



**Food and Agriculture Organization
of the United Nations**



**The Use of Trade and Associated Policies in the Eastern and Southern
Africa Grain Sector: The Case of Maize (Paper A)**

**The Impact of Trade and Associated Policies in the Eastern and Southern
Africa Grain Sector: The Case of Maize (Paper B)**

Bernard Kagira

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It comprises two papers prepared by Bernard Kagira under a collaborative arrangement between FAO and the Eastern Africa Grain Council aimed at improving the level of policy dialogue between public and private sector stakeholders involved in the grains markets of East and Southern Africa.

The papers were drafted as background documents ahead of a Consultative Expert Meeting convened by Eastern Africa Grain Council and FAO in Dar es Salaam 2-3 June 2009, where they served to bridge knowledge gaps and to stimulate discussion. They have subsequently been edited to incorporate comments received by workshop participants.

The two complementary papers consider (a) the use of trade policy interventions and (b) the potential impacts of the current policy sets in different countries, and of reforms to policies affecting the grains markets over the past decades.

Both papers draw upon, and synthesise a set of case studies prepared for FAO during 2008, edited versions of which are forthcoming in Sarris, A. and J.A. Morrison (Eds) (2010) Food Security in Africa: Market and Trade Policy for Staples Foods in Eastern and Southern Africa. Edward Elgar, UK

Table of Contents

The Use of Trade and Associated Policies in the Eastern and Southern Africa Grain Sector: The Case of Maize

1	Introduction	4
1.1	Scope of the paper	4
1.2	Opportunity for intra-regional trade in maize grain	4
2.0	Trade Policies and other associated policies in use.....	6
2.1	Trade policies	6
2.1.1	Tariffs	6
2.1.2	Customs clearance procedures	8
2.1.3	Pricing and marketing policies	10
2.1.4	Export/Import restriction.....	13
2.1.5	Non tariff charges.....	15
2.1.6	Food crops taxation	16
2.2	Other associated policies	16
2.2.1	Product quality standards	16
2.1.2	Sanitary and Phytosanitary measures	17
2.1.3	Policies in support of production	17
3.	Summary	18
4.	References	18

The Impact of Trade and Associated Policies in the Eastern and Southern Africa Grain Sector: The Case of Maize

1	Introduction	19
2	The impact of the reforms in pricing and marketing policies	19
2.1	Impact of full reform of pricing and marketing policies	19
2.1.1	Impact on production	22
2.1.2	Impact on exports	23
2.1.3	Impact on monthly trends in price levels	26
2.2	Impact of partial reform of pricing and marketing policies	28
2.2.1	Export and Import restrictions.....	31
3.	Alternative Policy approaches.....	32
4.	References	37

The Use of Trade and Associated Policies in the Eastern and Southern Africa Grain Sector: The Case of Maize

1 Introduction

1.1 Scope of the paper

This paper was prepared as background to a Regional consultation workshop on the use and impact of trade and domestic policy interventions on cereal value chain stakeholders in Eastern and Southern Africa convened in Dar es Salaam, Tanzania, 3 - 4 June, 2009 by the Eastern African Grains Council and the Food and Agriculture Organization of the United Nations under the EU funded All ACP Agricultural Commodities Programme.

The paper draws heavily on the findings of six studies previously commissioned by the FAO in 2008 covering Kenya, Malawi, Mozambique, South Africa, Tanzania and Zambia¹ in an attempt to integrate and summarise the findings at a regional level. These focus countries strand across the three regional integration blocks in Eastern and Southern Africa, namely, COMESA, EAC and SADC.

The paper focuses on the trade policies and associated policies in use in each of the six countries. It defines trade policies as including tariffs, customs clearance procedures; pricing and marketing policies; export and import restrictions; non tariff charges; and food crops taxation. Associated policies include product quality standards; sanitary and phytosanitary measures; and policies in support of production

The paper reflects on the regional integration framework for each aspect of these policies to establish the extent to which there is a regional position on trade and associated policies and the extent to which the sample countries are adhering to existing frameworks.

The paper also provides a comparative analysis of these policies across the six countries, identifying the policies that are facilitative or prohibitory to the regional trade in maize, with a view to contributing to the debate on appropriate trade policy conducive to the development of the region's grain markets.

