

CHAPTER 1

INTRODUCTION

1.1 The contribution of the agricultural sector to the macro-economy of Botswana

This chapter contains background information about Botswana's economy as well as its structural changes since independence. In addition, the Chapter attempts to define the food security problem in Botswana, as well as identifies the methodologies to be used in order to analyse how international trade liberalization and market access can contribute to improving food and income security as well as the competitiveness of the agricultural sector.

Botswana is a unitary state that has pursued free enterprise and an open economy since independence in 1966. Both public and private sectors participate fully in the economy, with the former concentrating on the provision of public goods (health, infrastructure, education, research, disease and pest control, the water supply, and so forth). Also, Botswana has generally maintained a stable macro-economic and political environment displaying very low inflation rates and almost regular budget surpluses.

Botswana's population consists of about 1.7 million people, half of whom live in the rural areas and subsist on extensive cattle, small stock and risky dry-land farming (National Development Plan 9, 2003). Hunting, gathering, harvesting of wild products and remittances constitute part of the income sources of several households. In general arable farming is very risky, owing to endemic drought.

At independence in 1966, the agricultural sector contributed about 40 percent of the country's Gross Domestic Product (GDP) while mining, construction, manufacturing and similar industries made only small contributions, except for

the service sector that accounted for 20 percent. The agricultural sector is still to date dominated by the export-based cattle industry. Table 1.1 shows the composition of the country's GDP by sector for selected years since independence, based on 1993/94 constant prices. It is very significant to note the structural changes that have occurred in Botswana's economy since the discovery of minerals, especially diamonds in the 1970's. From a zero contribution in 1966, the mining sector now accounts for about 32 percent of the country's GDP while agriculture has declined to a paltry 2.6 per cent in 2002/2003 (CSO, 2003).

Table 1.1: GDP by Economic Activity – Selected Years (Constant 1993/94 Prices) P million

Economic Activity	1966		1975/76		1985/86		2000/01		2002/03	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share
		%		%		%		%		%
Agriculture	387.6	42.7	431.1	20.7	318.9	5.6	424.4	2.5	476.0	2.6
Mining & Quarrying	-	-	365.3	17.5	2,790.8	48.9	6,149.0	36.5	5,853.0	31.7
Manufacturing	51.4	5.7	159.2	7.6	224.9	3.9	695.3	4.1	793.0	4.3
Water and Electricity	5.2	0.6	48.4	2.3	113.1	2.0	395.9	2.3	455.0	2.5
Construction	71.2	7.8	267.1	12.8	260.7	4.6	954.8	5.7	1,076.0	5.8
Trade, Hotels & Restaurants	81.4	9.0	179.0	8.6	361.6	6.3	1,706.8	10.1	3,805.4	20.7
Transport	39.4	4.3	23.5	1.1	141.5	2.5	623.7	3.7	759.8	4.1
Banks, Insurance & Business Services	183.0	20.1	97.5	4.7	367.4	6.4	1,756.8	10.4	2,008.3	10.9
General Government	89.2	9.8	305.0	14.6	730.5	12.8	2,640.6	15.6	3,013.2	16.4
Social and Personal Services	-	-	57.8	2.8	145.4	2.5	653.6	3.9	777.3	4.2
+Adjustments items:										
Net Taxes on products/production	-	100	164.3	7.9	368.0	6.4	1,397.8	8.3	-	
=GDP total at constant market prices	908.6	100	2,083.5	100	5,708.1	100	16,865.8	100	18,412.0	100
GDP Per Capita (Pula)	1,682.5		2,861.9		5,175.0		9,793.4		10,508.0	

Source: Central Statistics Office, MFDP, Botswana, 2002.

Besides mining, only the trade, hotels and restaurants and general government sectors have generally and consistently experienced real growth at 1993/94 prices, while manufacturing, services, transport, communication and construction have in most cases declined since independence. In real terms, at 1993/94 prices, Botswana's economy has grown annually, on average at a rate of about 6.4 percent from 1966 to 2002/2003 (CSO, 2003). The mining sector, especially diamonds, has been responsible for this phenomenal growth. The growth in the country's GDP has also led to a 3.3

percent average growth rate in GDP per capita income over the same period. In fact, Botswana is now classified as a middle-income developing country (World Bank, 2002).

A relative decline in the contribution of agriculture to the country's GDP over time is expected in an economy as it undergoes structural transformation. As per capita incomes increase in real terms, real expenditure on agricultural goods also declines, which is consistent with Engel's law (Pyatt and Round, 1985). The decline in the food budget share as a proportion of total expenditure occurs because, in general, the income elasticity of the demand for agricultural products, including food commodities, is lower than that for manufactured goods such as cars and electronic equipment (Pyatt and Round, 1985; Ethier, 1995; Sadoulet and Janvry, 1995; Lipsey and Courant, 1996).

In a SAM-based study on the contribution of the cattle sub-sector to Botswana's economy, it was found that this activity evidences the largest full linkage effect compared to all sectors (Townsend and Sigwele, 1998). This signifies that the value added by this subsector and the income that the sub-sector generates induce the largest growth in other sectors of the economy. This sector, however, exhibits the lowest production linkages compared to the manufacturing sector but when the full circular flow of income-expenditure interrelationships is observed, it is clear that the cattle sub-sector is very important in stimulating growth in other sectors. Manufacturing/industry exhibits strong production multipliers because of high intermediate demand, while agriculture shows stronger multipliers based upon income-demand linkages (Sadoulet and de Janvry, 1995, p.201). The mining sector, while dominant in the country's GDP, does not demonstrate strong income/demand linkages with the rest of the economy (Fourth FAP Evaluation Report, BIDPA, 2000).

1.2 Objectives of the Study

Following international trade liberalization by means of the formation of the WTO in 1995, member countries are expected to introduce major reforms so as to improve market access to commodities and services previously barred or restricted by import levies, quotas and other discriminatory practices. The aim of this study is therefore to analyze the effects of trade liberalization and market access on food security and the agricultural economy of Botswana, in particular with regard to:

- a) Food security/per capita food consumption
- b) Household welfare and
- c) Agricultural sector competitiveness in Botswana.

Stylized facts indicate that global trade liberalization and enhanced market access can improve per capita food consumption, household welfare, economic efficiency and competition (World Bank, 1985; FAO, 1995). This study likewise assumes that international trade liberalization and enhanced market access can improve food security and household welfare, and contribute towards a competitive and efficient agricultural sector as well as to the whole economy of Botswana.

1.3 Problem Statement

For the purpose of this study, the problem of food insecurity will specifically be confined to inadequate per capita food consumption and as well as an analysis of how trade liberalization and market access, in particular, can contribute towards improved food security. The main problem for Botswana is that the country is primarily a net food importer and faces widespread abject poverty, which in turn leads to low per capita food consumption. As a result of poverty, the high cost of food imports owing to SACU agricultural tariffs and limited domestic production and competition, many households cannot afford to access enough food to be able to enjoy a healthy and productive life (World Bank, 1985).

While Botswana has over the last three decades witnessed phenomenal growth in GDP, severe poverty still remains a major concern. The latest statistics show that about 23 percent of the population lives below the poverty datum line or subsists on less than US \$ 1 per day (HIES 2002/03, CSO, 2004, p.26). If, however, a basic food consumption basket is used in calculations about 30 percent of the population is considered poor. Most of the impoverished households live in the rural areas and are dominated by female-headed families. The high incidence of HIV/AIDS is also expected to worsen poverty since scarce savings are diverted to health care. Currently the prevalence of HIV/AIDS is estimated at 39 percent among the 15-49 age groups (National Development Plan 9, 2003, p.321). It is estimated that if the current HIV/AIDS prevalence rates persist the proportion of households below the poverty datum line will increase while the “national income dependency ratio will rise from 5.4 to 6.4” (NDP 9, 2003, p.25).

Botswana is among the countries where the daily food per capita intake is below the recommended levels of carbohydrates, proteins, fats and vitamins. According to the World Health Organization, a minimum of 2500 calories per day is recommended for an adult person. As in most Sub-Saharan African countries, for the majority of people in Botswana, the per capita calorific intake is below the recommended daily intake (World Food Summit, FAO, 1996). Inadequate per capita daily food intake is also primarily a result of income poverty or limited access to assets, as well as of the lack of alternative but sustainable income and employment opportunities (Sen, 1981; HIES 1993/94, CSO, 1995; BIDPA, 1996; UNDP, 2002; HIES 2002/03, CSO, 2004).

