



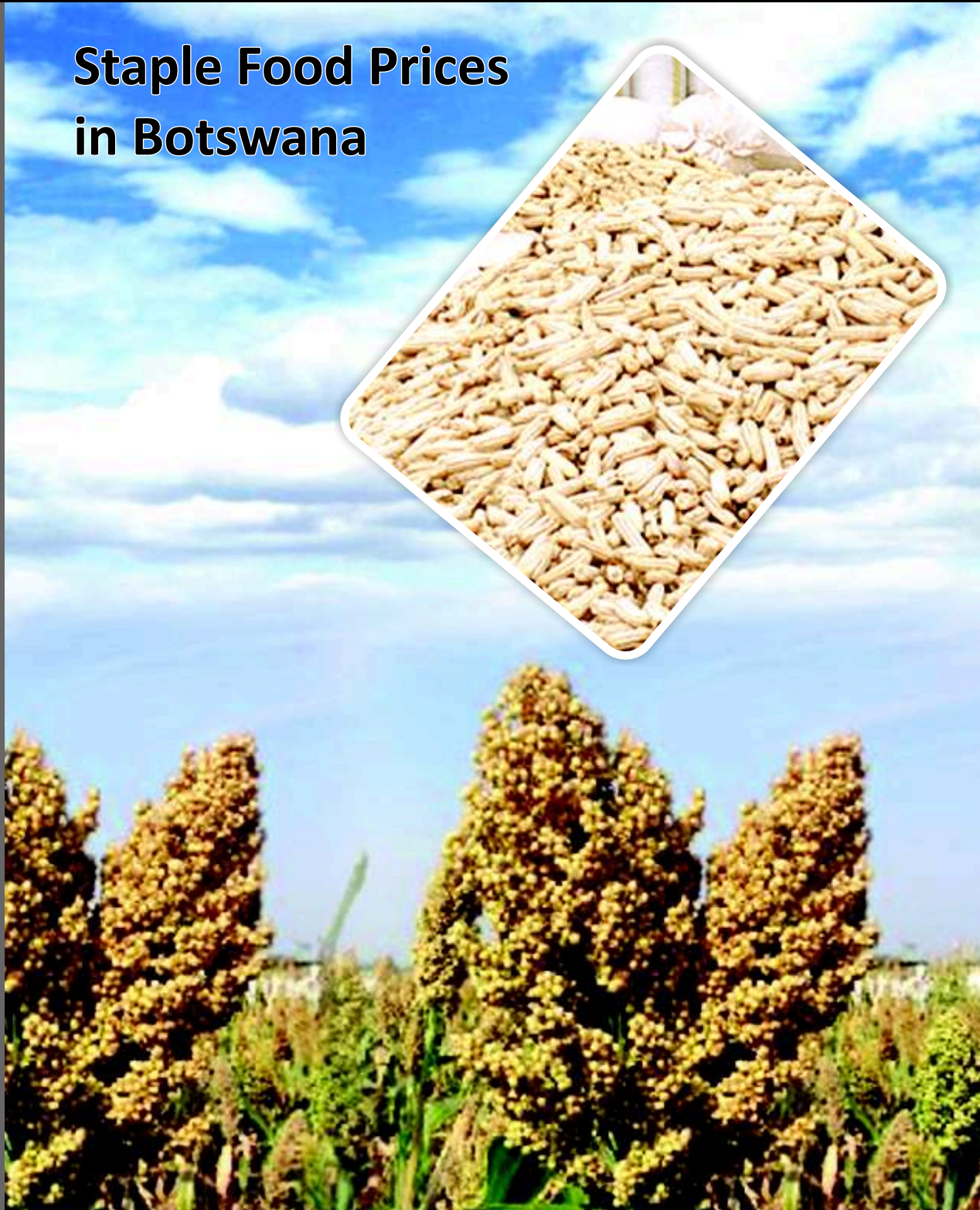
**Botswana Institute for
Development Policy Analysis**

May 2010

Staple Food Prices in Botswana



BIDPA Policy Brief No. 8



What were the Causes of the 2007-9 Global Food Crisis?

- i) The main causes for the food crisis were the increase in oil prices together with subsidies for bio-fuels provided by food exporting countries. The introduction of bio-fuel subsidies by the US for maize derived ethanol contributed significantly to the food crisis. Changes in the value of the US dollar also worsened the crisis.
- ii) Almost all major food exporting countries have now established substantial bio-fuel mandates whereby a certain percentage of national transport fuel requirements will come from renewable sources bio-fuels. These can easily be raised for bio-diesel which creates an increase in demand for the feedstock. This is a low cost way for governments of providing state support for farmers.
- iii) According to the World Bank, for every one percentage point increase in the barrel price of oil the price of maize will rise by 0.9% for all oil prices above USD50 per barrel (World Bank 2009, p7). This now links oil prices directly to maize.

What Happened to food prices in Botswana?

i) Maize

Global maize prices rose sharply but maize prices in southern Africa remained low because South Africa, Botswana's main supplier had a bumper harvest in 2008. If South Africa had not had a surplus Botswana would have had to pay almost twice as much for imported maize from the US as was paid for South African maize.

