	7.6	1.8%	19.8	7.2%	17.3	7.7%
Services	14.1	3.9%	17.1	4.0%	10.3	3.8%	9.8	4.3%
Construction	11.0	3.0%	19.0	4.4%	12.5	4.5%	7.6	3.4%
Total Authorizations	362.3	100.0%	427.2	100.0%	274.6	100.0%	226.6	100.0%
Actual Imports *	412.9		550.1		549.0		512.4	

(*) Actual imports exceed total authorizations because some imports were purchased with import licenses from previous years.

Source: World Bank, "Zambia: Industrial Policy and Performance," June 1984.

[11] Before the auction, the import licensing and foreign exchange allocation processes were separate. As a result, there were continual backlogs of companies holding import licenses but no foreign exchange. This explains the divergence between total authorizations and actual imports in Table 7-8.

Table 7-9: Allocation of Foreign Exchange Under the Auction and FEMAC By Sector, Zambia
(Percentage Shares)

Sector	% of Foreign Exchange Allocated During Auction (Sample Figures)	% of Foreign Exchange Allocated During FEMAC (Sample Figures) (1)	% of Foreign Exchange Allocated During FEMAC (Official Figures) (1)
Manufacturing (**)	54.3%	65.6%	46.5%
Transport/Communications (***)	12.0%	5.0%	6.9%
Mining (2)	11.4%	7.4%	7.8%
Agriculture	7.5%	7.6%	9.7% (3)
Construction	7.0%	0.3%	5.7%
Banking/Finance	5.4%	3.1%	4.8%
Energy	3.1%	3.6%	14.1%
Other Services	2.9%	4.5%	2.4%
Trading	2.5%	2.5%	2.0%
Health and Education	0.2%	0.3%	NA
Tourism	0.0%	0.0%	0.0%

Notes: Calculations are products of random sampling and are thus estimated percentage shares.
(**) Chi-square statistic significantly different at 95% level.
(***) Chi-square statistic significantly different at 99% level.
(1) Sample figures differ from official figures because: sample figures include Main Application allocations, whereas official figures also include 50% Retentions, No Funds Involved, and PTA allocations; official allocations to the service "sector" include some commodities destined for other sectors; official figures for the period May 1, 1987 to March 31, 1988 while sample figures are for May 1, 1987 to March 10, 1988; and sampling error. Neither set of figures include direct allocations to government.
(2) Represents foreign exchange allocated to companies that supply equipment and materials to ZCCM. ZCCM is excluded because they retain a portion of their export earnings for direct imports.
(3) If the US$ 9 million allocated to agriculture in March 1988 under a special EC facility is excluded, this figure falls to 7.6%.

Sources: For sample figures, "Times of Zambia" (various issues) and author's calculations;
For official figures, NCDP Progress Reports No. 1 and 2 on implementation of the Interim National Development Plan.

The sectoral allocation of foreign exchange did not change very much under the auction when compared with FEMAC. While the share of foreign exchange allocated to manufacturing has risen substantially under FEMAC (from 54% during the auction to 65% currently), and the transport/communications sector did relatively better during the auction (12% then versus 5% now [12]), no other shifts in sectoral allocations are observable.

At the sectoral level, the overall performance of agriculture in gaining access to foreign exchange during the auction appears to be disappointing as its share fell when compared with 1979-1982 import license figures, and remained unchanged with the advent of FEMAC. The Bank of Zambia attributed agriculture's performance in the first year of the auction to a number of factors: unattractive producer prices; the small number of commercial farmers in Zambia; and low liquidity in the dominant smallholder sub-sector. These issues will be discussed in more detail in section 7.3.G.

To some extent, these figures need to be approached with caution. The Bank of Zambia's grouping of companies under the "manufacturing" sector is quite sweeping. The performance of manufacturing can have significant consequences for other sectors due to linkages. For example, NCZ (the fertilizer company), cereals millers, textile mills, cigarette companies, and agricultural equipment manufacturers fall under the manufacturing classification. However, their performance has obvious ramifications for the more narrowly defined "agricultural

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[12] Importation of new vehicles was prohibited upon cancellation of the auction. The transport sector is only allowed to import spare parts under FEMAC.

sector". Moreover, although the auction and "Main Application" allocations under FEMAC have been the main sources of foreign exchange during the period under examination, there are several other sources of foreign exchange available to potential importers. Exporters may retain a portion of their foreign exchange earnings and use these hard currencies as they wish. In addition, the "No Funds Involved" category is for companies and individuals who have external sources of hard currency (such as overseas bank accounts) [13]. For companies that do considerable exporting, many of their imports are financed through the 50 Percent Retention Program whereby 50% of hard currency earnings do not have to be surrendered by exporters to the reserve bank, but can be immediately used for purchase of additional imports. Within agriculture, companies such as the Zambia Sugar Company and commercial farming enterprises involved in vegetable, fruit, and livestock export have financed many of their imports through this program.

For the FEMAC period, percentage shares generated by the sampling procedure were compared with official GRZ figures to determine whether the sample accurately identified sectoral allocations [14]. GRZ figures include Main Applications, PTA Funds, 50 Percent Retentions, and No Funds Involved allocations whereas the sample was taken from the Main Applications only.

Comparison of the second and third columns of Table 7-9 reveals that the sample overstates the share of foreign exchange allocated to

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[13] In general, the bulk of these imports are consumer goods purchased by private individuals.

[14] Official figures on sectoral allocations during the auction are not available.

manufacturing during FEMAC. This is because manufacturing depends almost exclusively on Main Applications as a source of foreign exchange. Therefore its share would be smaller in the GRZ figures which also includes the other sources of foreign exchange. While the share of foreign exchange allocated to manufacturing varies between the sample and official figures, its dominant first place ranking is beyond dispute, regardless of which figures are used. This needs to be considered in light of the GRZ proclamation in its New Economic Recovery Plan that manufacturing would only receive third priority behind agriculture and mining.

A second discrepancy concerns the "service" sector which has received a significantly greater share of foreign exchange according to official figures. However this is probably only a problem of classification of commodities. In October 1987, the National Commission for Development Planning stated in its first progress report on the recovery program:

> The sector classification actually followed by FEMAC when allocating foreign exchange differed from the published list...a look at items placed under the service sector has revealed a problematic situation. Items like medicines, education books and scientific journals, and some industrial raw materials have appeared under the service sector.

Beyond these two problems, sectoral percentage shares and rankings and percentage shares do not differ too widely when comparing sampling and official figures. Although agriculture's percentage share appears higher using the official figures, this is accounted for by an EC grant of US$ 9 million in March 1988 targeted specifically to agriculture.

When this is removed, agriculture's share falls from 9.7 to 7.6% which is the same as the sample figure.

Allocation by Commodity Imported. - Foreign exchange allocation shares to broad groupings of commodities under the auction and FEMAC are displayed in Table 7-10. The big loser under FEMAC appears to be financial and transport charges [15]. The fall in this category's share during FEMAC probably results from a combination of two factors. First, as mentioned in the previous section, prohibition of new vehicle imports under FEMAC has substantially lowered the share of funds allocated to the transport sector. Secondly, allocations for financial charges are lower under FEMAC because payment of dividends with FEMAC Main Application funds are not allowed while they could be paid with auction funds. Under FEMAC, these charges must be placed in a pipeline or sold at a discount [16].

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[15] Financial charges include requirements of the banking and insurance sectors as well as dividend payments, personnel recruitment expenses, and consultants' fees.

[16] Payment of these charges is referred to as "pipeline dismantling." These are commitments that the reserve bank agrees must be paid, but are not high priorities like essential commodities and industrial inputs. They are put in a pipeline and when money is available, they are paid off. However, with the critical shortage of foreign exchange, this currently takes a number of years. Some unhonored charges are 4-5 years old.

Selling at a discount is facilitated by exporters who agree to sell their 50% foreign exchange retention to interested buyers at the parallel exchange rate. This is arranged through the commercial banks. A bank telexes its customers, informing them that some quantity of dollars is available at the going parallel exchange rate (about ZK30=US$1 in early November 1988 versus an official rate of ZK8=US$1). This can be quite profitable as acquiring the 50% retention only costs the seller ZK16=US$1 (at the official rate of ZK8=US$1).

Table 7-10: Allocation of Foreign Exchange Under the Auction and FEMAC
By Commodity Type
(Percentage Shares)

Type of Commodity	% of Foreign Exchange Allocated During Auction	% of Foreign Exchange Allocated During FEMAC
Industrial Supplies (**)	35.6%	44.2%
Financial Charges (Inc. Transport) (***)	29.4%	13.8%
Spare Parts (*)	18.4%	24.6%
Capital Goods	12.3%	12.2%
Consumer Goods	4.0%	4.6%

Notes: Calculations are products of random sampling and are thus estimated percentage shares.
(*) Chi-square statistic significantly different at 90% level.
(**) Chi-square statistic significantly different at 95% level.
(***) Chi-square statistic significantly different at 99% level.

Source: "Times of Zambia" (various issues) and author's calculations.

Industrial inputs (variable cost items such as raw materials, chemicals, and other intermediate goods) have received a relatively greater share of foreign exchange under FEMAC, rising from approximately 35% during the auction to 44% currently. There is also evidence that the share of foreign exchange apportioned to spare parts has risen during FEMAC (but this evidence is statistically weaker).

If industrial supplies are broken down by primary (i.e. raw materials) versus processed (relatively more value added), there is evidence that the share going to primary supplies has fallen during FEMAC (from 12.5% to 7.5%) while hard currency going to imports of processed industrial supplies has risen from 22% to 32% under FEMAC.

In other words, more value added is being imported at present while less value is being added locally. This is consistent with the view that the overvalued kwacha is depressing competitiveness of local import-substituting industries.

Also of interest are the commodity categories for which there are no discernible changes -- consumer goods and capital goods. There is a widespread belief in Zambia that the auction was abused by greedy traders and profligate private individuals who squandered scarce foreign exchange on luxury consumer goods. In other words, the market failed to allocate foreign exchange in a manner consistent with the long-term interests of a society concerned with productive growth and development. Imports of consumer items were not significantly different during the two periods and were only in the range of 4 to 5% of total imports which were purchased with auction funds and Main Application funds during FEMAC.

In its review of the first year of the auction, the Bank of Zambia (1986) put the share of consumer goods imported with auction funds at 6% and stated the following:

> In the first few months after the introduction of the auction system and the accompanying liberalization of the trade and payments system, the country was flooded with imported foodstuffs and other consumer goods which were, in most cases, out of reach to the ordinary Zambian. Without being supported by any statistics, the auction system was solely held responsible for the reappearance on shelves of this assortment of commodities. .... such an allegation can hardly be supported by the available data on the distribution of auctioned foreign exchange.

Similarly, neither system was significantly better at increasing allocations of foreign exchange to long-run investment items such as

capital goods: their share remained unchanged at roughly 12% under both systems.

Summary. - While much changed under the two systems of allocating foreign exchange, much remained the same. Although consumer goods were in greater evidence in local markets, the auction was not responsible for their appearance [17]. Although a somewhat greater share of foreign exchange has been devoted to the importation of intermediate goods under FEMAC, the difference is not huge. Although TNC's captured a larger share of foreign exchange during the auction than under FEMAC, the share going to parastatal enterprises did not fall precipitously as had been feared might happen prior to commencement of the auction. Finally, allocations were considerably higher to the transport/communications sector during the auction and considerably lower for manufacturing. However, allocation shares remained unchanged for all other sectors.

That sectoral shifts were not as great as had originally been anticipated should not necessarily be surprising. The auction lasted only nineteen months. Movement to a flexible exchange rate regime implies profound structural change that would perhaps take five to ten years to fully manifest itself. It is possible that there would eventually have been significant shifts of resources to sectors with great potential such as agriculture if the auction had been allowed to last longer.

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[17] The bulk of these goods were imported through the "No Funds Involved" mechanism.

F. Comparison of Allocation of Foreign Exchange to the Agicultural Sector Under the Auction and FEMAC

Classification of Companies as Part of the Food and Agricultural Sector. - As stated earlier, the Bank of Zambia's classification of manufacturing enterprises is quite broad, including a number of companies which are of critical importance to the food and agricultural sector. In this section, analysis of "agricultural" sector companies goes beyond the Bank of Zambia's narrow classification to include agricultural input manufacturers (such as NCZ) and food processors (such as NMC, other cereals millers and meat packers such as the Lusaka Cold Storage Commission). There is a problem with this classification as some companies manufacture both food-related commodities and non-food items. This makes it very difficult to identify the end use of an imported input or capital good as agricultural or non-agricultural. This is dealt with in the following way. An allocation to a company such as ROP Industries (a parastatal that manufactures both soap and cooking oil) for imports of soybeans would be included in the agricultural sector sample frame while an allocation for detergents, general spare parts, or capital goods would not. While it is obvious that detergents do not have a food-related end use, spare parts and capital goods are more problematic as there is a distinct possibility that they could be at least partially used for food processing. Nevertheless, such allocations were not included in the agricultural sector sample frame.

Allocation by Company Ownership Pattern. - As is the case with a number of other sectors in the Zambian economy, parastatal enterprises

dominate the formal food sector. The parastatal share of overall GDP in the food, beverage, and tobacco sector ranged between 70-75% during the 1970's (see Table 7-5). While the percentage share of parastatal GDP in overall agricultural GDP (which includes informal activity) is not that large (roughly 35% in 1980), government involvement with smallholders through parastatal marketing boards such as NAMBOARD (maize, other grains, and fertilizer distribution) and LINTCO (cotton) is extensive.

Reflecting its prominent position in the food sector, the foreign exchange share for parastatal and mixed parastatal/ private companies was nearly half (47.6%) of allocations to food sector-related companies during the auction (Table 7-11). This has risen to 58.7% under FEMAC, supporting claims that the committee has actively favored parastatal companies [18].

While private companies enjoyed greater access to foreign exchange during the auction (receiving 51.3%), they have seen their share drop to 36.9% since the beginning of FEMAC operations. Within the private sector, the TNC's have seen their allocation share fall precipitously under FEMAC. This parallels developments in the general economy, but the reduction in TNC shares has been more pronounced in agriculture

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[18] During interviews, a number of people stated that if a private company seeking a FEMAC allocation failed to provide a supporting letter from a parastatal verifying that the requested imported goods were to be used by that parastatal, the chances of approval were virtually nil.

Table 7-11: Allocation of Foreign Exchange Under the Auction and FEMAC to the Food and Agricultural Sector (Percentage Shares)

	% of Foreign Exchange Allocated During Auction	% of Foreign Exchange Allocated During FEMAC
By Company Ownership Type:		
Transnational (***)	34.3%	20.6%
Mixed Parastatal/Private (***)	24.6%	40.8%
Parastatal (100% GRZ)	23.0%	17.9%
Private Zambian	17.0%	16.2%
Agricultural Cooperatives	1.1%	4.4%
By Sub-Sector Firm-Type:		
Input Dealers/Manufacturers (*)	51.7%	44.3%
Food Processors	34.5%	39.1%
Crop and Livestock Producers	13.7%	16.6%
By Commodity Type:		
Industrial Supplies (*)	30.2%	38.9%
Spare Parts	23.7%	23.6%
Capital Goods	21.6%	25.1%
Food and Beverages	12.5%	8.5%
Financial Charges (Inc. Transport) (***)	12.0%	3.8%

Notes: Calculations are products of random sampling and are thus estimated percentage shares.
(***) Chi-square statistic significantly different at 99% level.
(*) Chi-square statistic significantly different at 90% level.

Source: "Times of Zambia" (various issues) and author's calculations.

(from 34.6 to 20.8%) than in the economy as a whole (from 22.4 to 14.9% -- see Table 7-6). Meanwhile there has been no discernible decline in the share going to locally-owned private companies under FEMAC.

While 100% foreign-owned TNC subsidiaries operating in Zambia have been the big losers under FEMAC, the biggest winners appear to be mixed companies whose share has risen from 24.6% during the auction to 40.8% under FEMAC. Because most private shares in mixed companies are held by TNC's, in one sense it can be said that TNC's have not been uniformly discriminated against. The percentage share allocated to 100% GRZ-owned companies has not been significantly different between the auction and FEMAC.

Allocation by Economic Activity Within Agriculture. - Enterprises were also classified according to their major activity within the food and agricultural sector (Table 7-11). There is some evidence that input dealers/manufacturers have received somewhat less foreign exchange under FEMAC (falling from 51.7 to 44.3%). Disaggregation reveals that the decline in allocations to agro-chemical dealers/manufacturers has been dramatic. Whereas agro-chemical companies received 23% of foreign exchange allocations during the auction, their share has fallen to a meager 7.6% under FEMAC. There are only a handful of agro-chemical companies in Zambia and most of them are TNC's. As stated above, TNC's have received significantly reduced foreign exchange allocation shares during FEMAC.

Allocation by Commodity Imported. - There is very little difference in the types of commodities that were imported for the food and agricultural sector under the two foreign exchange allocation systems (see Table 7-11). Only financial charges registered a significant fall in shares declining from 12% during the auction to less than 4% under FEMAC (for the same reasons cited earlier).

Although agro-chemical companies have received substantially less foreign exchange under FEMAC, chemical imports have not decreased in a statistically significant way. Increasingly private individuals and businesses that are not primarily agro-chemical companies have been importing directly, as opposed to buying from agro-chemical companies. During the auction, farmers were allowed to import directly and apparently this trend has accelerated under FEMAC [19].

Table 7-12 shows the portions of agro-chemical costs in total variable costs for various crops and classes of Zambian farmers in 1986/87. For large commercial farmers, chemicals are most important in soybean production and least important for irrigated wheat cultivation. Cotton is primarily a smallholder crop. As can be seen, agro-chemicals comprise a large portion of total variable costs for both small commercial farmers and oxen technology smallholders. Because LINTCO (the Zambian cotton parastatal) imports agro-chemicals for smallholders through TNC's and not directly, there was concern on the part of agro-

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[19] According to the data sampled, agro-chemical companies imported 88.3% of all agro-chemicals during the auction. This fell to less than 50% under FEMAC. While it is doubtful that this order of magnitude in erosion of agro-chemical market share is accurate, interviews with agro-chemical companies and farmer interest group representatives confirm that direct importation by individual farmers has been on the rise.

Table 7-12: Proportion of Total Variable Costs Attributable to Agro-Chemicals for Selected Zambian Crops by Farm Type, 1986/87 (Percent)

	Cotton	Soybean	Wheat	Maize
Large Commercial	NA	12.4	5.4	8.8
Small Commercial	17.1	NA	NA	0.7
Smallholder (Ox-Drawn)	18.9	NA	NA	0.5

Source: MAWD (1986).

chemical company representatives that reduced allocations could have a negative impact on smallholder cotton production.

There is mild evidence that variable cost items other than spare parts registered an increase under FEMAC and this may be for the same reason that this happened across sectors. Reappearance of a seriously overvalued exchange rate during the FEMAC period has reduced competitiveness of domestic import-substituting industries, making it more financially attractive to import such items instead.

G. Evidence from Interviews

A purely statistical analysis provides an incomplete picture of why some types of companies and commodities were more successful at obtaining foreign exchange under one allocation system than under another. To obtain a better understanding of the nature of the trading environment since the advent of the auction in 1985, representatives from 25 companies involved in food industries and agriculture, the Bank

of Zambia, donor organizations, and farm interest groups were interviewed during December 1987, March, July, and November 1988. In comparing the business climate during and since the auction, respondents voiced concern in four broad areas which they believed to be important for explaining the performance of the food and agricultural sector: the structure of producer incentives which was a function of changing input costs and output prices; the ability to plan future activities; increased administrative costs under FEMAC; and the priority given by the GRZ and FEMAC to agriculture.

Input Costs and Output Prices. - A number of respondents believed that one reason the agricultural sector as a whole did not respond as favorably to the auction as hoped was that while the costs of imported inputs were allowed to increase as the kwacha depreciated, the producer price for maize remained controlled [20]. Although the producer price for maize rose by 41.2% between 1985/86 and 1986/87 (Republic of Zambia, 1988), farmers were squeezed as this was insufficient to keep pace with inflation on the input side where costs for some imported items had doubled or tripled by April 1987.

While commercial farmers who were primarily maize cultivators may have done poorly during the auction [21], commercial farmers who devoted more resources to export crops did well. Local currency depreciation

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[20] GRZ-decreed producer prices for all other crops served only as minimum-guaranteed floor prices.