Regarding assets, cattle ownership and access to urban land, in particular, can improve per capita food consumption by generating additional household income to purchase food. Ownership of cattle improves a household's income as well as providing draught power for crop production. Unfortunately cattle ownership, the single most important rural asset, is skewed in Botswana with almost 45 percent of farming households lacking cattle (Agricultural Statistics

Report, CSO, 2002). Access to urban land, another asset to generate alternative income, is also very limited. Access to urban land allows households to own property for the purposes of leasing, manufacturing, etc. According to Sen (1981) an individual/household can obtain food by means of their own production. Alternatively a household can access food through trade-based entitlement.

While asset ownership is also important in food security, access to employment can also improve household food security. Currently in Botswana, sustainable employment opportunities are becoming limited owing to regional and global competition, especially in “loose” industries such as textiles and clothing. In general, countries in Southeast Asia enjoy a comparative cost advantage in these industries. Loose industries are those that could easily be moved from one place/country to another with minimum delay. The unemployment rate in Botswana is estimated at 23 percent for the 15-64 age groups (Budget Speech, Botswana, 2005). The latest labour survey, however, shows that unemployment rate has dropped to about 18 percent, of whom the majority are young people (Labour Force Survey, CSO, 2006). Labour productivity has also been adversely affected by HIV/AIDS, as most of the time a number of workers are on sick leave in any particular enterprise.

While moderate protein-energy malnutrition of children under five years of age has declined from 15 percent in 1995 to about 7-9 percent during the 2000/2001 period, severe malnutrition has increased from just under 0.5 percent to about 2 percent over the same period (National Development Plan 9, 2003, p.316). Whilst efforts are being made to reduce child malnutrition by offering feeding programmes and fortified food, trade liberalization and improved market access could also contribute towards reducing this problem by enabling households to obtain cheaper food at competitive world prices, while at the same time additional income is expected from more extensive exports to the markets of industrialized countries. In a country well-known for meat surpluses and exports, it is ironic that there should be protein

malnutrition amongst children. It is evident, worldwide, that food security or access to nutritionally balanced food is not synonymous with food self-sufficiency (World Bank, 1985; World Food Summit, 1996 and 2001).

Finally, Botswana depends heavily on food imports. Almost 90 percent of her cereal requirements are dominated by white maize and wheat imports (see Annexes 1.1–1.5). Climatically, Botswana is not suited to a viable and sustainable crop production but, instead, possesses a comparative cost advantage in extensive beef production and wildlife (see Chapter 2). Except for white maize, which is normally obtained from South Africa, wheat is generally imported from outside the Southern African Customs Union (SACU). As a member of SACU, Botswana also levies duties/tariffs on imported food and agricultural goods and this practice increases the cost of food to many poor households. Until recently, SACU agricultural tariffs were very high since they were primarily designed to protect domestic industries as well as large-scale farmers in the SACU region (see Chapter 2). All SACU members administer a common external tariff in agricultural and industrial goods.

1.4 Hypotheses of the Study

To improve food security through per capita food consumption in Botswana, it is hypothesized that the introduction of trade liberalization within SACU by the reduction of agricultural tariffs, especially on so-called sensitive products, will reduce food prices and enhances household food security. A tariff is an added cost to a consumer; hence access to cheaper food at competitive prices following tariff reduction is expected to improve per capita food consumption and household food security. According to the Household Income and Expenditure Survey/HIES 2002/03, poor households spend about 36 percent of their disposable income on food (CSO, 2004). Most of this food comprises cereals, meat, vegetables, pulses and dairy products (HIES 2002/03, CSO, 2004, p.96). Except for meat products, most of the consumed food commodities are imported, hence the hypothesis that trade liberalization will improve access.

Within SACU, beef, dairy products, maize, wheat and sugar are considered as sensitive products because of their strong inter-sectoral and intra-sectoral linkages in the economies of member states. Similar information from other SACU and SADC countries also demonstrates the strong direct and indirect links between these sensitive products and the rest of the economy. Given their strong linkages in the economy of SACU members higher duties are imposed on competing imports.

Furthermore, this study also hypothesizes that improved market access for Botswana's exports will increase foreign earnings, which in turn could be used to import those food commodities that the country is least suited to produce competitively and sustainably. An increase in foreign earnings is consistent with Sen's trade-based entitlement in which food access is improved through additional export revenue that is used to purchase imports and other inputs (Sen, 1981). Improved market access also offers a country the opportunity to generate additional earnings for development and consumption. Currently, their limited market access to industrialized countries costs the low-income countries about US\$ 60 billion a year in lost export earnings (World Bank, 2002). In this study, it is assumed improved market access of beef and textiles exports can enhance food security/household welfare in Botswana.

In addition to improved market access, it is also hypothesized that a reduction of SACU tariffs on imported food commodities can improve food security and the competitiveness of the agricultural sector in Botswana. A tariff is a wedge between domestic and world prices. As an additional tax on imported goods, a tariff is a cost to households, industries and the economy. Through an economy-wide analysis, the study will examine the effects of the reduction of SACU agricultural tariffs on household welfare/food security and agricultural sectoral output as well as on other sectors of the economy. The evaluation of agricultural trade liberalization through SACU tariff reduction on imports will cover sensitive agricultural products (beef, maize, wheat and dairy products,

especially powdered milk). It is through SACU that import duties could be reduced as each member state is bound by one common external tariff.

There has generally been an ongoing concern, especially in Botswana, Lesotho, Namibia and Swaziland (BLNS), that some of the SACU agricultural tariffs are too high for consumers/businesses in these countries. BLNS countries are predominantly deficient in food even during years of relatively favourable rainfall. High SACU import tariffs were originally designed to protect South Africa's agriculture and industry during the years of political isolation and economic sanctions. As a result of the relatively high agricultural tariffs on certain sensitive products, BLNS countries have agreed with South Africa since the mid 1990's to import wheat grain and powdered milk at zero duty, provided the imports are solely for domestic consumption and that any excess is not re-exported to South Africa. Re-exports of duty-free wheat grain and powdered milk to South Africa could cause economic injury to local competing firms/goods in that country. This so-called *gentlemen's agreement* is still in force but sometimes leads to difficulties owing to alleged illegal exports to South Africa, as an incentive exists on both sides.

1.5 Research Methodology

In order to undertake this study, a SAM multiplier analysis will be used to examine the economy-wide effects of improved market access for exports and tariff reduction on food security and competitiveness in agriculture in Botswana. Data from the 1993/94 SAM was used and reorganized, so as to undertake an analysis with special reference to agriculture and allied industries. An economy-wide or SAM-based approach was chosen for the analysis: the assumption is that a policy change/shock, like a reduction in commodity tariff rates in a sector, not only affects the sector in question but that other activities, commodities, households, etc, are also likely to be influenced by the circular flow of income and expenditure relationships in the economy (Sarris, 1997).

The partial equilibrium framework is not able to capture the economy-wide effects of policy changes or shocks. Whereas in terms of partial equilibrium analysis, the reduction of import duties on agricultural commodities would change relative prices between and among tradables, signal potential profitability for certain farm enterprises, as well as influence substitution and consumption, etc, the welfare effects and the cost structure of certain economic activities/sectors and the like are not captured by this analysis (see Chapter 4 on partial equilibrium analysis).

Besides the SAM-based model to analyze the effects of trade liberalization and market access, a partial equilibrium analysis based on the tariff reduction formulas proposed by the United Nations Conference on Trade and Development (UNCTAD) for global agricultural liberalization will however be undertaken. The agricultural trade policy simulation model (ATPSM) is currently used by UNCTAD to analyze the effects of the reduction of tariffs regarding agricultural products and domestic support/subsidies on exports, imports, government revenue, producer and consumer welfare, by country. A brief description of the model is provided in Chapter 4. The use of partial equilibrium analysis in this study is intended to show whether there is any convergence between the two methods of analysis. The technique of partial equilibrium analysis of trade liberalization is widely used because it is relatively less data-intensive and therefore, unlike SAM-based models, also less costly. Further, UNCTAD has also for some time used ATPSM findings to advise developing countries, especially in preparation for and during multi-lateral trade negotiations under the WTO, how liberalized global agricultural trade could benefit them. The study strongly advocates the use of both partial equilibrium and economy-wide analyses of global trade liberalization to achieve complementarities, where possible.

1.6 Limitations of the Study

The study is based on secondary data and also assumes that the structure of the economy since 1993/94 has not changed sufficiently to influence the

results of a SAM-based model. The latest 2002/2003 sectoral contributions to GDP, however, shows very few structural changes in Botswana's economy, since mining, especially that of diamonds, still accounts for at least a third of total GDP. Sectors such as manufacturing, trade, hotels and banking services have not changed much since 1993/94 save for insignificant gains or losses of less than five percentage points in each of these areas.