Despite stable and decreasing prices for maize on South African markets, retail prices in Botswana rose sharply and have fallen only very slightly. While the South African market price of maize (SAFEX) decreased by 14.2% from the beginning of the period in May 2007 until September 2009 from ZAR 1.66 per kg to ZAR 1.48 the Botswana retail price of maize meal as measured by the Statistics Office increased from ZAR 4.78 to ZAR 5.50 per kg, an increase of 17% over the same period.

ii) Wheat and Flour

Unlike maize, wheat is imported into the SACU market and therefore the full effect of the global price increases are passed through to consumers through the import price. World wheat prices peaked in February – March 2008 at approximately ZAR 3.91/kg. They

have subsequently more than halved to ZAR 1.35/kg. Retail flour prices in Botswana continued to rise until October 2008 when they peaked at ZAR 9.41/kg in Botswana. Retail flour prices then decreased from October 2008 until September 2009, the last date for which prices are available, to ZAR 7.60/kg, a decrease from the peak of ZAR 1.81/kg while wheat prices decreased by much more from their peak by ZAR 2.56/kg. The price adjustment of flour is both delayed for decreases and not as significant as for the underlying input i.e. wheat.

iii) Rice

Rice is not commercially grown in South Africa or Botswana and all supplies are imported. Rice in 2008 was the most important food import by value in Botswana. There are no tariffs or other restrictions on rice trade as is common with other staple products. As significantly rice is the only product in the study for which the Statistics offices in Botswana, Namibia and South Africa use the same product for comparison i.e. Tastic rice in 1 kg packets. This permits legitimate international comparisons of prices which could not be made with other retail prices because the products and weights used by statistics offices were not the same in all three countries. Botswana has the highest rice prices of the three SACU countries for which such data is available.

Despite the absence of any government restrictions on rice, retail prices did not adjust downwards in response to the decreases in the world market price of rice that accompanied the onset of the global financial crisis in the last quarter of 2008. It was not until March 2009, fully nine months after the world market peak that consumer prices began to adjust very modestly downwards. In Southern Africa the value chain for rice is some six weeks long from the time of the order to final purchase by the consumer.

iv) Sugar

The global sugar market is arguably the world's most distorted agricultural market and the SACU market is no exception. Sugar has its own market characteristics which is unlike that of the other coarse grain products. The sugar market is distorted by both a two tier pricing system in South Africa for sugar exports and domestic SACU supply as well as an orderly marketing arrangement whereby South African and Swaziland sugar prices have formally agreed on market shares of the SACU market which includes Botswana. (18.7% for Swaziland and 81.3% of the market for South Africa).

The sugar premium paid by SACU consumers, including Botswana consumers over and above the

world price of sugar results from the need to protect Swaziland and RSA producers from subsidized sugar producers in developed as well as developing countries.

Why do Botswana's prices behave the way they do?

What is observed in Botswana, Namibia and South Africa is what economists call 'asymmetric price formation' ie prices go up quickly but are sticky downwards. This phenomenon is found in many countries and was observed during the last food price spike earlier in the decade. It has been the subject of much discussion by economists and it is often the result of market failure. In Botswana there are a number of factors that restrict the free flow of the market. These include:

1) *The existence of rising tariffs along the food value chain*

While tariffs for basic grains are very low which forces SACU farmers to compete tariffs cascade up the value chain which offers protection to food processing firms which appear to have considerable market power. These SACU tariffs apply to all members

2) *Non-Tariff Measures*

Botswana, along with the other BLNS (Botswana, Lesotho, Namibia and Swaziland) countries employ an extensive series of non-tariff measures to protect local farmers and processors from imports from South Africa as well as other sources. These non-tariff measures close the Botswana market or a part of the market to imports from all countries including South Africa. In the case of Botswana these are applied for maize meal and wheat. This raises prices to consumers. There are no non-tariff measures applied to the trade in rice or sugar and therefore the price trend in those markets cannot be explained by government action alone.

3) *Market or Oligopoly Power*

The food value chain is largely competitive at the farm gate but the markets that supply the inputs e.g. fertilizer to farmers and supply food to consumers are highly concentrated with a few large firms controlling the market. In the past few years the South African Competition Commission has imposed very large fines on firms along the food value chain including those that provide inputs to farmers e.g. fertilizer as well as food processors for collusion, price fixing and other anti-competitive behavior. These same firms also operate in Botswana. South African supermarkets, at the time of writing were under investigation for anti-competitive practices by the Competition Commission.

4) *Commercial practices*

The purchasing practices of supermarkets where most urban consumers buy food are such that they must either purchase from or through their South African agents or through a fixed number of firms with whom they have long standing commercial relationships. This limits competition. Even where cheaper sources of supply of some produce may be available, these supermarkets may be unable or unwilling to purchase because the economics of bulk purchasing militates against multiple sources of supply.

Many of the South African branches that have established in Botswana are unable to export because their parent corporation prohibits exports. This is because they would be in direct competition with other subsidiaries or the parent company itself. Thus these processors are confined to the small and restricted Botswana market and can never reap the benefits of economies of scale that comes from exports.

What Should the Government of Botswana do about high food prices?

There are no easy solutions to high food prices. Self sufficiency will not solve this problem as Botswana farmers will expect the same prices as those received on the global market. The government of Botswana may wish to consider the following measures:

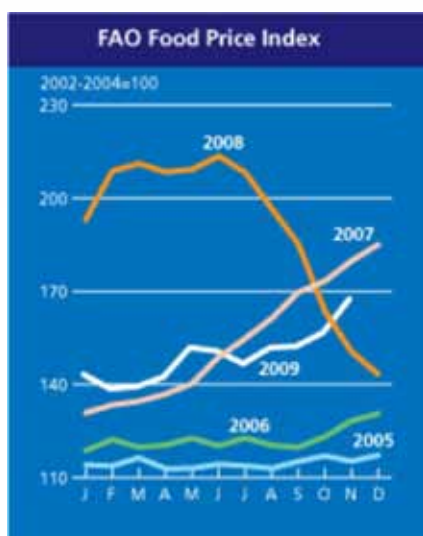
- 1) Publishing world and South African staple food prices on a regular basis. This will put greater pressure on processors and supermarkets to keep prices in line with world and regional trends
- 2) Reconsider the existing non-tariff measures protecting the processing of maize and wheat. Botswana does not grow wheat and hence the measures only protect millers. Given the impact on the low income groups of the non-tariff measures for maize milling, the government should reconsider its trade policy.
- 3) The new competition authority being established by the government should be given an assertive mandate similar to that of its counterpart in South Africa. It should monitor the practices of super-markets and food processors on an on-going basis.
- 4) Working with the Africa group at the WTO, FAO, Commonwealth and UNCTAD, Botswana should push for more objective studies and strong WTO disciplines on bio-fuel policy given their long term impact on net food importing countries.

