

Food Security, Agricultural Policy & Environmental Interface: An African Perspective

The case of Botswana

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ABSTRACT

Food security situation in the Southern African Region is very critical with some countries reported facing the worst significant food shortages of the decade. Most food insecurity problems are associated with war and civil strife. In peaceful, democratic and open countries with good macroeconomic management, the situation is not critical. Botswana's food security situation is stable, and is largely attributable to peace, democracy and good macroeconomic management. The country has adopted food security approach in the 1990s and has an extensive food security safety net that accommodates the vulnerable groups in society. The early warning system is also very effective. The major constraint in the economy is heavy reliance on diamonds and a small population. There are attempts to diversify the economy. Long-term food security objectives should rely on regional trade and export led growth based on the exploitation of areas of potential in agriculture that will rely on the wider regional market. Finally, land use and planning should be an integral part of future agricultural policy to ensure the conservation of communal land and sustainability of the livestock sector among the poor.

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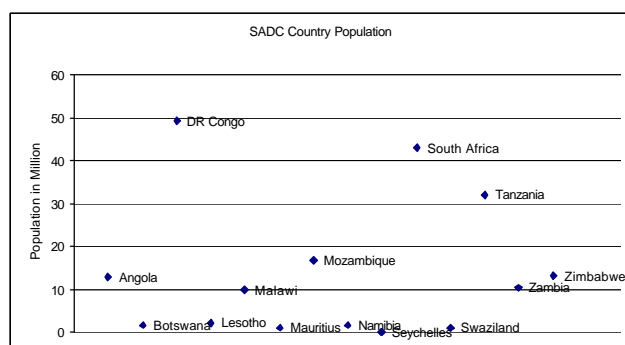
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1.0 INTRODUCTION

Food insecurity is critical in most parts of Southern Africa because of widespread poverty, civil wars, recurring droughts and minimum levels of trade. Botswana has stable food security situation because of peace, democracy, good macroeconomic management and openness. This paper will begin with an outline of the Southern African region's background, then define food security in the region, and discuss food security issues in terms of macroeconomic and agricultural policy perspectives. The environmental interface is discussed as an integral part of the overall discussion and concludes that Botswana can strengthen her food security objectives through export led growth in agricultural areas where she has comparative advantage. The country should also join regional initiatives that will lead to free trade, which will link her to a wider regional market, and open up opportunities for economies of scale.

2.0 BACKGROUND

The Southern African Development Community (SADC) region has a population of 195.4 million. The Democratic Republic of Congo (DRC) and Angola are in civil wars associated with conflict

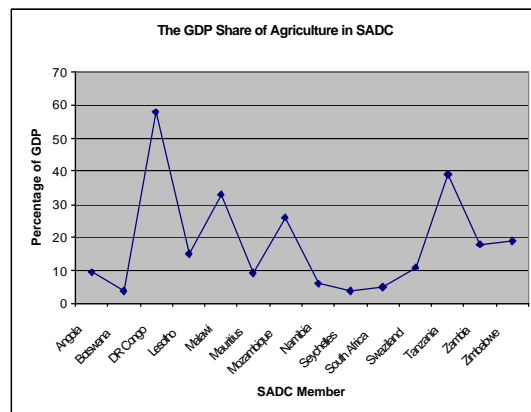


diamonds (World Diamond Conference, 2000). The World Bank lists Tanzania, Mozambique, Zambia, Malawi, Angola and DRC as Heavily Indebted Poor Countries (HIPC). The World Food Programme (2002) warned of the worst regional food shortages in a decade this year, with already 2.6 million people being fed by the Agency in Malawi, Mozambique, Swaziland, Zambia and Zimbabwe. This confirms various conclusions that the food insecurity situation in the region is critical (Swaminathan, 2001; Southscan 2002). Although Zimbabwe was once a major food supplier after South Africa in the region, it is now forced to import maize because of the repression of political and civil liberties. Botswana's food security situation is stable primarily because of good economic management, peace and democracy. The country is small and landlocked, sharing borders with Namibia, South Africa, Zambia and Zimbabwe.