The study is also based on the application of static SAM-based models which do not incorporate the dynamic changes brought about by improvements in technology and productivity.

1.7 Commodities Chosen for the Analysis

Maize, wheat, beef and dairy products have been chosen as commodities for analysis. In addition to agricultural products, other exports have been included in order to discuss increased benefits from improved market access for them. These non-agricultural exports, tourism and textiles, have been included because export earnings from agricultural exports alone cannot meet the country's total food import bill nor improve food security.

Maize and wheat have been selected for the study, as these are the main cereals consumed and are almost exclusively obtained through imports into the country (see the Food Balance Sheets which are annexed to this study). Sorghum is also an important cereal produced and consumed in the country, and in good, that is rainy years up to 50-70 percent of total consumption may be purchased from domestic producers. Beef has been selected because it is one of the country's main exports. Dairy products have also been selected because they account for one of the most extensively consumed, and yet imported, food commodities in the country. However, for the partial equilibrium analysis in Chapter 4, several agricultural products including beef, wheat, maize and dairy foods are covered in ATPSM. About 36 agricultural commodity groups are altogether covered in ATPSM.

Annexes 1.1 to 1.5 show the importance of the selected cereals in Botswana's food balance sheet. A food balance sheet is a table that illustrates at any given time a country's total food supply and consumption at the macro-level. As a member of SADC, Botswana is currently, like other most member countries, using a food balance sheet (FBS) that only covers cereals. Plans are underway to include meat, vegetables, and dairy products in the FBS.

As indicated in the thirteen-year food balance sheets for Botswana, maize is the largest source of calories, proteins and fats on a per capita basis. After maize, sorghum and wheat are the next most important consumed products in Botswana. However, if livestock products are included, the relative importance of consumed food commodities regarding the provision of calories, proteins and fats may alter.

As a food balance sheet only illustrates food availability and consumption at a national or macro-level, it suffers from the deficiencies that are associated with aggregate indicators like GDP per capita. Further, a food balance sheet does not indicate which areas, households by gender, age, etc are vulnerable or secure as regards food. Food supplies are often seasonal, a factor that a food balance sheet does not also take into account. It is for these reasons that extreme care should be exercised when interpreting food balance sheets as they only measure the national aggregate picture.

According to macro-economic indicators, Botswana experienced one of the highest per capita incomes (currently estimated at US \$ 3500) among developing countries; yet poverty is a serious social concern. The latest HIES 2002/03 results indicate that about 30 percent of the population faces food insecurity as their disposable income is not sufficient to enable them to live a productive and healthy life (HIES 2002/03, CSO, 2004). Poverty is identified as one of the major factors responsible for food insecurity and malnutrition.

CHAPTER 2

A REVIEW OF AGRICULTURAL POLICIES IN BOTSWANA AND SOUTH AFRICA

2.1 Introduction

This chapter mainly reviews the agricultural policy in Botswana since independence in 1966 and considers how the policy has contributed (or failed) to the attainment of the objectives of this sector. Despite its reduced contribution to the macro-economy (see Chapter 1), the agricultural sector in Botswana, as in many developing countries, still plays an important role especially in rural areas since it provides employment and income opportunities as well as food to many people. Besides, the beef industry continues to provide the country with scarce export earnings so that it can import food, inputs and machinery.

Furthermore, because Botswana and South Africa are both members of the five-country Southern African Customs Union (SACU),¹ this chapter also reviews the agricultural policy of South Africa in particular, as Botswana depends heavily on imported agricultural products from the latter. SACU administers a common external tariff in which all member countries apply a single duty on imported agricultural and industrial goods outside the customs area. This chapter will therefore also briefly describe SACU's agricultural trade and tariff policy in order to contextualize Botswana's agricultural policy and show how the SACU policies affect household food security in the latter country.

Finally, the chapter analyzes the recent institutional and trade tariff policy changes within SACU following the advent of global economic liberalization.

¹ The other SACU members are Lesotho, Namibia and Swaziland. SACU countries maintain a common external tariff for both agricultural and industrial products.

These changes have a direct bearing on the way in which import tariff reduction for sensitive SACU food products could improve food security and contribute to agricultural competitiveness, greater choice for consumers in Botswana, in particular, and the SACU economy in general. SACU agricultural trade liberalization through of tariff reduction and improved market access is analyzed in Chapter 7 so as to assess its effects on food security, agricultural competitiveness and the overall economy of Botswana.

While the aggregate economic contribution of the agricultural sector to the Gross Domestic Product (GDP) in the economies of Botswana and South Africa has been substantially reduced to less than 5 percent in both countries, the sector still possesses considerable potential to improve food security and employment creation, subject to the formulation and implementation of appropriate sectoral and macro-economic policies (Krueger *et al.*, 1988; Sadoulet and de Janvry, 1995; Ingco and Nash, 2004). In fact studies carried out in many parts of the world indicate very strong forward and backward linkages between agriculture and the rest of an economy (Mellor, 1979; Vogel, 1984; Fenyés and Van Rooyen, 1985; Mellor, 1986; Van Zyl and Vink, 1988; Nieuwoudt, 1989; Townsend and McDonald, 1998). In particular, these studies indicate that real increases in farm incomes create a demand for commodities as well as services in and outside the agricultural sector.

One of the major reasons for the growth in demand for non-food items following real growth in per capita farm income, *ceteris paribus*, is that the proportion of food items in the household budget declines, and this provides additional disposable income for non-food commodities, including services (Engel's Law; Nieuwoudt, 1989; HIES, Botswana, 1993/94). Therefore in low-income countries, where the majority of people are still engaged in farming, public policies that discriminate against the real growth of agriculture and depress farm incomes will not benefit from the multiplier effects associated with sectoral linkages. Besides income and demand linkages, the agricultural sector in Botswana and South Africa provides raw materials for the manufacturing sector, investment capital and foreign exchange earnings in

order to purchase food and other inputs, including capital goods and technology (Botswana SAMs for 1993/94 and 1996/97; South Africa SAMs for 1993, 1998 and 1999).

The following sections review the agricultural policies of the two countries and examine the similarities in agricultural policies and the distortions in the respective economies. Similarities in such policies have led to macro-economic effects as well as food security implications. Before a review of the agricultural policies of the two countries is undertaken, it is important, first, to understand fully the relationship between Botswana's agricultural sector and SACU, in which South Africa has been a dominant player since the creation of the customs union in 1910.

2.2 Linkages between Botswana's Agricultural Sector, SACU and Agricultural Policies of South Africa

As pointed out earlier, it is important to understand these linkages. In order to introduce a brief analysis of the agricultural policies of Botswana and South Africa, it is essential to understand how Botswana's membership of the Customs Union has influenced her policies and development strategies.

2.2.1 External Tariff Policy for SACU

When SACU was renegotiated in 1969 following the political independence of Botswana, Lesotho and Swaziland, the contracting parties made a major legal and/or political "mistake" in the Customs agreement. This legal provision, as enshrined in Article 4 of the SACU agreement of 1969, gave absolute powers to South Africa to determine external tariffs for agriculture as well as industry on behalf of the other members. Namibia, then a territory under illegal occupation by South Africa, joined SACU as a sovereign state in 1990.

At the time when this provision was made and the agreement entered into, the smaller economies (Botswana, Lesotho and Swaziland) did not possess

sufficient resources to run their countries. As a result, customs revenue from tariffs levied was indeed very necessary for socio-economic transformation as well as for consolidating the newly acquired political independence. Apart from underdeveloped primary agricultural production and limited agro-processing in the smaller states, South Africa has developed more advanced agricultural and industrial sectors that would benefit significantly from tariff protection. In addition, the apartheid political system in South Africa made it difficult for this country to attract foreign investment. This in turn hardened the attitudes of both business and political leaders towards higher tariff protection and self-sufficiency in producing many goods including those in the agricultural sector (see table 2.3). It is no secret that the protection of high tariffs together with other discriminatory trade practices under Article 4 of the SACU agreement disproportionately favoured South Africa's agricultural and industrial sectors (Leith, 1994; McDonald and Walmsley, 2001).

Evidently, the granting of powers by the SACU states to South Africa to determine tariff levels on their behalf was *de facto* a surrendering of their fiscal mandate by the smaller BLNS economies. This later proved very costly for the smaller countries when they wished to industrialize, improve food security and develop competitive and sustainable farming. Although a compensation factor was built into the custom revenue formula, the smaller countries have consistently argued that it did not adequately cover their economic costs after they surrendered their sovereignty in fiscal policy. It is, however, gratifying that following the democratization of South Africa in 1994, SACU has renegotiated a new trade agreement, which came into force in 2002. The institutional and trade implications of the new agreement for food security and agriculture regarding Botswana, in particular, and SACU, in general, will be analyzed later in this chapter.