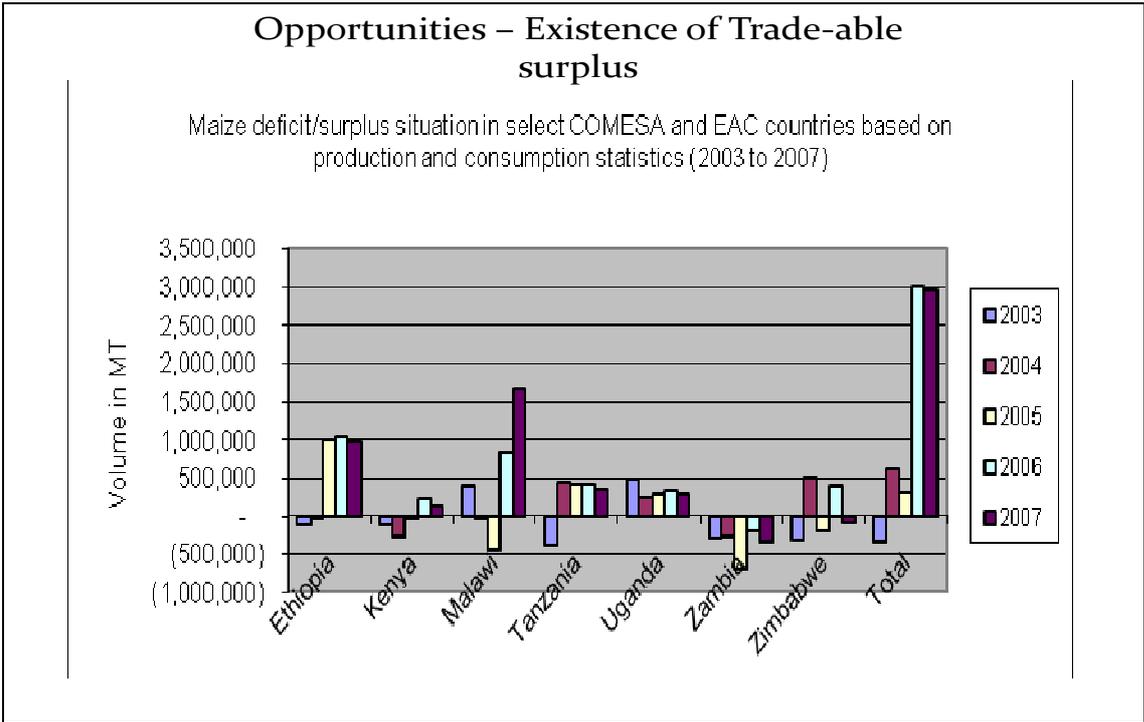
In a second, associated paper, the impacts of policies in use are examined.

1.2 Opportunity for intra-regional trade in maize grain

An analysis of production and consumption figures of maize for selected key maize producing and consuming countries undertaken by RATES and the USAID COMPETE Programme reveals the existence of a tradable surplus of maize in the region. As can be seen in Figure 1, in any one given year during the period 2003 and 2007, there is always a country in the region that has a surplus that could be traded with deficit countries.

¹ Edited versions of the studies are available in Sarris, A. and J.A. Morrison (Eds) (2010) Food Security in Africa: Market and Trade Policy for Staples Foods in Eastern and Southern Africa. Edward Elgar, UK

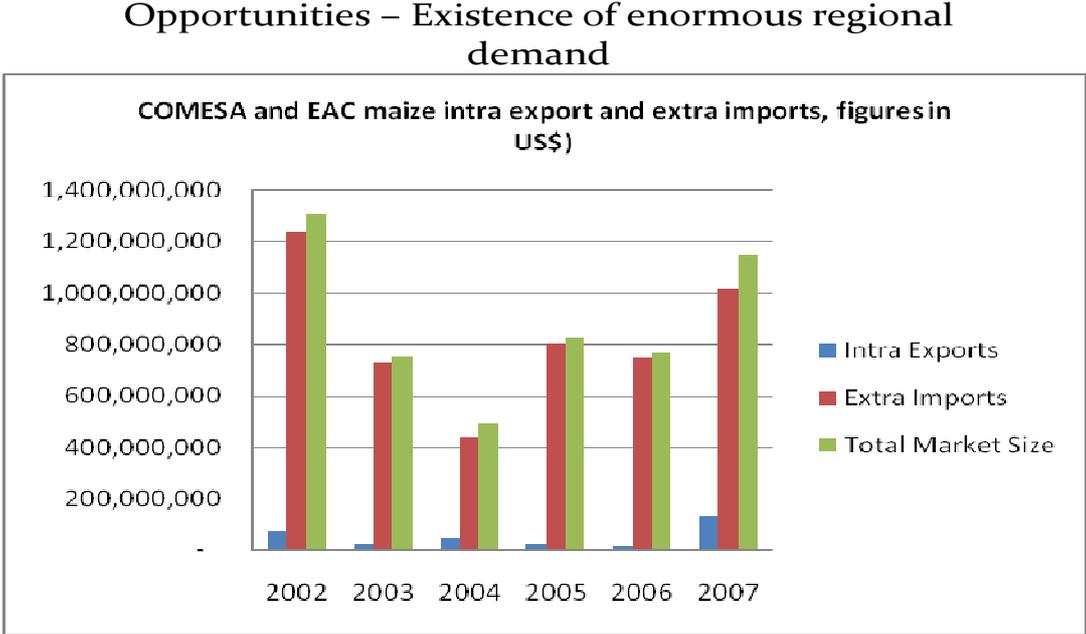
Figure 1 Tradable maize surpluses in COMESA and EAC