The purpose of this BIDPA Policy Brief is to consider what has happened to food price in Botswana over the past two years. In mid and late 2008 food prices throughout the world peaked after a period of almost one year of continual price rises. Yet the collapse of those prices on world markets which in some cases preceded but in most cases coincided with the onset of the global recession has not been translated into commensurate decreases of consumer prices in the shops in Botswana. This brief attempts to explain why consumer prices rose so dramatically in 2008, why they collapsed on the world market and why the consumers in Botswana have not seen significant benefits from that price decrease on world markets. This paper uses publicly available data from the statistics offices of Botswana and her neighbors, the Republic of South Africa (RSA) and Namibia as a basis of comparison. Several important basic commodities will be considered including maize, wheat flour, sugar and rice. Beef and chicken will be considered in a subsequent brief. The results are intended to assist policy makers as well as the general public understand the forces of global markets, national policy and the Botswana and regional market structures and how they affect day-to-day food prices.

Background to 2007-2009

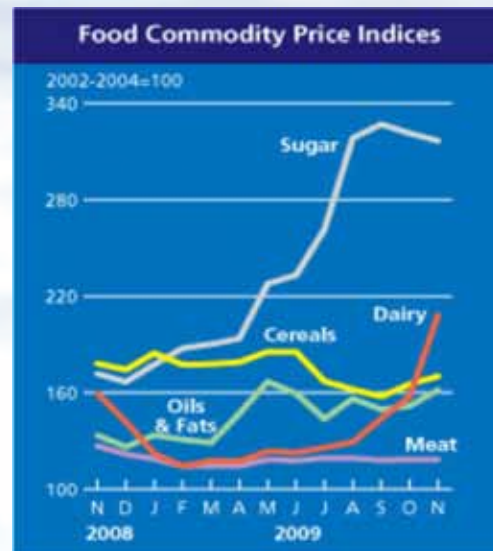
The period 2007-2008 saw the most dramatic rises in global food prices in a generation. Chart 1 and 2 below show by how much world food prices increased over the period. What they show is that prices rose most dramatically from the beginning of the second quarter of 2007 and then rose until the second quarter of 2008 and then collapsed with onset of the global recession in the last quarter of 2008. With the exception of sugar which has its own rather unique market rhythm prices fell through to the first quarter of 2009 and have been rising on global markets ever since.

Chart 1



Source: FAO, December 2009

Chart 2



Source: FAO, December 2009

Why did world prices rise in 2008?

The international community led by the international financial institutions and UN bodies such as the Asian and African Development Banks, the IMF and the FAO came with a list of standard culprits to explain the price increases. These included the following factors:

- 1) Rising incomes in India and China causing an increased demand for food
- 2) Rising petroleum prices
- 3) Increased demand for bio-fuel feedstock from corn and rapeseed
- 4) Currency fluctuation.- collapse of the US dollar
- 5) Climatic conditions in supplying nations e.g. drought in Australia
- 6) The use of export restrictions by some exporting countries e.g. India and China
- 7) Speculation in future markets on basic commodities
- 8) Lack of productivity growth in key agricultural sectors

This list of causes that was provided to policy makers throughout and even after the crisis of 2008 failed to differentiate between the extent of the impact of each of these factors and therefore made all of them appear to be equally important. What researchers subsequently determined¹ was

¹Readers wishing to consult a more comprehensive and academic analysis of the food crisis may wish to consult Supplement to Issue 39.3 of Agricultural Economics of November 2008, which was devoted entirely to the causes of the 2007-2008 food crisis.

that food prices rose because of two main reasons. Oil prices had risen dramatically in 2008 which caused the usual feed through to food prices through transport and fertilizer costs. But a new development has occurred and the large food exporting countries had introduced policies whereby they provided subsidies to petroleum blenders and feedstock producers to use bio-fuels. While the policy began in earnest in Brazil in the early 1980's following the oil crisis after the Iranian revolution it had been confined to sugar for ethanol. However, the Bush administration in the US in 2005, created a series of incentives for the US blenders to use maize as feedstock for ethanol. These subsidies created an artificial demand for maize which in turn pushed up prices. However, the increase in the price of maize would never have been as substantial as was experienced had it not been for the fact that oil prices reached USD147 per barrel which in turn increased the profitability of bio-fuel production. As can be seen from the table on page 6, where the US led in supporting its farmers, the other major food producers have followed suite.

The EU created mandatory targets which focused more on bio-diesel than ethanol as in the US. The feedstock in the EU for bio-diesel is primarily rapeseed. This in turn pushed up the price of edible oils and fats. Soon after the EU and US mandates Canada, China, Australia, India and Argentina weighed in with their own mandates on bio-fuels (see table 1 below).

The beauty of bio-fuels as a political instrument of subvention to the agricultural sector is that governments of net food exporting countries can increase support to their farmers by simply raising the mandatory fuel requirement by a few percentage points. This has no direct costs once the bio-fuel industry is established and artificially raises demand and prices. However, there are technical barriers to these mandates, especially for ethanol. Brazil went from 20% mandate for transport fuel supplied by ethanol in the early 1980's to 25% recently. This change occurred after many years of working with the Brazilian motor vehicle industry to assure that engine modifications made this level of ethanol use possible. Other developed countries which commenced bio-fuel production long after Brazil such as the US have set their mandates at E10 i.e. 10% of transport fuel coming from ethanol. But the US congress is currently under considerable pressure from the agricultural lobby to raise this to E15 despite the technical barriers. While these technical barriers exist for ethanol, they do not exist with regard to bio-diesel which can be used in standard diesel engines with only minor modification.