[21] Because smallholders are less dependent on imported inputs than commercial farmers and fertilizer subsidies remained in place during the auction period, they felt less cost pressure on the input side and responded more positively to producer price increases.

may have hurt them on the input side, but they made up for this by exporting at an attractive exchange rate. As of early 1987, the Export Growers' Association estimated that the value of horticultural exports had more than doubled since the auction began. ZAMHORT, a parastatal that deals in fruit and vegetable trade, exported 438.3 MT in 1985/86 versus only 16.1 MT in 1984/85 (Weidemann et al., 1987). In fact, 1986 was the first year that ZAMHORT turned a profit [22]. With the establishment of FEMAC and the reappearance of an overvalued exchange rate, these farmers and their suppliers are now feeling the crunch. While incentives to export have been drastically curtailed, input costs have not fallen. As one respondent explained, when the kwacha was revalued to ZK8=US$1 from ZK20=US$1, export returns automatically fell. However input dealers did not reduce prices accordingly. While export prices in local currency terms are currently about one half of what they were in April 1987, input dealers continue to base their prices on an exchange rate that is substantially higher than the official rate.

The Planning Capacity of Businesses. - Respondents were split over the question of whether operating under the auction or FEMAC was more conducive to being able to plan future business activities. All of those interviewed agreed that it was extremely difficult to carry out budgeting exercises or issue future price quotations to potential customers during the auction due to the rapid depreciation of the kwacha. For example, a company might order some imported item on the basis of an exchange rate of ZK5=US$1, and by the time the item arrived

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[22] Personal communication from a ZAMHORT official.

three weeks later, be forced to pay for it at ZK7=US$1. In such an environment, short-term business planning for as little as six to twelve months into the future was largely futile.

A representative of one of the major agro-chemical companies reported that his company had a cash-flow problem over the duration of the auction. Ironically, this might not have happened if the auction had begun during some other period of the year. The marketing of chemicals is seasonal with the fourth quarter being the busiest and the second quarter being the slowest. The auction started in October 1985 and the company had ordered chemicals in August/September for the 1985/86 crop year. When they ordered, imports were based on an exchange rate of ZK2=US$1. Yet when they had to pay for the imports in October/November, the exchange rate had shot up to ZK5=US$1 and they found themselves having a big shortage of kwacha for bidding on the auction. The firm sold a lot of chemicals at the prices set in September 1985. They raised prices slightly in late 1985 and received some kwacha on sales based on an exchange rate of ZK2-5=US$1. The following year, the exchange rate was approximately ZK15=US$1 and the previous year's sales (which were based on the much lower exchange rate) were insufficient for bidding for imports to be used during the 1986/87 crop year. If, by chance, the auction had begun in the second quarter of 1986 (the firm's slow period), the company might have done much better under the auction because there would have been time to adjust import orders based on a more appropriate exchange rate.

Despite such problems, if one was willing to pay enough kwacha, priority items such as spare parts could be obtained with speed and

certainty. As one representative of a farmer interest group put it, when a farmer's tractor breaks down in the middle of the planting season, the cost of a necessary spare part is no object -- timely availability is the overriding concern. In this sense, the auction was superior to FEMAC.

One strategy followed by a number of companies was to bid high for priority items (about 10% above the previous week's exchange rate) so that one was sure to get funds in the same week's allocation and bid low for non-priority items for which one could perhaps afford to wait a bit if the bid was unsuccessful. Money was released one week after a successful bid and the importing process could then begin.

Under FEMAC, exchange rate uncertainty has been reduced and this has made the planning process somewhat easier. However, most company representatives were sure that there would be a major devaluation sometime after the national elections in late 1988 [23]. As long as the kwacha remains seriously overvalued, exchange rate uncertainty will continue to be a major concern for Zambian businesses because nobody can predict the date of a devaluation nor its magnitude.

If a company had enough kwacha to bid during the auction, it was a certainty that foreign exchange would be available for essential inputs. Now even with sufficient kwacha, there is no guarantee of receiving an allocation. Many company representatives believed this severely hindered their capacity to plan. TNC representatives were

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[23] As mentioned earlier, a 25% devaluation was announced in November 1988, just a few weeks after national elections.

especially convinced of this because they are of the opinion that FEMAC is discriminating against them in allocation decisions.

Even if a company is granted an allocation, the question of timely release of funds remains. While most observers agree that FEMAC is a vast improvement over the system that was in place prior to the auction, release of funds is slower than during the auction. Under FEMAC, funds are not automatically transferred to commercial banks, so letters of credit can not be quickly confirmed. The procedure is as follows: foreign exchange is deposited in a large New York bank by the Bank of Zambia. When FEMAC approves a foreign exchange allocation, funds are then transferred from the New York bank to the Zambian commercial bank of the company receiving the allocation. There may be delays during these transfers totalling as much as two to three weeks from the time of foreign exchange allocation approval to final confirmation of the letter of credit. Suppliers will not begin processing an order until the letter of credit has been confirmed.

Overhead Costs. - For most companies, establishment of FEMAC has led to higher administrative costs. Because applicants can never be sure of receiving allocations the first time they are requested, companies apply for foreign exchange much earlier than would be desirable if they could import whenever they wanted. This results in excessive interest charges which are passed on to farmers in the form of higher input prices. A representative of one of the agro-chemical companies stated that even though he would prefer to order imported chemicals in August and September for the approaching planting season,

he will now begin ordering as early as February or March. His rule of thumb is basically to get an allocation whenever possible. A representative of another company involved in fresh produce exports stated that on a recent order, there was a ZK 120,000 interest charge (US$ 15,000 at ZK8=US$1) on a US$ 180,000 tractor purchase because funds were tied up for so long.

Because of the often lengthy lead time involved, a number of companies ask foreign suppliers to provide price quotations valid for 60 to 90 days. This makes planning a bit easier, but results in an added cost as suppliers charge a slight mark-up for locking in this price over the extended period.

Several company representatives felt that the amount of paperwork required by FEMAC was excessive. In addition to a pro forma invoice, a minimum of six other forms must be completed and sent to the FEMAC Secretariat in multiple copies. As mentioned earlier, if a private company does not also submit letters from one or more parastatals in support of the foreign exchange application, chances of FEMAC approval are slim. For foreign exchange requests in excess of US$ 20,000, one must provide three price quotations to assure that suppliers are not charging too much. According to one company representative, many firms get around this by obtaining three different quotations from three subsidiaries of the same parent company. Many applications are rejected because the committee does not have the time to wade through all the supporting documents in a timely manner. In addition, they have very little technical expertise for evaluating the commodities that companies are planning to purchase. According to this company

representative, the more paperwork FEMAC staffers ask for, the lower their ability to get through it all.

The end result is that every company must have an extra amount of cash earmarked solely for inflated interest costs and for processing FEMAC applications. A lot of capital can be tied up in just bidding and getting refused. Table 7-13 illustrates this problem using data obtained from one of the companies interviewed. For FEMAC's 1 through 39, finance charges resulting from tying-up capital in the application process totalled US$ 56,000 or approximately 3.9% of the amount of dollars actually allocated to the company [24]. This figure would have been higher (5.3%) if there had not been a special EC grant of US$ 7 million to the agricultural sector in March 1988.

There is also a "snow-balling" effect as unsuccessful applications are resubmitted along with new applications for upcoming import requirements. Finance charges may be actually understated because allocations were not necessarily granted at the most appropriate time considering the seasonal nature of agriculture and lead time requirements of three to four months for importation of most variable cost items. Whereas the successful applications through FEMAC 7 are timed more or less correctly, the FEMAC 13, 14 and 16 allocations are too late to be useful for the 1987/88 planting season. Additional expenses for storage will therefore be incurred until just before the next season. The EC grant also came earlier than would have been best

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[24] This figure is calculated using an 18% annual rate or 0.75% for each FEMAC (as the committee meets once every two weeks).

Table 7-13: FEMAC Applications, Estimated Finance Charges, and Approvals for a Representative Company, Zambia (US Dollars)

FEMAC Sitting	Date	Amount of Application	Estimated Finance Charges	Amount Approved
1	5-16-87	78,000	546	0
2	5-30-87	78,000	546	39,000
3	6-13-87	0	0	24,600
4	6-27-87	97,200	680	54,600
5	7-11-87	126,600	886	136,800
6	7-25-87	157,200	1,100	60,000
7	8-7-87	312,000	2,184	0
8	8-28-87	126,000	882	0
9	9-5-87	332,400	2,327	0
10	9-19-87	353,400	2,474	0
11	10-3-87	374,400	2,621	0
12	10-17-87	331,800	2,323	141,000
13	10-31-87	511,200	3,578	51,000
14	11-14-87	289,800	2,029	0
15	11-28-87	244,800	1,714	34,200
16	12-11-87	172,200	1,205	0
17	12-26-87	245,400	1,718	0
18	1-9-88	245,500	1,719	0
19	1-23-88	245,500	1,719	0
20	2-6-88	211,600	1,481	0
21	2-20-88	211,600	1,481	0
22	3-5-88	210,400	1,473	137,500
23	3-19-88	185,800	1,301	149,400
24	4-9-88	185,800	1,301	98,100
25	4-23-88	186,400	1,305	39,200
26	5-7-88	61,200	428	0
27	5-21-88	61,200	428	23,300
28	5-28-88	280,800	1,966	39,200
29	6-11-88	40,000	280	0
30	6-25-88	0	0	0
31	7-9-88	39,900	279	39,900
32	7-23-88	106,900	748	0
33	8-6-88	106,900	748	35,600
34	8-20-88	286,300	2,004	90,000
35	9-3-88	457,200	3,200	0
36	9-17-88	82,500	578	60,000
37	10-1-88	307,200	2,150	102,400
38	10-15-88	357,800	2,505	85,800
39	10-29-88	237,500	1,663	0
		TOTAL	55,569	1,441,600
	Finance Charges as % of Total Amount Approved	3.9%		
	Finance Charges as % of Amount Approved (Net of EC)	5.3%		

Note: Finance charges calculated as 0.7% per FEMAC or 18% annually.

Source: Data supplied by one of the companies participating in the UZ/MSU trader survey.

considering company cash flow positions (although everybody interviewed was happy to gain access to these funds at any time of the year).

While it is inevitable that some funds will be tied up regardless of what import procedures are in place, the only "excessive" finance charges that would have resulted during the auction would have been those attributable to bidding at an exchange rate below the market clearing rate for a given week. It is difficult to believe that finance charges attributable solely to bidding for foreign exchange during the auction would have approached the levels currently experienced by importers under FEMAC [25].

The snow-balling effect mentioned above is not an isolated phenomenon. In Figure 7-4, the number of successful and unsuccessful Main Application bids are plotted for FEMAC's 1 through 38 [26]. The gap between successful and unsuccessful bids reached its height in September 1988 (FEMAC 35) when only 250 of 1608 applications were approved. Compounding this problem, a backlog of unhonored application approvals began to develop in June 1988. As of November, there was a 6 to 7 week delay involved in receipt of approved funds. In most cases, companies were unable to open letters of credit until funds were transferred to their bank accounts.

Prioritization of Agriculture. - Companies were divided on the question of whether FEMAC attached sufficient priority to the

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[25] However, nominal interest rates were higher during the auction (25-30%) as part of the IMF package. Therefore, borrowing (for whatever purpose) was more expensive at that time.

[26] Unfortunately values of unsuccessful bids are not available.

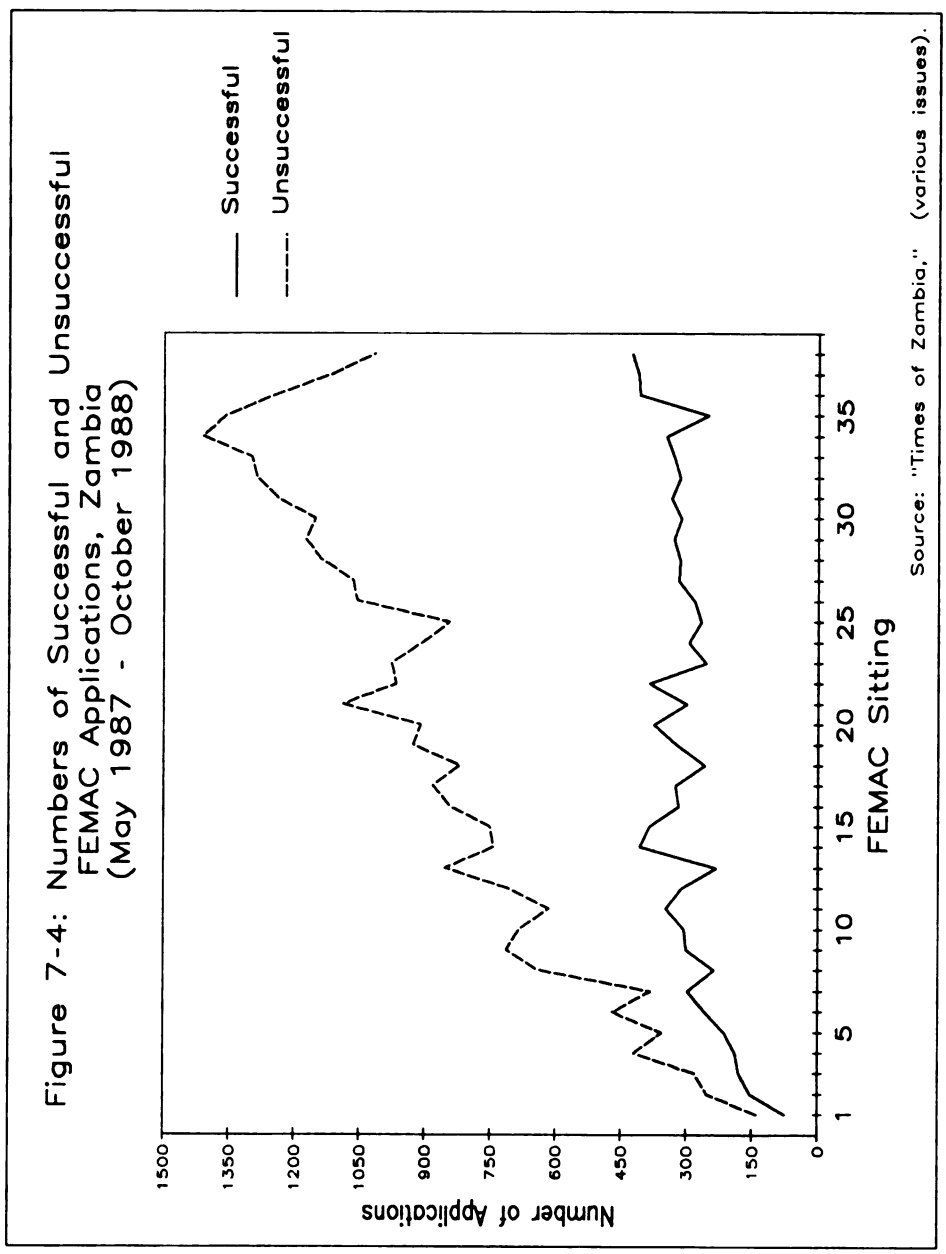
Figure 7-4: Numbers of Successful and Unsuccessful
FEMAC Applications, Zambia
(May 1987 - October 1988)
Successful
Unsuccessful
Number of Applications
1500
1350
1200
1050
900
750
600
450
300
150
0
1
5
10
15
20
25
30
35
FEMAC Sitting
Source: "Times of Zambia," (various issues).

agricultural sector. While some companies (especially TNC's) strongly believed that FEMAC did not understand the critical need for timely arrival of agricultural inputs, others believed that agriculture was getting its fair share, given the meager availability of foreign exchange.

Evidence presented earlier suggests that agriculture's share of foreign exchange has not changed significantly with the establishment of FEMAC even though in its Interim National Development Plan (for the period July 1987 to December 1988), the GRZ attaches first priority to allocating foreign exchange to the agricultural sector. Moreover, it does not appear that adequate consideration has been taken of the seasonal nature of agricultural input requirements.

Figure 7-5 presents the monthly dollar amounts and percentage shares allotted to the agricultural sector from May 1987 to October 1988. For the 1987/88 cropping season, higher dollar levels and percentage shares were apportioned to agriculture from November through March. However, due to the three to four month lag between opening a letter of credit and arrival of the goods in-country, relatively more should have been allocated during the May to September period. There is no marked improvement in the seasonal allocation of foreign exchange for the 1988/89 season. Agricultural sector allocations have been erratic -- not following any distinguishable seasonal pattern. The 6 to 7 week pipeline has further raised uncertainty about the timeliness of receipt of funds.

The percentage share of funds allocated to agriculture has risen from 1987/88 to 1988/89. From May 1987 to March 1988, the sector

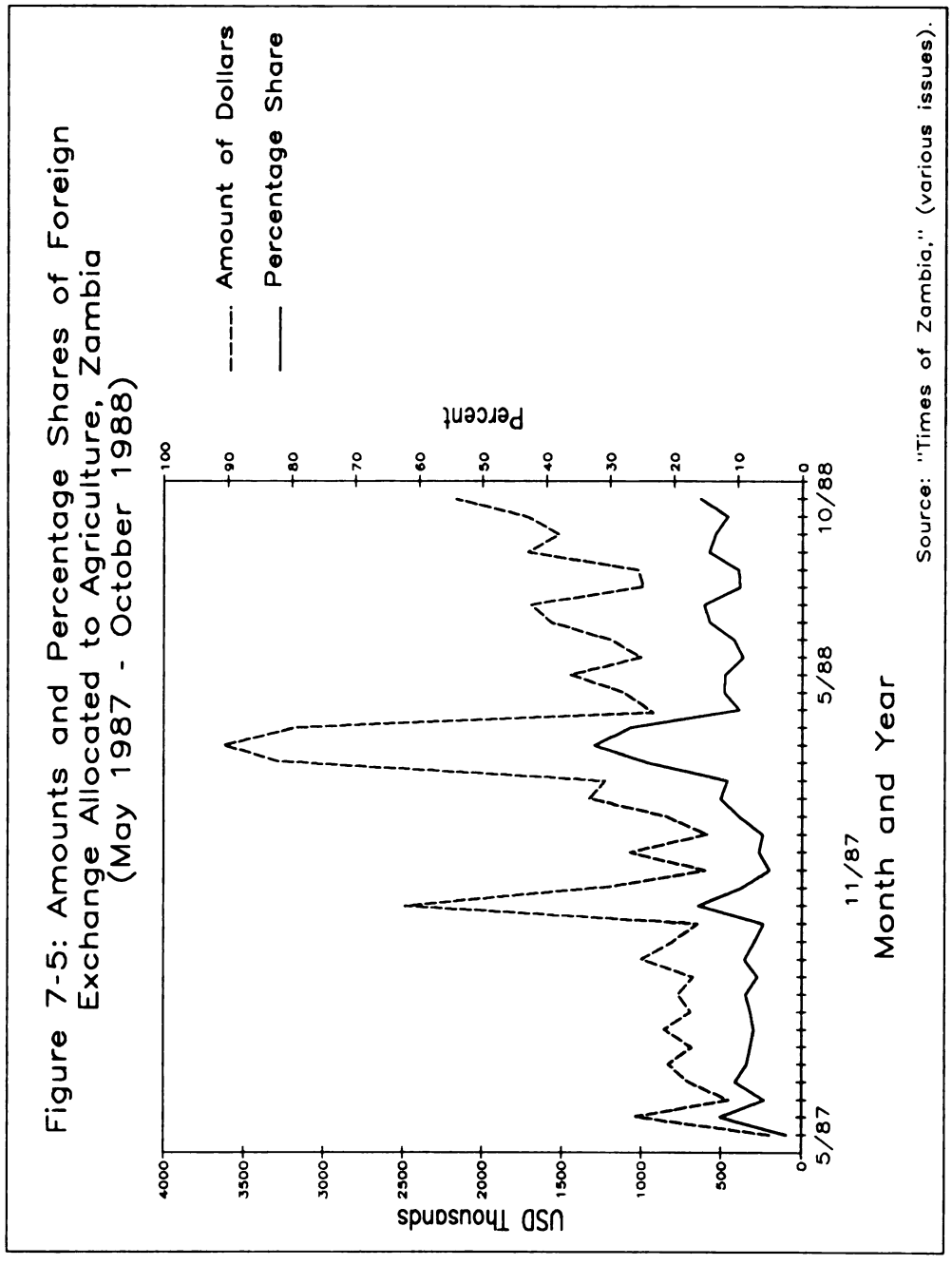
Figure 7-5: Amounts and Percentage Shares of Foreign Exchange Allocated to Agriculture, Zambia (May 1987 - October 1988)
Amount of Dollars
Percentage Share
USD Thousands
Percent
Month and Year
5/87
11/87
5/88
10/88
Source: "Times of Zambia," (various issues).

received 8.6% of total foreign exchange allocated, net of the EC grant. From April to October 1988, this figure rose to 12.3%. Absolute amounts also rose, averaging US$ 891,000 per FEMAC during 1987/88 as opposed to US$ 1,391,000 per FEMAC for the second period (net of the EC grant). Yet once again, delay in receipt of funds has limited access since June 1988.