Source: RATES/ USAID COMPETE

The RATES and USAID COMPETE programmes have also shown the existence of a significant potential for increases in intra regional trade. At present, the region’s share of trade in the total regional market for maize is less than 2% of the region’s market size. This is evidenced in Figure 2.

Figure 2: Intra- and Extra- regional trade volumes (2002 – 2007)



Source: RATES/ USAID COMPETE

The existence of tradable surplus and regional market potential that is yet to be exploited by regional enterprises is a clear demonstration of the need for enabling regional trade policies that are geared towards the exploitation of the trade opportunity potential. It is in the context of this background that the synopsis of six recently finalized case studies was undertaken. A clear understanding of the trade policies and other associated policies in use is critical to the process of developing an enabling policy environment to stimulate intra-regional trade targeting the unexploited trade potential.

2 Trade Policies and other associated policies in use

2.1 Trade policies

The application of trade policies differs from country to country. Regional policy frameworks in the context of COMESA, EAC and SADC regional integration arrangements cover tariffs (and standards in the case of EAC). The remaining trade policies are governed by national policies, generally aimed at alleviating food security concerns.

2.1.1 Tariffs

In COMESA, the tariff on intra-regionally traded grain is 0% for the Free Trade Area countries, which include Burundi, Comoros, Djibouti, Egypt, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Sudan, Seychelles, Zambia and Zimbabwe.

As noted above, intra-regional trade flow in grains is quite dismal. Table 1 shows that with exception of barley, the COMESA countries share in the regional market ranges between 1% for wheat and 34% for rice. This is a clear demonstration that the 0% import duty on grain has not been an enough stimulus to the intra regional trade, pointing to the existence of other salient trade policies and associated policies that could be limiting intra-regional trade. Despite the low intra-regional trade, the region's demand for grain is quite high, as illustrated by the extra-regional imports, whose share in the regional market is as high as 99% for wheat.

Table 1: COMESA trade in grain – figures in US\$

HS Code	Description	COMESA Region Market Size for Staple Foods in 2007			The region's share in the regional market	Rest of the world share in the regional market
		Intra Exports	Extra Imports	Total Market Size		
100110	Wheat	40,081	2,789,994	2,830,074	1%	99%
100300	Barley	543,837	59,389	603,225	90%	10%
100590	Maize	129,908,731	1,023,606,687	1,153,515,418	11%	89%
100600	Rice	3,839,148	7,575,077	11,414,226	34%	66%
100700	Grain Sorghum	1,424,435	40,417,002	41,841,436	3%	97%
100820	Millet	223,263	987,454	1,210,717	18%	82%

Source: COMESA Data Base

COMESA external tariffs on maize vary across COMESA countries, primarily because COMESA is not yet a Customs Union.

In Zambia, maize grain and maize meal imported from non-COMESA and non-SADC countries attracts customs duty of 15 per cent and 25 per cent on imported maize grain and maize meal, respectively. Besides, import value added tax (VAT) of 17.5 per cent is also charged. Total taxes for imported maize and maize meal to Zambia together add up to 35 per cent and 47 per cent, respectively.

In the EAC, the intra-regional import duty on grain trade is 0%, just as in the COMESA FTA. Extra regionally imported grain, however, attracts common external tariff that ranges between 25% for millet to 50% for maize (refer to table 2 for EAC tariffs on other grains).

In Malawi, the applied tariff on maize grain imported into Malawi from COMESA countries is zero. However, maize meal is subject to customs duty of 10-15 percent for maize imports from non-COMESA and non SADC countries. Maize imports from SADC attract an import duty of 10%. In all cases, maize meal imports are exempt from excise taxes and surtax.

The EAC countries covered in the FAO case studies (Kenya and Tanzania) revealed that the application of the tariffs as prescribed by the regional integration framework. As noted by the Kenyan case study, 'since 2005, Kenya's maize trade policy has stabilized considerably. It has complied with regional initiatives under the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) to eliminate cross-border tariffs within the region and harmonize regional and international trade policies. Since January 2005, the tariff on maize imported into Kenya from Tanzania and Uganda has been limited to a 2.75% government levy. Imports of maize grain from Mombasa continue to attract a 50% tariff. The policy on import tariff for maize and grain in general has targeted protection of the regional market and encouraging intra-regional trade. Just like COMESA, intra-EAC trade in grain is however quite dismal, as revealed in table 2. This is an illustration of the existence of more fundamental barriers in grain trade than tariffs alone.