Table 1

Bio-fuel Policies of Major Food Exporters

Country	Mandate
USA	Mandatory target of 7.5 billion gallons of biofuels by 2012, rising to 36 billion by 2022
Brazil	Mandatory blend of 20-25 per cent anhydrous ethanol with petrol; mandatory minimum blend of 3 per cent biodiesel with diesel by July 2008 and 5 per cent by end of 2010
EU	Mandatory target of 10 cent share of renewable (including biofuels) in transport fuels by 2020
China	15 per cent of transport energy needs from biofuels by 2020
Canada	5 per cent renewable content in petrol by 2010; 2 per cent renewable in diesel fuel and heating oil by 2012
India	Proposed blending mandates of 5-10 per cent of ethanol and 20 per cent of biodiesel

Source: Commonwealth Secretariat (2009)

It would be inaccurate to suggest that all of the increase in food prices that was experienced was because of bio-fuels. Reliable estimates suggest that at least 20% of the price increase of food products in the period can be explained by the decline in the value of the US dollar against major trading currencies. This dramatically raised food prices which are traded in US dollars. The decline in the value of the dollar, which was caused by the US structural trade deficits only stopped with the onset of the global economic crisis in September 2008 when the value rose sharply with the so-called 'flight to quality'. The US dollar resumed its decline after the first signs of recovery in 2009.

The relationship between US maize subsidies and food prices are fairly clear though they are vigorously disputed by US officials. During the last oil shock following the Iranian revolution in 1979/80 bio-fuels and their subsidized introduction have changed the nature of the relationship between food and oil prices. The World Bank now concludes that for every one percentage point increase in the barrel price of oil the price of maize will rise by 0.9% for all oil prices above USD 50 per barrel (World Bank 2009, p.7). This has profound implications for food security policy for Botswana. The US intends to use 40% of its maize crop for bio-fuel by 2015. The US is the world's largest exporter of maize, which is Botswana's main staple. These figures mean that for the first time in history governments can choose to use maize as a food or put it in their cars as fuel.

Once you affect the world price of maize and oil seed such as rapeseed in the EU, this will change the market for many other coarse grains and oil seeds which are either substitutes in end use or alternative users of land used to grow these crops. In 2007-2008 the prices of wheat rose (as land was transferred to maize and rape) as well as sorghum which is used as animal feed in developed countries and is a near perfect substitute for yellow maize, the price of which also rose. Once wheat and maize prices rose, rice prices increased as this is a close substitute on world markets. However, when one looks at beef and poultry prices they are very closely related to feed prices which are determined by the price of maize and sorghum and thus the whole food chain is affected by a fundamental structural change as occurred with maize and rapeseed. The rise in price of rapeseed oil immediately impacts the price of other edible oils such as soy, sunflower and olive oil.

Table 2

Estimated Cereal Production, Consumption and Imports for SACU members 2008/09 (000's tonnes)

	Production	Imports	Estimated Consumption
Botswana	37(8)	290(135)	296(135)
Lesotho	88(69)	213(118)	323(230)
Namibia	121(68)	123(74)	264(145)
South Africa	15,510(13,164)	1150(0)	14173(10,158)
Swaziland	64(64)	34(34)	172(115)

Source: SADC, Food Security Update, January 2009 NB – Cereals include maize, wheat, rice, sorghum and millet. Rice is not commercially grown in SACU countries. Numbers in parenthesis represent maize

Botswana is highly dependent upon food imports and hence increases in world prices will be fed through to farmers as well as to consumers. However, almost all the food imports come from South Africa which in turn is also dependent upon food imports for some basic products eg wheat and rice but generally not for other products such as sorghum, maize and sugar. In those products where RSA has an exportable surplus the world price does not affect domestic prices in RSA to the same extent as where RSA imports and therefore trades at what is called the import parity prices.

i) Maize

This is without doubt the most important staple product in the diet of Botswana. The retail price behavior of maize in Botswana has not tended to follow closely either world prices or South African market prices. The Chart 3 below depicts maize and maize meal prices in RSA, Botswana and Namibia. The lower three lines are South African Import and Export Parity Prices and the South African Futures Exchange (SAFEX) spot market price for yellow maize contracts. When there is a good harvest and exports occur, which is in most years prices tend to hover around the export parity price. When the harvest is poor in RSA prices tend to follow the import price. Fortunately for Botswana 2008 was a bumper maize crop and hence prices tended to follow export parity. Had RSA experienced a poor maize crop in 2008 Botswana would have felt the full effects of US and EU bio-fuel subsidy program and prices would have doubled to around ZAR 4,000 per tonne (the import parity price) in May 2009. This would have had very serious repercussions on low income groups in Botswana. It is important to note that while world prices were rising dramatically until May 2008 RSA prices were relatively stable and in decline.

This observation, that RSA SAFEX prices were stable and in decline makes the three upper lines in Chart 3 below which is the retail prices of maize meal in Botswana, Namibia and RSA respectively all the more perplexing. While the SAFEX spot price of maize decreased by 14.2% from the beginning of the period in May 2007 until September 2009 from ZAR 1.66 per kg to ZAR 1.48 per kg the Botswana retail price of maize meal as measured by the Central Statistics Office increased from ZAR 4.78 per kg to ZAR 5.50 per kg, an increase of 17% over the same period.