One reason why agriculture has not received greater priority under FEMAC may have to do with the fact that FEMAC allocates foreign exchange directly to individual companies. It is therefore difficult to see how the committee prioritizes across and within sectors. There is no formal flow of policy documents to the committee which deals with sectoral planning issues [27]. Section 7.4 discusses how other SADCC governments have used their import control regimes to address sectoral planning issues.

H. Synthesis of Lessons Learned from the Zambian Case Study

This section identifies the most important lessons learned from the Zambian case study and possible policy implications for decision-makers in government and business.

For the most part, import priorities determined in the market-place during the auction and by the government under FEMAC have coincided.

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[27] This may be changing as the Commercial Farmers Bureau submitted a schedule of agricultural sector requirements for the 1988/89 season based on Interim National Development Plan targets (CFB, 1988). ZCCM has also submitted import requirement plans for the mining sector to FEMAC.

Contrary to pre-auction fears and post-auction conventional wisdom, when people were relatively more free to import whatever they wanted, large quantities of foreign exchange were not "squandered" on unproductive luxury consumer goods. The share of auctioned foreign exchange allocated to consumer goods did not vary significantly from shares allocated under FEMAC. Shares going to "productive" items such as spare parts and capital goods also did not vary significantly. There is however some evidence that under FEMAC, variable cost items (other than spare parts) have received higher priority while financial and transport charges have received lower priority.

Sectoral prioritization has not differed markedly either although two qualifications are in order. Officially-stated New Economic Recovery Plan (NERP) sectoral allocation priorities differ sharply from both auction and FEMAC sectoral allocations. Under the NERP, agriculture was to receive the highest priority while manufacturing was ranked third. Under both the auction and FEMAC, manufacturing received a far greater share than any other sector while agriculture was third or fourth. There is also evidence that percentage shares allocated to manufacturing have risen under FEMAC. Bearing in mind that the auction only operated for nineteen months, resource shifts between sectors would probably have been larger if the auction had lasted longer.

As for company ownership status, allocations to 100% foreign-owned firms (TNC's) have fallen substantially under FEMAC. Within the agricultural sector, TNC allocations have also fallen significantly.

Both the auction and FEMAC have contributed to a volatile economic environment in which planning by government and business has been rendered extremely difficult.

It would be hard to say which system resulted in greater uncertainty. One can however conclude that its source has to some extent shifted resulting in a redistribution of uncertainty. Under the auction, if bids are high enough, availability of foreign exchange to importers was certain, both in the quantities and at the time desired. Due to exchange rate uncertainty however, the amount of kwacha that had to be paid to obtain hard currency was very difficult to predict. This made budgeting an exercise in futility for both business and government. In addition, government had very little control over what entered and left the economy. Under FEMAC, exchange rate uncertainty has been reduced substantially although the possibility of devaluation still looms. Now adequate and timely availability of foreign exchange has become a serious problem. It would be hard to say that the ability of businesses to plan has improved under FEMAC. It is easier to say that planning difficulties have been somewhat reduced for government.

For essential items such as agricultural spare parts where timeliness is of greater concern than price, the auction is a superior system. Perhaps for long-term investment items such as capital equipment, FEMAC may be preferable because immediate availability is not as important as having a reliable short to medium term indication of price and repayment schedules.

For a foreign exchange allocation system to be effective and lasting, both government and business must have some latitude to plan.

This must somehow involve a compromise between total reliance on the free market and rigid state planning. At the same time, red tape needs to be minimized and the amount of sophisticated technical analysis required must not surpass the resource limitations of government. Examination of the Malawian system might be useful to Zambian policy-makers currently involved in foreign exchange allocation and will be discussed in subsequent sections of this chapter.

Excessive finance charges and cash flow difficulties resulting from the tying-up of funds during the application process appear to have become major problems under FEMAC.

Although it is difficult to quantify the magnitude of these finance charges and what constitutes "excessive" charges, it is clear from interviews that importers consider the tying-up of funds to be a major problem. The ever-increasing number of unsuccessful FEMAC applications is evidence of this, as more and more local currency is set aside while the available hard currency pie is not growing commensurately.

7.4. Foreign Exchange Allocation in Malawi, Zimbabwe, and Tanzania

A. Description of the Foreign Exchange Allocation Systems in Malawi, Zimbabwe, and Tanzania

An overview of major elements of the foreign exchange allocation systems of Malawi, Zimbabwe, and Tanzania is presented in Table 7-14 and discussed below.

Malawi. - Under the Malawian system, the reserve bank prioritizes commodities to be imported, and in principle, firms are allocated

Table 7-14: Major Elements of the Foreign Exchange Allocation Systems of Malawi, Zimbabwe, and Tanzania, 1988

	Malawi	Zimbabwe	Tanzania
Frequency of Allocation	Monthly	Semi-annual	Semi-annual
Structure of Allocation Committee	Reserve Bank Committee	Intermin-isterial	Intermin-isterial
Extent of Sectoral Planning Analysis	Low	High	Medium
Additional Programs:			
Retentions for Exporters	No	No	Yes
No Funds Involved	No	Yes	Yes
Commodity Import Programs	Yes	Yes	Yes
Export Revolving Funds	Envisaged	Yes	No
Open General Licensing	Envisaged	No	Yes

Sources: Interviews with government officials, firm representatives, review of secondary documents.

foreign exchange on a monthly basis. Companies submit annual import plans where their monthly import requirements are identified. Justification of each monthly allocation is submitted by companies through their private banks. Companies must furnish a single pro forma invoice for each commodity they are requesting to import, as well as any other supporting documents. The reserve bank then decides on that month's allocation to the company. This allocation will often be less than what the company requested in its annual plan. For example, let us say a textile company requests US$ 100,000 for a given month to import of various manufacturing equipment and spares. The reserve bank only allocates US$ 50,000. The company then resubmits pro forma invoices for the goods they will actually import based on the reduced

US$ 50,000 figure. Assuming that the goods more or less correspond to the goods in the original request, the firm is then free to order the goods indicated in this second request. The reserve bank may reject the importation of some of the goods in this second round, but this is rare in the case of manufacturers who are generally importing essential goods such as spares and capital equipment. The firms generally are aware of what imports are allowed, and adjust requests accordingly. Second round rejections are more frequent for wholesalers who are bringing in a wide range of consumer goods which are more apt to be rejected because they are either luxuries or locally available.

In recent years, the reserve bank has required the use of "soft" letters of credit for most imports. This means that the reserve bank will guarantee that foreign exchange is released for payment on the imported goods sixty days after receipt of the goods in-country.

Zimbabwe. - In contrast to the relatively young Zambian and Malawian systems, the Zimbabwean foreign exchange allocation system has been in place for more than twenty years. It was first established to facilitate tight balance of payments control and sanctions-busting during the UDI period.

The Zimbabwean system is far more elaborate than the other systems with regard to the amount of analytical effort that goes into assessing sectoral import requirements. The Ministry of Finance, Economic Planning and Development (MFEPD) coordinates a balance of payments forecasting exercise whereby various ministries forecast sectoral export earnings and hard currency import requirements for the next six

months. Within the Ministry of Lands, Agriculture and Rural Resettlement (MLARR), a series of Agricultural Input Prioritization Committees (AIPC's) meet to estimate crop areas and assess and prioritize import requirements for major inputs. The Ministry of Trade and Commerce consolidates sectoral foreign exchange requirements into a list with 35 to 40 sub-headings. This "consolidated bid" is submitted to an inter-ministerial Foreign Currency Allocations Committee chaired by the MFEPD which finalizes allocations among the various sub-headings. It is then the task of the appropriate sectoral ministries (agriculture, mining, health, etc.) to issue licenses to individual firms for importation of commodities identified in the sub-headings. Allocation amounts to individual firms are based on past import shares [28].

The Zimbabwean government also permits "No Funds Involved" imports. As is the case in Zambia, this category is for companies and individuals who have external sources of hard currency (such as overseas bank accounts).

Tanzania. - Of the four countries, Tanzania presently possesses the most experience with making a transition from Phase II to Phases III and IV. The process of introducing trade liberalization began in 1985 and has proceeded at a gradual pace. This is in stark contrast to the Zambian experience of moving immediately from Phase II to Phase V with the establishment of the auction.

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[28] For a more detailed description of the Zimbabwean foreign exchange allocation system, see Pakkiri, Stoneman, and Davies (1982), and Murphy (1987).

As of November 1988, there were a number of ways that companies could gain access to foreign exchange.

1. Administrative Allocation Procedures. Sectoral ministries (agriculture, industry, tourism, etc.) begin by formulating annual sectoral plans which attempt to identify priority imports for that budget year. Foreign exchange is allocated on a semi-annual basis to individual companies. Companies must submit a letter from the appropriate sectoral ministry certifying that their import request is among the priorities identified by the ministry in its annual plan. Import licenses are then granted valid for a six month period. They may be renewed upon approval of the Bank of Tanzania (BOT -- the central bank) if it is not used during the initial six month period. When the import license is granted, the company approaches the National Bank of Commerce (NBC -- the government-owned sole commercial bank operating in Tanzania) to open a letter of credit. Granting of import licenses does not automatically imply availability of foreign exchange as the two procedures are untied.

2. Open General License (OGL). This system was originally established in 1968, cancelled in 1980, reestablished in 1986 (under the IMF agreement), and began operating in 1987. Under the OGL, a list of priority import items (intermediate goods such as spare parts, small-scale machinery, etc.) can be imported without going through the administrative allocation procedures. Companies need a letter from their sectoral ministry certifying that the company is a legitimate business in the area for which goods are being requested. The BOT then automatically issues an import license. Companies are then required to

put up the local currency cover equivalent to the amount of foreign exchange requested before a letter of credit can be opened.

The Tanzanian government envisages a substantial expansion of the OGL system in the near future. The World Bank and other donors plan to commit US$ 200 million annually of hard currency support for OGL imports [29]. The OGL commodity list is to be extended to all intermediate goods imports with a US$ 500,000 limit for individual companies over each six month period. The World Bank is attempting to get other donors to divert tied CIP funds to the more flexible OGL system. It is foreseen that this expanded OGL system will begin operating in early 1989. The OGL is viewed as one of the pillars of the trade liberalization program, eventually becoming the main import mechanism for agricultural inputs, industrial raw materials, and intermediate goods.

3. Foreign Exchange Retention Scheme. This was instituted during the 1986/87 budget year. For traditional exports such as coffee, cotton, cashews, and tobacco, the retention is 10%. For non-traditional exports, the retention is 50%. Up to 100% may be granted on a case by case basis with special approval from the BOT.

4. Own-Funded Imports (OFI). This system was established during the 1984/85 budget year. It is the rough equivalent of the "No Funds Involved" mechanism currently operating in Zambia and Zimbabwe. There are important differences however. First, although supporting

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[29] The Government of Tanzania forecasts total annual import requirements to average US$ 1.37 billion from 1988/89 to 1991/92 (see Table 7-15 below).

documents pass through the BOT, there is no requirement that the importer state the source of the foreign exchange. Secondly, firms can import any item on a very broad list of commodities. This tends to be all-inclusive as the list is not strictly enforced. The bulk of consumer goods now available in shops come in through the OFI system.

5. Commodity Import Programs (CIP's). These are sponsored by the donor agencies and are tied in various ways. Sometimes the donor will only stipulate which sector is to be supported by the CIP. Often, donors also stipulate that goods must be purchased from companies in the donor country (see Chapter VI for a more detailed discussion of CIP's).

B. Major Issues Related to the Foreign Exchange Allocation Systems in Malawi, Zimbabwe and Tanzania

Malawi. - A total of 15 companies involved in agricultural trade were interviewed during July and November 1988. Seven of the 15 company representatives cited the threat of devaluation (coupled with payments problems resulting from use of soft letters of credit) as the most serious risk faced in doing business. In addition, a number of firm representatives claimed that reserve bank officials did not understand the unique needs of their businesses with regard to the importance of timely allocations for critical imports.

In recent years, devaluations have been more frequent in Malawi than in most other SADCC countries. One respondent even claimed that they were frequent enough so that with experience, one could predict the timing and magnitude of upcoming devaluations with a fair degree of accuracy. Because the Malawian economy is dominated by agriculture,

devaluations are usually announced after planting (somewhere between December and April). In principle, building a devaluation risk premium into one's cost price is prohibited. Yet it appears that this regulation is unevenly enforced. A number of firm representatives openly admitted adding a premium while others whose prices tended to be more strictly regulated (such as a fertilizer distributor) claimed that devaluations had greatly reduced their profit margins over the last several years.

Exposure to devaluation risk is exacerbated by the reserve bank practice of requiring use of soft letters of credit for most imports. The reserve bank defends use of soft letters because they are of the opinion that with a more strict confirmed letter of credit system, they would be unable to assure timely approval of foreign exchange applications. Although reserve bank officials cite a 60 day delay in release of funds after goods arrive in-country, a number of firm representatives said they had experienced average delays of 120 to 160 days since 1986 and sometimes as much as 9 to 10 months. Moreover, this arrangement has been criticized because foreign suppliers charge a premium to account for the increased financing charges. Some respondents estimated this premium at between 7.5 and 15% of the cost of the goods. These premiums are paid in hard currency and therefore represent a foreign exchange loss to the country. To provide a rough indication of what this implies at the national level, Malawi's 1987 fob imports were valued at ZK 393 million or approximately US$ 178 million (IMF, 1988). If the reserve bank required use of soft letters on half of these imports and the average premium charged by foreign

suppliers was 10%, 1987 foreign exchange losses would have totalled almost US$ 9 million.

At the firm level, the longer the delay between opening a letter of credit and final payment to suppliers, the greater the risk of there being a devaluation in the meantime. However, most respondents believed that the situation was improving because Malawi's balance of payments problems eased somewhat in 1988. The reserve bank now appears to be somewhat more willing to allow use of irrevocable letters of credit (whereby payment occurs immediately upon in-country receipt of goods) because a pipeline in delayed payments that had developed in 1986 has been substantially reduced.

As one element of its agreement with the IMF, the Malawian government is gradually relaxing controls on priority imports such as agro-chemicals and spare parts. For example, in February 1988, 15-25% of foreign exchange allocations for agro-chemicals were allowed to bypass traditional import licensing procedures. Firms with established allocations for such goods simply had to apply for foreign exchange through their commercial bank and open letters of credit shortly thereafter. In October 1988, this was increased to 70-80% of agro-chemical imports. With further improvement in the balance of payments, it is anticipated that the scope of this new system will be broadened.

Respondents cited a number of strengths of the traditional foreign exchange allocation system. Because companies are allowed to choose what they will import from the list of approved pro forma invoices, they believe the system affords them some latitude to set priorities as to which imports are most important. At the same time, government is

also able to set import priorities. The "zero-sum game" view prevalent in Zambia is not in great evidence in Malawi.

Despite frequent bureaucratic delays and what respondents perceived as a sometimes unsympathetic reserve bank attitude towards their import needs, most firm representatives viewed the system as straightforward and relatively free of corruption and favoritism. The general attitude seemed to be that, although there was room for improvement, reserve bank officials were making the best of a difficult situation.

Zimbabwe. - Eighteen companies involved in agricultural trade were interviewed in Zimbabwe from March to November 1988 [30]. Firm representatives mentioned a number of issues which coincided with concerns raised in the other countries: risk from devaluation; delays and excessive paperwork involved in obtaining foreign exchange; and difficulties in maintaining inventories and planning future activities. They also highlighted two issues which were not emphasized so strongly in the other countries -- the problems of emergent businesses and price controls.

As noted earlier, firm-level allocations are based on 1964-65 import shares. This provides significant protection to traditional importers and creates barriers to entry for new firms. Given Zimbabwe's unique history, this issue is of special importance because it serves to protect white-owned businesses at the expense of emergent

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[30] Officials in the ministries of trade, agriculture, and finance, the reserve bank, and donor agencies were also contacted.

black enterprises. Although the government has instituted a program to assist emergent businessmen to gain access to foreign exchange, those emergent businessmen interviewed believed that it was still very difficult for non-traditional importing firms to receive allocations. On the other hand, a number of traditional importers accused emergent businessmen of being opportunistic and lacking expertise to import efficiently.

Pakkiri, Stoneman, and Davies (1982) suggest that the foreign exchange allocation system is not well suited for dealing with this issue. Because approval of import licenses implies granting of monopoly privileges, substituting a black elite for a white elite will not necessarily increase equity -- nor will it promote competition. Moreover, the performance of many emergent businesses is constrained by a number of factors other than foreign exchange shortages alone (access to credit, training, etc.). They suggest creation of a development bank to aid emergent businessmen to deal with the larger set of constraints facing them. Such a bank would receive a separate foreign exchange allocation and be responsible for evaluating import license applications by emergent businesses.

Because import licenses confer monopoly privilege, Zimbabwe has instituted price controls on a wide range of commodities. A number of firm representatives complained that these margins were insufficient given the costs of operating in Zimbabwe, set arbitrarily, and subject to abuse. Pakkiri et al. argue that price controls are also responsible for reducing competition because of the disincentives they provide for minimizing costs.

As mentioned earlier, Zimbabwe has incorporated a sophisticated set of sectoral planning procedures into its foreign exchange allocation system. These procedures have been institutionalized over more than 20 years as Zimbabwe has become firmly entrenched in a Phase II exchange control regime. Other governments which have opted for a Phase II regime might be tempted to establish something akin to the Zimbabwean system for prioritizing sector and firm-level foreign exchange allocations. However, this may be inappropriate in countries not possessing similar levels of human capital. With the Zimbabwe model, data needs and technical analysis requirements would probably be too great a burden for the bureaucracies of such countries to bear, given their relatively scarcer resources. There would probably be longer delays in allocation decision-making than under a simpler system. At the same time, it is unlikely that sectoral and firm-level prioritization would become more rational. Something similar to the Malawian system might be a more realistic alternative for such countries. With such a system, there is room for both the government and individual companies to prioritize and plan import needs. Moreover, the amount of paperwork is reduced as less official scrutinizing of each and every pro forma invoice is required than under a system like FEMAC.

Tanzania. - Nine companies involved in agricultural marketing and trade were interviewed in November 1988. Interviews were also conducted with officials at the Bank of Tanzania and a number of donor agencies.

The recent Tanzanian trade liberalization experience is perhaps most interesting when viewed as an alternative model to the short-lived Zambian effort. Zambia shifted abruptly from Phase II to Phase V and back to Phase II. In contrast, Tanzania has moved gradually from Phase II to Phase III. While both countries embarked on trade liberalization in the same year (1985), the Zambian program failed after 19 months while Tanzanian efforts continue.

Key elements of the Tanzanian trade liberalization program are: a series of discrete devaluations that have brought the official exchange rate from TSH17=US$1 in mid-1986 to TSH120=US$1 in October 1988; relaxation of import controls through introduction of the OFI system and gradual expansion of the OGL; and provision of greater incentives to producers through more remunerative exchange rate and pricing policies and other agricultural marketing reforms.

The IMF originally anticipated movement to an equilibrium exchange rate of TSH150=US$1 by June 1988. This goal was not met and is now anticipated for July 1989 [31]. If this goal is actually met, it will have taken four years to achieve from inception of the IMF agreement. In Zambia, a number of observers believed the equilibrium exchange rate was approximately ZK15-16=US$1 in 1986. This level was reached 12 months after the advent of the IMF program, but the combination of expansionary monetary and fiscal policies and speculation pushed the rate even higher (ZK21=US$1) and led to the cancellation of the adjustment program. Thus, there appears to be a trade-off between

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[31] Personal communication from a USAID/Tanzania official, November 1988.

rapid achievement of an exchange rate level that sends more appropriate signals to market participants, and a gradual approach that is politically palatable, but perhaps far from optimal from a strictly economic perspective.

The combination of devaluation, ceilings on domestic credit growth, and high nominal interest rates (29% in October 1988) have made access to credit perhaps the most important constraint for importers (as opposed to foreign exchange availability). Historically, credit has only been offered to the private sector after the needs of governmental and quasi-governmental institutions have been met. Approximately 80% of the current National Banking Corporation loan portfolio consists of government-guaranteed overdrafts to the public and parastatal sector and agricultural cooperatives [32]. Because the banking system is nationalized, government lending priorities and prudent choice of loan portfolios have not always coincided and the banking system is critically short of funds.