Botswana is a flat country with the Kalahari Desert covering more than two thirds of its size. The majority of the population lives in the east, where there are more fertile soils suitable for rain-fed arable agriculture. The northern parts are major tourist attractions and had 3 percent share of total employment in 1996 (Central Statistics Office 1998). The mean annual rainfall ranges from 650mm in the north-east to less than 250mm in the south-west.

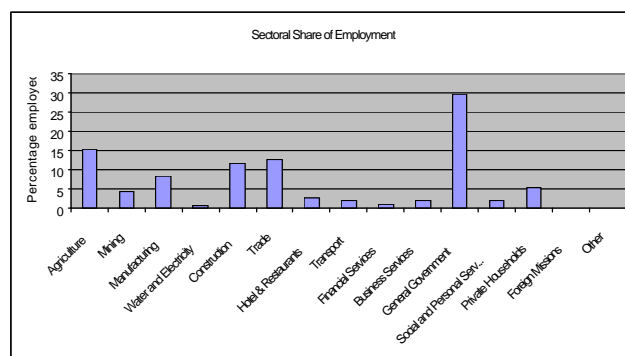
Botswana's GDP per capita of US\$ 3,000 is the third highest in Sub-Saharan Africa, after Seychelles (US\$ 7,448) and Mauritius (US\$ 3,901). The diamond dominated mining sector's share of GDP in 1999/00 31.1 percent, whereas agriculture's share was 2.6 percent (Bank of Botswana¹ 2001).

Agriculture's share of GDP is high in countries with critical food insecurity problems (SADC Review 2002). In Botswana, approaches towards addressing food



insecurity problems have changed from the 1970s-80s-food self-sufficiency² to food security since the 1990s. The objective was to pursue good macroeconomic management and employment creation through the diversification of the economy. By the end of December 2001, the country's

foreign exchange reserves were US\$5.9 billion, representing 39 months of import cover



¹ BoB

² food self-sufficiency is a physical import substitution policy strategy aimed at replacing imports on basic cereals by intensifying domestic production irrespective of the suitability of the land resource, level of consumption and cost (Sigwele, 1993).

of goods and services (BoB 2002). In 1995, the Botswana government was the major employer (CSO 1998), followed by agriculture, construction and manufacturing. Mining's share of the total labour force in employment was 4.4 percent.

3.0 FOOD SECURITY IN SOUTHERN AFRICA

3.1 Definition

Food security has been variously defined (American Heritage Dictionary 1985; The International Famine Centre, 2000; Ellis, 1992; FAO, 1997; and Menezes, 2001). In this paper, food security will refer to access by all people at all times to enough acceptable food for an active, healthy life (FAO, 1997). The emphasis will be on access to acceptable food, or whether people have sufficient command over food. The paper will investigate whether individuals and social groups at risk have access to food based on overall food availability or supply, and whether the ability to acquire it is adequate. In Botswana, chronic³ food insecurity has not been reported, but transient⁴ food insecurity is prevalent. Food insecurity in Botswana is associated with high rates of crop failure and lack of employment.

3.2 Food Security Issues in Botswana

The main objective of Botswana's food security policy is to stabilise food supply and enhance household access to food through reduction of the incidence of poverty (EWTC, 2002; MFDP, 1997; McCalla,

³ Chronic food insecurity is a continuous inadequate diet caused by persistent inability to acquire enough food.

⁴ Transient food insecurity is a temporary decline in a household's access to enough food.

1998). It is generally agreed that household food security can only be achieved if macro-level availability of food is guaranteed, and opportunities to access acceptable food either through own production, purchase or transfers are also available (Rooyen and Sigwele, 1998; McCalla, 1998; Southscan, 2002). Sen, 1999 and Stiglitz, 1999 observed that peace, democracy and transparent participatory processes are critical elements necessary towards the achievement of food security and prevention of famines. This has formed the basis for Botswana's approach.