2.2.2 Agricultural Tariff Levels in SACU

For Botswana and other contracting parties, the high tariffs imposed on imported agricultural goods may have generated (in the short to medium term)

benefits such as increased government revenue from the customs union, protection of fledgling industries including the export-driven beef industry, limited employment creation and economic surpluses for rent-seeking groups in the livestock and other sectors. For livestock farmers, in particular, the domestic producer price was significantly higher than the world price owing to the SACU import tariff, which created a wedge between these prices. Of course, Botswana's membership of the Lome/Cotonou Agreement is also partly responsible for higher domestic beef producer prices. Through the Common Agricultural Policy (CAP) of the EU, members of the African, Caribbean and Pacific (ACP) group benefit from subsidized producer prices. The EU provides direct producer subsidies to farmers as well as export subsidies for agricultural products, most of which are also exported by ACP countries.

Table 2.1 describes the current bound and applied tariffs for selected agricultural products imported within SACU. Under SACU, beef, dairy, wheat and processed wheat products, maize and processed maize products and cane sugar are classified as sensitive products, which demonstrate very strong sectoral, household, income and employment linkages in SACU's regional economy. As a result, these products are considered extremely important for food security and for agricultural as well as rural development. To distinguish sensitive SACU agricultural products from other farm products, the former attract higher import duties and in some member countries, permits are required from importers.

Table 2.1: SACU Bound and Applied Tariffs for Selected Agricultural Products

	Bound Duty	Applied Tariffs		
		SADC	EU	Rest of the World
Boneless beef	160%	32%	40%	40%
Powdered milk	450c/kg	360c/kg	450c/kg	450c/kg
Wheat Grain	72%	16.4c/kg	19.6c/kg	19.6c/kg
Wheat Flour	99%	20%	20%+29.4c/kg	20%+29.4c/kg
Maize Grain	50%	6.7c/kg	6.7c/kg	6.7c/kg
Maize Flour	99%	10.1c/kg	10.1c/kg	10.1c/kg
Cane Sugar	105%	66.6c/kg	66.6c/kg	66.6c/kg

Source: SACU, 2005

Note: c stands for South African cents which is SACU's unit of accounting

SACU has stipulated bound tariffs for traded agricultural products as part of her commitment to trade liberalization under the World Trade Organization (WTO). Member countries to the WTO are obliged to submit proposals for bound or maximum import duties based on the value of the product, i.e. an *ad valorem* tax, in order to achieve a global trade system that is rules-based, transparent and consistent. Final bound tariffs, as approved by the WTO, constitute the base from which global trade liberalization through tariff reduction to improve market access is undertaken (WTO, 1995).

Except for maize grain, final bound tariffs for other primary and processed agricultural products, as may be observed in table 2.1, are generally far higher than 50 percent. Bound tariffs for boneless beef and cane sugar are indeed very high compared to other products. Higher bound tariffs for meat and sugar products are also common globally (Ingco and Nash, 2004, p. 69). Final bound *ad valorem* duties are the maximum allowable tariffs that a country may impose on agricultural imports from any source. This means that SACU can no longer impose additional duties on products indicated in table 2.1 over and above the final bound tariffs.

It is evident from the table that primary products like wheat and maize grain attract lower bound *ad valorem* duties compared to processed/value added products (beef, powdered milk, cereal flour and cane sugar). Increases in the tariff levels applied to primary goods and those applied to processed products constitute a common feature in global trade. The process of increasing tariffs from primary products to processed/finished goods is known as tariff escalation, which comprises one of the major world trade barriers, especially between developing countries and industrialized nations (Ingco and Nash, 2004, p.76; Watkins and Von Braun, 2003). Whereas primary agricultural exports from developing countries attract zero or nominal *ad valorem* tariffs, their processed products face very steep import duties in industrialized countries.

While countries or economic groupings like SACU lay down final bound tariffs approved by the WTO, in practice trade is generally based on applied tariffs. Before describing the different tariff schedules used by SACU in agricultural trade globally, it is important to observe special features of applied tariffs. Unlike bound *ad valorem* duties that are standardized and presented only in percentages, applied tariffs are generally very complex and compounded. In table 2.1 applied tariffs combine percentages and additional tariffs based upon the cost per unit of an imported quantity. For instance, the tariff for wheat flour under SADC is 20 percent while for the EU and the rest of the world, the *ad valorem* duty combines 20 percent and 29, 4 per kilogramme of the imported flour. For other agricultural products, the applied *ad valorem* duties are based upon the cost per unit of the imported product. Consequently, the use of applied tariffs in trade liberalization poses operational problems since several countries administer different combinations of *ad valorem* duties. It is for this reason that in terms of WTO's liberalization of tariffs all member states submits bound tariffs presented in standardized percentage form so as to facilitate transparent and consistent rules or conditions (WTO, 1995). Further, Table 2.1 indicates that bound *ad valorem* duties are higher than applied duties. For certain products like boneless beef and wheat flour, the difference between the bound *ad valorem*

duty and the applied rate is indeed very high. This difference, also known as “tariff overhang”, is more pronounced in beef where the bound rate is 160 percent while the applied rates range between 32 percent and 40 percent, or just about 25 percent of the final bound rate. In countries whose final bound rates are very high and close to the applied rates, food insecurity could be adversely affected, as the cost of imported food may be prohibitive.

After briefly describing the features of the applied agricultural tariffs in SACU, one can now discuss the tariff schedule by trading region. Currently, SACU has divided its applied agricultural tariff rates into three groups. As indicated in table 2.1, SADC members are levied lower applied agricultural tariffs in boneless beef, powdered milk, wheat flour and frozen chicken. Agricultural imports from SADC into the SACU territories enjoy a certain amount of preferential treatment compared to similar goods from the EU and the rest of the world. Lower applied agricultural tariffs levied on non-SACU SADC imports are intended to promote regional trade and economic integration as part of the long-term objective of the SADC Trade Protocol.

The SADC Trade Protocol, crafted along the lines of the WTO framework, advocates freer trade within the region and the promotion of free movement of capital. The Protocol, which came into force in 2000, commits each member state, including SACU members, to further trade liberalization by 2008. By this date, SADC expects that up to 85 per cent of SADC intra-trade should be free and open to intra-regional competition (SADC Trade Protocol, 2000). In general, trade liberalization signifies unilateral reduction of tariffs, as well as non-tariff barriers like quotas and licences, by all member states in a transparent and consistent manner. To date, little progress has been made in the SADC Trade Protocol as some countries still *unilaterally* impose additional duties on imports from other member states while non-tariff barriers including the use of very stringent sanitary and phyto-sanitary measures are still applied to limit intra-regional trade. Currently, intra-SADC trade is less than 13 percent because of different tariff and customs policies, quality and technical standards, infrastructural constraints and other trade barriers (Lewis,

Robinson and Thierfelder, 2002). Processed agricultural products such as beef, wheat and maize flour, sugar, and etc attract higher import duties within SADC and this reduces intra-regional trade.

Apart from the preferential applied tariff rates for SADC countries, table 2.1 shows that SACU has tariffs for the EU and the rest of the world. The EU, SACU's largest trading partner in agricultural goods through the Cotonou Agreement, attracts identical applied tariff rates to the rest of the world. As indicated earlier, agricultural imports from the EU and the rest of the world attract higher *ad valorem* duties compared to SADC. If SADC countries did not face supply and infrastructural constraints and consistently produced competitive food and agricultural products, they could contribute to improved food security in the sub-region as transaction costs, especially those of transportation might be lower. The underdeveloped infrastructure in the SADC area is one of the causes of relatively high transportation costs. In fact, the emphasis on infrastructural development by SADC during its formative stages in the 1980s was partly intended to improve the movement of goods and services.

As both SACU and SADC move towards regional integration and commit themselves to global trade liberalization, both bound and applied tariffs for agricultural commodities will eventually decline, in order to promote access to cheaper and more competitive food and agricultural goods. However, almost all SACU/SADC countries are classified as developing or least-developed members of the WTO. While developing countries like Botswana, Zimbabwe and Namibia are expected to reduce tariffs slowly and over a longer period, the least-developed countries like Mozambique, Tanzania and Lesotho are not expected to open up their economies through tariff reduction in accordance with WTO provisions. According to the current WTO Agreement on Agriculture, developing countries are expected to reduce their bound tariffs by 24 percent over a period of ten years while developed countries reduce theirs by 36 percent over six years (WTO, 1995). South Africa, both a SACU and a SADC member, is classified as a developed country, which also poses

challenges as well as creating problems within the two organizations. This issue will be taken up later in this chapter. The implementation period for the tariff cuts should have begun in 1995 but very little progress has been made in terms of improving market access (Watkins and Von Braun, 2003; Ingco and Nash, 2004).