Unless they possess sufficient internal cash flow, importers find it very difficult to raise the necessary shilling cover to open letters of credit for approved import licenses. Because the bulk of business done by agricultural input importers is with parastatals, the substantial arrears of these institutions exacerbates the cash flow problems of importers. One representative of a TNC irrigation equipment supplier stated that his company is unable to use its semi-annual foreign exchange allocation because it is not possible to raise

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[32] Personal communication from an official of the World Bank/ Tanzania, November 1988.

sufficient shilling cover due to lack of access to domestic credit facilities. Instead, the firm's headquarters in Europe purchases imports on the subsidiary's behalf in dollars. The subsidiary then charges customers a price based on the parallel market exchange rate (TSH200-210=US$1 in November 1988) to generate adequate local currency to reimburse headquarters. While it is illegal to change money at parallel rates, it is legal and fairly common to base local prices on parallel exchange rates, given the lack of domestic credit availability for private firms.

There is also little credit available to farmers for productive activities not directly associated with cooperative unions. In 1988, one tractor distributor imported 35 tractors intended for emergent farmers under a British CIP. However, because of lack of credit facilities, 22 were purchased by industrial users, 7 went to large-scale farming concerns, 5 were bought by missionaries, and only 1 went to an emergent farmer through the traditional agricultural credit system. This same importer had recently received a large consignment of tractor spares that he was having difficulty selling due to low liquidity among farmers.

In a way, the problem in Tanzania is opposite that of other SADCC countries like Zambia and Zimbabwe. In those countries, there are severe foreign exchange shortages with excess domestic liquidity. Due to the abundance of aid donors, Tanzanian agricultural input suppliers have little difficulty in finding sources of foreign exchange, but they

are blocked in gaining access to it because of tight credit ceilings and high interest rates [33].

The newest IMF agreement (signed in October 1988) has established credit sub-ceilings which restricts access of parastatals and cooperative unions to credit. These sub-ceilings are established marginally (i.e. credit growth to parastatals may not exceed a certain percentage of last year's credit). This is designed to increase domestic credit availability to the private sector.

While the Tanzanian government appears strongly committed to the Economic Recovery Program and donors view Tanzania's progress favorably, considerable balance of payments support will be necessary over the next several years. Favorable world prices for Tanzania's major exports will also be critical to the success of the ERP and a smooth and lasting transition to a Phase IV or V trade regime.

Table 7-15 presents the Tanzanian government's balance of payments forecast through 1991/92. This scenario is based on nominal export value growth of 15.8% annually with annual import growth held to 5.8%. The terms of trade is assumed to improve by a cumulative 4% over this period (Government of Tanzania, 1988). Even under such favorable assumptions, there will be no reduction in the current account deficit. Grants, loans, and debt rescheduling are expected to cover the bulk of this deficit. Even after these, a financing gap of US$ 78 million will remain in 1991/92.

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[33] Many donor-funded CIP's stipulate that firms must deposit local currency counterpart funds with the treasury prior to release of foreign exchange.

Table 7-15: Tanzanian Balance of Payments Forecast
(1987/88 - 1991/92)
(In Millions of US Dollars)

	1987/88	1988/89	1989/90	1990/91	1991/92
Exports	363	424	484	565	653
Imports	1190	1265	1332	1405	1493
Net Services	-171	-172	-169	-165	-164
Resource Balance	-998	-1013	-1017	-1005	-1004
Private Transfers	214	194	185	175	165
Current Account	-784	-819	-832	-830	-839
Grants	508	508	508	508	508
MLT Loan Inflows	180	273	268	269	277
MLT Loan Amortization	188	194	178	151	152
Net MLT Loan Inflows	4	79	90	118	125
Net Supplemental Credit	-5	-12	-3	-3	-8
Net IMF	25	44	4	-30	-15
Arrears Reduction	-250	250	0	0	0
Reserve Increase	-17	64	60	60	65
Financing Gap	15	-514	-293	-297	-294
Eligible for Rescheduling		492	256	224	216
Net Financing Gap (After Rescheduling)		-22	-37	-73	-78

Source: Government of Tanzania (1988).

If assumptions about terms of trade developments, export response, or the level of international donor support wind up being over-optimistic, trade liberalization could be imperiled. For example, if exports were to grow by only 8% annually (half the forecast rate, but still healthy by any reasonable standard), the 1991/92 finance gap before debt rescheduling would be US$ 494 million -- 65% higher than forecast. If increased assistance from the international community were not available, the government might cancel or reduce the scope of the OFI and the OGL and reinstitute tight import controls.

The general lesson of the Tanzanian adjustment process to date is that liberalization is perhaps most effectively implemented as a gradual process, and that there are few, if any, shortcuts to achieving sustained balance of payments improvements. Although many observers regard Tanzanian liberalization as a success story, it rests on a fragile macro-economic base. The adjustment process will be far from complete in 1992 -- seven years after the program began. Success will not only require persistence on the part of the Tanzanian government, but also sustained financial commitment from the international community.

7.5. Towards the Improved Design of Foreign Exchange Allocation Systems

This section assesses how well the foreign exchange allocation systems discussed have performed in meeting some of the objectives identified in Table 7-2. In addition, modifications are identified which may have the potential to better meet these objectives.

Section 7.5.A identifies factors that are important for thinking about the possible effects of moving to a Phase V regime on the general economy and the agricultural sector. Hypotheses are largely generated as a function of lessons learned from the Zambian experience. These lessons are not only drawn from analysis in this chapter, but also from other studies which have examined the Zambian experience as well as Phase V regimes in other countries. Key structural characteristics of the general economy and agriculture are then identified for other SADCC countries (Zimbabwe, Malawi, and Tanzania) in an effort to distinguish how these countries' economies differ from or are similar to that of Zambia and how their economies might adjust if they were to attempt a transition from Phases II-IV to a Phase V regime. It must be reiterated that section 7.5.A is concerned with hypothesis generation as a means to stimulate thought about possible effects of attempting such a transition. Its purpose is not to predict outcomes for any country. The interaction of the variables identified (and variables left unidentified for this is not meant to be an exhaustive list) is too complex for reliable prediction.

Discussion in the remaining sub-sections centers around four general objectives: stimulating competition and increased allocative efficiency; improving the ability of governments and businesses to plan future activities; strategies for reducing the possibility of corruption; and the equitable distribution of gains.

A. Key Variables for Evaluating Possible Effects of Moving to a Phase V Exchange Control Regime on Other Southern African Economies

Table 7-16 identifies key variables and presents hypotheses about potential short and long run effects of introducing a Phase V exchange control regime. Data for some variables can be identified prior to transition to Phase V (extent of currency overvaluation, export concentration, etc.) and are related to the pre-transition structure of the economy. Drawing on the Zambian experience, variables are also identified which deal with the behavior of major actors during the implementation of a transition (money supply growth, budget deficit reduction, donor and government support for the reform process, etc.).

The degree of currency overvaluation is very important for providing an indication of the amount of adjustment that is likely before the exchange rate stabilizes.

During implementation of a transition, careful monitoring of macro-economic variables such as money supply growth, the budget deficit, and interest rate movements is critical. As mentioned in section 7.3.C, some analysts have suggested that the GRZ's inability to limit money supply growth and the budget deficit was the main reason for the failure of the exchange rate to stabilize during the auction. On the other hand, the Tanzanian private sector is currently severely constricted from expanding investment due to high interest rates and domestic credit ceilings. It appears that a careful balance between expansionary and contractionary macro-economic policies is required.

It is also important to understand linkages between fiscal, monetary, and exchange rate policy. Devaluation has two counteracting

Table 7-16: Indicators for Effects of Moving from Phases I-IV to a Phase V Exchange Control Regime

Key Variables	Hypothesized Short-Run Effects	Hypothesized Long-Run Effects
For the general economy:		
Degree of currency overvaluation prior to the auction	The greater the overvaluation, movement to market-determined exchange rates will: -increase domestic inflation; -increase exports; -decrease imports.	Unclear. The exchange rate may eventually stabilize at a rate consistent with the ERER. On the other hand, severe fluctations may continue due to changes in fundamental variables, over and undershooting.
Degree of concentration of export revenues prior to movement to Phase V.	The more diversified the sources of revenues, the more widespread the incidence of benefits.	Production shifts to goods that the country can produce most efficiently, given dynamic comparative advantage.
Share of import expenditure in GNP prior to Phase V.	The higher the share, the greater greater domestic inflation will be (magnitude also depends on import elasticity of demand).	Share of imports in GNP falls as import substitution occurs.
Terms of trade for the country's exports during the Phase V transition.	Partially determines supply and demand of foreign exchange. The greater the supply and lower the demand, the lower the levels of local currency depreciation.	Unclear. TOT changes as export supply and import demand responses to ER change alters weights comprising TOT.
Level of foreign debt repayment obligations during the Phase V transition.	Partially determines supply of foreign exchange. The greater debt repayment requirements are, the more constricted the supply of foreign exchange, leading to local currency depreciation.	Currency depreciation and inflation can make Phase V politically unsustainable.
Money supply growth during the Phase V transition.	The greater the money supply growth, the greater the demand for dollars, leading to local currency depreciation.	Currency depreciation and inflation can make Phase V politically unsustainable.
Size of government budget deficit during transition and steps taken to reduce it.	See text for linkages to money supply growth, interest rates, and the exchange rate.	Currency depreciation and inflation can make Phase V politically unsustainable.
Employment	Unemployment growth may be severe as industry contracts due to increased imported input prices. On the other hand, employment is stimulated for exportables. Net employment effect unclear.	Employment shifts to sectors in which the country can produce to its dynamic comparative advantage. Employment levels will depend on whether these sectors are more or less labor-intensive than sectors from which workers migrated. ER stability also critical.
Level of donor financial support to the transition.	Increases supply of dollars, mitigating against local currency depreciation.	Helps ease transition to a stable market-based exchange rate, although ER instability may continue to be a problem.
Extent of government commitment to the transition.	If government assumes an educating role, citizens become aware of reasons for short term sacrifice. If government abdicates this role, Phase V becomes scapegoat leading to lack of confidence in long-run prospects of liberalization. This fuels speculation which contributes to local currency depreciation.	If government assumes an educating role Phase V may become accepted as the ER stabilzes. If government does not take this role, Phase V may be abandoned with a return to Phase I or II. Equity concerns may also imperil liberalization.

Table 7-16 (cont'd.)

Key Variables	Hypothesized Short-Run Effects	Hypothesized Long-Run Effects
For the agricultural sector:		
Extent of development of marketing infrastructure	The more developed, the more rapid marketed supply response is to new ER signals. Other taxes/subsidies may alter response.	If the sector was taxed by the ER prior to Phase V, improved incentives will lead to increased investment in marketing infrastructure. If the sector was subsidized prior to Phase V, resources may move out of agriculture.
Extent of development of commercial relative to smallholder farming	The more prominent the role of commercial farmers, the greater the supply response for exportables because most commercial farm output is marketed.	A larger segment of smallholder farmers will move into exportable crops with increased ER incentives.
Within smallholder sector, extent to which farmers are net sellers vs. net buyers.	If ER depreciation causes relative food prices to rise (due to higher import prices), net sellers will respond with increased marketed output. Net buyers will experience decreased access to food due to inflation.	Net sellers will shift resources into production of export crops. To the extent possible, net buyers will also shift resources into production of export crops, but may be impeded by low liquidity, labor bottlenecks, and limited access to improved technology.
Level of dependence on imported inputs	Cost inflation will erode profitability but greater availability of spare parts will raise productivity.	Reduction in use of imported inputs with greater substitution of locally-produced inputs.
Producer price structure	If prices remain controlled and do not keep pace with inflation, farmers incur losses.	Farmers shift resources to crops whose prices are not officially controlled.
Share of agriculture in total merchandise exports	If the share is high, and the ag. sector has a short-run comparative advantage over other sectors, increased export revenues have a positive balance of payments effect. If the share is low, even with comparative advantage, increased ag. exports have little effect.	If the share is high, and dynamic comparative advantage exits, same effect as in short-run. If share is low, it may take many years for a significant positive balance of payments effect to be felt, even with comparative advantage.
Level of national self-sufficiency in staple foods	The lower the self-sufficiency level, the greater the amount of inflation for food items.	Import substitution and greater demand for locally-produced foods may occur. However if export crops become more financially attractive, production may move away from staple food crops, leading to greater dependence on imports.

effects on deficit financing. First, current external debt repayment requirements in local currency terms are increased which reduces domestic credit levels. Second, the local currency value of new external credit is greater than before devaluation which serves to increase domestic credit levels. Therefore, the net effect on domestic credit can not be determined a priori. All other things remaining equal, if government expenditures are not reduced and taxes are not raised, two options remain. In the short run, the government can raise treasury bill interest rates which will siphon money from the economy, reduce non-governmental investment incentives, and dampen demand for foreign currency [34]. Alternatively, the government can leave interest rates unchanged, but increase domestic credit by expanding the money supply. This does not dampen investment incentives, but with increased liquidity in the economy, runs the risk of raising demand for foreign exchange which in turn leads to further depreciation of the local currency. During the auction, the GRZ chose this second alternative for financing its deficit and it had a profoundly destabilizing effect on the exchange rate (Harber, 1988).

Employment levels and costs of essential commodities must also be monitored. Where possible, plans for subsidies targeted to vulnerable groups should be introduced, although effective targeting may be difficult to implement. Up-to-date consumption and expenditure surveys

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[34] High interest rates may also attract funds from abroad. However, foreign investors must have reasonable expectations that they will be repaid when treasury bills mature. This is a problem for many LDC governments with heavy foreign debt burdens.

may not be available and identification of appropriate commodities, populations, payments procedures, and timing may be problematic [35].

Some explanation is necessary concerning donor support and government commitment. Some observers blame the donors for having proceeded too rapidly, without adequate consideration of Zambian political realities. Discussing the reform process in general, Colcough (1988) concludes:

> ...the Fund and the Bank (and by implication, all other Consultative Group members) pushed Zambia too hard and too fast. The extent to which they pauperized the wage earning classes, and pushed many at the fringes of the formal economy into starvation and destitution almost guaranteed that the reforms would become untenable. The speed and extent of enforced structural change was greater than the fabric of the polity would allow. Kaunda -- faced with circumstances on external account where things could hardly deteriorate further -- had little to lose, and much domestic popularity to gain, by turning his back on the IMF.

The nature of donor interaction with local governments is an important factor to be monitored during implementation of a reform program. In the case of the Zambian auction, donor financial support contracted substantially after the July 1986 attempts by the Bank of Zambia to modify the auction. This reduced the flow of dollars to the auction and contributed to the accelerated depreciation of the kwacha from July 1986 to April 1987 (see Figure 7-3).

Proponents argue that auctions (and other types of floating exchange rate regimes) are preferable to discrete devaluations because

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[35] To better appreciate these difficulties, see Weidemann et al. (1988) for a discussion of the developments in Zambian maize meal consumer pricing policy which led to the December 1986 riots in the Copperbelt.

they remove some of the onus from governments resulting from the decision to devalue (Quirk et al, 1987). In the case of Zambia however, this proved to be a double-edged sword. If the government blames the IMF for forcing a Phase V regime upon the nation against its will, it quickly becomes a scapegoat for all the pain of adjustment (Sanderson, 1987). Citizens come to believe that there is no end in sight to economic and social upheaval, and that they are being made to suffer while foreign bankers and TNC's get rich. This is clearly not conducive to the adjustment process and ultimately imperils the survival of the entire reform program.

For the agricultural sector, one elementary hypothesis is that devaluation provides fresh incentive for export activities as well as import substitution. However, the ability of agriculture to respond to price signals is often constrained by a lack of infrastructure, low liquidity, and a legacy of official neglect. Typically, long-run supply response is greater than short-run response, because with time, constraints are to some extent overcome. In general, an agricultural sector with extensive marketing infrastructure which is already well-integrated into the cash economy will respond more quickly to price incentives than a relatively under-developed agricultural sector.

Potential long-run effects on food self-sufficiency levels are ambiguous. While new incentives for import substitution may emerge due to higher import costs resulting from devaluation, resources may be transferred into the production of export crops whose prices also become more attractive as a result of devaluation. If there is a net movement away from food crop production without a corresponding fall in

consumption, greater dependence on imported foodstuffs will develop. This issue can only be clarified through careful analysis of costs and returns at the farm level [36].

Table 7-17 presents data for some of the indicators identified in Table 7-16 for the four SADCC countries. Current exchange rate overvaluation (as shown by the 1988 parallel market premium) is highest for Zambia, indicating that trade and exchange rate liberalization would result in significant depreciation of the currency. Given the large unsatisfied demand for foreign exchange reflected in the mounting number of unapproved FEMAC applications, this is not surprising. Movement to a Phase V regime would also result in considerable exchange rate volatility for Tanzania, and to a lesser extent Zimbabwe.

The structure of the Zambian economy is quite different than those of the other countries in several ways. Exports are highly concentrated in the mining sector which accounts for over 90% of total 1985 exports. This concentration has led to large historical terms of trade fluctuations as shown by a coefficient of variation much higher than those of the other three countries. Fluctuations in the terms of trade is one of the most important variables for RER determination. This raises serious questions about the medium-term prospects for Zambian exchange rate stabilization if the auction had been pursued for a longer period of time [37].

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[36] For more discussion of the possible effects of trade and exchange rate liberalization on food security, see Chapter VIII, section 3, on future areas of research.

[37] In the long-run, resource shifts to other sectors would probably have facilitated export diversification, leading to less TOT volatility.

Table 7-17: Key Structural Characteristics of the Economies and Agricultural Sectors of Four SADCC Countries

Characteristic	Zambia	Zimbabwe	Malawi	Tanzania
Parallel Exchange Rate Premium (1988 Average)	264.5%	75.3%	21.5%	112.5%
Coefficient of Variation of the Terms of Trade (1970-85) (1)	0.444	0.109	0.182	0.160
Concentration of Exports (1985):				
1st Most Important and Percent	Copper 84.7%	Tobacco 23.5%	Tobacco 41.0%	Coffee 34.5%
2nd Most Important and Percent	Zinc 3.5%	Iron 12.0%	Tea 20.4%	Cotton 17.6%
3rd Most Important and Percent	Cobalt 1.5%	Cotton 9.8%	Sugar 10.5%	Sisal 5.5%
Cumulative Percentage	89.7%	45.3%	71.9%	57.6%
Share of Agriculture in Total Merchandise Exports (1982-84)	0.9%	40.7%	89.4%	84.5%
Ag. Input Imports as a Percent of Ag. Exports (1982-84)	629.1%	10.8%	12.6%	11.6%
Development of Marketing infrastructure	MEDIUM/LOW	HIGH	MEDIUM/HIGH	LOW
Development of Commercial Farming (Relative to Other African Countries)	MEDIUM/LOW	HIGH	MEDIUM/HIGH	LOW
Self-Sufficiency for:				
Coarse Grains (2)	86.4%	100.0%	100.0%	93.8%
Wheat (2)	19.7%	60.1%	4.9%	36.4%

Notes: (1) Defined as the absolute value of the ratio of the standard error estimate from a linear time trend of the mean of the TOT. 1972-85 only for Tanzania.
(2) For a "normal year" which is calculated using trend production and imports as estimated by the FAO.

Sources: For currency overvaluation, ICA, Inc. "1985 World Currency Yearbook";
For Zambian and Tanzanian TOT figures, UNCTAD (various issues);
For Zimbabwe and Malawi TOT figures, IMF, "International Financial Statisitcs," (various issues);
For Zambian commodity export shares, Bank of Zambia "Quarterly Financial and Statistical Review," March 1986;
For Zimbabwean commodity export shares, CSO, "Statistical Yearbook 1987";
For Malawian commodity export shares, Government of Malawi, "Economic Report 1987";
For Tanzanian commodity export shares, IMF, "International Financial Statisitcs," May 1988;
For agricultural imports as a percent of GNP, IMF, "International Financial Statisitcs," May 1988;
For agricultural exports as a percent of merchandise exports, and inputs as a percent of agricultural exports, FAO, "Trade Yearbook 1985";
For self-sufficiency in coarse grains and wheat, FAO, "Food Supply Situation and Crop Prospects in Sub-Saharan Africa: Special Report," April 1988.

For the other three countries, export revenue sources are more diversified and agriculture plays a far more prominent role. Malawi and Tanzania are especially dependent on agriculture for export revenues, although no single commodity dominates to the degree that copper dominates Zambian exports. Zimbabwe has a more diversified economy than the other SADCC countries with several sectors (agriculture, mining, manufacturing) historically important for generation of export revenues. One could hypothesize that because the agricultural sectors are more developed in these countries, agriculture would be quicker to respond in the short-run than happened in Zambia. In addition, export response would be relatively more broad-based than in Zambia. Relatively lower historical terms of trade variability might also enhance the prospects for greater exchange rate stability.