Table 2: EAC trade in grain – figures in US\$

HS Code	Description	EAC Region Market Size for Staple Foods in 2007			Region's share in the regional market	Rest of the world share in the regional market	Common External Tariff
		Intra Exports	Extra Imports	Total Market Size			
100119	Wheat	470,840	243,670,381	244,141,221	0%	100%	35%
100300	Barley	653,946	1,442,867	2,096,813	31%	69%	25%
100590	Maize	1,908,210	3,960,163	5,868,373	33%	67%	50%
100300	Rice	428	1,139,014	1,139,442	0%	100%	75%
100700	Grain Sorghum	71,910	9,918,913	9,990,823	1%	99%	25%
100820	Millet	284,873	301,748	586,620	49%	51%	25%

Source: COMESA data base

In SADC, the intra-regional tariff on grain is also 0%, with exception of grain imports from South Africa. Under the SADC FTA liberalization program, the tariff on grain imports from RSA is expected to decline from 25% in 2004 to 0% by 2015.

Although the three regional blocks have done very well in eliminating import duties on intra-regionally sourced maize, a regional policy on use of import tariffs as a policy instrument to manage maize trade in instances of projected bumper harvest or shortage is lacking.

Presently if a country determines that it is under threat of hunger, the import tariff is lowered to allow duty free importation of maize from extra-regional sources. For instance, Kenya applied this option in December 2008, when the 50% tariff on extra regionally sourced maize was waived for a period of six months, up to July 2009.

In Zambia, import tariffs have been used to protect the domestic market during instances of excess production or to encourage importation during instances of projected shortage. The government has changed its import tariff rates on maize several times since 1994. Prior to 2004, the tariff rate was at 5% but this was raised to 15% in 2004. During critical domestic maize shortages in 2005, the government waived duty for maize imports in order to cushion maize consumers from high maize meal prices. This policy environment, in which the import tariff can change suddenly, can stymie private traders from importing maize when the situation would otherwise warrant doing so. If traders suspect that the import tariff will be waived later in the year, this means that if they mobilize imports early (while the tariff is in place), they are likely to lose their market later when competing against other firms that can import more cheaply once the tariff is waived. The result of this policy uncertainty is commonly a temporary under-provision of imports during periods when traders wait for the anticipated waiver of the import tariff before importing. Such policy uncertainty in the market can produce a situation in which local prices exceed import parity levels for periods of time, as it did in Zambia's case in both 2001/02 and 2005/06

2.1.2 Customs clearance procedures

a) Customs declaration document

The three regional blocks (EAC, COMESA and SADC) have embraced the Single Entry Document for Customs clearance. To clear maize using this form, the trader is required to fill in all the details and provide accompanying documents – Import declaration form, Certificate of Origin, invoices, import permit (SPS) and standards compliance stamp. This can impose significant restrictions on small traders who are often unable to provide the details required in the form and/or obtain supportive documents.

The case study of Mozambique demonstrates the limitation that this customs declaration document has had, and traders' response to the challenge that it poses. The study notes that 'the importer has to complete and present a pre-declaration document to the customs, together with several other documents before the commodity leaves the country of origin. When the commodity reaches the port of entry, the importer must complete a declaration form, *Documento Único* (DU), which must be accompanied by the pre-declaration certified by the customs, and a document proving that the commodity belongs to the importer, as well as the final receipt. If all is in order, the importer pays the amount that corresponds to the official duty charged for that commodity, and the VAT if that commodity is not exempt.

It is clear that, under the regulation, it is difficult for an informal trader to import maize grain from South Africa, for instance. First, they have to have an importer card, which is not easy

to obtain for an informal trader. Second, to obtain a quotation from a maize supplier (silo), an informal trader would need detailed knowledge of how South Africa maize trade is undertaken.

In view of this challenge, the government introduced a simplified system to import any good through a regulation (Act number 206/98) signed by the Ministry of Planning and Finance of Mozambique on 25 November 1998. Any importer with goods whose FOB value does not exceed US\$500, and who has not imported any goods during the previous 30 days, may have a simplified dispatch granted at the port of entry. In this case, the importer does not have to complete the pre declaration. This simplified system to import seems to be a good option only for the small traders, since with US\$500 it is possible to import from South Africa about three tons of maize grain.