Since becoming a member of the WTO, SACU has reduced its applied agricultural tariffs. Table 2.1 shows the current agricultural tariffs within SACU. Prior to joining the WTO, there were no bound tariffs but only applied import duties. Applied tariffs for several commodities were very high. For instance, SACU tariffs for meat products ranged from 100 percent for chicken, 110 percent for both lamb and mutton, to 440 percent for boneless beef. With such high import tariffs as well as other discriminatory provisions (disease control etc.), it is no surprise that both livestock farmers in Botswana and South Africa enjoyed handsome economic rents. High domestic producer prices, owing to import tariffs, may have also contributed to heavy investment in the livestock sectors of the two countries.

Similarly, in the crop sector, the import tariff levels were similarly high. Tariff levels ranged from about 100 percent for maize grain to 225 percent for wheat grain in the 1980's. As noted earlier, processed/finished products attracted a higher import duty under the SACU agreement. Under these circumstances it was almost impossible for consumers in the SACU area to import processed food/industrial goods (maize meal, bread flour, etc.). Consequently, high import tariffs/duties adversely affected per capita food consumption among the low-income families while the large-scale surplus farmers benefited from high economic rents. For the poor, maize, in particular, is a staple food and supplies the largest source of calories, proteins and fats (see Annexes 1.2 to 1.5 on Botswana's Food Balance Sheets, Ministry of Agriculture 1998-2001).

2.2.3 The Role of Agricultural Trade in Botswana's Food Security

Over 80 per cent of Botswana's food imports (maize, milk, vegetables, fruits, etc.) as well as live animals and plants are imported from South Africa (External Trade 1998-2003, CSO, Botswana, 2004). High import tariffs for non-SACU goods are also partly responsible for this trade relationship between the two countries. In terms of agricultural exports, South Africa is the second most important beef market for Botswana after the European Union.

Botswana, like the other smaller economies of SACU, *de facto* constitutes an extended domestic market for South Africa's economy and agriculture. For instance, since 1994 there has existed a major disagreement between South Africa and her smaller SACU partners concerning the levels of tariffs for certain agricultural commodities. The SACU external tariffs for wheat and dairy products are considered to be very high and this has made it difficult for BLNS countries to increase per capita food consumption.

Regarding wheat and dairy products for BLNS countries, South Africa agreed to allow them to import such products outside SACU at zero tariffs provided that the imports are specifically for domestic consumption and that no excess is exported to any of the SACU member states (Record of SACU meetings, 1996-2001). In particular, South Africa does not want the rebated products to be exported to her territory as this could disrupt her local industries. The special dispensation, by South Africa, to allow other SACU member states to import agricultural products at a zero tariff is a temporary measure pending an agreement on acceptable tariff levels.

Also with regard to trade relations with South Africa, another major trade development has taken place within SACU. South Africa and the European Union have entered into a reciprocal free trade agreement (FTA) since 2000. Other SACU members are not part of the FTA. Accordingly goods from each party, that is the EU and South Africa, will be allowed duty-free entry. Some goods, including agricultural products originating from the EU, will find free

entry into BLNS markets because of the common external tariff and free movement of goods within SACU. Unless the EU-SA FTA is monitored carefully, better-quality products might threaten some of the BLNS firms.

Evidently the EU-SA FTA provides opportunities for as well as threats to industries and service sectors within SACU, but stakeholders and governments will require objective analysis of the effects and implications of the FTA on their economies in order to make informed policy decisions. Opportunities include competitively-priced food and agricultural imports such as wheat, maize, barley, farm machinery, breeding animals, technology and fertilizers. As a food deficit country, Botswana could benefit from low-duty imports of cereals (wheat, maize), dairy products and meat products from the EU-SA FTA. The high cost of food caused by, *inter alia*, import duties has been identified as a major food security concern in the problem statement in Chapter 1. The expected high economic growth stemming from the foreign investment brought about by the EU-SA FTA could create a demand for agricultural and industrial goods from Botswana and other SACU and SADC countries.

However, threats to Botswana's agricultural sector and food security include the accidental importation of plant and animal diseases, economic injury to small industries owing to subsidized exports, and so forth. The EU is one of the largest users of export subsidies which cover SACU's most important and sensitive products (Ingco and Nash, 2004, p.54). Subsidized imports of beef, wheat and dairy products from the EU might adversely affect local competing industries, employment opportunities, etc unless provisions for the requisite safeguards are applied.

To minimize the potential adverse effects of the EU-SA FTA on the economies of developing SACU members such as Botswana, bilateral negotiations between the EU and BLNS countries are in progress. Some SACU countries have already ratified the EU-SA FTA but some have not yet done so, pending the outcome of comprehensive impact studies. Botswana

ratified the EU-SA FTA in 2003 on the assumption that economic growth, trade creation and household welfare, and the like would be fostered although the government's revenue from customs duties would be reduced owing to lower import duties for EU products (Lewis *et al.*, 2002). While customs revenue accounts for about 15-20 percent of Botswana's total government income, for other SACU members tariff revenue contributes a minimum of 50 percent of public finance (WTO-SACU Document, 2002). Given the potential adverse effects on some SACU members, it is for this reason that the EU is holding meetings with the BLNS countries with a view to all SACU members possibly forming an EU-SACU FTA, as opposed to the current situation.

Besides the EU-SA FTA, South Africa is currently negotiating possible free trade agreements with countries such as Brazil, China and India. If these potential FTAs materialize, developing SACU countries such as Botswana could be affected both positively and negatively. Access to more competitive food and agricultural imports, including technology and investment stemming from some of the FTAs, could enhance Botswana's food security, increase per capita consumption of food and promote sustainable economic diversification. However, small local producers as well as agro-processing firms operating under economies of scale could in the short to medium term suffer or be forced to close if appropriate safeguards are not timeously applied. WTO-compliant measures include countervailing and anti-dumping laws (WTO, 1995), could be applied to protect infant industries.

2.3 A Review of the Agricultural Policy of Botswana

Until 1991, after almost 25 years of independence, Botswana had pursued an import substitution or inward-looking agricultural policy objective that was intended to replace imported basic cereals (sorghum and maize) by means of domestic production. Producer prices, especially for sorghum, were increased substantially above world prices so as to attain food self-sufficiency. Similarly, maize producer prices were increased in order to intensify domestic production in order to replace imports, mainly from South Africa.

Botswana's basic cereal prices are historically based on those of South Africa, as almost all food commodities are imported from this country. Both pan-territorial and pan-seasonal pricing practices, which were carried out for a long time irrespective of the market conditions, aggravated price distortions in Botswana. Pan-territorial pricing, that is maintaining the same prices across the country, increased the economic rent for producers who were distant from markets while at the same time worsening the welfare of consumers in these areas (Coulter, 1994). Consumers in deficit regions could also benefit from pan-territorial pricing as the local demand factors might dictate higher prices than what the pricing policy prescribes. Pan-seasonal pricing on the other hand means that the prices of both maize and sorghum were kept at the same level for the whole year irrespective of the prevailing demand and supply situations.

Other incentives such as subsidized credit and farm inputs, marketing infrastructure and import permit controls, regulated import licences and a monopoly over the sorghum trade were invoked over a period so as to attain food self-sufficiency in basic cereals. Unlike other countries that also controlled the marketing and price of farm produce through single channels or the agencies of agricultural boards, in Botswana, however, buyers and sellers were still free to negotiate a price in the domestic market. The Botswana Agricultural Marketing Board (BAMB), a parastatal organization responsible for the marketing of crop products and inputs, has basically been a residual buyer as most traded agricultural products go through the private sector.

For the beef sub-sector, producer prices are based closely on the highly distorted European Union prices under the Common Agricultural Policy (CAP). The EU beef producer prices are reported to be at least 30 percent above the world prices. As the beef industry in Botswana is primarily an export sector, the high domestic producer price may be largely responsible for the heavy investment and support services in this country as well as for the subsidies and tax concessions in this sub-sector.