Prior to the auction, Zambia's agricultural exports were very small relative to overall merchandise exports (less than 1%). Among the 41 Sub-Saharan African countries (South Africa excluded), Zambia ranked next to last in 1983 (FAO, 1986). The export diversification challenge facing Zambia is perhaps more daunting than for any other country in Africa. In addition, the agricultural sector consumed six times more foreign exchange than it generated over the 1982-84 period. This meant that short-run adjustment would in all likelihood be painful due to heavy dependence on imported inputs, and limited ability to substitute locally-produced inputs (which exchange rate depreciation had made relatively less expensive).

Secondly, from a macro-economic perspective, the chances of improved agricultural performance making a significant dent in Zambia's

balance of payments deficit were dim because the sector's export base was so small. In contrast, in each of the other three countries, one could hypothesize that adjustment would not be as painful because agricultural sector production is not so dependent on imported inputs. The percentage of imported inputs as a percentage of agricultural exports is only in the ten percent range for each of these countries. In addition, the relative prominence of the agricultural sector as a source of export revenue means that improved export incentives could have a greater positive short and medium-run balance of payments impact than was possible in Zambia.

In summary, although a Phase V regime might eventually have succeeded in Zambia if the political will to continue the auction had been stronger, the highly skewed nature of the economy leads one to seriously doubt that Zambia was an appropriate laboratory for such radical experiments as foreign exchange auctioning. In effect, Zambia jumped from Phase II to Phase V in October 1985. Alternative approaches, such as Malawi's and Tanzania's gradual move from Phase II to Phases III and IV, might have had a greater chance of succeeding, both economically and politically.

B. Stimulation of Competition and Increased Allocative Efficiency

Foreign exchange rationing alters incentives from what they would be if import demand were market-determined. If price controls are also imposed, incentives are lowered for cost minimization. This results in misallocation of resources (in a static efficiency sense) and reduced competition. Yet movement to trade liberalization is not synonymous

with movement to a free-market. Although reductions in exchange rate overvaluation presumably improve allocative efficiency, monopoly power may be either reduced or enhanced. Within the agricultural sectors of the four SADCC countries discussed, monopolies or oligopolies exist in the fertilizer, agro-chemical, seed, hand-tool, machinery and irrigation equipment industries. Removal of import controls combined with devaluation may actually facilitate consolidation of monopoly power if there are business failures in these industries. Although no data are currently available on the pattern of business failures during the Zambian auction, the fact that TNC's captured larger foreign exchange shares during the auction than under FEMAC may offer weak evidence that such consolidation was taking place.

Under the auction, commercial farmers were for the first time allowed to import directly, thus by-passing traditional importers. This policy has been continued under FEMAC and a number of those interviewed in Zambia believed that it constituted a significant check on potential monopoly abuse.

Governments committed to maintenance of a Phase II regime should carefully weigh the pros and cons of relaxing monopoly/oligopoly control of importation of strategic agricultural inputs. Such a policy may have some drawbacks. First, because direct import orders are scattered in small lots, economies of scale in importing are less likely to be achieved than if only a few large firms imported. Second, established importers tend to offer additional services which can to some extent be viewed as public goods. Examples are training programs and publication of brochures for the safe and effective use of agro-

chemicals and specialized equipment, furnishing of warning labels, and establishment of local applied research and extension programs. Farmers (or "brief-case businessmen") can perhaps import at prices lower than those offered by established agro-chemical firms, but these beneficial services are not provided. Third, for some agricultural inputs, rationalization of the import process may be important. For example, if there are a plethora of tractor or vehicle brands in the country, this can seriously impede the efficient importation of spare parts inventories and servicing of national tractor and transport fleets. Finally, only large commercial farmers tend to have the resources and expertise to import directly. If foreign exchange allocations to traditional importers are reduced for a given category of input because of greater direct imports, smaller farmers who still buy from traditional importers will suffer due to reduced availability and higher prices from diseconomies of scale in importing. In Zambia, this issue is currently under debate for agro-chemicals.

C. Planning by Government and Business

One major finding of the Zambian analysis is that government sectoral and commodity import priorities under FEMAC (during the May 1987 - March 1988 period) did not differ greatly from the priorities set in the market-place by the auction. Scarce foreign exchange was not wasted on frivolous luxury items and productive sectors were not starved of variable inputs and capital goods any more under one system than under the other. In other words, allowing parastatal and private

sector managers some leeway in setting their own import priorities did not automatically result in irresponsible and anti-social behavior.

For governments committed to instituting a Phase II exchange control regime, the Malawian system is of special interest because it represents a compromise between complete government planning as implied by FEMAC where government feels it necessary to approve every pro forma invoice and a liberalized import system where the government may lose a great deal of its ability to control who imports what. Under the Malawian system, there is room for both government and business to plan and prioritize import needs to some degree.

A liberalized foreign exchange market need not necessarily imply loss of government control over import planning. Rather it can be accompanied by a tariff structure that encourages imports that government deems desirable and penalizes "undesirable" imports such as luxury goods. For such a system to operate effectively, decision-makers need to have estimates of import demand elasticities. If the country has a long history of foreign exchange rationing or import quotas, several years of trial and error will be necessary before these elasticities can be estimated accurately. An additional benefit is that the bulk of economic rents enjoyed by import license recipients under a rationing system will be transferred to government coffers in the form of increased tariff revenues.

Analysis required to allocate foreign exchange in a way that meets government import objectives should not be beyond the capacity of government. Although the Zimbabwean government has developed elaborate procedures for assessing sectoral import priorities, it is doubtful

whether many other African governments could successfully duplicate the Zimbabwe model. This is because Zimbabwe has more trained professionals at this time than most other African countries.

The Zambian FEMAC secretariat passes judgment on each item that a firm wishes to import. A number of respondents complained that sometimes FEMAC would approve allocations that were not very important to the firm, while rejecting the highest priority items. In addition, there were complaints of FEMAC approval of allocations which constituted a fraction of the value of a particular pro forma invoice. This led to the problem of firms being issued an import license for 50% of a tractor or 25% of a combine harvester. Again, allowing firms to decide on imports from a list of approved items would largely eliminate such problems.

Firm representatives in all countries were of the overwhelming opinion that administrative allocation of foreign exchange took up considerable management time, added to finance charges, and seriously reduced the probability that key imports would arrive in a timely fashion. This is an especially important issue for agriculture due to the seasonal nature of production.

Realistically, there is probably very little that can be done to speed the import process within a framework of allocation of foreign exchange by government officials who have no direct stake in seeing firms function more effectively. More promising perhaps are the marginal adjustments that have been made by some SADCC governments that to some extent skirt around traditional foreign exchange allocation procedures. Such reforms usually take place in Phase II and

transitional Phase III regimes. Examples are the foreign exchange retention programs operating in Zambia and Tanzania. The recently-created Zimbabwean export revolving fund for agriculture should also be closely monitored by SADCC countries looking for innovative ways to encourage agricultural exports and ease the import crunch. If properly implemented, such programs allow firms to more effectively plan importation of agricultural inputs and spare parts which are either needed at a particular time of year or on short notice. One shortcoming of these programs is that they offer few benefits to firms that primarily serve the domestic market.

Another innovation which might be useful to consider is a partial auction of foreign exchange. Under such a dual exchange rate system, most foreign exchange would still be administratively allocated, but some portion would be set aside for auction to the highest bidders. If government so desired, it could prohibit importation of certain items (luxuries) through this auction.

Among the advantages of a partial auction are: 1) The government would still control allocation of the bulk of foreign exchange at an exchange rate that it judged appropriate. This helps make economic adjustment less chaotic as the government can target goods and sectors for different trade policies; 2) Those firms that had sufficient local currency could resort to the auction for importing high priority goods such as spare parts; 3) Government receipts would increase if, on average, hard currency export earnings were exchanged for local currency at a rate lower than the rate at which the hard currency was sold at auction. For example, if Zambian exporters were obliged to

surrender foreign exchange to the Bank of Zambia at an exchange rate of ZK10=US$1, and the Bank auctioned the foreign exchange at a spot rate of ZK20=US$1, government receipts would increase by ZK 10 for each US dollar auctioned.

Among the disadvantages are: 1) Exchange rate fluctuations might be very volatile due to the thinness of the spot market; 2) A partial auction might have inequitable results if only the strongest firms were able to bid effectively at the spot exchange rate; 3) If governments limit auction participation to certain goods or sectors, decision-making may be arbitrary. This could result in import bottlenecks or unintended discrimination against some goods and sectors; 4) If the local currency equivalent price of imported inputs rose while the effective exchange rate for exporters remained fixed, this would erode export profitability [38].

D. Avoiding Corruption

In a number of countries around the world, rationing of foreign exchange has been plagued by corruption as the economic rents inherent in such a system can be very enticing to those in a position to capture them. Although it is never possible to completely eliminate opportunities for corruption, reasonable sets of safeguards need to be established to lower the latitude for corruption to tolerable limits. Safeguards may include the establishment of investigative units,

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[38] See Collins (1988) for a detailed discussion of arguments for and against dual exchange rates (as well as the more general topic of multiple exchange rate regimes.

contracting with SGS [39], or requiring additional documentation by importers. One of the simplest and least costly immediate steps that SADCC governments can take is to follow the Zambian example of publishing foreign exchange allocation results in local newspapers. Knowledgeable observers in Zambia credited this policy with reducing the extent of corruption from what it was under the pre-auction allocation system.

In contrast, it is no exaggeration to say that foreign exchange allocation is regarded as a state secret in Zimbabwe and Malawi. In the case of Zimbabwe, this secrecy is a holdover from UDI when import controllers aided and abetted sanctions-busting. Because this imperative is no longer required, the policy of secrecy should be viewed as carrying real costs while conveying few, if any, legitimate benefits. For example, in July 1988, the Zimbabwe press reported on a scandal in the Import Control Division of the Ministry of Trade and Commerce. A small publishing company had received a foreign exchange allocation far in excess of any previous allocation and several officials were implicated. It would be more difficult to engage in such behavior if allocation approvals and rejections were public information.

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[39] Société Genérale de Surveillance, a Belgium-based TNC that monitors quality control and trading irregularities. For a detailed discussion of the pros and cons of governments contracting with SGS, see Pakkiri, Stoneman, and Davies (1982).

E. Equitable Distribution of Gains

Because foreign exchange rationing confers monopoly privileges to the recipients of import licenses, benefits will rarely, if ever, be evenly spread among market participants. If firm-level allocations are based on past import shares, this serves to solidify past economic structure and any historical inequities. Movement to a market-determined allocation system will not necessarily improve equity if ability to compete is unequal. While foreign exchange allocation systems may have significant equity effects, it is not clear that allocation system redesign is the most appropriate means of addressing equity issues because foreign exchange shortages may be only one of several constraints facing smaller firms. Development banks and other targeted programs may be better vehicles for aiding new businesses to compete effectively and share benefits.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

8.1. Introduction

SADCC governments and international agencies perceive that increasing agricultural trade among SADCC states can be an important component of a regional food security strategy. To better inform these issues, this study identifies important barriers to the expansion of food security-enhancing marketing and trade in the SADCC region. It also explores strategies for lowering some of these barriers.

Section 8.2 discusses the implications of major findings. The following section identifies areas where more research is required to clarify selected SADCC marketing and trade issues. The final section discusses a key trade policy challenge facing SADCC leaders in the next decade.

8.2. Summary of Major Findings and Policy Implications

Much applied trade analysis has focussed primarily on price factors, (i.e. existing relative resource endowments, and pricing and exchange rate policies). A basic premise of the present study is that there are both price and non-price constraints on improved SADCC agricultural marketing and trade. Non-price factors, such as transactions costs, may have a strong effect on marketing and trade performance, but are generally not well understood.

Chapter III proposes a market coordination analytic framework for examining these non-price as well as price constraints. Such a framework not only includes the horizontal dimensions of an industry (i.e. competitiveness), but also encompasses relationships between market participants arising from the vertical value-adding process of input acquisition, production, transformation, and distribution. Market coordination functions that have an effect on transactions costs in such a horizontal and vertical framework are: market information; government regulations and their enforcement; property rights governing transactions; and procedures for financing transactions.

A. Historical Trade Patterns

Chapter IV provides an historical overview of the evolution of official cereals trade patterns in the SADCC region. Overall import volumes of maize, wheat, and rice have more than doubled since the early 1970's. The 1970-75 annual average import volume was approximately 800,000 MT while anticipated 1988/89 imports are on the order of 1,860,000 MT. Food aid dependency has also risen in some SADCC countries, most notably in Mozambique and Angola. Food aid accounted for only 11.5% of total SADCC imports in the early 1970's, while the FAO expects this figure to rise to 66.4% for 1988/89.

The analysis shows that the diversity of maize exporting countries within SADCC has also fallen. Whereas five SADCC countries (Angola, Malawi, Tanzania, Zambia, and Zimbabwe) exported maize to other SADCC countries in at least two years during the 1970's, only Zimbabwe and Malawi have exported within the region since 1980. Moreover, domestic

production problems and the large influx of Mozambiquean refugees have transformed Malawi into a large net maize importer in the latter half of the 1980's. Zimbabwe has thus become the sole source of significant volumes of exportable white maize stocks within SADCC. Two or three successive years of production shortfalls in Zimbabwe would seriously reduce white maize availability in the region.

On the demand side, levels of long-term import requirements depend critically on political developments in Mozambique and Angola. If the civil wars in these two countries were to end, the need for massive food aid shipments would eventually subside as displaced farmers would be likely to return to their land and resume agricultural production.

B. Price Constraints

Chapter V examines price-related constraints and opportunities for expanded intra-SADCC agricultural trade through both official and parallel marketing channels. The chapter begins by summarizing recent maize pricing and subsidy policy developments in the five countries that are the most important white maize producers in Southern Africa (Zimbabwe, Zambia, Malawi, Tanzania, and South Africa). Governments in these countries have participated extensively in agricultural markets by setting official producer and consumer prices, and by establishing parastatal marketing boards with officially-decreed maize purchasing monopsonies, and maize marketing and trade monopolies.

Governments have also tended to impose pricing structures that do not permit parastatals to recover costs of domestic marketing services. In Tanzania and Zambia for example, pan-territorial pricing policies

have resulted in regions distant from consumption centers becoming major sources of marketed surpluses. This has driven up marketing costs and severely stressed transportation infrastructure. Consumer prices have also been kept low while producer prices and marketing costs have risen. In 1987/88, official Zambian maize meal prices were less than 40% of purchase, milling, and distribution costs. The total costs of this subsidy were estimated at nearly 20% of Zambian government revenues for 1988.

For the maize exporting countries of Zimbabwe and South Africa, export subsidies are also major contributors to grain board operating deficits. Because of the fiscal costs they impose upon governments, pricing policies are also unstable. Official white maize producer prices tend to fluctuate in cobweb fashion in both countries. Producer prices are set at relatively high levels following successive years of below average production. This stimulates official marketings in subsequent years. Domestic price subsidies and low export prices combine with large marketing volumes to produce significant financial losses for parastatals. This results in pressure on governments to lower producer prices which eventually leads to curtailed production. The cycle then repeats itself. The cobweb phenomenon results in large interannual fluctuations in export availability and prices at which white maize can be acquired.

From a price perspective, transportation costs are important components of comparative advantage for low value commodities such as maize. This is especially true in Southern Africa where six of the nine SADCC countries are landlocked. While Zimbabwe holds a

transportation cost advantage over South Africa in most SADCC markets, a more important determinant of short-run competitiveness in Southern African markets is the extent to which governments are willing to export at a financial loss. The availability of stocks for export is largely a function of the excess of official stockholdings over domestic effective demand. Large stocks in these countries are often the result of a combination of favorable rainfall, and of farmer supply response to attractive maize prices and to the availability of other output-enhancing services.

Thus, consumer subsidies, pan-seasonal, and pan-territorial pricing policies strongly influence whether the private sector and parastatal bodies will engage in profit-generating trade. Under the present array of price-related policies, it is hard to see how continued government-to-government trade (much of which is underwritten by food aid donors) can lead to greater SADCC food self-reliance. Given alternative uses for scarce government revenues, such trade is not sustainable if source country governments consistently lose money in the form of export subsidies and importing country governments lose money through consumer subsidies. The cobweb maize pricing cycle discussed above, and recent efforts at pricing policy reform in all five countries examined in Chapter V, are evidence that Southern African governments are concerned about the high costs of current maize marketing policies.

C. Incentives for Informal Trade

Analysis of price data from open markets in Northern Malawi and Southwestern Tanzania demonstrates that the incentives for engaging in informal intra-regional trade may be far greater than for official trade. When maize and rice prices are adjusted for transport and handling costs, and compared at parallel exchange rates, the incentives for spatial arbitrage appear strong. Informal trading networks may have the potential to serve remote provincial markets more effectively than official networks, thus improving food availability for those populations.

Comparison of open market prices converted at official and parallel exchange rates in Northern Malawi and Southwestern Tanzania also demonstrates that currency overvaluation has the potential to completely negate any cost advantage that a prospective trader might enjoy in export markets. Significant overvaluation (the discrepancy between Tanzania's and Zambia's official and parallel exchange rates was more than 100% in 1988) may dwarf other disincentives to exporting.

D. Non-Price Constraints

Chapter VI examines non-price market coordinating functions. The chapter reports results of a survey of over 90 agricultural trading firms implemented in five SADCC countries (Zimbabwe, Zambia, Malawi, Tanzania, and Botswana). The survey generated information on the functioning of marketing and trade coordination mechanisms such as regulations restricting trade and access to foreign exchange, market information gathering strategies, and export/import payment procedures.

Additional issues examined were the design of export promotion schemes and the experience of donor-supported commodity import programs (CIP's).

There is a wide range of agricultural inputs and outputs that have either been traded or firm representatives expressed an interest in exchanging within the region. Traders believe that excessive transactions costs prevent much of this trade, however.

Traders clearly report that transactions costs are often higher for intra-regional trade than for trade with the rest of the world. Because regional trade links are not as developed as those with Europe and South Africa, the costs of negotiating transactions are raised as uncertainty is greater. Moreover, mistrust and lack of confidence in the ability of SADCC governments to facilitate prompt payments are widespread in the region. As a result, payment conditions for intra-regional trade are generally more stringent than for trade with the rest of the world. In addition, information pertaining to regional trading opportunities is rarely readily available so search costs are high.

SADCC was created in part to lessen dependence on South Africa. But given the above findings, South Africa often benefits from regional economic and political disarray because transactions costs and risks associated with trading with South Africa may be lower than for trade within SADCC.

SADCC governments have important roles to play in formulating and implementing policies that can lower the transactions costs associated with trading. They can design policies and administrative procedures

that better facilitate information exchange among prospective trading partners. Strategies include: continued sponsorship of SADCC and PTA trade fairs; expansion of export promotion board activities; promotion of export products in foreign markets, either through direct advertising or provision of tax credits to exporter organizations who do their own foreign promotion; and relaxation of business travel restrictions.

Governments must also carefully consider the right balance between trade controls and allowing firms necessary flexibility in business operations. While some controls may be necessary, too much import regulation ultimately raises producer costs and consumer prices in domestic markets. Excessive controls on exports eventually erodes hard currency earnings if foreign competitors are subject to fewer restrictions and can thus exercise greater flexibility in serving clients.

Both governments and donors must carefully monitor the effects of CIP's on the local business environment. If well designed, such programs can serve as development tools by stimulating infant industries as well as agricultural production. Alternatively, CIP's can become thinly veiled dumping exercises, disrupting development by undercutting indigenous firms and creating dependency on inappropriate agricultural inputs.

The foreign exchange constraint is a fundamental cause of many marketing and trade barriers. To some extent, the following problems mentioned by traders all emanate from foreign exchange shortages and rationing: excessive documentation; official reluctance to use the PTA

clearinghouse; restrictions on travel for export promotion; poor transport and communications infrastructure; and the inability to achieve benefits from economies of scale. Traders were nearly unanimous in citing foreign exchange allocation procedures as the most important factor raising transactions costs and risks associated with trading.

E. Foreign Exchange Allocation

To examine effects of foreign exchange allocation systems, Chapter VII documents the experiences of four SADCC countries (Zambia, Zimbabwe, Malawi, and Tanzania) with foreign exchange rationing. Section 7.2 recounts Bhagwati's classification of phases of import control regimes [1] which makes it clear that the evolution of rationing practices is intimately linked with exchange rate overvaluation and the balance of payments.

