

**THE EFFECTS OF INTERNATIONAL TRADE LIBERALIZATION ON FOOD  
SECURITY AND COMPETITIVENESS IN THE AGRICULTURAL SECTOR  
OF BOTSWANA**

**by**

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## **Declaration**

I declare that this thesis I am submitting to the University of Pretoria for the degree of Ph.D. in Agricultural Economics represents my own work and has never been submitted by me to any other tertiary institution for any degree.

Howard Kgalemang Sigwele

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## **Abstract**

The Effects of International Trade Liberalization on Food Security and Competitiveness in the Agricultural Sector of Botswana

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Access to adequate and nutritionally balanced food to achieve a productive and healthy life for all individuals, on a daily basis, has been an elusive challenge in several parts of the world. In many developing countries such as Botswana, increasing per capita food consumption has been hampered by poverty as well as poor access to marketable skills and employment opportunities. Experience and studies elsewhere indicate that international trade liberalization based on comparative cost advantage in the goods sectors, can greatly improve per capita food consumption through improved export market access and reduction in tariffs. The purpose of this study is to analyze the effects of international trade liberalization on food security/household welfare and the competitiveness of the agricultural sector in Botswana.

In undertaking this study basically two hypotheses were made. Firstly, it is hypothesized that trade liberalization within SACU through the reduction of agricultural tariffs on food commodities can improve per capita consumption by reducing domestic food prices. Currently, products like maize grain, beef, dairy and wheat grain attract an import duty which partly increases their

domestic prices within SACU. Poor households in Botswana, in particular, spend a disproportionate share of their disposable income on food most of which is imported. Secondly, this study also hypothesizes that improved market access of agricultural exports for Botswana based on WTO rules could generate additional foreign earnings that could be used to import more food. Globally, agricultural trade is characterized by distortions that restrict free commerce based on comparative advantage. Direct producer price and input subsidies together with export subsidies to farmers especially in major trade players like the EU, USA and Japan constitute barriers to trade and disadvantage developing countries like Botswana which have comparative advantage in several farm commodities. Subsidies by major industrialized countries create an artificial comparative advantage for their farmers as without direct farmer assistance, it is doubtful if some of them could invest in agriculture!

Secondary data on international trade and social accounting matrix (SAM) were used in this study. Trade data were used to conduct policy simulations in order to determine the effects of trade liberalization on food security and competitiveness of the agricultural sector in Botswana. SAM data for 1993/94 were modified and used to generate income and price multipliers to undertake policy simulations. Data from SAM captures the income and demand linkages in the economy.

Using partial equilibrium and economy-wide approach (SAM multiplier analysis), this study shows that Botswana can improve its household welfare or per capita food consumption through an increase in export earnings which in turn could be used to import more food at competitive prices. Except for meat products especially beef, Botswana is a net-importer of most food items. Based on a partial equilibrium agricultural trade policy model, this study found that the country's agricultural sector enjoys global comparative advantage in beef exports if there was global trade liberalization. The model advocates for the reduction of direct producer price, input and export subsidies in the agricultural sector by WTO members. Beef earnings including those from

other goods like textiles and minerals are used to purchase imported food to increase domestic supply.

Through a SAM income multiplier analysis, policy simulations on improved export market access for beef and textiles indicated that households, factors and activities gained from global trade liberalization. However, poor households without assets or factors such as capital and skills marginally benefited from improved export market access. This finding also indicates the potential negative income distributional effects which require policy support to benefit poor households during trade liberalization. Beef and textiles exports were chosen when undertaking policy simulations based on improved market access.

With a SAM price multiplier analysis, policy simulations based on SACU tariff reduction on maize grain, beef, powdered milk and wheat grain was made. Applied tariffs were used for policy simulations. A reduction in tariffs not only improves household welfare, factors and activities also benefit through lower domestic food costs/prices. This study found that SACU tariff reduction indeed contributed to welfare improvements among households in Botswana as their cost of living declined. Poor households, in particular, benefited most from tariff reduction in imported food commodities.

Factors including low-wage workers also gained from a reduction of import duties on selected food commodities. However, government loses tariff revenue when import duties are cut while producers of exports enjoying preferential markets such as the beef producers in Botswana lose when trade-distorting agricultural subsidies are removed/reduced. Like government, consumers of imported food items are, in short term, adversely affected by an increase in food prices following the reduction of trade-distorting agricultural subsidies (producer price, input and export subsidies). The results of the SAM price multiplier analysis also indicated limited price/cost transmission in the economy following tariff reduction. Limited price transmission or circular flow of cost reduction in the economy imply weak competition in the market, poor information dissemination, institutional rigidities, etc hence the need for an



effective competition policy and law. An effective competition policy and authority minimizes unfair trading practices and provides consumers and the economy with choice and possibly maximum net-value for money.

In addition to improving welfare and reducing cost of living, etc, this study also found that when policy simulations/shocks were made, income and demand linkages in the economy were identified. In some simulations the linkages demonstrated a strong circular flow of income/price transmission while in others the multiplier effects were weak indicating limited economic integration/competition, a policy challenge that requires efforts for sustained diversification. Based on the results from SAM multiplier analysis, this study has provided Botswana with useful information to design policies that enhance economic integration and diversification.

To maximize her benefits from international trade liberalization, Botswana also needs to implement complementary policies to address supply-side constraints and improve infrastructure, competition, information technology, etc. Safeguard mechanisms are still necessary to protect the agricultural sector and the economy in Botswana from unfair trade practices including market failure.

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## **ACRONYMS/ABBREVIATIONS**

<b>ACP</b>	African, Caribbean and Pacific
<b>ATPSM</b>	Agricultural Trade Policy Simulation Model
<b>BIDPA</b>	Botswana Institute for Development and Policy Analysis
<b>BLNS</b>	Botswana, Lesotho, Namibia and Swaziland
<b>CSO</b>	Central Statistics Office
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization
<b>FAP</b>	Financial Assistance Policy
<b>FTA</b>	Free Trade Area
<b>HIES</b>	Household Income and Expenditure Survey
<b>HIV/AIDS</b>	Human Immuno-deficiency Virus/Acquired Immune Deficiency Syndrome
<b>IDASA</b>	Institute for Development Alternatives in South Africa
<b>IFPRI</b>	International Food Policy Research Institute
<b>IMF</b>	International Monetary Fund
<b>MFDP</b>	Ministry of Finance and Development Planning
<b>OECD</b>	Organization of Economic Cooperation and Development
<b>SADC</b>	Southern African Development Community
<b>SAM</b>	Social Accounting Matrix Theory
<b>UNDP</b>	United Nations Development Programme
<b>US (A)</b>	United States (of America)
<b>WHO</b>	World Health Organization