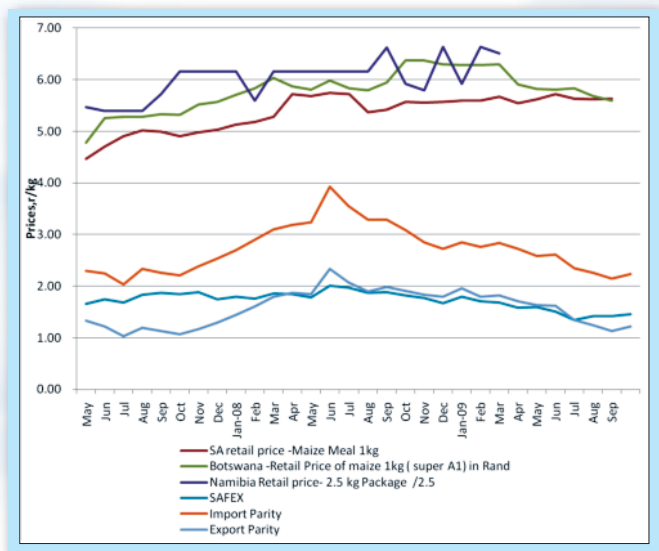
Three other observations are also significant:

- a) The first is that consumer prices are generally considerably higher for maize meal in Botswana and higher still in Namibia than they are in RSA.
- b) Just as significantly is the fact that SAFEX and world prices peaked in June 2008, the retail price did not begin to fall in Botswana until March 2009. However, this is in contrast to the situation in RSA where the retail price peaked in July 2008 and retail prices began falling for several months.
- c) Third, the Botswana margin between the SAFEX spot price of maize and the retail price of maize meal

has increased very substantially indicating the miller to retail margin has increased from ZAR 3.12 to ZAR 4.16 in September 2009. This is a 33% price increase significantly higher than the rate of inflation in Botswana or South Africa.

Chart 3

SAFEX, Import and Export Parity Prices of Maize and Consumer Prices of Maize Meal



Source: SAFEX, USDA, Statistics offices of Botswana, Namibia and RSA. NB Import and Export Parity prices are based on the US dollar Gulf price of Hard Red Wheat. (HRW)

ii) *Wheat and Flour*

The pattern of retail flour prices in Botswana indicates that, unlike maize meal, the retail price is lower than in South Africa and Namibia. The production of wheat occurs in South Africa but it has for many years become a net importer of wheat following its liberalization of the agricultural sector at the end of the apartheid era. Chart 4 shows the price of wheat (hard red wheat, FOB Gulf) and the retail price of flour². Global wheat prices peaked at ZAR3.91 per kg in March 2008 and declined by 65% to a price of ZAR 1.35 per kg by the end of October 2009. Retail prices for flour in Botswana continued to rise until October 2008 when they peaked at ZAR 9.41 per kg in Botswana. Retail flour prices then decreased from October 2008 until September 2009, the last date for which prices are available to ZAR 7.60 per kg, a decrease from the peak of ZAR1.81 while wheat prices decreased by much more from their peak by

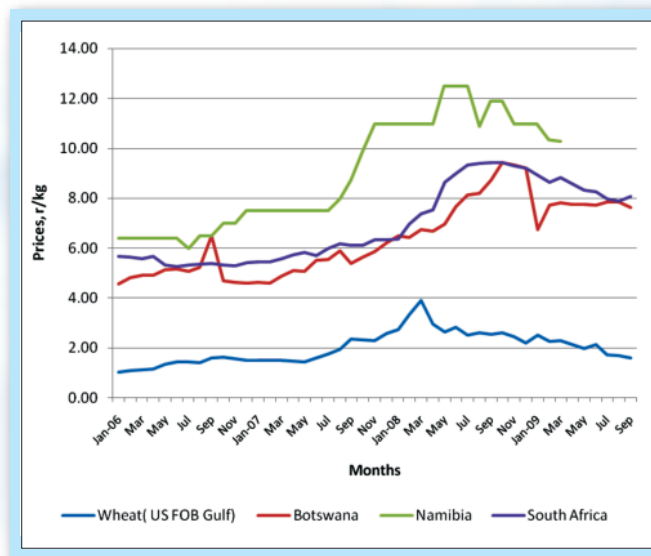
²Given that RSA and Botswana are wheat importers the HRW FOB price rather than domestic prices were chosen as reference prices.

ZAR2.56³. The price adjustment of flour is both delayed for decreases and not as significant as for the underlying input i.e. wheat.

It should be noted that based on data provided by Namibian national statistics offices has considerably higher prices for flour than either Botswana or RSA.

Chart 4

International Wheat Prices and Retail Prices of Flour in Botswana RSA and Namibia (all prices in Rand)



Source: SAGIS, Statistics office of RSA, Botswana and Namibia.

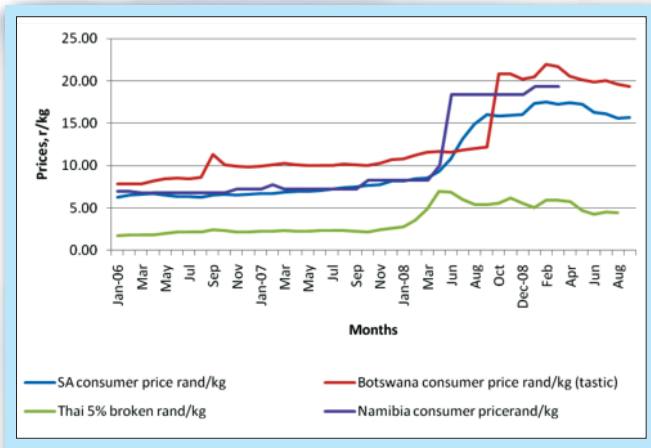
iii) *Rice*

Rice is not produced in any SACU country and is imported from RSA where most rice that is consumed in Botswana is packaged. Rice is packaged, but not processed in both South Africa and Botswana. This is done for commercial reasons as it allows marketing flexibility and enhances brand loyalty. The value chain for rice is very short approximately six weeks from order to final consumer and therefore one would logically expect that retail rice prices follow the international indicator price (Thai 5% broken) more closely than either wheat or maize which have a longer value chain and also tend to have more domestic processing in Botswana as well as in South Africa.