Much of the analysis in the chapter is devoted to a comparison of the Zambian auction with administrative allocation of foreign exchange

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[1] The five phases are:
Phase I: Quantitative restrictions are placed on imports and capital movements are tightly regulated. No detailed criteria have yet been developed for prioritizing imports and identifying importers.
Phase II: Quantitative restrictions become institutionalized and import license priority-setting becomes more complex.
Phase III: Efforts begin to ease quantitative restrictions through increased use of tariffs, official devaluations, and exemption of some goods from the import licensing system. Such measures are meant to ease import demand pressure.
Phase IV: Essentially a continuation of Phase III wherein import and exchange control relaxation becomes institutionalized and pro-liberalization interest groups have formed.
Phase V: Complete trade liberalization with full convertibility on all current account transactions.

under FEMAC [2]. The transactions costs associated with importing are quite high under FEMAC. Excessive finance charges and cash-flow difficulties have become major problems that result from the tying-up of funds during the application process. The ever-increasing number of unsuccessful applications is evidence of this, as more and more local currency is set aside while the available hard currency pie does not grow commensurately.

Both the auction and FEMAC have contributed to a volatile economic environment in which planning by government and business has become extremely difficult. Sources of uncertainty have shifted, resulting in a redistribution of costs associated with uncertainty. Under the auction, with a high enough bid, availability of foreign exchange to importers was certain, both in the quantities and at the time desired. Yet due to exchange rate uncertainty, the kwacha costs of obtaining future hard currency supplies was difficult to predict. In addition, government had very little control over what entered and left the economy. Under FEMAC, exchange rate uncertainty has been reduced substantially. Now, however, adequate and timely availability of foreign exchange has become a problem. This is an especially important issue for agriculture, due to its highly seasonal import requirements.

There is evidence that the Zambian agricultural sector responded to the auction by increasing exports. Because the sector was starting from such a small base, however, it would have taken several years for significant positive balance of payments effects to have been felt.

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[2] The Foreign Exchange Management Committee, which was established in May 1987 after the auction was cancelled.

In contrast to Zambia, Tanzanian and Malawian trade and exchange rate policy liberalization have been more gradual. Zambia moved abruptly from a Phase II regime to Phase V and then back again to Phase II. Malawi and Tanzania began their liberalization efforts in 1981 and 1985 respectively (at which time both trade regimes could be categorized as Phase II). Over time, they have moved to Phase III. If liberalization can be sustained, it appears that they will eventually become Phase IV regimes.

A clear implication of the Zambian experience is that import control policies should afford both government and business some latitude to plan future activities. For governments committed to maintaining Phase II regimes, rationing system design should involve compromise between rigid state planning and total reliance on the market. If some degree of flexibility is permitted, governments can retain some control over economic planning while helping private firms to increase trading flexibility and lower uncertainty at the firm level. This reduces transactions costs which facilitates greater competitiveness in international markets and can lower prices for domestic consumers.

For SADCC governments attempting to liberalize their trade regimes, the Tanzanian and Malawian models may be more appropriate than that of Zambia. Compared to the Zambian auction, the more gradual approach has resulted in less uncertainty for both government and traders.

Caution is required, however, in concluding that auctions would fail in other settings, based solely on the Zambian experience. In

Zambia, heavy dependence on copper for export revenues implies greater exchange rate variability than for economies with more diversified export bases. The dominance of copper in Zambia also implies that export supply response to devaluation from other sectors would have taken a significantly longer time to translate into noticeable improvements in the balance of payments. Therefore, Zambia may have been an especially inappropriate laboratory for foreign exchange auctioning.

8.3. Areas for Future Research

This study represents a beginning analysis of constraints on and potentials for agricultural marketing and trade expansion in Southern Africa. There are a number of research topics that this study either only partially addresses or are considered beyond its scope: some of the most important ones are discussed below.

A. Strategies for Reducing Transitory and Chronic Food Insecurity

One major policy issue that requires further analysis is the appropriate level of white maize buffer stocks necessary to achieve desired degrees of transitory food security for each SADCC nation. Because of the strong preference for white maize, analysts should no longer make the common error of equating the opportunity cost of domestic maize production with the costs of importing US yellow maize (plus some arbitrarily calculated premium). Although yellow maize is consumed in years of serious production shortfalls (mostly as food

aid), the political costs of forcing yellow maize on consumers are considered high by SADCC governments.

The issue is even more complicated because Zimbabwe has become the only consistent Southern African source of white maize imports. The question of whether neighboring countries like Zambia and Malawi can count on Zimbabwe as a reliable long-run import source needs detailed examination.

For Zimbabwe, the following related questions are important: What are feasible and desirable levels of white maize stocks in light of the fact that there may be no reliable import sources elsewhere in the world? What producer and consumer prices are necessary to produce and maintain such stocks on an inter-annual basis? What would be the micro and macro-economic effects of alternative price policy regimes? Such research must also carefully analyze the effects of externalities created by one country's pricing and storage policies on its neighbors. Because it is currently the only consistent white maize exporter in SADCC, detailed analysis of Zimbabwe's pricing, storage, and trade policy options would be valuable for informing the supply availability question for the proposed regional grain reserve.

Increased regional flows of food security-related agricultural products may also have the potential to lower consumption variability, thus enhancing transitory food security in adjacent surplus/deficit border regions of SADCC. Potential effects of border trade liberalization on price and consumption stability could perhaps be simulated as part of a case study on informal trading networks.

In the short and medium-run, the role of commercial trade in reducing chronic food insecurity appears more limited. Because entrenched poverty is the source of chronic food insecurity, food availability alone is insufficient to maintain adequate nutritional levels. Increasing food access through raising incomes is also necessary. Although the "vent for surplus" argument suggests that incomes are raised through exporting, most surpluses emanate from those farm households that are relatively better endowed to begin with. In the short-run, the food insecure are less able to generate surpluses for domestic and export markets.

Realistically, direct health and nutrition interventions, food for work, and other food aid schemes are likely to be required to reduce chronic food insecurity in the short-run. Research on the relative cost-effectiveness of these schemes for improving food security is required. Lessons learned from programs that have been attempted in SADCC countries should be broadly diffused.

In the medium and long-run, strategies for expanding incomes are most important to improving food access. The research agenda should include the question of what commodities can be economically produced and traded, and where to reinvest the gains from trade so that incomes of the food insecure are raised. More specifically, which exportable commodities would best facilitate income growth among the chronically food insecure, either directly or indirectly? What are the potential multiplier effects of export expansion on employment generation?

B. Effects of Trade Liberalization on Production Costs, Incomes, and the Distribution of Benefits of Trade

Trade Liberalization and Production Costs. - Much of the analysis in Chapters VI and VII focusses on the high transactions costs associated with importing agricultural inputs. Foreign exchange rationing raises imported input prices because: 1) transactions costs incurred by importers are passed on to farmers, and; 2) importers are sometimes able to capture monopoly rents associated with the awarding of import licenses [3]. Rationing systems may also lower farm productivity and profitability due to delayed application of inputs and cash flow problems arising from farmers being unable to purchase inputs at times of the year that minimize financing and inventory maintenance charges.

Exchange rate overvaluation also penalizes potential agricultural exporters, as returns are lower than they would be with a less overvalued currency. More extensive quantification of the costs associated with overvaluation is needed to inform policy-makers of the incentives (disincentives) created by exchange rate policy for agricultural sector participants.

Easing of import restrictions and giving greater priority to the importation of strategic agricultural inputs may alleviate some transactions cost problems. Yet short-run effects will be more significant for the production costs of commercial farmers than for

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[3] However there is a countervailing effect. Rationing can only be lifted if the exchange rate is less overvalued. This implies that imported inputs will be more expensive in the absence of rationing.

smallholders, most of whom currently use minimal quantities of purchased inputs.

For example, Table 8-1 presents Zimbabwean data on the foreign exchange costs of dryland commercial and communal production for maize, cotton, and groundnuts. The foreign exchange portion of total costs are significantly higher for commercial farmers than for communal farmers. Cotton and groundnuts are especially labor-intensive for communal farmers. In general, a similar pattern holds for the agricultural sectors of most other SADCC countries [4]. In countries with poorly functioning input delivery systems (such as Zambia and Tanzania), imported inputs are even less important than for Zimbabwean communal farmers. Moreover, use of purchased inputs is not homogeneous across the smallholder sector. Rohrbach (1988) concluded that use of purchased inputs by communal farmers in low rainfall areas of Zimbabwe was significantly lower than for communal farmers in higher rainfall regions.

In the short-run, trade liberalization may either raise or lower the costs of food production and marketing. Food prices will be lowered if the transactions costs and implicit protection of domestic industries associated with foreign exchange rationing are reduced [5]. This causes prices of imported inputs (or their domestically-produced substitutes) to fall. This of course assumes that reduced production

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[4] As noted in Chapter VII, one important exception is cotton in Zambia.

[5] Implicit protection arising from quantitative restrictions on imports may be very high. For example, Bhagwati and Srinivasan (1975) estimated quota premiums for Indian medicinal imports and food imports at 230% and 500% respectively.

Table 8-1: Foreign Exchange and Labor Costs of Selected Zimbabwean Commercial and Communal Dryland Crops, 1987/88
(Percent of Total Costs per MT)

	Commercial		Communal	
Crop	Foreign Exchange	Labor	Foreign Exchange	Labor
Maize	28.7%	21.6%	17.7%	29.8%
Cotton	34.8%	19.8%	19.2%	51.5%
Groundnut	29.3%	22.5%	13.0%	49.0%

Source: O'Driscoll and Takavarasha (1988).

costs are passed on to consumers. Food prices will rise if the countervailing effects of exchange rate depreciation are stronger than reductions in transactions costs and levels of implicit protection.

Researchers should begin by quantifying the costs of exchange rate overvaluation and import controls on the agricultural sector. A variety of analytic tools can be used. Domestic resource cost (DRC) ratios can be calculated for major crops by farm size to determine the static effects of overvaluation on import costs and export revenues. Quota premiums for imported inputs can be estimated by comparing CIF prices paid by importers and actual retail prices paid by farmers. Sensitivity analysis can simulate effects of devaluation and relaxed import controls. Subsequently, econometric analysis can be used to estimate supply response to production cost changes resulting from trade liberalization.

Food Crop/Export Crop Trade-Offs and Complimentarities, and Distribution of Benefits From Trade. - Trade liberalization and exchange rate depreciation may also raise incentives for export crop production relative to food crop production for domestic consumption. On the one hand, this may have the short-run effect of raising food prices, thus harming the food security of low income consumers. In countries with bi-modal agricultural sectors, there may be an additional deleterious effect on smallholder land tenure as export-oriented commercial farmers buy up smallholder land and convert it from food crop to export crop production. For example, Kandoole and Kaluwa (1988) posit that balance of payments considerations have led the Malawian government to encourage estate sector expansion at the expense of smallholders. Small farm holdings shrunk from 7.6 million hectares in 1974 to 7.4 million hectares in 1985. This, in combination with population growth, has led to a decline in average farm size among smallholders.

On the other hand, there may be dynamic complimentarities between food crop production and consumption, and cash crop cultivation. On the production side, D'Agostino (1988) found that cotton cultivation improved food security in Mali through: the residual effect of cotton fertilizer on coarse grains grown in rotation with cotton; and improved access to fertilizer, credit for animal traction equipment, and marketing infrastructure. These had been primarily intended for cotton, but also benefited coarse grain production and marketing. On the consumption side, Kennedy and Cogill (1987) concluded that

increased income accruing to Kenyan sugar farmers positively affected household caloric intake.

In Malawi, proposals for allowing smallholders to cultivate burley tobacco are currently being debated (at present, only estate farmers are permitted to grow burley). Carr (1988) posits that such a policy could raise smallholder incomes significantly as burley cultivation is far more profitable than production of alternative crops [6]. Therefore, burley cultivation could more positively and directly contribute to Malawian food security in the future, perhaps eventually replacing the negative legacy cited by Kandoole and Kaluwa.

For flows of food imports and exports within the SADCC region, close attention to the distribution of gains from trade is required. While theory suggests that there are overall welfare gains from trading, it is ambiguous about trade's distributional effects.

Among food producers, the short-run distributional effects of trade depend critically on whether households in importing and exporting regions are net buyers or net sellers of traded commodities. Opening up to trade will raise prices in exporting regions and lower prices in importing regions. In the short-run, higher prices in exporting regions are beneficial to net sellers and harmful to net buyers. As urban consumers are all net buyers, exporting region city dwellers would be hurt from movement to trade. Lower prices in importing regions have opposite effects in the short-run, harming net

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[6] For 1987/88, the Malawian Ministry of Agriculture estimates smallholder gross margins per 0.1 hectare as: MK 24 for groundnuts; MK 19 for cotton; and MK 13 for sun-air cured tobacco. In contrast, burley tobacco minimum gross margins per 0.1 hectare are calculated to be MK 60.

sellers and benefiting net buyers. Orders of magnitude of gains and losses depend on supply, demand, and income elasticities, and the share of household expenditure devoted to purchase of the traded commodity.

It is important for governments to be aware of the potential negative effects of expanded trade on some segments of the population. Governments may wish to implement targeted policies and programs that cushion the shock of higher food prices on consumers in exporting regions and lower producer prices on farmers in importing regions.

Long-run dynamic effects depend on the scale of income transfers generated by trade, marginal propensities to save out of that income, and where savings are reinvested. If, for example, the marginal propensity to save is substantial and savings are reinvested in agriculture (in both cash and food crops), the growth stimulating effect of trade on the agricultural sector can be large. Employment may also be generated as demand for marketing services increases.

Sorting out the above effects empirically in a dynamic framework of analysis should be a priority in countries currently engaged in trade liberalization programs (Tanzania and Malawi), as well as in countries whose governments have recently indicated that they may be soon introducing trade policy reforms (Zimbabwe and Zambia). Because the food crop/cash (export) crop debate is not new, researchers would benefit from reviewing previous studies in Southern and Eastern Africa. To further examine this issue, case studies of farm income and expenditure patterns can be analyzed, stratifying farmers as export crop and non-export crop producers, and as small and large units. The direct effects of income changes on food and non-food consumption could

first be identified. Important indirect dynamics would involve determination of the effects of changes in income on investment, and on demand for locally-produced goods and services, as well as the employment effects of such changes.

C. Trade Potential

Three trade potential issues appear to merit further work. First, case studies are required which assess the comparative advantage and regional trade potential of specific agricultural inputs and outputs. Oilseed production and processing, fish, poultry, seed, and implements are goods cited by traders as having unexploited intra-regional trade potential. Because these are for the most part infant industries, dynamic comparative analysis would be required to assess current and possible future technical and policy-related constraints on the expansion of production, marketing, and trade.

Second, the prospects for establishing regional industries in input manufacturing and food processing need to be assessed. Particular attention should be devoted to potential benefits arising from economies of scale, how such industries would initially be financed, and the political barriers that regional initiatives would have to overcome.

Third, as discussed in Chapter V, if cross-border parallel trade were legalized by SADCC governments, its legitimization could have an important positive effect on the food security of those populations who are poorly served by official markets at present. There is substantial evidence that informal trade volumes are already large across some

borders and that the array of goods traded is broad. However, there have yet to be empirical studies of specific border markets to learn how trade is conducted and which policies require modification. Case studies of border markets should first determine why there is trade (comparative advantage, lack of policy harmonization, poorly functioning agricultural and consumer goods markets in one of the two countries, etc.). Researchers should then identify key constraints that raise risks and transactions costs associated with trading. Finally, analysis should focus on: policy alternatives that would lower risks and transactions costs; potential distributional effects on different population groups in importing and exporting regions; implications for supply and demand stability; and possible effects on parastatal and government operations.

D. Other Research Areas

Chapter VI briefly outlined major issues related to the design and implementation of commodity import and export promotion programs. Both of these areas require more detailed study. Firms that have participated in these programs possess a wealth of experience on how they can more effectively ease the foreign exchange constraint and better contribute to economic development.

Chapters IV and V both highlight the need for more systematic collection of trade and price data within the SADCC region. Improved databases can enhance the prospects for more reliable research and better informed policy recommendations to decision-makers.

There would also be a high pay-off to continued monitoring, analysis, and diffusion of lessons learned from individual SADCC country experiences with altering agricultural marketing, macro-economic, and trade policies. Decision-makers in a number of SADCC countries are currently grappling with similar policy issues in these areas. During interviews with government and parastatal officials, donor representatives, and businessmen, there appeared to be a large untapped demand for information on successes and failures of policy and program changes in neighboring countries. While there is widespread awareness that certain national policies and procedures need to be changed, how to best time and sequence reform measures is not evident.

8.4. SADCC Trade Policy in the 1990's

Chapter II reviewed prior studies and position papers that cast doubt on the relevance of Neo-Classical economic integration theory for LDC's. The history of regional integration efforts in LDC's is not encouraging, primarily because it is perceived that the gains from integration tend to be enjoyed disproportionately by the more advanced economies in a regional scheme. A number of researchers have concluded that this "polarization effect" was one of the main reasons for the failure of the East African Community.

At the same time, some observers have criticized SADCC for its failure to come to grips with trade and economic policy harmonization issues that need to be addressed if SADCC is to become an effective vehicle for lessening dependence on South Africa and facilitating regional economic development. Yet in light of the EAC experience, the

gradual approach taken by the SADCC leadership can be better appreciated. Such an approach deemphasizes controversial subjects of trade and other economic policy harmonization issues that have the potential to derail regional cooperation.

As SADCC approaches its second decade, its leaders still face a dilemma. While SADCC has been successful at enlisting international financial support for a number of regional undertakings (transport and communications sector projects, triangular food aid shipments within the region, etc.), it has been reluctant to identify and address national-level policy issues that impede regional trade.

If trade is to be expanded and regional industries established, a number of national level economic and agricultural policies will eventually have to be modified. Official price structures for food staples like maize do not currently allow for trade expansion without increased financial losses for parastatals that are already operating at substantial deficits. Among other things, pricing policies will have to be changed before maize trade can become remunerative. If SADCC governments were to alter pricing policies in a way that facilitated trade, they would need to carefully weigh the benefits of increased trade and reduced marketing board deficits against the potential adverse effects of reducing subsidies on farmers and consumers. Uncritical acceptance of the "trade for trade's sake" argument should be avoided.

Perhaps most important, yield-enhancing and cost-saving technologies must be developed and adopted to assure that intra-SADCC agricultural trade becomes more competitive with extra-regional import

sources in the long-run. There will only be truly sustainable gains from trade if SADCC consumers are allowed to benefit from lower food prices while producers simultaneously earn adequate margins to maintain profitability.

Informal trading networks may have the potential to reduce food access and availability problems for some border regions that are distant from major national production and consumption centers. SADCC governments can lower risks and transactions costs associated with this trade by acknowledging its existence, and by removing (or at least reducing) legal sanctions. Governments can also take an active role in encouraging border trade by investing in transport and storage facilities, and offering credit to traders.

Exchange rate overvaluation is also a serious barrier to trade expansion for a number of SADCC countries. Overvaluation reduces export competitiveness and leads to foreign exchange rationing schemes which raise the transactions costs of trading and limits the flexibility of traders to make basic resource allocation decisions. Governments also come to require prompt payments in hard currency for their exports. This proclivity favors trade with developed countries and South Africa, and penalizes trade within SADCC.

At this point, it is still unclear whether SADCC governments have the political will to tackle these and other policies that currently limit trade. Assuming that there is a desire to take up such issues, there are major questions to be answered about economical and manageable steps to follow in designing and implementing appropriate policies. SADCC agricultural trade policy research and management

capacity needs to be strengthened at both the national and regional levels. At the national level, a first step would be to establish positions in the economics and agricultural economics departments of universities to teach trade courses. In addition, both universities and ministries of agriculture need to develop the capacity to conduct applied trade research. At the regional level, the SADCC Food Security Unit might have its mandate extended to conduct or perhaps contract out studies that address national agricultural policy issues with regional implications. These studies should be viewed as opportunities to develop regional human capital, drawing on indigenous manpower to the fullest extent possible.

Much of the previous research assessed SADCC trade potential while abstracting from institutional constraints. By primarily addressing institutional constraints, the present study extends the body of SADCC trade literature, and will, it is hoped, inform decision-makers on policy changes that can facilitate food security-related trade improvements. For researchers, it is hoped that this study will serve as a foundation to guide future SADCC trade research priorities and methods.

APPENDIX A

APPENDIX A

METHODS USED IN CONSTRUCTING THE CEREALS TRADE DATABASE [1]

A.1. Data Sources

Much trade data are presented in a format that only lists total imports and exports for individual countries. There are only a few sources where trade figures are reported by source of imports and destination of exports. Table A-1 summarizes sources used in constructing the University of Zimbabwe/Michigan State University SADCC Cereals Trade Database, commodities and years covered, and the number of times data from each source were used in compiling the database.