In Zambia, imports and exports are controlled through the Customs and Excise Act (GRZ, 1955). This regulation requires that importation be accompanied by the relevant licenses, permits, certificates and other legal documents. Under the same Act, limited quantities of maize and maize meal meant for consumption are not subjected to any documentation. This is commonly known as the “one-bag rule”. Traders abuse this provision by employing youth gangs to cart grain across borders one bag at a time.

Though a Single Entry Document (SED) is required for custom clearance for COMESA countries, Kenya has additional requests for other information that makes it difficult for traders to fill these forms, which delays custom clearance. Before being cleared through customs, one might need a combination of the following forms: (i) original invoice; (ii) Import Declaration Form; (iii) Pre-Shipment Inspection (Clean Report of Finding-CRF); (iv) Certificate of Origin; (v) Phytosanitary Certificate; (vi) Quality Standards Certificate (issued by KBS); and (vii) Safety Standards Certificate, among others. Small traders who cannot meet the requirements of these customs documents opt to use the non commercial import forms, which allow limited quantity of the product to be imported at each time. Although the system is meant for goods of non commercial use, traders are using it to cart the maize through the borders using bicycles.

The EAC and COMESA has developed a Simplified Trade Regime (STR) which is aimed at addressing the limitation which small traders face in using the current customs clearance system. In COMESA the STR is in the form of a simplified customs document and simplified certificate of origin, while in EAC the STR is in the form of a simplified certificate of origin. Both regimes are at the nascent stages of implementation. COMESA and EAC Partners States are yet to adapt the STR in to their official Customs Clearance procedures. The step taken by Mozambique to gazette the simplified customs systems is the direction that the COMESA and EAC STR require countries to take and to provide capacity building traders and customs officials on their use.

b) Certificate of Origin

A Certificate of Origin is required in order for maize imports to be allowed into any of the EAC, COMESA and SADC countries. Although the six studies, with the exception of the Tanzania study, did not provide details of administration of the certificate of origin, issues of interest to trader relates to information that they are required to provide in order to get the certificate and accessibility to the certificates. The Tanzanian case study observed that for a trader to obtain a certificate of origin from the issuing agency – Chamber of Commerce, a fee of TSh 20,000 has to be paid. Such a certificate has two pre-requisites: a phyto-sanitary

certificate and a sales agreement/contract specifying the crop being sold for delivery outside Tanzania. The study notes that, although it is only a single day's process, all exporters across the country, even those at border towns with Kenya and Uganda, have to obtain the permits and certificates from Dar-es-salaam – the capital city, sometimes as far as 2000km away.

2.1.3 Pricing and marketing policies

Pricing and marketing policies are perhaps the most widely used instruments for encouraging production and trade of maize. These policies have been driven by food security and political concerns rather than by business objectives. Over the years, each country's pricing and marketing policy regimes have been tested and found wanting. The six case studies have documented the evolution of these policies in each of the countries. In this paper we focus on salient features of these policy regimes with a view to drawing lessons for action planning.

South Africa

South Africa's experience with pricing and marketing policies reveals a full cycle from a highly controlled regime to a market driven regime. The controlled policy regime is traced to 1968, when the country established a pricing and marketing system and the Maize Board to administer the single-channel fixed price scheme for maize. The maize farmers were only allowed to market their goods through the Board or a licensed agent at prices set for the year by the Board.

The wind of change, driven by changes occurring at the macro level generated pressure for reform of the pricing and marketing policies for maize. For instance the deregulation of the financial sector dictated liberalization of output prices. As noted in the case study, "the change was spirited under the 'White Paper' on Agriculture of 1984, which established production, marketing and food self-sufficiency goals". Therefore the following policy reforms were consequently pursued: -

- ❖ Maize Board shifted away from cost-plus pricing procedures towards more market-based pricing systems.
- ❖ Shift to pool-type pricing for maize in 1987.
- ❖ Reduction in the use of price controls and registration requirements as instruments of marketing policy. For example, in mid-1980 the prohibition on the erection of maize grain silos was repealed
- ❖ Price controls on maize meal and fixing of millers' margins were removed in 1991/92 fiscal year