³It takes approximately 60 kg of wheat to produce 42 kg of white flour. This implies that the decrease in flour prices, if it followed costs of production would fall in this proportion.

Chart 5

International Indicator and Consumer Prices of Rice in Botswana, Namibia and RSA



Source: FAO and Statistics offices of Botswana, RSA and Namibia NB The comparator products are 1kg of Tastic Rice

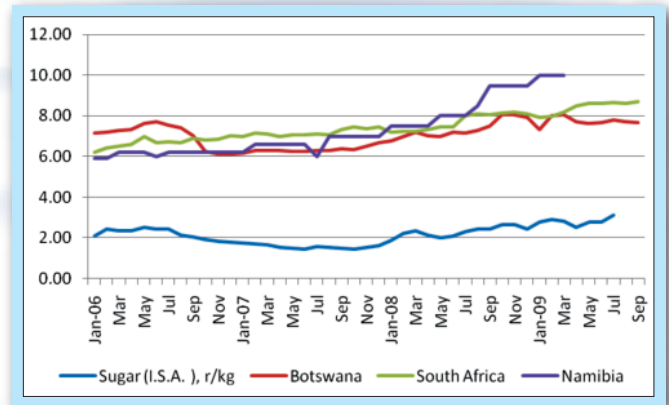
The price data shows that world rice prices increased dramatically and peaked in May 2008 with international market prices at ZAR 6.91/kg. This occurred when India announced the termination of its very substantial rice exports to the world market. While the increase in world prices was very large the impact on consumer prices, as recorded by the respective statistics offices in SACU, was not in proportion to the increase in the cost of the underlying input. Namibia’s rice price increased by ZAR 8 per kg almost immediately after the world market price increased. Botswana’s prices increased by a like amount but only by October 2008. By February 2009 the retail price in Botswana of a 1kg package had risen by ZAR 10 per kg since the beginning of 2008. RSA prices rose but not as rapidly. World prices decreased from the peak of ZAR6.91per kg in May 2008 to ZAR4.44 per kg in October 2009. Consumer prices in Botswana and RSA have decreased by approximately ZAR2 per kg in the same period.

iv) Sugar

Sugar prices behave quite differently from that of other field crops as cane sugar production has its own unique dynamics because the land used for cane sugar is not readily substitutable in most countries for alternative end use. Sugar is also amongst the most distorted global markets because of the traditional intervention by governments in this sector which appears to be more common than that of other field crops. This stems in large part from the traditional treatment of sugar as a luxury product and one that has been heavily regulated since its commencement as an internationally traded good in the 17th century.

Chart 6

International and Botswana, RSA and Namibian Sugar Prices



Source : FAO and Statistics office of Botswana, Namibia and RSA

The chart above indicates that the effect of the global food price bubble that so effected the coarse grain markets i.e. maize, wheat and rice had no perceptible effect on sugar and that despite the global recession that began in the last quarter of 2008 sugar prices did not rise. This is in large measure because the two largest players in the world sugar market are Brazil and India. Climatic conditions have decreased the size of their crop and prices continued to rise in 2009 despite the decline in global demand that accompanied the recession. Little can be inferred about relative prices of sugar in Botswana because the comparator products in RSA and Botswana are of different weight. Statistical offices in Namibia and RSA use one kilo packages and Botswana uses a 2 or 2.5 kilo package.

What is clear from Chart 6 above is that margins between the indicator world price and the retail price of sugar have increased over time. Sugar is highly regulated in RSA with approximately 280,000 tonnes of sugar sold by Swaziland duty free into SACU. Sugar into the SACU market from Swaziland and RSA is governed by an orderly marketing arrangement between the Swaziland Sugar Association and the South African Sugar Association whereby 18.7% of the market is retained by Swaziland and the balance of 81.3% by RSA⁴. Whether such an agreement to divide the market might be deemed by other non-sugar producing SACU members as a restraint of trade is unknown⁵.

⁴Competition Tribunal, Republic of South Africa ‘In the large merger between Mananga Sugar Packers Pty Ltd and Sunshine Sugar Specialities (Pty) Ltd/ MSASA Sugar (Pty) Ltd’ Case No 116/LM/Dec05.

⁵It should be noted that a Sugar Agreement under SADC is pending.

What is clear is that there is a two tiered pricing system for sugar with a higher SACU price and a lower export price because⁶:

‘(exported sugar) is sold at prices below the domestic sugar price because of subsidy-induced production in some major sugar-producing countries’.

The size of the sugar premium paid by SACU consumers, including Botswana consumers over and above the world price of sugar results from the need to protect Swaziland and RSA producers from subsidized sugar producers in developed as well as developing countries. Table 3 below presents the premium paid by Botswana consumers.

Table 3

Estimates of Unit Price of RSA Sugar for the SACU and Export Market in 2007/8

South African Sugar Production (000's t)	2273
Volume of Sales to SACU(000's t)	1363
Volume of Exports (000's t)	910
Revenue from SACU sales (billions of Rand)	5.2
Revenue from Exports (billions of Rand)	2.3
Unit Export Value(rand/kg)	2.50
Unit SACU Value (rand/kg)	3.81

Source: Trends in the Agricultural Sector 2008, RSA, page 36

Why Do Botswana's Food Prices Behave the Way They Do?