As a result of tariff protection, some local producers benefited, since the domestic prices were higher than world prices for similar products. The presence of high tariffs (against competing beef imports) served as additional incentives to producers in the cattle industry, which in turn may have contributed to the over-exploitation of a common resource, i.e. rangeland. In the communal areas in Botswana, where about 85 percent of the cattle are raised, no defined property rights exist; hence access to grazing land is treated like a public good where exclusivity is not possible. The environmental costs of range degradation, soil erosion and other issues are not sufficiently internalized to reflect the social costs of livestock production (Vink & Kassier, 1987). In 1986, for instance, with the aid of an infrared photo mosaic map, it was estimated that 30 percent or 17.5 million hectares of Botswana's land surface was overgrazed and that the long-term production potential of this area was also adversely affected (Ringrose, 1986).

As in the grain sector, buyers and sellers of cattle/beef in Botswana are free to negotiate domestic prices. The Botswana Meat Commission (BMC), a parastatal responsible for beef exports and a price leader in this industry, still remains a residual buyer in the domestic market. At least 60 per cent of the cattle slaughtered annually in Botswana are handled by BMC, which exports almost 80 per cent of its throughput to the EU. However, this state-owned company still enjoys a monopoly on beef, veal and lamb/mutton exports. In addition, imports of these commodities are for all practical purposes not permitted. While the entry costs in beef manufacturing, marketing and maintaining high hygienic and quality standards for the export market are high for potential competitors to the BMC, it is, however, necessary to explore the possibilities of liberalizing this industry by identifying certain niche markets where other players may compete with BMC in the beef exports so as to improve efficiency. Government is planning to liberalize beef processing, which might improve efficiency and competition, provided that complementary policies which promote domestic competition are designed. Stiglitz (1998 and 2002), however, cautions against liberalization or privatization that is not

supported by policies or legislation governing competition, investment in public goods such as technology, infrastructure, and so on.

Botswana has been self-sufficient in beef, mutton and lamb for a long time, even during the colonial era, and yet malnutrition among five-year-old children has been at about 14 percent since 1986 (National Development Plan 9, 2003, p.316). In fact, as in many other countries, food self-sufficiency is equated with food security at the macro level, which unfortunately does not cover the household level (World Bank, 1986; World Food Summit, 1996 and 2001). In general, a food self-sufficiency policy objective discourages imports by means of either high tariffs or very limited import quotas. If imports of beef, lamb and mutton were allowed it is possible that the per capita protein consumption amongst low income households could increase, unlike the situation at present because of the pricing policy where the domestic price is higher than the world price. At present, a limited group of households in Botswana receive old-age pension funds to supplement their income. Preparations are, however, underway to design a national social security programme whose coverage is expected to be broader and this may, it is hoped, improve food security or per capita food consumption.

In 1988/89, Botswana undertook a comprehensive sectoral review to evaluate the impact of the government policy on food self-sufficiency and make proposals concerning the future direction of the sector vis-à-vis economic as well as environmental sustainability, efficiency etc. In addition, the review was designed to explore how best the agricultural sector could meet other socio-economic objectives such as income and employment opportunities. The results of this review recommended the abandonment of food self-sufficiency and adoption of food security as a policy objective. Given the country's endowment in terms of natural resources and an increasing competition for scarce resources, it was not possible for Botswana to achieve basic food self-sufficiency without causing serious economic as well as undesirable environmental consequences (Agricultural Sector Assessment, 1989).

Botswana is a semi-arid country with sandy soils that lack major crop nutrients, especially phosphorus. Drought is almost endemic in the country's agricultural production system. Despite the pursuit of a policy of basic food self-sufficiency, Botswana has never achieved this goal at macro-level, at least since 1966, mainly as a result of these factors. Table 2.2 indicates Botswana's food self-sufficiency ratios since 1985. The only products where food self-sufficiency has been achieved are beef, lamb and mutton, primarily because the country is basically suitable for extensive livestock farming. Quite recently substantial progress has been made in increasing the domestic production of chicken meat as well as eggs. Public financial assistance together with import restrictions has played a major role in the growth of the chicken industry.

Table 2.2: Average Food Self-Sufficiency Indices of Selected Farm Commodities

COMMODITY	SSI
	1985-05
	%
Maize	5
Wheat	1
Sorghum	34
Millet	100
Rice	0
Vegetables	20
Fruits*	20
Beef	150
Fresh Milk	20
Chicken Meat	98

Source: National Early Warning System, Ministry of Agriculture, Botswana (1985 – 2005)

$$SSI = \text{self- sufficiency index, which is } \frac{\text{Total production of commodity}}{\text{Total consumption of commodity}} \times 100$$

During the period 1985/91, the government of Botswana spent about P 253 million (in nominal terms) to achieve food self-sufficiency (Sigwele, 1993). The value of domestic production during this period, in nominal terms, was about P 144 million or 57 percent of the total expenditure. This expenditure is, in fact, an underestimate of the country's total social cost since commercial loans, salaries to public officers, cost of transport and fuel, land degradation and so on are excluded. In particular, the social and environmental costs of land clearing/debushing, soil erosion and overgrazing as well as subsequent land degradation were not taken into account. As a result, the costs of production did not reflect the social/environmental costs of raising crops (Agricultural Sector Assessment, 1989).

As a result of the Agricultural Sector Assessment in 1989, it was found that the domestic cost of producing maize under the import substitution strategy was twice the import parity price (Ministry of Agriculture, Botswana, 1989). The price of the locally produced maize was therefore not competitive compared to imported maize. Pursuing food self-sufficiency regarding maize in Botswana was found to be economically costly and unsustainable. Given the high economic and environmental costs of producing maize, in particular, it was also established that increasing the quantities of maize imported would be less costly to the country, and possibly benefit households as well as individual consumers.

Similarly, locally-produced sorghum was also more costly than competing imports and this partly led to its replacement by maize as the latter was imported more cheaply. The consumption of sorghum relative to maize declined primarily because of Botswana's import substitution strategy and protection from SACU external tariffs. Producer prices of sorghum were set deliberately above those of other crops, including white maize, in order to encourage domestic production to attain food self-sufficiency. As indicated earlier during the high cost of food partly due to SACU tariffs coupled with poverty cannot enhance household welfare (World Bank, 1986).

The Government of Botswana adopted food security as a policy objective instead of food self-sufficiency, following the Agricultural Sector Assessment (Government White Paper No. 1, 1991). In particular, whereas food self-sufficiency is basically anti-trade, a food security strategy promotes efficient and competitive domestic production on the basis of comparative cost advantages for those commodities where the country does not enjoy this advantage, commercial imports should meet the shortfall in order to satisfy a country's total consumption requirements. For Botswana, commodities such as maize and wheat cannot be produced efficiently and competitively because of the unfavourable natural resource base and the high economic and social costs.

After the adoption of the food security policy objective in 1991, agricultural trade has been relatively liberalized. While import permits are still required for several food commodities, in essence very few quantitative restrictions are imposed on imported commodities, except for maize meal and bread flour where licensed traders are only allowed to import 50 percent of their total requirements, while the remainder is sourced internally to support the local food processing industry. Even in terms of the 50 percent local purchase policy, government has not, in practice, enforced this requirement. For other commodities, by and large, importers are free to purchase their requirements without imposing quotas.

The monopoly on sorghum imports that BAMB enjoyed in the 1980's has since been removed. During the mid-1980's, BAMB imported sorghum from Thailand, as the region including Botswana did not have sufficient quantities owing to drought. Upon arrival, it was realized that the imported sorghum was not suitable for human consumption but only for livestock. Consumers rejected the sorghum and as a result BAMB was forced to sell it at a loss. In order to help BAMB recoup these losses, government regrettably, decided to grant the organization a monopoly over sorghum imports. All commercial imports of sorghum were purchased by BAMB. Sorghum millers and other

users of sorghum were forced to acquire their grain through BAMB. This monopoly continued until 1992 when the government lifted the ban on sorghum imports. Whilst the ban on such imports prevailed, several consumers of the grain expressed concern to the government over the monopoly. In fact it is very likely that some of the small millers went out of business because of the high cost of grain obtained from BAMB. As indicated earlier, the substitution of maize products for sorghum also intensified during the ban.

Further to the adoption of a policy regarding food security, the pricing policy for a tradable agricultural commodity is now based on import and export parity. In particular, for exports such as beef, lamb, oilseeds (sunflower, groundnuts), the producer prices are based on the world/border price less marketing, transport, handling, insurance costs (f.o.b. pricing). For imported competing products like maize and sorghum the producer prices are also based on import prices or cost, inclusive of carriage, insurance and freight costs (c.i.f. pricing). It is assumed that the adoption of a parity pricing policy for agricultural products will not only promote efficiency and competitiveness, but also signal to both producers and consumers the country's economic resource or opportunity cost in the production and consumption of these commodities.

In short, the agricultural pricing policy for Botswana is now largely aligned with and integrated into the world economy.