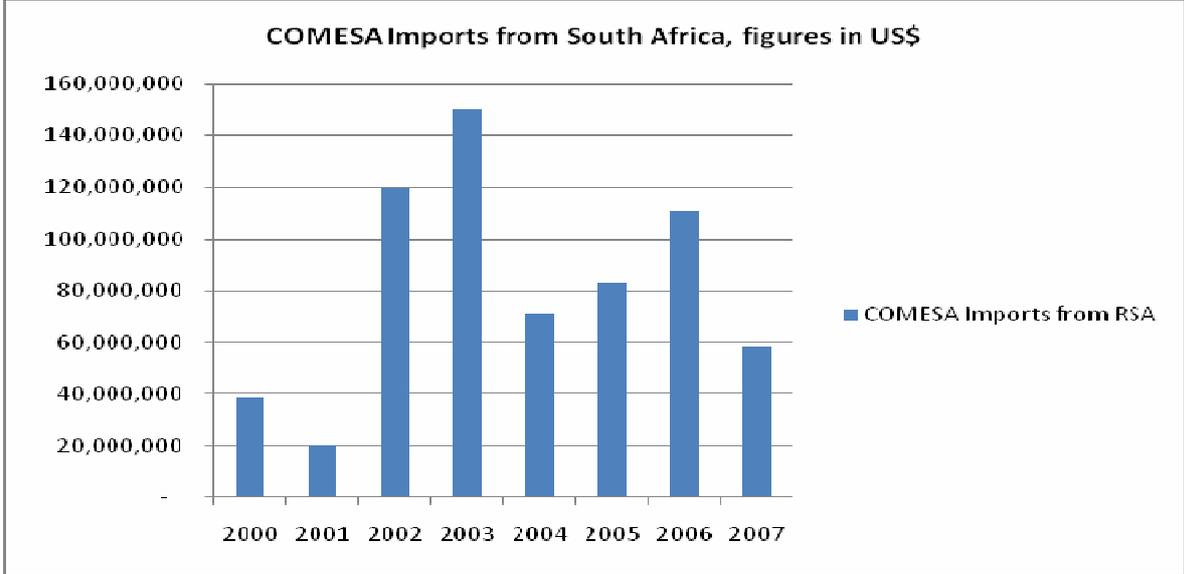
Further liberalization in the maize marketing were stimulated by the 'White Paper' on Agriculture of 1995, which stood for transparency and inclusiveness of all market participants and advocated for market oriented product marketing and limited role of the government in fixing of price. This led to enactment of the 'Marketing of Agriculture Product' Act 47 of 1996, which sought to improve market access, agricultural efficiency, and to optimize export earnings through the creation of market-driven marketing system. As a process towards implementation of this legislation Maize and Wheat Boards were abolished, leaving prices in both industries to be based entirely on negotiation between market actors.

The South African Futures Exchange (SAFEX) was established in 1997 and the trading of derivatives (futures and options) was introduced. This is the only formal future market where extremely high volumes (the national maize crop is traded over ten times – this implies that each ton of maize in South Africa is bought and sold ten times on the futures market) are

traded through this market. It is regarded as the “benchmark” for the prices that market actors ask or offer in the ‘spot’ market of daily trading in maize. SAFEX also reports fixed transport differentials to various destinations in the country; consequently, the spot price for a region is derived from the SAFEX price minus the transport differential.

These policy reforms have contributed to South Africa being a net exporter of maize into the region, as evidence in COMESA imports of maize from South Africa for the period 2000 to 2007.

Figure 3: COMESA maize imports from South Africa (2000 – 2007)



Malawi

In Malawi, maize pricing and marketing policies has over the years been characterized by price and marketing controls, which have been central to the country’s maize policy. The price and marketing policy regime has undergone reforms, triggered by the Structural Adjustment Programs (SAPs) of 1980s.

As noted in the Malawi case study, maize marketing has been progressively liberalized although ADMARC remains one of the main players in the marketing of maize. This followed the government’s abolishment of the monopsony power of ADMARC and liberalisation of the marketing of smallholder agricultural produce.

Pricing policies for maize had evolved from a fairly controlled regime to the current regime where the Malawi case study noted that the price of maize ‘is liberalized and the private sector is able to set the buying and selling price of maize’. At government level, pricing policy is focused on setting the price at which ADMARC buys maize from farmers, while allowing flexibility for ADMARC to set prices for selling maize. The motivation for setting buying prices is ‘the perception that the private sector exploits smallholder farmers by offering lower buying prices – hence, ensuring that smallholder farmers get better returns from maize farming which in turn can promote the commercialisation of maize’.

Liberalization of marketing and pricing policies generated competition from private traders, which coupled with the decline in subsidization from the Central Government, weakened the ability of the stating marketing Agency. Although, the Agency continues to implement government pricing policy by offering better prices than small-scale private traders, it hardly

buys maize from smallholder farmers due to lack of funds. For instance, as observed in the Malawi case study ‘in the 2005/06 season, although ADMARC bought the maize from farmers at a government announced price of MK20 per kilogram while private traders were buying maize from farmers at MK15 - MK17 per kilogram, it only managed to buy about 70,000 metric tonnes because it had run out of money’.

This is a clear demonstration of the role of private sector in offering clearing market prices which the farmers require in order to continue producing the commodity. It is also a pointer to the need to develop the private sector market in order to ensure the existence of an uptake capacity at the harvest time so that farmers are not disappointed. Private sector investment in storage facilities, especially in view of the reduced role of ADMARC is very critical as a market response to the market and pricing liberalization policy.