A. United Nations Tapes

The United Nations Statistical Office (UNSO) maintains tapes on trade quantities and values by destination and source of exports and imports. Flows are recorded on a calendar year basis. The UN depends on member country reports and makes no effort to revise the data or resolve discrepancies between importer and exporter source quantities.

B. The Economic Research Service

Economists in the Economic Research Service (ERS) of the United States Department of Agriculture (USDA) have attempted to reconcile

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[1] This appendix is largely based on information contained in Kingsbury, Stackhouse, and Rusike (1988).

Table A-1: Data Sources for the UZ/MSU SADCC Cereals Trade Database

Data Source	Commodities*	Years Covered	Type of Year	Number of Entries	Percent of Total
UN Tapes	M,W,R	1970-85	Calendar	324	29.4%
ERS Tapes (Reconciled)	M,W,R	1970-85	Calendar	318	28.9%
WFP Documents	W,R	1982-85	July/June	126	11.4%
FAO"Export of Cereals by Dest. and Source"	M,W,R	1981-85	July/June	119	10.8%
ERS Tapes	M,W,R	1970-85	Calendar	87	8.0%
CSO - Zimbabwe	M,W,R	1978-85	Calendar	72	6.5%
NAMBOARD/NMC - Zambia	M,W,R	1980-85	Calendar	31	2.8%
FAO"Food Aid In Figures"	M,W,R	1981,1984	July/June	15	1.4%
US Ag. Attaché Cables	R	1985	Calendar	6	0.5%
Trade Yearbook - Malawi	M,W,R	1981-83	Calendar	3	0.3%
TOTAL				1101	100.0%

* M = Maize
  W = Wheat
  R = Rice

Source: Author's calculations.

trade data from various sources using the UN series as a base. They use the following procedure for constructing trade matrices for imports. Each importing country is listed with its corresponding trading partner nations. If there is only importing country data for a particular trading transaction in a given year, it is entered into the matrix. If there is only exporting country data, that number is entered into the matrix. If there are both importer and exporter source data, the importer number is entered and the percent difference between the two figures is noted [2]. After this is accomplished, data from additional sources such as country trade yearbooks and international trade organization documents are added (Hiemstra and Mackie, 1986).

C. National Sources

Published national trade yearbooks, computer print-outs from central statistical offices, and internal documents of parastatal cereals marketing boards are also important sources of trade data. It was possible to acquire detailed trade data in Zimbabwe and Zambia for several years. The Central Statistical Office in Zimbabwe maintains an up-to-date computerized database on monthly imports and exports of all commodities. However CSO officials claimed that records are only reliable since Independence. This is due to the sensitivity of trade

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[2] Data from importers are generally preferred over exporter data because customs officials usually pay closer attention to imports than to exports. This is explained by the relatively greater abundance of duties and quantitative controls on the import side (FAO, 1984b).

statistics during UDI when Rhodesia was subject to an international trade embargo.

Some of the Zambian data were obtained from grain marketing parastatals. NAMBOARD provided import data for maize from 1983-1986. Data on wheat and rice imports were obtained from the NMC. These two parastatals have an official monopoly on trade of these commodities.

Malawi's "Annual Statement of External Trade" is one of the few trade yearbooks which lists sources and destinations by commodity. Some data were also gleaned from this publication.

D. Additional Sources

Beginning in 1981, the FAO has annually published a statistical bulletin entitled "Exports of Cereals by Destination and Source". Quantity flows of wheat and wheat flour, maize, rice, barley, sorghum, oats, and rye are recorded on a July/June basis. All importing countries that report to the FAO are listed whereas only the leading exporting countries are explicitly identified [3].

Data for food aid transactions were obtained for several years from the FAO publication "Food Aid in Figures". Food aid source and destination quantities are published on a July/June basis for wheat, rice, coarse grains, dairy products, and edible oils.

United States agricultural attachés stationed in embassies around the world also generate annual outlook reports for internal USDA use.

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[3] However there is an "others" column which lists aggregated quantities for minor exporters. Disaggregated source and destination figures from this column were obtained during a visit to the FAO in July 1987.

These reports often have statistical annexes with detailed trade data. Some of the South African data came from this source.

The World Food Programme also has a great deal of internal documentation on food aid flows and trilateral transactions available upon request. Destination and source of quantities of wheat, rice, coarse grains, and a variety of non-cereal products are included on a July/June basis.

A.2. Strengths and Limitations of the Database

A. General Problems With Trade Data

The reasons for discrepancies in importer/exporter trade volume reportings are well-documented (Hiemstra and Mackie, 1986, FAO, 1984b). Among the reasons often cited are:

1. Non-receipt of reporting documents by the exporting country;

2. Trading partners may classify and/or aggregate commodities differently;

3. Trading partners may define imports and exports differently;

4. Data processing lags which may result in trading partners assigning a transaction to different reporting periods;

5. Storage, processing, and transshipment may make determination of commodity origin and ultimate destination problematic;

6. Customs officials may give greater scrutiny to import documentation due to the greater array of regulations associated with imports.

While the above problems are associated with destination and source data, there are also difficulties with alternative sources of

aggregated total import/export data. An International Food Policy Research Institute study compared FAO and Foreign Agricultural Service (FAS) [4] figures on world imports and exports of individual countries (Paulino and Tseng, 1980). The researchers found that 60% of the 1200 pairs of FAO and FAS data on cereals imports in 1965, 1970, and 1975 diverged by more than 20%. Reasons given for these discrepancies were:

1. The FAO reported on a calendar year basis while the FAS reported on a marketing year basis;

2. The FAO reported data for many small countries that the FAS ignored;

3. Both organizations modify official national data if they feel such numbers to be unrealistic. Because this is inevitably a rather ad hoc process, total figures diverge between the two agencies.

The largest discrepancies involved data for Africa, Oceania, and the USSR.

B. Trade Data Problems Specific to Southern Africa

Because Southern Africa is such a politically volatile region of the world, detailed information on trade flows is sensitive for some countries. Because of its status as an international pariah, the Republic of South Africa has refused to release trade data for individual African nations since 1977. Only aggregate figures for total trade with Africa are provided. Moreover, trade with the BLS countries, which together with South Africa, comprise SACU, are

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[4] A division of the USDA.

considered domestic transactions by South Africa [5]. Therefore, they do not appear in the aggregate trade statistics.

There is considerable evidence that commodity flows to other African countries (including the BLS nations and Namibia) are quite large. Table A-2 shows aggregated 1979/80 to 1983/84 white and yellow maize export quantities for South Africa. "Unspecified" (which is probably for the most part the SADCC countries and Zaire) is second only to Japan in volume of export sales for both white and yellow maize. Table A-3 provides an indication of the magnitude of BLS and Namibian trade volumes for maize and maize products during the 1982/83 to 1986/87 period. Even in years when white maize exports to the rest of the world were insignificant, volumes to the BLS states and Namibia were quite substantial.

To some extent, the failure of South Africa to report trade statistics can be overcome by acquiring data from trading partners. For the most part, SADCC government statistical bureaus do not appear to conceal information on trade with South Africa.

Information on trade was also suppressed during the UDI period when Rhodesia was subject to a series of trade embargoes. As a result, the Zimbabwean CSO has no computer records of trade prior to 1978, and the 1978 and 1979 data are not believed to be reliable by CSO officials [6]. UN data also give what must be a rather incomplete picture of Rhodesian trade flows in the 1970's.

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[5] Trade with Namibia is also considered a domestic transaction.

[6] Personal communication from the CSO, July 1987.

Table A-2: South African Unmilled Maize Exports, 1979/80 - 1983/84

Destination	Thousand Metric Tons White	Yellow	Total	% of Total Maize Exports White	Yellow	Total
Japan	1902	4103	6005	54.7%	36.3%	40.6%
Taiwan	0	2283	2283	0.0%	20.2%	15.4%
United Kingdom	28	663	691	0.8%	5.9%	4.7%
Hong Kong	0	246	246	0.0%	2.2%	1.7%
Reunion	0	142	142	0.0%	1.3%	1.0%
Italy	13	117	130	0.4%	1.0%	0.9%
Spain	0	133	133	0.0%	1.2%	0.9%
West Germany	8	87	95	0.2%	0.8%	0.6%
Netherlands	0	39	39	0.0%	0.3%	0.3%
Portugal	22	11	33	0.6%	0.1%	0.2%
Unspecified	1501	3483	4984	43.2%	30.8%	33.7%
Total	1544	4258	5802	26.6%	73.4%	100.0%

Source: Maize Board, "Report on Maize 1984".

Apart from political reasons for under-reporting, the administrative capacity to collect and process trade data in a timely and accurate manner is very uneven from one country to another. While the Zimbabwean CSO has an excellent system for compiling up-to-date trade statistics, the Zambian CSO has not published an annual trade yearbook since 1979 [7]. In war-torn Mozambique and Angola, the situation is even worse.

One result of this inconsistency in reporting capability is that UN data lose a great deal of validity. Even when data are reported in a timely manner, the UN may fail to record them accurately. Either the

[7] As of December 1987, the Zambian CSO was working on a trade yearbook for 1985 which was supposed to be released sometime in 1988. There is no processed trade information for the years 1980-1984 at the CSO.

Table A-3: South African Maize and Maize Product Exports to the BLS Countries and Namibia, 1982/83 - 1986/87 (Thousand Metric Tons)

Year	BLS and Namibia	Rest of World	Total	BLS as % of Total
1982/83				
White Maize	195	1561	1756	11.1%
Yellow Maize	27	2804	2831	1.0%
Total	222	4365	4587	4.8%
1983/84				
White Maize	191	196	387	49.4%
Yellow Maize	57	118	175	32.6%
Total	248	314	562	44.1%
1984/85				
White Maize	253	5	258	98.1%
Yellow Maize	155	18	173	89.6%
Total	408	23	431	94.7%
1985/86				
White Maize	403	4	407	99.0%
Yellow Maize	44	539	583	7.5%
Total	447	543	990	45.2%
1986/87				
White Maize	162	11	173	93.6%
Yellow Maize	73	3071	3144	2.3%
Total	235	3082	3317	7.1%

Note: "Maize products" are comprised of maize meal grinded to various degrees of fineness, maize flour, and grits.

Source: Maize Board, "Report on Maize and Buckwheat", various years.

reporting country has the data and fails to supply them, or the UN somehow fails to tabulate the data quickly and correctly. Table A-4 illustrates these problems. Reliable data for Zimbabwe and Zambia are compared with UN reportings for unmilled maize trade in 1984. In the Zimbabwean case, data were supplied by the CSO which is the agency that would presumably report to the UN. In the Zambian case, the data source is NAMBOARD. As discussed above, the Zambian CSO would not have been able to provide this information to the UN.

Table A-4: Unmilled Maize Imports for Zambia and Zimbabwe - 1984
(Metric Tons)

Exporting Country	Zambia: NAMBOARD	Zambia: UN	Zimbabwe: CSO	Zimbabwe: UN
Malawi	97,270	0	50,000	0
USA	0	31,100	43,099	40,943
Argentina	1,404	0	102,943	61,800
Indonesia	0	0	10,038	0
Thailand	0	0	65,861	0
Total Imports	98,674	31,100	271,941	102,743

Sources: NAMBOARD and UN Trade Tapes for Zambian data;
CSO and UN Tapes for Zimbabwean data.

As can be seen, not only do total imports widely diverge, but the UN data even fails to reveal the existence of trade in five cases reported by the national sources. The result is that the UN database only detects 32% of Zambian maize imports and 38% of Zimbabwean maize imports for this particular year.

Table A-4 also helps to illustrate a further complication which relates to the recording of trilateral food aid transactions. The

31,100 MT figure (a United States export to Zambia according to the UN) was actually a trilateral food aid transaction. The physical source of the commodity was Malawi but because it was financed by the United States, the UN recorded it as a United States export. The UN failed however to report additional Malawian exports to Zambia of 29,850 MT of commercial sales and 35,300 MT of food aid financed by the EC, WFP and the Dutch which are also part of the 97,270 MT figure reported by NAMBOARD. Thus UN figures tend to underestimate the extent of intra-regional movement of maize either because they incorrectly assign the physical source of a commodity when it is a trilateral food aid transaction [8], or because they even fail to detect the existence of trade -- regardless of whether it is a commercial or a food aid transaction.

Table A-5 compares total SADCC import figures of maize, wheat, and rice from two sources -- the FAO trade tapes and the UZ/MSU database. Clearly, it was easier to obtain destination and source data for more recent years (1981-85) than for the 1970's. This is largely because spotty UN data had to be relied upon more heavily for trade in the more distant past. For more recent years, a variety of data sources were available -- leading to a more complete picture of trade patterns. Because 1970's destination and source data are relatively less reliable, FAO totals were used for wheat and rice in constructing the graphs in the third section of Chapter IV related to the import bill and total imports, and in calculating average annual quantity figures

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[8] This is not a problem for wheat and rice which have not been involved in intra-regional trilateral food aid movements.

Table A-5: Comparison of FAO and UZ/MSU SADCC Cereals Import Totals 1970-1985
(Thousand Metric Tons)

Year	Maize		Wheat		Rice		Total Cereals		UZ/MSU Total as
	FAO	UZ/MSU	FAO	UZ/MSU	FAO	UZ/MSU	FAO	UZ/MSU	% of FAO Total
1970	199	192	422	373	21	9	642	574	89.5%
1971	320	321	436	318	22	16	778	655	84.2%
1972	226	136	487	388	16	10	729	534	73.2%
1973	48	2	438	195	16	153	502	350	69.7%
1974	289	305	491	222	81	34	861	561	65.2%
1975	390	270	628	278	83	48	1101	597	54.2%
1976	121	81	421	282	72	22	613	385	62.8%
1977	101	97	470	302	144	36	714	434	60.8%
1978	236	133	448	212	148	56	832	401	48.2%
1979	388	212	591	277	163	33	1141	521	45.7%
1980	1069	652	703	314	226	55	1998	1021	51.1%
1981	572	589	637	539	151	120	1360	1248	91.8%
1982	469	493	614	482	259	273	1342	1248	93.0%
1983	506	457	569	518	254	234	1329	1209	91.0%
1984	1119	935	805	904	249	443	2173	2283	105.0%
1985	654	825	728	510	251	329	1632	1664	101.9%

Source: FAO Trade Tapes and UZ/MSU SADCC Cereals Trade Database.

in Table 4-1. For maize, the quantity series set forth in Table 4-6 which includes South African exports to the BLS countries and Namibia were used for the graphs in the third section of Chapter IV, growth rates, and Table 4-1 calculations.

Finally there is the problem of unrecorded parallel market cross-border trade. Although there are no reliable estimates of the extent of unofficial cereals trade, there is much anecdotal evidence of substantial movement of agricultural products and inputs across a number of borders. Zambia's borders with Zaire, Namibia, and Malawi are among those often cited as being especially porous (see Chapter V).

In light of the above discussion of trade data problems, it may seem to the reader that any attempt at an historical reconstruction of trade patterns among the SADCC nations is a fruitless task. This is not entirely true. While time-consuming, first hand collection of the data at national statistical agencies, parastatals, and donor organizations can lead to significant improvements in accuracy and completeness when compared with UN data. It also depends on the use for which the data is intended. While it would be imprudent to employ these data in a quantitative model which requires great accuracy in the data for the generation of precise results, these data can be useful in describing approximate trade patterns and rough historical trends. They can also be useful for identifying questions for closer examination such as:

• If trade which had been fairly regular between two countries in a commodity abruptly stopped in one year, why may this be so?

• If very small quantities of a commodity are consistently traded between two countries in the face of substantial deficits for one country and significant surpluses for the other, what is constraining the expansion of trade?

• To what extent is the "SADCC market" synonymous with the "Southern African market" for agricultural products? Does it make sense to classify certain SADCC countries as part of the Southern African market when South-South trade links may be stronger with other regions of Africa or the world? Examples are Tanzania's links with other East African countries and Angola's trade links with South American nations like Argentina. Alternatively Zaire, which is not a

member of SADCC, has historically traded quite heavily in grains with some of the SADCC nations such as Zambia and Zimbabwe.

A.3. Procedures for Constructing the Database

A database for SADCC imports of maize, wheat, and rice was constructed for the years 1970-1985. Both commercial and food aid imports were included. This section first details the rules for selecting one source of data over another in the specification of the import quantities and then briefly describes data entry and trade matrix table formulation procedures.

A. Decision Rules for Selecting Data Sources

As discussed in section A.1, principal sources of trade data were the UN, ERS, WFP, FAO, and national documents. Importer data were usually preferred over exporter data in keeping with the FAO's stance that importer data is generally more reliable. Thus if importer data were available, they were entered in the matrices. If only exporter data were available, these numbers were entered. There were two exceptions to this procedure. One exception would be if the exporting country had better reporting capability than the importer. An example would be choosing United States export data over Angolan or Tanzanian import data which had been supplied to the UN. The other exception would be if the exporter data came from a reliable national source whereas the importer data was from the UN (see decision rule 1 below).

If importer or exporter data were available from several sources, the following decision rules governed selection of one source over another.

1. Data coming directly from national sources were preferred over all other sources regardless of whether they were importer or exporter data. If both importer and exporter data were available from national sources, importer data were selected over exporter data in keeping with the FAO findings. The author was of the opinion that individual government sources were generally better at tracking information on their own trade than international organizations such as the UN which reports on over 100 countries around the world and is dependent on national sources for data anyway. The discussion related to Table A-4 above confirms that serious gaps exist in the UN data.

2. The ERS was viewed as the second most credible and complete source for the database because attempts at revision of the UN data had been made.

3. The unedited UN data was viewed as the third most reliable source.

4. The FAO publication "Exports of Cereals by Destination and Source" reports data on a July/June basis whereas the UN and most of the national sources report on a calendar year basis. Therefore these data were used only if no other data source existed for either of the two years in question. If chosen, these data were entered in the first of the two years (for example, 1985/86 data were entered for 1985). Admittedly, this is rather arbitrary, but better than deleting the trade flow altogether.

5. FAO "Food Aid in Figures" data and WFP internal documentation are also reported on a July/June basis. These sources only superceded a UN number if the food aid quantity reported was greater than the UN figure for the same transaction. If not, it was ignored. Other than this, the same rules were followed as for data from the "Exports of Cereals by Destination and Source" series.

B. Data Entry Procedures

Raw data were entered onto a Lotus 123 spreadsheet and then loaded for processing into the microcomputer version of the Statistical Package for the Social Sciences (SPSSPC). Tables A-6 and A-7 are examples of the two types of tables generated. Table A-6 shows Southern African imports of a single commodity for a single year. Southern African nations (SADCC and South Africa) which imported in that year are listed along the horizontal axis while exporting nations are listed down the vertical axis. Tables were done for each commodity in each year (1970-1985). Quantities traded are identified in the body of the table. In Table A-7, an historical series of imports is generated for a single country. Tables were formulated for each commodity and for each of the nine SADCC countries and South Africa.

Table A-6: Southern Africa Wheat Imports (In Thousand Metric Tons)

Year: 1978

	Importing Country						
	Angola	Lesotho	Malawi	Mozambique	Tanzania	Zambia	South Africa
Exporting Country							
USA	27.532	1.700	.	.	14.995	29.200	.398
Belgium/Luxemburg	.	.	.	1.400	.	.	.
Canada	.	.	.	11.000	.	.	.200
EEC	.	.	1.400	.	.	.	.
France	.	.	.	39.000	.	.	1.500
Italy	.	.	.	3.000	.	.	.
Australia	.	.	.	11.000	.	71.400	.
Total Imports	27.532	1.700	1.400	65.400	14.995	100.600	2.098

Source: UZ/MSU SADCC Cereals Trade Database.

Table A-7: Southern Africa Maize Imports (In Thousand Metric Tons)

Importing Country: Tanzania

	Exporting Country									
	Malawi	Zambia	Zimbabwe	USA	Argentina	Canada	EEC	Kenya	Thailand	Total Imports
Year										
1970	.	.	.	14.345	.	.	.	.	.	14.345
1971	.	.	.	58.232	.	.	.	.	.	58.232
1972	12.733	.	.	58.580	.	.	.	.	.	71.313
1974	19.660	69.133	.	.	.	.	.	.	.	88.793
1975	15.962	.	.	175.552	.	.	.	.	.	191.514
1977	.	.031	.	37.260	.	.	.	3.630	.	40.921
1979	.	.	.	.	.	.	.	4.300	.	4.300
1980	.	.	.	204.936	.	.	.	2.670	.	207.606
1981	.	.	9.689	129.691	.	85.100	.	.	.	224.480
1982	.	.	61.459	29.346	.	.	10.000	.	.	100.805
1983	21.000	.	24.983	.	.	.	4.000	8.824	.	58.807
1984	.	.	.	.	12.900	.	10.000	.	157.300	180.200
1985	.	.	.075	.	.	.	.	.	55.000	55.075

Source: UZ/MSU SADCC Cereals Trade Database.