Besides the adoption of food security and parity pricing as policy strategies, Botswana has also endeavoured to diversify the agricultural production base. The policy decision to do so was in response to the limited supply of commodities that government had induced by means of high, distorting, producer prices and other incentives. This exposed farmers to several risks, especially in a drought-prone country such as Botswana.

Whilst the trend in cereal consumption has witnessed an increase in white maize and wheat consumption per capita, as mentioned above sorghum, in particular, enjoyed higher producer prices for the purpose of attaining food self-sufficiency until 1991, when this policy strategy was abandoned. Other potential crops such as cowpeas, sunflower, groundnuts and cotton were not promoted by means of price support, unlike sorghum. Such a policy could have raised farm incomes and spread risks more widely. Admittedly, while diversification may act as a risk management strategy or production insurance, especially among low-income countries such as Botswana, studies by Quiroz and Valdes (1995) indicate that movements in world prices show that 22 of the 28 correlations in prices were positive for the most important internationally traded commodities (white maize, rice, wheat, cotton, coffee, cocoa etc.). It is therefore important that diversification minimizes correlation in prices among agricultural products to reduce risks in income losses.

The results of these studies, which covered the period 1970-1991, caution against high expectations of large gains from diversification, since world prices for major commodities tend to be positively correlated. This positive correlation, in essence, means that these prices go up or decrease together with each other. This may make it difficult for countries or households to stabilize farm incomes and hence improve household food security. The results also raise concern over the viability of diversification in the face of positive correlations of world prices. Of course, it is acknowledged that trade liberalization and diversification are complementary, as long as the latter strategy promotes viable enterprises as well as potential tradables (Delgado, 1995). Diversification, as much as possible, should be market-driven and based on economic and environmental sustainability.

2.4 A Review of the Agricultural Policies in South Africa

Like Botswana, South Africa has been aggressively pursuing a food self-sufficiency policy objective, for both political and economic reasons. In particular, international isolation coupled with the imposition of sanctions on

investment and trade gave “legitimacy” to an inward looking agricultural strategy. In fact, “agricultural policies were aimed at assuring national self-sufficiency in basic agricultural commodities, while ensuring a price structure that guarantee the profitability of the large-scale farming enterprises. These policies were supported by public expenditures that resulted in significant subsidies to large-scale agriculture in order to insure its financial success” (World Bank, 1994, p150). In fact up until the democratization of South Africa in 1994, agricultural policies were closely intertwined with general economic, social and political policies which created serious macro-economic and sectoral distortions and imbalances in the country, while marginalizing the poor African farmers (the majority) at the expense of white farmers who operated on a large scale.

Since the 1980’s up to the present, South African agriculture has witnessed major policy changes culminating in the removal of market and price controls, in trade and economic liberalization as part of the WTO obligations, as well as in addressing land and other equity issues in favour of African farmers. Insofar as land and equity are concerned, the implementation of the Restitution of Land Rights Act of 1994, the Land Rights Act of 1996 and land re-distribution under the settlement/land acquisition policies in South Africa have improved their access to agricultural land for citizens previously disadvantaged under the racially discriminatory Land Act of 1913 (Lyne and Darroch, 2003). Furthermore, other institutions such as the Land Bank, the Agricultural Research Council, Development Corporations and the like, which provided assistance to commercial agriculture before 1994 and therefore excluded the majority of citizens engaged in farming, have since been restructured to comply with the new political and economic order (Vink and Kirsten, 2003). It is partly because of these institutional reforms that the current Strategic Plan of South Africa’s agricultural sector envisages a united and prosperous industry for the benefit of all (Strategic Plan for the Department of Agriculture, 2005).

As a result of these import substitution agricultural policies pursued by South Africa, basic food self-sufficiency has been reached in many commodities (see Table 2.3) although at a high social, economic and environmental cost (Van Zyl, 1989). In particular, large-scale white commercial producers benefited from these policies while the welfare of the majority of consumers and marginal black farmers suffered (Van Zyl, 1989; Kirsten and Van Zyl, 1996). It is in fact estimated that more than 2 million people in South Africa go hungry every day despite the high food self-sufficiency ratio. Available statistics also indicate that about 11 million to 17 million people in South Africa are poor and food insecure (Reconstruction and Development Programme/RDP, 1995). These statistics show that almost 40 percent of the population lives in poverty and therefore faces food insecurity (RDP, 1995). In short, the food security of many people in South Africa has been adversely affected by narrow-minded agricultural policies that essentially benefited a small minority.

Ironically, South Africa's agricultural policy made a very strong commitment to improving food security and tied this to political stability by proclaiming that "for any country, the provision of sufficient food for its people is a vital priority and for this reason it is regarded as one of the primary objectives of agricultural policy. Adequate provision in this basic need is also an essential prerequisite for an acceptable economic, political and social order and for stability" (White Paper on Agricultural Policy, RSA, 1984: pp 8 - 9). Since 1994, South Africa's agricultural policy has changed from pro-food self-sufficiency to food security, trade, and nutrition in order to improve access and increase per capita consumption. Programmes to broaden production among small farmers are being implemented while access to productive inputs such as land and credit is being improved so as to increase income and employment opportunities for the poor. Trade liberalization also aids a country to import food commodities at competitive prices.

Table 2.3 Average Food Self-Sufficiency Indices for Selected Commodities and Years in South Africa

Commodity	1985-95	1991-95	1999	2002	2005
Wheat	98.76	89.31	68.9	81.9	68.2
Maize (white & yellow)	124.6	107.18	97.0	121.4	139.6
Potatoes	100.61	100.69	101.7	101.8	92.3
Vegetables	101.15	101.1	87.2	85.1	87.5
Sugar	184.96	188.86	156.4	172.7	163.8
Beef	92.06	92.32	95.4	98.7	94.0
Mutton, goat's meat & lamb	87.76	80.9	68.9	76.1	50.5
Pork	97.58	94.9	92.2	91.5	105.9
Chicken	98.32	97.5	91.9	90.6	100.7
Eggs	101.54	101.64	101.0	103.2	99.5
Deciduous and subtropical fruit	153.58	157.07	127.8	127.5	130.2
Citrus fruits	205.64	198.52	215.1	213.9	107.2
Dairy products:					
Condensed milk & powdered milk	110.49	120.66	119.5	102.3	108.9
Fresh milk	100	100	100.4	100.3	100.3
Cheese	100.24	100	103.8	98.8	96.5
Sunflower seed oil	59.97	53.31	68.4	104.8	80.9

Source: Food Balance Sheets, Directorate of Agricultural Statistics and Management Information, Department of Agriculture, South Africa. (1985-2005)

Scarce domestic resources were used in South Africa to produce cereals such as maize, in marginal areas (Brand *et al.*, 1992). Favourable commodity, factor and technology policies (Marketing Act of 1937; Land Acts of 1913 and 1937; Land Bank Act of 1912) largely contributed to the profitability of maize in marginal areas (Brand *et al.*, 1992). According to Schoeman and Scotney (1987), only about 14 percent of South Africa is suitable for arable farming while the rest could be utilized for extensive livestock production, tourism and wildlife.

Cowling (1991) underscores this observation regarding South Africa's agriculture by warning that the "indications are that, certainly in the longer term, much of commercial agriculture in South Africa is neither economically nor ecologically sustainable". It can be safely concluded that the pursuit of the food self-sufficiency policy objective also promoted the adoption of

economically and environmentally unsustainable farming practices (Kirsten and Van Zyl, 1996). It is estimated that in 1992/93, the total social cost of land resource degradation (soil crusting, increased soil acidity, Salinization and waterlogging, rangeland overgrazing, sedimentation of dams, etc) was R 672.6 million (Van Rooyen *et al.*, 1996). The high social as well as environmental costs comprised agricultural policy distortions (food self-sufficiency, untargeted and financially expensive public subsidies) and racially based development programmes. The annual cost of land degradation was also estimated at about R 373 million in 1992/93 (Van Rooyen, *et al.*, 1996).

Further, not only did the policy of import substitution lead to frequent financial relief being provided to farmers because of almost continual crop failures due to drought, disasters and regular export losses, especially for maize (Kirsten and Van Zyl, 1996), the distorted price structure also “artificially” inflated land values for loan and mortgage purposes. It is also reported that between 1980 and 1991 agricultural subsidies to farmers for maize alone averaged about R 293 million per year (Kirsten and Van Zyl, 1996). Further, high import tariffs, monopolistic marketing practices, the developed infrastructure and technology, *inter alia*, also supported the food self-sufficiency strategy.