Tanzania

In Tanzania, the government has liberalized the marketing and pricing of maize. Consequently, maize marketing is now a key responsibility of the private sector². The role of the government is being seen as to strengthen competition. In Tanzania, since liberalization, it is widely accepted that, though liberalized, the food market is still performing sub-optimally due to lack of strong regulatory mechanism, poor rural infrastructure (rural roads, markets, processing and storage facilities), and organization in the local grassroots especially village level marketing.

The Tanzania case study notes that in exercising this responsibility, the government facilitates procurement, in some areas, in order to promote quality, advocacy for rationalization of levies. The government also facilitates the collection and dissemination of market information.

The government recognizes the opportunity for trade in maize aims to ensure that cross border trade in food grains is legalized, facilitated and encouraged. However, food security and especially grain self-sufficiency imperatives often challenge the government to implement conflicting policies.

Kenya

In Kenya, the current marketing and pricing system for maize is as a result of a liberalization process through the Cereal Sector Reform programme, which began in 1987/88. The marketing and pricing regime was characterized by:

- The Government set producer and into-mill prices for maize and set maize meal prices to be sold by millers and retailers to consumers. These prices were pan-territorial and pan-seasonal, adjusted once per year at the beginning of the marketing season.
- The government marketing board (the National Cereals and Produce Board (NCPB)), had a longstanding monopoly on internal and external trade.
- Informal private trade across district boundaries was illegal, as was cross-border trade. Traders were required to apply for movement permits to allow them to transport grain across district boundaries.

² There is opportunity to capitalize on marketing and price controls internally, the establishment of various buying centers as well as warehouse receipt system indicates a high potential for linking producers with major trading centers within and outside their localities.

The Kenya case study notes that ‘the reform process intensified in late 1993, when, under pressure from international lenders, the government eliminated movement and price controls on maize trading, deregulated maize and maize meal prices, and eliminated direct subsidies on maize sold to registered millers (Jayne and Kodhek, 1997). By 1995, private traders were allowed to transport maize across districts without any hindrance’.

It is however important to note that the reforms have been marked by frequent and usually unanticipated changes in trade tariffs, quantity restrictions, and regulatory changes facing private traders. The discretionary policy tools used by the government to influence market prices and supplies, and which raised market uncertainty for traders include: (i) frequent and unannounced changes in maize import tariff rates; (ii) export bans; (iii) the behaviour of the NCPB, in particular the prices it sets for maize purchase and sale, and the funds allocated for this purpose by the Treasury, which then determine the extent to which the NCPB can defend its official pricing structure and influence market prices; and (iv) regulatory changes regarding the amount of freedom the private sector was permitted in maize marketing.

Zambia

In Zambia, the government has resumed its former heavy role in maize purchasing. The Food Reserve Agency has opened over 600 buying depots in the country to buy maize from smallholder farmers at pan-territorial prices far above wholesale market prices (e.g., \$192 per ton in 2006 and \$186 in 2007). Therefore, although in principle the private sector is allowed to engage in maize trade, the risks associated with heavy government involvement discourage private sector investment along the value chain.

Mozambique

Mozambique’s maize marketing and pricing policies was until 1987 handled by a state marketing board called AGRICOM. This marketing board had a mandate of being the buyer of last resort of producer surpluses. The reform program of 1987 brought about the current marketing and pricing regime. As a result of the reform, the state owned agricultural marketing board (AGRICOM) was abolished. In its place, the Cereal Institute of Mozambique (ICM) was created.

In the late 1990s, restrictions on maize grain movement across districts and provincial boundaries were removed. Previously, a license was needed to move grain from the Central to the Southern region. This was the practice in use, especially for cash crops such as cotton

2.1.4 Export/Import restriction

All of the case studies show the impact of maize export and import restrictions as a policy tool that has been applied in all of the countries at some point in time. Seasonal import restrictions have been used to protect domestic market against competition from imported maize grain. On the other hand, export restrictions tend to be pursued during seasons of projected maize short fall, for food security concerns.

In Malawi, although maize is not on the list of restricted products requiring an import license, it is subject to regulated imports. The Malawi case study noted that ‘in most cases, the importation of maize is normally done by government through a tendering process. The private sector is sub-contracted to import maize into the country through a government tender whenever there are expected shortfalls in its domestic supply. Once the maize is in the country, the government makes it available in all areas at a subsidised price through a well-established network of a state-owned enterprise, ADMARC. In view of this, it is very difficult

for private traders to import large quantities of maize in a private arrangement and find a market for it at a commercial price. The increases in formal imports of maize typically occur when the domestic supply has been affected by poor harvest due to floods, drought and other natural disasters.