APPENDIX B

APPENDIX B: DATA TABLES

Table B-1: Malawi Maize Prices
(April 1984 - August 1988)

Year	Month	Open Mkt. Retail	Official Retail	Official Producer
1984	4	21.12	15.56	12.20
	5	15.55	15.56	12.20
	6	17.09	15.56	12.20
	7	17.48	15.56	12.20
	8	19.01	15.56	12.20
	9	17.83	15.56	12.20
	10	19.08	15.56	12.20
	11	18.45	15.56	12.20
	12	19.59	15.56	12.20
1985	1	20.84	15.56	12.20
	2	24.51	15.56	12.20
	3	18.78	15.56	12.20
	4	18.43	16.50	12.20
	5	17.77	16.50	12.20
	6	17.75	16.50	12.20
	7	16.94	16.50	12.20
	8	17.62	16.50	12.20
	9	18.45	16.50	12.20
	10	18.75	16.50	12.20
	11	22.62	16.50	12.20
	12	27.65	16.50	12.20
1986	1	20.86	16.50	12.20
	2	22.42	16.50	12.20
	3	22.62	16.50	12.20
	4	22.65	20.00	12.20
	5	19.90	20.00	12.20
	6	21.17	20.00	12.20
	7	21.67	20.00	12.20
	8	22.26	20.00	12.20
	9	23.36	20.00	12.20
	10	23.52	20.00	12.20
	11	25.71	20.00	12.20
	12	28.28	20.00	12.20
1987	1	25.26	20.00	12.20
	2	24.30	20.00	12.20
	3	24.88	20.00	12.20
	4	24.18	24.00	16.60
	5	22.06	24.00	16.60
	6	21.45	24.00	16.60
	7	23.82	24.00	16.60
	8	26.83	24.00	16.60
	9	32.14	24.00	16.60
	10	34.20	24.00	16.60
	11	36.16	24.00	16.60
	12	37.24	24.00	16.60
1988	1	38.49	24.00	16.60
	2	41.41	24.00	16.60
	3	38.95	24.00	16.60

Note: Prices for Figure 5-1.

Sources: Government of Malawi, 1988a and 1988b.

Table B-2: Open Market Maize and Rice Prices for Selected Malawian and Tanzanian Markets, January 1986 - August 1988

Year	Month	Maize				Rice			
		Mbeya (TSH/KG)	Songea (TSH/KG)	Mbinga (TSH/KG)	Mzuzu (MK/KG)	Mbeya (TSH/KG)	Songea (TSH/KG)	Mbinga (TSH/KG)	Mzuzu (MK/KG)
1986	1	8.89	4.17	5.56	20.12	47.50	42.15	NA	71.83
	2	9.44	6.44	0.00	21.83	47.50	50.00	NA	67.49
	3	8.61	6.39	5.28	21.47	55.00	43.32	66.65	65.70
	4	9.72	6.50	5.56	21.27	47.50	43.32	66.70	67.40
	5	9.44	6.00	5.56	19.67	37.50	43.35	NA	78.02
	6	9.03	5.67	5.56	18.87	25.00	30.00	58.25	65.79
	7	7.78	5.67	5.31	18.32	22.50	27.50	46.68	59.26
	8	6.67	4.20	4.55	17.93	30.00	34.30	45.03	70.80
	9	7.36	4.71	5.00	18.01	28.75	34.30	43.35	82.92
	10	8.06	5.25	5.69	18.40	35.00	34.30	37.50	60.28
	11	8.06	5.13	6.29	22.26	37.50	35.75	53.00	83.10
	12	8.06	5.65	8.06	21.73	40.00	37.10	51.50	75.06
1987	1	9.31	5.00	9.01	21.86	31.25	34.30	48.30	74.75
	2	10.56	7.78	10.56	22.37	27.50	43.23	53.30	73.60
	3	8.47	7.36	9.28	23.97	41.25	43.92	53.30	94.59
	4	8.61	6.94	9.28	26.50	38.75	45.00	53.30	184.80
	5	8.06	6.60	9.28	24.77	35.00	45.05	59.95	117.57
	6	7.92	6.25	9.26	23.32	35.00	40.00	60.00	75.00
	7	7.22	5.56	8.33	24.28	30.00	31.24	49.94	91.32
	8	8.75	5.56	8.33	28.84	33.75	30.00	46.70	110.84
	9	8.61	7.64	7.99	32.95	35.00	31.43	48.35	172.84
	10	8.75	6.94	8.33	31.92	33.75	42.85	46.70	199.50
	11	11.94	7.06	9.03	37.53	32.50	47.14	63.35	159.79
	12	11.67	7.18	9.49	29.65	32.50	51.42	61.70	136.26
1988	1	13.33	7.18	11.11	28.53	32.50	48.57	66.70	140.49
	2	18.06	0.00	11.11	34.17	37.50	NA	50.00	171.15
	3	16.53	8.33	11.11	38.38	40.00	51.43	66.70	145.77
	4	15.28	13.33	NA	35.29	42.50	68.57	NA	137.46
	5	13.33	10.42	12.50	35.56	33.75	60.00	73.35	189.75
	6	15.00	9.38	12.50	28.45	37.50	57.14	66.60	127.95
	7	11.94	8.33	12.50	21.57	37.50	51.43	66.60	106.86
	8	11.94	8.33	12.50	26.25	37.50	54.00	NA	118.46

Sources: For Tanzanian data, Marketing Development Bureau, computer print-outs;
For Malawian data, National Statistical Office, computer print-outs.

Table B-3: Malawian and Tanzanian Official and Parallel Exchange Rates, January 1986 - August 1988

Year	Month	Official Rate: Malawian Kwacha per US$1	Official Rate: Tanzanian Shillings per US$1	Parallel Rate: Malawian Kwacha per US$1	Parallel Rate: Tanzanian Shillings per US$1
1986	1	1.70	16.41	2.13	90.00
	2	1.73	16.20	1.96	110.00
	3	1.79	15.99	2.00	130.00
	4	1.81	18.33	1.92	145.00
	5	1.80	22.97	2.04	152.00
	6	1.84	32.69	1.89	160.00
	7	1.82	40.46	1.82	175.00
	8	1.90	41.94	2.04	180.00
	9	1.98	43.72	2.08	190.00
	10	1.98	45.32	2.44	220.00
	11	2.00	47.95	2.33	200.00
	12	1.98	50.40	2.38	180.00
1987	1	1.90	52.58	2.22	170.00
	2	2.20	54.40	2.78	150.00
	3	2.30	56.30	2.50	160.00
	4	2.26	58.30	2.44	165.00
	5	2.23	60.30	2.44	170.00
	6	2.26	62.41	2.56	165.00
	7	2.30	64.64	2.56	155.00
	8	2.31	66.88	2.63	160.00
	9	2.26	69.12	2.63	160.00
	10	2.25	71.86	2.50	183.00
	11	2.15	75.13	2.38	205.00
	12	2.09	79.31	2.33	200.00
1988	1	2.27	89.16	2.38	210.00
	2	2.53	92.06	2.63	195.00
	3	2.51	93.20	3.13	200.00
	4	2.48	94.34	3.13	190.00
	5	2.50	95.40	3.23	195.00
	6	2.57	96.33	3.33	200.00
	7	2.67	97.28	3.45	205.00
	8	2.71	97.28	3.57	212.00

Sources: IMF, "International Financial Statistics," various issues; International Currency Inc., computer print-outs.

APPENDIX C

APPENDIX C

AGRICULTURAL MARKETING AND TRADE IN THE SADCC REGION

Private Trader Questionnaire

(Zambia) [1]

Firm_____

Respondent Name_____

Respondent Position_____

[1] The Zimbabwean questionnaire was identical to the Zambian questionnaire, except for minor modifications on the final page to account for different trade promotion activities sponsored by the Government of Zimbabwe.

INSTRUCTIONS

The questionnaire consists of a series of multiple-choice, ranking, and short answer questions and should not take more than thirty minutes to complete. Ignore all letters and numbers in brackets []. They are solely for the use of the researchers.

I. FIRM BACKGROUND

How many years has your firm been operating?_____ [YRSOP]

How many years has your firm been involved in importing? _____ [YRSIM]

How many years has your firm been involved in exporting? _____ [YRSEX]

How many years have you personally been involved in this line of business, either with this firm or elsewhere?

_____ [YRSPI]

What is your firm's legal status? (please tick)

[1]_____Private LTD. [4] _____Sole Proprietor

[2]_____Cooperative [5] _____Parastatal/quasi-govt. [LS]

[3] _____Public LTD. [6] _____Other

Is your firm part of a group of firms? [1] Yes [2] No [GRP]

If yes, what is the name of the group?_____

Is your firm a local subsidiary of an international parent firm? [1] Yes [2] No [SUB]

If yes, which firm?_____

Would you characterize your firm as small, medium, or large relative to other companies in your line of business in Zambia?

_____ [SIZE]

What companies are your principal competitors?

in Zambia: internationally:

During the last two years, what have been <u>your firm's most important imported commodities in terms of value</u>? Please list them in order of importance as well as the corresponding country of origin, destination organization type, and your firm's function in facilitating trade. For destination organization type and firm function, please fill in the space with the appropriate code number. Feel free to enter more than one country, destination organization or firm function if necessary.

Commodity (and Tariff Code If Known)	Country(s) of Origin	Destination Org. Type(s)	Firm's Function(s)
1			
2			
3			
4			
5			

DESTINATION ORGANIZATION CODE:
1=Government ministry/agency in Zambia
2=Parastatal/quasi-govt. firm in Zambia
3=Aid organization in Zambia
4=Your own firm
5=Private manufacturer in Zambia
6=Private wholesale firm in Zambia
7=Private retail firm in Zambia
8=Agricultural cooperative in Zambia
9=Organization in another country

FIRM FUNCTION CODE:
1=Broker/agent
2=Direct purchaser from overseas
3=Purchaser from a local importer
4=Other (please specify)
_____

What is the approximate value of your company's <u>annual imports</u>?

_____ [VALIM]

About what percentage of this would be:

Farm inputs (fertilizer, seed, machinery, tools, etc.) _____ [MPERI]

Farm commodities (grains, beans, vegetables, fruits, etc.) _____ [MPERC]

During the last two years, what have been your firm's most important exported commodities in terms of value? Please list them in order of importance as well as the corresponding organization type, destination country, and your firm's function in facilitating trade. For source organization type and firm function, please fill in the space with the appropriate code number. Feel free to enter more than one source organization, destination nation, or firm function if necessary.

Commodity (and Tariff Code If Known)	Source Org. Type(s)	Destination Nation(s)	Firm's Function(s)
1			
2			
3			
4			
5			

SOURCE ORGANIZATION CODE:
1=Government ministry/agency in Zambia
2=Parastatal/quasi-govt. firm in Zambia
3=Private manufacturer in Zambia
4=Your own firm
5=Private wholesale firm in Zambia
6=Private retail firm in Zambia
7=Agricultural cooperative in Zambia
8=Organization in another country

FIRM FUNCTION CODE:
1=Broker/agent
2=Direct seller overseas
3=Seller to a local exporter
4=Other (please specify) _____

What is the approximate value of your company's annual exports?

_____ [VALEX]

About what percentage of this would be:

Farm inputs (fertilizer, seed, machinery, tools, etc.) _____ [XPERI]

Farm commodities (grains, beans, vegetables, fruits, etc.) _____ [XPERC]

II. CONSTRAINTS AND POTENTIAL FOR TRADE

A. How important are the following <u>factors in reducing the potential volume of farm input and product imports for your firm</u> from: (a) other SADCC countries; (b) the rest of the world? Fill in the space provided with the appropriate code number:

1 = Very Important
2 = Somewhat Important
3 = Not Important
4 = Not Applicable

	(a) SADCC	(b) WORLD	
Lack of information on demand in Zambia	_____	_____	[CM1S] [CM1W]
Lack of information on supply in other countries	_____	_____	[CM2S] [CM2W]
Foreign exchange shortages in Zambia	_____	_____	[CM3S] [CM3W]
Transport availability	_____	_____	[CM4S] [CM4W]
Cumbersome Govt of Zambia regulations	_____	_____	[CM5S] [CM5W]
Cumbersome regulations in partner countries	_____	_____	[CM6S] [CM6W]
High import duties in Zambia	_____	_____	[CM7S] [CM7W]
Credit availability for my firm	_____	_____	[CM8S] [CM8W]
Fluctuations in foreign supply	_____	_____	[CM9S] [CM9W]
Fluctuations in domestic demand	_____	_____	[CM10S] [CM10W]
Changes in Zambia government policies	_____	_____	[CM11S] [CM11W]
Changes in foreign government policies	_____	_____	[CM12S] [CM12W]
Unreliable product quality	_____	_____	[CM13S] [CM13W]
Fluctuating exchange rates	_____	_____	[CM14S] [CM14W]
Lack of port facility availability	_____	_____	[CM15S] [CM15W]
Theft and pilferage	_____	_____	[CM16S] [CM16W]
Complicated payments procedures	_____	_____	[CM17S] [CM17W]

B. How important are the following <u>factors in reducing the potential volume of farm input and product exports for your firm</u> to: (a) other SADCC countries; (b) the rest of the world? Fill in the space provided with the appropriate code number:

1 = Very Important
2 = Somewhat Important
3 = Not Important
4 = Not Applicable

	(a) SADCC	(b) WORLD	
Lack of information on demand in other countries	_____	_____	[CX1S] [CX1W]
Lack of information on supply in Zambia	_____	_____	[CX2S] [CX2W]
Foreign exchange shortages in other countries	_____	_____	[CX3S] [CX3W]
Transport availability	_____	_____	[CX4S] [CX4W]
Cumbersome Govt of Zambia regulations	_____	_____	[CX5S] [CX5W]
Cumbersome regulations in partner countries	_____	_____	[CX6S] [CX6W]
High import duties in partner countries	_____	_____	[CX7S] [CX7W]
Credit availability for trading partner firms	_____	_____	[CX8S] [CX8W]
Fluctuations in domestic supply	_____	_____	[CX9S] [CX9W]
Fluctuations in foreign demand	_____	_____	[CX10S] [CX10W]
Changes in Zambia government policies	_____	_____	[CX11S] [CX11W]
Changes in foreign government policies	_____	_____	[CX12S] [CX12W]
Unreliable product quality	_____	_____	[CX13S] [CX13W]
Fluctuating exchange rates	_____	_____	[CX14S] [CX14W]
Lack of port facility availability	_____	_____	[CX15S] [CX15W]
Theft and pilferage	_____	_____	[CX16S] [CX16W]
Complicated payments procedures	_____	_____	[CX17S] [CX17W]
Delays in payment	_____	_____	[CX18S] [CX18W]

C. Are there any factors other than those listed above which constrain the ability of your firm to trade?

D. For which agricultural commodities and inputs do you believe there is significant potential to expand trade between SADCC countries within the next ten years?

E. What specific recommendations would you make to the Government of Zambia to promote trade, both within SADCC and internationally?

F. What specific recommendations would you make to governments of other SADCC countries to promote trade within SADCC?

III. METHODS OF PAYMENTS AND LOGISTICAL ISSUES

A. Please rank the most frequently used methods of payment when your firm: imports from other SADCC countries; imports from the rest of the world; exports to other SADCC countries; and exports to the rest of the world. Fill in the spaces with the appropriate code numbers.

Rank	Import from: SADCC	Import from: World	Export to: SADCC	Export to: World
1st most frequent				
2nd most frequent				
3rd most frequent				

METHODS OF PAYMENTS CODE:
1=Cash-in-advance
2=Cash against documents
3=Cash on delivery
4=Letter of credit
5=Irrevocable letter of credit
6=Confirmed irrevocable letter of credit
7=Open account
8=Other (please specify)

_____

B. Which currencies does your firm most frequently deal in?

1st most frequent_____ [CUR1]

2nd most frequent_____ [CUR2]

3rd most frequent_____ [CUR3]

4th most frequent_____ [CUR4]

5th most frequent_____ [CUR5]

IV. MARKET INFORMATION

This section deals with how your company obtains information on elements important for decision making. Please indicate the importance of various sources of information for the following questions by circling the appropriate number:

	Very Important 1	Somewhat Important 2	Not Important 3	
A. What sources are most important for finding out about <u>possible trading opportunities</u>?				
Tenders for bid published in newspapers and/or the government gazette	1	2	3	[DEAL1]
Contacts in ministries or marketing boards	1	2	3	[DEAL2]
Communications with competitors	1	2	3	[DEAL3]
Direct communications with potential buyers or sellers	1	2	3	[DEAL4]
Contacts in the international business community	1	2	3	[DEAL5]
Communications with trade missions or embassies based in Zambia	1	2	3	[DEAL6]
Other _____	1	2	3	[DEAL7]
B. What sources are most important for finding out about <u>long-run demand for your products</u>?				
Analysis done by your own firm	1	2	3	[DEM1]
Analysis done by your parent firm (if a subsidiary)	1	2	3	[DEM2]
Contacts in ministries or marketing boards	1	2	3	[DEM3]
Communications with competitors	1	2	3	[DEM4]
Direct communications with potential buyers or sellers	1	2	3	[DEM5]
Contacts in the international business community	1	2	3	[DEM6]
Past experience	1	2	3	[DEM7]
Other_____	1	2	3	[DEM8]

C. What sources are most important for finding out about sources of supply?

Analysis done by your own firm	1	2	3	[SS1]
Analysis done by your parent firm (if a subsidiary)	1	2	3	[SS2]
Tenders for bid published in newspapers and/or the government gazette	1	2	3	[SS3]
Contacts in ministries or marketing boards	1	2	3	[SS4]
Communications with competitors	1	2	3	[SS5]
Direct communications with potential buyers or sellers	1	2	3	[SS6]
Contacts in the international business community	1	2	3	[SS7]
Past experience	1	2	3	[SS8]
Other_____	1	2	3	[SS9]

D. What sources are most important for finding out about legal procedures for trading?

Information published in newspapers and/or the government gazette	1	2	3	[LP1]
Communications with trade missions or embassies based in Zambia	1	2	3	[LP2]
Contacts in ministries or marketing boards	1	2	3	[LP3]
Communications with competitors	1	2	3	[LP4]
Contacts in local financial institutions	1	2	3	[LP5]
Contacts in the international business community	1	2	3	[LP6]
Past experience	1	2	3	[LP7]
Other_____	1	2	3	[LP8]

V. SPECIAL TRADING ARRANGEMENTS

Please circle the appropriate response to the following questions (yes, no, not applicable).

Has your firm ever used the PTA Clearinghouse Facility?	Yes	No	NA	[PTA]
Has your firm ever forward contracted with suppliers?	Yes	No	NA	[FCS]
Have other firms ever forward contracted for your products?	Yes	No	NA	[FCP]
Has your firm ever used exchange rate forward contracting?	Yes	No	NA	[ERFC]
Has your firm ever hedged on the commodities exchanges?	Yes	No	NA	[HCE]
Has your firm ever used the 50% foreign exchange retention programme?	Yes	No	NA	[FERP]

(AUC) Under the auction system, did your firm receive more, less, or about the same amount of foreign exchange than under the allocation system that existed before the auction?

[1] _____Much more [3] _____Much less [5] _____About the same

[2] _____Slightly more [4] _____Slightly less

Are there any other comments that you would like to make?

APPENDIX D

APPENDIX D

PRIVATE TRADER SURVEY -- OPEN-ENDED QUESTIONS

(Zimbabwe) [1]

Firm_____
Questionnaire No._____
Date of Interview_____

Did you have any problems filling out the questionnaire (unclear, inappropriate questions, etc.)?

What would you say are the biggest risks your firm faces in importing and exporting? Is there anything Government could do to lower these risks?

Has your firm ever used credit insurance (like that provided by the Zimbabwe Credit Insurance Corporation)? If yes, what for and how frequently? If no, why not?

What would you say is the minimum percentage margin your firm needs in order to break even on a trade?

Is this margin different for SADCC trade compared to trade with developed countries?

What are the main elements that make up this margin?

Would you say that this percentage has risen, fallen, or remained about the same in recent years? Why?

Is obtaining market information a problem for your firm? (What types of information are you unable to get which makes it more difficult for you to do business?)

What agricultural inputs are given priority by the foreign exchange allocation system?

Which items important for agriculture do not receive high enough priority?

What is the effect of the foreign exchange allocation system on the prices of goods that you import? (Could you give an example?)

ADDITIONAL NOTES:

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[1] Checklists of open-ended questions for Botswana, Malawi, Tanzania, and Zambia were slightly modified to account for policies and programs specific to those countries.

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