As in the case of Botswana, the majority of the people, especially consumers, small-scale farmers, the landless and impoverished rural and urban households did not benefit from the food self-sufficiency strategy. The small-scale farmers in the rural areas were basically neglected in this initiative, even though they constitute the majority of the farming community. In South Africa, In any case, the incidence of both poverty and malnutrition, especially in the rural areas, is very high, despite food self-sufficiency strategies (Kirsten and Van Zyl, 1996).

Besides domestic reforms, South Africa, as a developed economy, is obliged to improve market access in conformity with the provisions of the World Trade Organization of which she is a founder member and signatory. Members of the WTO subscribe to the policy of liberalized trade and accept competition in

the international economy (WTO, 1994). As part of their WTO obligations, member states commit themselves to reducing tariffs as well as removing trade-distorting measures. According to the WTO Agreement on Agriculture, developed countries like South Africa are expected to reduce bound agricultural tariffs by 36 percent in six years beginning in 1995 while direct trade-distortions such as producer subsidies are also expected to be reduced. Unfortunately progress among developed countries in improving market access to exports from developing countries by means of tariff reduction and subsidy reduction has been very slow and limited (WTO, 2003).

In compliance with the WTO provisions, South Africa as a developed country has already implemented some of them as a part of trade liberalization in order to promote global competition. Quotas have been replaced by tariffs, while direct trade-distorting measures such as producer price and input and export subsidies have been drastically reduced or removed (Vink *et al.*, 2002; Vink and Kirsten, 2003). Monopolistic agricultural state-owned enterprises have been abolished while exchange and price control instruments have also been phased out.

As indicated earlier, South Africa is a developed country yet is also a member of SACU. Except for Lesotho, the other three members of SACU are developing countries. As such countries, Botswana, Namibia and Swaziland are to liberalize their economies by reducing trade barriers over a longer period than developed countries (WTO, 1995). Developed countries such as South Africa are expected to reduce their tariff barriers and other trade-distorting measures (e.g., subsidies) in six years while developing countries are expected to reduce their bound agricultural tariffs by 24 percent over ten years, beginning in 1995. Developing countries are given a longer period to liberalize because of poverty and underdevelopment. Lesotho as a least-developed country is not expected to open up her economy.

Given this heterogeneity within SACU, agricultural trade liberalization is indeed very complex and requires careful implementation so as to minimize

high social costs and sectoral dislocation. Poorer members of SACU depend heavily on tariff revenue and have very limited alternative public sources of revenue, hence liberalization of trade by South Africa may have both positive and negative effects on other SACU members. For instance, South Africa has entered into a free trade area (FTA) with the EU, one of the largest global trade players. Through the EU-RSA FTA, the two contracting parties have agreed to trade in agricultural products under preferential terms. While a South African-EU FTA could provide other SACU members with opportunities such as alternative sources of food imports, technology, foreign investment, and so on, small farmers and firms in the latter countries may collapse from the effects of competing imports which are subsidized by the EU, leading to reduced tariff revenue.

2.5 SACU's New Agreement and its Implications for Botswana's Food Security

SACU ratified a new customs agreement in 2002. Some of the main objectives of the agreement are:

- To create effective, transparent and democratic institutions to ensure equitable trade benefits to all members;
- To increase investment opportunities in the customs area;
- To enhance economic development, diversification, industrialization and competitiveness;
- To facilitate the development of common policies and strategies; and
- To promote fair competition in the customs area (Article 2, SACU Agreement, 2002).

Based on the aforementioned objectives, the new customs agreement is a major departure from that of 1969. For the first time, industrial, agricultural and trade tariff policies will be approved democratically by a Council of Ministers representing all SACU members. Previously, the Board of Tariffs and Trade (BTT), a South African Parastatal body, provided technical advice

on tariff levels, presumably for the benefit of all members. Evidently, the tariff policy formation process was undemocratic, lacked transparency and was biased towards benefiting the already developed sectors in South Africa. Under the new SACU agreement a tariff tribunal has been set up to advise member governments about appropriate tariff policies and levels, by sector and commodity, to promote efficiency, competitiveness, comparative advantage and sustainability while taking into account the developmental challenges facing the sub-region.

The SACU tariff policy, which complies with the WTO provisions, can still be used by low-income countries for food security and agricultural development as well as poverty reduction. For instance, developing countries can invoke special differential treatment (SDT) provisions to safeguard their sensitive sectors and commodities (WTO, 2003). Some of these SDT provisions include lower tariff reduction commitments over longer periods, increased market access in developed countries, provision of technical assistance and support to build capacity, etc. (WTO-Doha Declaration, 2001). Botswana as a developing country is also (by means of Article 9 of the WTO Agreement on Agriculture) granted a special provision to subsidize the internal transport, freight and marketing costs of agricultural exports (WTO Agreement on Agriculture, 1995). In addition, in terms of the ongoing WTO negotiations on Agriculture, the proposal has been made that for developing countries import quotas/volumes of sensitive products should not be increased (WTO, 2003). For SACU this covers beef, wheat, maize, dairy and sugar. If this proposal is accepted for developing countries, it could constitute an important additional SDT provision which might strategically assist to develop potential domestic industries. The application of WTO-compliant SDT provisions is critical for Botswana's agriculture and food security.

Besides the creation of structures for making policy decisions within SACU, the new agreement has adopted common development policies in the agricultural and industrial sectors in order to reduce poverty, among other social problems. Recognizing the different levels of development within

SACU, the agricultural policy will improve food security, foster competitive domestic production and also create trade through encouraging the importation of commodities where the sub-region does not enjoy a comparative cost advantage in producing them. Consequently, the SACU tariff policy is expected to facilitate sustainable domestic and sub-regional agricultural and industrial development, but also to promote import trade by means of lower applied *ad valorem* duties (see table 2.1). As the agricultural sector is obviously very critical for food security because of its linkages with income and demand, WTO-compliant SDT provisions can be administered to protect small farmers and agro-processing industries within SACU in order to reduce poverty. For sensitive products such as beef, wheat, maize, dairy and sugar, SACU can administer safeguarding measures such as countervailing duties if subsidized imports injure domestic industries.

Furthermore, a Secretariat has been established to administer the new SACU agreement transparently and equitably. This Secretariat together with a Committee of senior officials from all member states will serve the Council of Ministers. In order to improve food security, especially among countries like Botswana which experience food deficits, the Secretariat is expected to implement the SACU agricultural, tariff and industrial policies in order to increase per capita food consumption, improve trade competitiveness and regional and global integration. The Secretariat is based in Windhoek, Namibia. At least together with the new SACU agreement and a democratic South Africa it is hoped trade relations in the customs area will be improved for the benefit of all members. It is also expected that all SACU members will contribute adequate human, technical and financial resources for the Secretariat to be able to implement the new agreement so as to improve living standards and reduce the abject poverty currently affecting at least 40 percent of SACU's population (IFAD, 2001; World Bank, 2002).

2.6 Summary

In summary, this review of the agricultural policy of Botswana, in particular and that of South Africa indicates a commitment towards farm production based upon economic and environmental sustainability, while promoting trade to meet domestic shortfalls. Of course, it is assumed that trade will not unfairly displace domestic production as a result of subsidies and other similar distorting and unfair farm and business practices. Previous market, price and public investment distortions in agriculture in order to protect inefficiency will no longer form the basis of agricultural policy in Botswana nor in other SACU member country. While the new SACU agreement is developed along the lines of the WTO framework to encourage efficiency, competitiveness and sustainability, in order to improve food security and increase per capita food consumption, the special development needs of developing countries should be borne in mind.

The previous agricultural policy in Botswana (including that of South Africa) did not improve per capita food consumption nor did it contribute to food security as malnutrition and poverty still persist (NDP 9, 2003; HIES 2002/03, CSO, 2004). About 30 percent of households or 23 percent of Botswana's population live below the poverty datum line. In South Africa, while the country is food-secure at the national or macro-level, at the household level many people still face food insecurity. According to the country's Integrated Food Security Strategy (IFSS), "currently about 35 per cent of the population or 14.3 million South Africans are vulnerable to food insecurity. Among these, women, children and the elderly are particularly more vulnerable" (IFSS, 2003, p.22). In both countries, agricultural policies have not yet improved household food security, owing primarily to income and asset poverty. Clearly, poverty is a structural phenomenon that requires both macro-economic and sectoral approaches and strategies.

Finally, as in the previous SACU agreement, the importance of the agricultural sector in social and economic transformation is acknowledged. The agricultural sector in Botswana exhibits strong direct and indirect linkages with the economy: hence the need to set in place relatively efficient but sustainable resource allocation in this industry in order to achieve other broad social objectives (see Chapters 6, 7 and 8).