This paper is based on a limited survey of four commodities only and hence drawing general conclusions is not possible. These four products are of course very important products in the food basket of Botswana and what is clear is that for these important staples Botswana prices are not necessarily higher than its neighbors. Botswana's retail prices of rice and maize are reportedly higher than that found in RSA but sugar and flour prices are considerably lower than that found in the RSA. Namibia has much higher prices for sugar, flour and maize than Botswana and RSA. It must be recalled that these price comparisons are based on consumer prices collected by the respective national statistical offices and there will almost certainly be differences between the standards used at the point of collection. More importantly, the statistical offices do not necessarily use the same weight or brand, and hence a comparison must be treated with care as the most important determinants of unit price is usually

⁶Department of Agriculture-South Africa (2009), "Trends in the Agricultural Sector-2008", page 35

the size of the package. However, in some cases, such as rice the product and weight used are identical in the three countries.

It is not possible to generalize about Botswana's retail prices in comparison to the those prices paid by consumers in neighboring countries based on this limited sample. However, certain characteristics of price behavior are common to all three countries. The most important is what economists call 'asymmetric price formation' ie prices tend to rise quickly but do not fall at all or fall disproportionately less and much more slowly than they rose⁷.

This phenomenon is common to many countries and has been documented in previous trade cycles in the SACU region⁸. It is well known by economists but it is not well understood and the causes are contested by economists. It is for this reason that one needs to consider what factors inside the market cause this phenomenon which seems to be common to Botswana, Namibia and South Africa. In a truly competitive market where entrepreneurs are free to trade, domestic prices should adjust around world prices. Moreover, in a customs union like SACU where trade is, in theory, free across borders the relatively large price differences between some of the products observed above should result in traders in the low cost market buying the product and selling across borders in high cost countries. So why do prices not adjust or adjust so badly?

a) *Markets for many of these basic products are not competitive.*

The value chain for many of these staples is dominated by a few very large South African transnational corporations which operate in all of these markets. This is true all way along the value chain from fertilizer, to storage through milling transport and finally retailing. The documented evidence of collusion and other anti-competitive practices in South Africa is undeniable and the South African Competition Commission has been aggressively asserting its authority in 2008/9 in the food sector as it became evident that domestic retail prices were not adjusting as world prices fell. Some of the largest fines in South African history were imposed at this time on companies such as Tiger Brands and Food Corp (collusion over bread prices ZAR 99 million and ZAR 44.5 million respectively) for collusive and other anti-competitive behavior. Sasol was fined ZAR 188 million for anti-competitive behavior in the fertilizer sector and Tiger Brands has brought evidence of collusion in the milling sector. At

⁷For those wishing to read more about the subject an excellent review is found in Meyer J and Stephan von Crmaon-Taubadel "Asymmetric Price Transmission: A Survey" *Journal of Agricultural Economics*, Vol. 55(3) 2004, pp.581-611.

⁸See Cutts, M and Kirsten J (2007), "Asymmetric Price Transmission and Market Concentration: An Investigation into Four South African Agro-Food Industries". *South African Journal of Economics*, 74(2), 323-333



the time of writing, investigations were occurring into anti-competitive practices of some of RSA's largest food retailers most of which operate in Botswana and Namibia as well.

b) *SACU creates trade restrictions through high tariffs on some processed food products*

While it would appear that tariffs for the basic unprocessed food staples attract a zero tariff, three of the four products discussed above, maize, wheat and sugar are subject to a dollar based reference price system (DBRP). This is described in the box 1. These dollar based reference price systems are border measures but the formulae, as opposed to the nominal rate, are not published in the SACU tariff schedule. The system used for wheat is presented in the box below but a very similar regime (with a different price) is used to protect farmers in the sugar and maize sectors as well from the effects of competition when commodity prices are particularly low. These reference prices used by RSA have not tended to be very high, though the sugar price was raised in 2009 from USD 330/tonne to USD 358/tonne. In periods of elevated coarse grain and sugar prices as the world is currently experiencing these are not commercially relevant.

Box 1

Dollar Based Reference Price for Wheat⁹

South African domestic grain prices are import parity prices determined on the South African Futures Exchange (SAFEX). The specific customs duty for wheat is calculated as the difference between the domestic reference price for wheat and the world reference price, where the domestic reference price is the long term average US dollar No2 HRW (ord) Gulf price, calculated as USD 157 per tonne, and the world reference price is the 3 week moving average US dollar No 2 HRW (ord) Gulf price for wheat as published by the IWC Grain Market report. When the deviation amounts to more than USD 10 for 3 consecutive weeks, a new tariff is triggered. Adjustments to the tariff are calculated in US dollars and converted to rand against the exchange rate applicable on the day when the adjustment is triggered.

Source: SAGIS

While the tariff on basic food products is low the SACU tariff cascades up the value chain with higher tariffs the greater

⁹It should be noted that the DBRP system differs in its operations between the three commodities.

the degree of processing. This results in a situation where food processors, which possess a considerable amount of domestic market power in SACU are also protected from foreign competition.