3.2.1 Peace, Governance and Democracy

The Botswana Constitution, adopted at independence in 1966, established a non-racial democracy, which aims to guarantee fundamental human rights. National elections have been held peacefully every five years since 1965. An independent judiciary with a High Court is presided over by a Chief Justice. This and the culture of openness in the Kgotla⁵ traditional system contributed to sustained peace and stability, and led to positive attainment of food security. War and civil instability are strongly associated with food insecurity and famine (Sen, 1999); The International Famine Centre, 2000; Southscan, 2002; and World Bank website). Angola, the Democratic Republic of Congo and Zimbabwe are examples of countries where

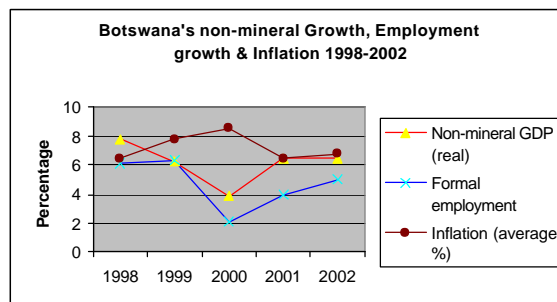
⁵ The Kgotla is the focal point of all settlement activities, governance and development.

there is war and civil instability and critical food insecurity in the region.

3.2.2 Growth and Monetary Policy

Macroeconomic policy in Botswana has been stable over the last ten years and supportive to the food security concerns in the country. The average GDP growth rate was 6.9 percent over the last five years, higher than the population growth rate of 2.4 percent (CSO⁶, 2001), during the period 1991 to 2001. An average annual 6.2 percent non-mineral GDP growth

rate over the last five years (BIDPA, 2002) compared favourably with overall



employment growth rates of 4.7 percent in the same period. Inflation has also averaged 7.2 over the same period (BIDPA 2002). This represented significant contribution towards food security because in Botswana, households acquire a significant part of their food through purchases. For instance, 80 percent of total consumption was purchased, while 8 percent was from own produce in the year 2000 (CSO, 2001).

⁶ Central Statistics Office.

3.2.3 Population and Incomes

Botswana experienced a declining population growth rate from 3.5 percent per annum in 1971-81 and 1981-91 periods to 2.4 percent per annum in 1991-2001. This trend, accompanied with a 6 percent economic growth rate in the last five years, suggests that the national food security situation is presently safe, because the demand for food is not likely to increase that much in the short term.

3.2.4 Fiscal policy

The Botswana Government has tended to rely heavily on emergency programmes, such as the Drought Relief Programmes to address transient food insecurity problems. However, increased spending options are no longer easy because of a P1.62 billion deficit (about 4.2 percent of GDP) predicted for the 2002/2003 financial year (BIDPA 2002). Some past components of these programmes, such as destumping and subsidised livestock supplementary feeds, contributed to deforestation and overgrazing.

Under the current plan period (NDP 8), fiscal policy aimed to facilitate private sector development and ensure improved efficiency⁷ in the use of Government resources (MFDP⁸ 1997). During this period, non-mineral sector's share of GDP was rising while those of mining and

⁷ Efficiency achieved through measures that included reduction of taxes to attract investors and introduction of cost recovery measures to save resources.

⁸ Ministry of Finance and Development Planning (MFDP)

agriculture were declining. This could be the reason for formal employment

growth noted

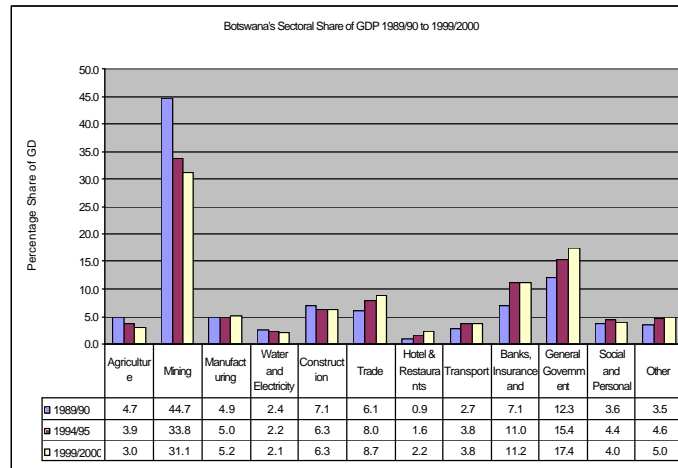
above. Hence

more households

could have cash

to access food.