Table 4

Tariffs along the Value Chain

Tariffs on Maize & Maize Products

Maize (corn): HS 10.05 Tariff: Free	Maize Meal: HS 1103.13 Tariff: 5%	Maize food preparations (e.g. cornflakes): HS 1904.10 Tariff: 25%
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Tariffs on Wheat & Wheat Products

Wheat: HS 10.01 Tariff: Free	Cereal Grains otherwise worked: HS 11.04.19 Tariff: 20%	Uncooked pasta: HS 1902.10 Tariff: 30%
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Tariffs on Rice & Rice Products

Rice: HS 10.06 Tariff: Free	Rice Flour: HS 11.02.90.40 Tariff: 20%	Groats of Rice: HS 11.03.19.20 Tariff: 20%
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Tariffs on Sugar & Sugar Products

Sugar: HS 17.01 Tariff: Free	Sugar confectionary (chewing gum): HS 1704.10 Tariff: 25%	Sugar Confectionary (other): HS 17.04.90 Tariff: 37%
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Source: SACU Tariff Schedule, 2009

c) *Non-tariff measures on intra-SACU trade*

Tariff measures have been ostensibly developed by RSA to protect its own industry from foreign competition. However, Botswana Lesotho, Namibia and Swaziland (BLNS) have developed their own protective measures. The four BLNS countries, including Botswana make extensive use of non-tariff measures to develop infant industries. Each of the members of SACU maintains a host of measures to protect its own infant industries. The table below outlines the non tariff measures taken by Botswana and Namibia for maize and wheat products.

Non-Tariff Measures for Maize and Wheat Flour

	Botswana	Namibia
Maize	Import Permit required. Traders must buy 50% of their maize meal from local mills. Import permits are also required on maize feed stock.	Import of processed yellow and white maize is prohibited in Namibia. Imports are only permitted after the Namibian maize crop has been harvested, purchased and milled.
Wheat/Flour	Import permits for flour are required under Import Control of Goods Act and there is a 15% levy on imports of wheat flour.	No imports of wheat flour are permitted

Source: SADC NTM Study, 2007 and WTO Trade Policy Review for SACU 2003

d) Commercial barriers to Intra-SACU trade

It should be understood that there exist significant commercial as well as government created measures that restrain intra-SACU trade. In theory SACU, while not a single market, is a customs union. But the reality is that many of the non-tariff measures described above end up creating small national markets in which the firms that operate are usually unable to take advantage of possible economies of scale. This should not be a problem for Botswana as it is part of SACU and there is a market of 50 million people in SACU. In reality even where the non-tariff measures do not exist there exist substantial commercial barriers to producers ever exploiting the full benefits of the SACU market. The reason is that the firms entering the Botswana market are usually South African firms and therefore any subsidiary established in Botswana will not normally be permitted by the parent to export to other SACU countries where they would be in direct competition with other affiliates or the parent company itself. Thus the affiliate or subsidiary in Botswana will only be viable as long as the Botswana government supports measures that brought it here remain in place. Where there is local ownership, as in the case of the supermarket chain 'Choppies', there is evidence that companies that are successful in Botswana are able to expand into other SACU markets and thereby gain the advantage of economies of scale provided by the SACU market. This puts into question the long term economic value to domestic production when the advantage is taken up by subsidiaries of RSA transnational companies. As these RSA subsidiaries cannot export from Botswana to larger markets this means that these infant industries may never attain the economies of scale that would allow the government to remove the incentives that brought them to Botswana in the first place.

Another important commercial limitation is that the large supermarket chains and specialty shops which

operate in Botswana have purchase arrangements with their parent corporations where products for sale must either come directly from their buyers, many of which operate out of RSA and purchase only through the central buying arm of the company or through a limited number of companies, usually themselves affiliates that operate in Botswana. Tariffs and even non-tariff measures cannot explain some of the observed pattern of prices found in Botswana. For example rice is duty free and there are no NTMs applied by either Botswana or Namibia. So why does no arbitrage trade occur when such substantial price differences exist for rice in one market as opposed to another? The reasons are commercial in nature as the owners of brand products will simply not allow their brand to be traded across borders from one supermarket to another. The supermarkets will only purchase from known suppliers and thus there is no room for a market to clear. Arbitrage can only occur in the very long run when new firms enter the market.

Policy Conclusions

What can Botswana do to protect its citizens against the effect of rising international grain prices? The reality is that Botswana is, and is likely to remain, highly dependent upon food imports and hence has to pay the world price for these imported products. Even if these products were produced domestically, which would be very costly, local farmers would expect prices that would cover their costs and would expect to receive prices at least as high as they would obtain if they were exporting their produce. There are simply no short cuts to lower food prices. However, what is in the purview of government is the use of appropriate incentives to develop domestic production as well as competition policy to assure that the market power of food processors is not abused. To that end the government has introduced a new competition policy in Botswana which is to be implemented by a statutory competition authority. Whether that competition authority will be willing to pursue those who abuse their market power with anything like the vigor that the South Africa Competition Commission has done in

recent years is to be seen. The Department of Trade could also monitor and publish domestic food prices for staples which would at least make clear which firms have been raising prices out of proportion with those found on world markets. Lastly the most important policy measure is the appropriate use of trade policy measures to restrict imports of maize meal and wheat flour. Given that these measures, as they pertain to maize, so affect the welfare of lower income groups and help processing and not necessarily farming (Botswana does not grow wheat) which is often controlled by foreign firms the government may wish to give consideration to liberalizing trade in these products.

Lastly the government of Botswana, working with the African group of countries, should request more independent work at the WTO, FAO, Commonwealth and UNCTAD on the impact that bio-fuel mandates are likely to have on the value and meaning of existing commitments by food exporting countries to lower trade distorting measures. Indeed should

there be substantial increases in these mandates as 'peak-oil' production approaches somewhere between 2020-2030 the impact may render as meaningless the agricultural support and subsidy commitments under the Uruguay Round and those proposed in the current Doha Round. Moreover, competing over scarce land and water for food or motor vehicle fuel may dramatically raise food prices in the coming years. BIDPA is working with the South African Bureau of Food Policy on estimates of these impacts.

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Botswana Institute for Development Policy Analysis (BIDPA)
Plot 134, Tshwene Drive, BIDPA House
International Finance Park, Kgale View
Private Bag BR-29
Gaborone, Botswana
Tel. 267 3971750, Fax: 267 3971748
Website: www.bidpa.bw