The Citizen



Entrepreneurial Development Agency (CEDA), has replaced the inefficient Financial Assistance Policy⁹ (FAP). For instance, a community in a small village called Ditshegwane, alleged that small stock grants under the FAP programme contributed to overstocking and overgrazing of their communal land.

The progressive tax system implementation ensures a more equitable distribution of the tax burden (MFDP 1997); those with low incomes are exempt from income tax. BIDPA (1997) has shown that poverty declined from 56 percent in 1985/86 to 47 percent in 1993/94, indicating significant progress towards household food security.

⁹ FAP was the Government incentive scheme up to 2000 aimed at encouraging development in manufacturing but also covered agriculture outside cattle ranching and dry land farming, small scale mining and service related activities in Tourism.

3.2.5 Food Prices

Food prices are a major factor towards food security in Botswana. The poor spend between 50 and 80 percent of their income on food (Mellor, 1988). Botswana cannot influence food prices through production. Arable agriculture is constrained by low and erratic rainfall, endemic droughts (the last five years were all drought years (EWTC¹⁰, 2002)), and uncertain and scattered water resources for irrigation (Ministry of Agriculture, 2000). Price stabilization and a stable macroeconomic performance have contributed significantly to stability in food security.

Past food self-sufficiency based agricultural policy in Botswana concentrated on input subsidies through the Arable Lands Development Programme (ALDEP)¹¹ and FAP, which were not successful in generating the desired employment in agriculture (BIDPA, 2000). Although both were popular and successful distributive mechanisms of farm inputs, no increased productivity in subsistence farming production was observed. Reasons included implementation during a prolonged drought period and inadequate monitoring. The next agricultural policy should focus on the development of commercial arable agriculture in high potential zones for sustainable output and job creation. This is expected to increase new employment

¹⁰ Early Warning Technical Committee (EWTC)

¹¹ ALDEP was an input grant scheme targeted to smallholder farmers with less than 40 head of cattle, who ploughed less than 10 hectares of land. Its aim was to increase productivity in subsistence farming.

opportunities in commercial agriculture for the poor by 50 percent, and develop linkages with other sectors that would provide a further 15 percent increase in total employment, which also will contribute towards food security (MoA¹², 2000).

3.2.6 Investment in Rural Infrastructure

Investment in rural infrastructure is a critical factor in facilitating the achievement of food security (Mellor, 1988). In Botswana, rural infrastructure includes a single-track railway in the east running from South Africa to Zimbabwe. Most major centres are connected through a good road network. Electricity and telecommunications infrastructure are non-existent in most production areas in the traditional sub-sector, but are necessary to facilitate small holder farmers productivity and access to markets (BIDPA, 2001; Swaminathan, 2001).

3.2.7 Agricultural Trade

Botswana is a net food importer, and trade is very critical for the country to be able to generate employment within the country in areas that she has potential comparative advantage such as vegetable and fruit production (MoA, 2000). Work in the region has shown that wage employment brings more returns than subsistence production in areas not suitable for cultivation of that crop (Maasdorp, 1998). The SADC region is currently working towards a free trade area (Maasdorp, 1998)

¹² Ministry of Agriculture (MoA)

and aims to address the dismantling of existing excessive trade barriers within each country (Stanton, 2000). Botswana is also a member of the Southern Africa Customs Union (SACU)¹³ and enjoys the preferential treatment under the Cotonou Agreement¹⁴ between the European Union and the Africa Caribbean Pacific (ACP) countries. Free trade in the region would facilitate large-scale production of white maize in SADC countries with comparative advantage, and improve regional food security, even in drought periods, because regional stocks can be made available to food importing countries such as Botswana, faster than imported cereals from overseas. Another advantage of free trade in the region would be access to a larger market by Botswana firms, which can allow them to enjoy economies of scale and increase employment opportunities. By 1998, 20.4 percent of Botswana's exports went to the SADC region, with 85 percent of these going to the SACU region, which is home to a quarter of the region's population (CSO, 2000).

¹³ SACU is a Customs Union Agreement between South Africa, Botswana, Lesotho, Namibia and Swaziland. Its aim is to maintain the free interchange of goods between member countries. It provides for a common external tariff and a common excise tariff to this common customs area. All customs and excise collected are paid into South Africa's national Revenue Fund. The Revenue is shared among members according to a revenue-sharing formula as described in the agreement. South Africa is the custodian of this pool.

¹⁴ ACP countries enjoy non-reciprocal duty free and quota free access to the EU market for most of their exports

3.2.8 Export Led-Growth

Export-led growth is necessary, given Botswana's small market. Beef is the main agricultural export in Botswana and generates rural employment and cattle industry is the main contributor to the 15 percent share of agriculture in total employment (CSO, 1998). However, trends towards globalisation and the possible end of the current Cotonou Agreement require identification of new markets, especially within the region for increased competitiveness of the sector.

Overgrazing, particularly in communal land systems threaten this sector's future and hence its contribution to food security. There is a need to address land use and planning in this area.

The MoA (2000) has identified export-led growth potential in sectors such as vegetable and fruit production. This could result in significant employment generation activities and contribute to food security.

3.2.9 HIV/AIDS, Health and Nutrition

Botswana has the world's highest rate of HIV prevalence, at 36 percent of the 15-49 years age group (UNDP, 2000). A separate project to address this epidemic under the Office of the President has been allocated an equivalent of 53 percent of the total development budget for the Ministry of Health (Gaolathe 2002). This priority in fiscal policy has negative implications for other areas of government expenditure. This could affect the long-term food security objectives.

Food insecurity, disease, poor sanitation, inadequate education and under-nutrition linkages require that efforts to improve nutrition should be consolidated to contain or reverse the problem (FAO, 1997). Nutrition education and programmes in Botswana have reduced under-nutrition problems and prevented famine, despite recurrent droughts and continuous crop failure. National average total malnutrition rates for children under 5 years declined from 13 percent in 1999 to 11.1 percent in 2000 to 9.3 percent in 2001 in the last three years (EWTC, 2002). This was very good compared to the average under-weight for age of 24 percent during 1995-2000 period in countries whose Human Development Index rank is Medium (UNDP 2001).

3.2.10 Safety Nets

Botswana has an extensive food security safety net system. Safety net programmes include the Old Age Pension Scheme and supplementary feeding programmes to vulnerable groups. This feeding programme benefited 75 percent of the target health related groups and all 253 819 targeted primary school children in the year 2001 (EWTC, 2002). Other programmes are the Remote Area Dweller Programme that targets mainly the San, the Destitute Programme, and the Orphans Support Programme. The GDP share of social and personal service in 2000/01 which includes the above programmes is 4.0 percent (Bank of

Botswana, 2001). The labour-based public works programme employed 57 717 able-bodied persons in 2001 who experienced crop failure or lack of employment (EWTC, 2002). The BIDPA (2001) rural survey revealed that 25 percent of households receive at least 25 percent of their income from transfers consistent with an earlier observation also by the BIDPA (1996) Poverty Study that transfers were an extremely important component of household income. For instance, female headed households and the rural poor derived 43 percent of their total income from transfers and only 18 percent from own production.

3.2.11 Institutional Needs

Botswana's early warning system is very effective with a strong political support to address food security issues. The system is supervised by the chief executives of government ministries and representatives of the civil society, business, traditional leadership and non-governmental organisations, who are members of the Rural Development Council that is chaired by the Minister of Finance and Development Planning.

4.0 Conclusions

Most parts of the SADC region are experiencing critical food insecurity problems as a result of widespread poverty, civil wars, political instability, poor economic management, and insufficient trade and

recurring droughts. Botswana has maintained a stable food security situation because of stable macroeconomic policies, transparency and minimal levels of corruption, social responsibility and an effective monitoring system. Some of the past policies aimed at achieving household food security, such as the FAP and the drought subsidies for livestock led to some environmental degradation of communal lands. For this Botswana to achieve sustainable food security objectives, she will have to develop and exploit her potentials in agricultural production areas where she has comparative advantage. She will also need to engage in regional trade beyond the SACU region. Another very important policy initiative would be to address the issue of land property rights around the villages and settlements in communal areas in order to encourage internalization of environmental externalities to users.

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