On the other hand, the export of maize is restricted and is subject to intermittent export bans and export licensing. Maize export licensing has always been imposed, even after the phasing out import and export licenses for other crops and products. Within the regime of export licensing, the authorities also impose intermittent export bans, particularly prompted by poor harvests. Effectively, the period of the export ban on maize are longer and only small windows exist when the export ban is lifted, because government seldom issues export licenses.³ Thus, whether the ban is lifted, export licenses are always required for maize exports. The policy of export bans and export licensing is bound to be continued as government strive to avoid a food crisis similar to the 2001 when maize exports were liberalized.⁴

The food shortages of 2004/05 season and improved harvest in 2005/06 season were fundamentals behind the imposition of a ban on the export of maize. The ban was lifted in May 2007 following the anticipated record maize harvest from the 2006/07 season. The lifting of the maize export ban has allowed up to 400,000 metric tonnes to be exported mainly to Zimbabwe. Maize exporters have to obtain a licence from the National Food Reserve Agency.

In Tanzania, both imports and exports of major food crops are subject to licensing. An exporter has to have a time bound permit, normally of one-month, stipulating the quantity allowed for the exportation. The food security department as the manager for Strategic Grain Reserve (SGR) advises the government on food security matters and on import/export policy and procedures. In this respect, the Department determines whether or not any of these three major grains (maize, rice and wheat) needs to be exported or imported, taking into consideration the effect of either decision on domestic production. To control excessive depletion of food reserves, the trader is issued with the clearance on consignment basis only. The effect of this has been an increased illegal grain trade particularly where producers are close to external borders.

In Zambia throughout the post-liberalization period, Zambia retained control over the flow of maize imports and exports through the Control of Goods Act, Agriculture Regulations (GRZ, 1954). This legislation is relied upon to restrict strategic food exports whenever the country experiences shortfalls in the production of maize. The issuing of permits has become much tighter since 2005. The Ministry is allocating export quotas and permits to FRA and agribusiness associations on a selective basis. This change in policy is forcing individual traders to affiliate with associations in order to utilize the relevant association's permit. In South Africa trade of maize, prior to 1991/92 was subjected to import and export licensing and quotas. This was replaced in 1992 by a system of tariff protection based on a tariff band

³ In any case, even when the ban is pronounced lifted export are subject to export licensing, and what the authorities do is never to grant export licenses to exporters – effectively imposing an export ban.

⁴ The export of maize in 2001 by the National Food Reserve Agency (NRFA) before information of the 2001 harvest created immense political problems for the government. This contributed to the food crisis in the 2001/02 season, leading to massive humanitarian operations (IMF, 2002). There were arguments about the role of the international financial institutions, particularly in the advice of the International Monetary Fund (IMF), in the 2001/02 food crisis (Devereux, 2002).

formula which delivers a tariff only when world prices fall below a reference price set at a level of US \$110/ton based on free-on-board US Gulf ports.

South Africa's experience demonstrates that complete abolition of export/import restrictions is feasible in certain contexts. Behind this policy shift is 'the system of tariff protection based on a tariff band formula. In order to implement these trade reforms, key institutions were established or restructured. These include:

1. International Trade Administration Committees (ITAC): established under the International Trade Administration Act of 2003. This committee replaced the Board of Tariffs & Trade (BTT) as the tariff body for SACU. Its primary function includes calculation and/or structuring of current tariffs as well as the promulgation of anti-dumping regulations.
2. Directorate: Food Safety & Quality Assurance: this unit is within the Department of Agriculture and is responsible for standardizing quality norms for grains and grains products for both domestic and export markets as well as regulating and administering chemicals used within the grain sector.
3. Directorate: South African Agricultural Food, Quarantine and Inspection Services: this unit within the Department of Agriculture is responsible for enforcing the application and adherence to the quality standards set by the Food Safety and Quality Assurance Directorate within the domestic market.
4. Perishable Products Export Control Board (PPECB): this assignee of the Department of Agriculture is responsible for the inspection of grains intended for export markets as well as the enforcement of standards regarding Food Hygiene and Food Safety of Regulated Agricultural Food Products of Plant Origin. The South African Agriculture Food Quarantine and Inspection Services audits the PPECB inspection activities.
5. Department of Agriculture: Division of Plant Health and Quality establishes phytosanitary standards for the grain sector.
6. Department of Health: responsible for administrating, compiling and publishing legislation relating to food safety of grain products sold locally and/or imported into the country.

A key lesson to draw from the experience of South Africa's reform of the maize marketing is the need to ensure that there is an institutional structure to carry through the reform agenda.

2.1.5 Non tariff charges

Maize imports are generally subjected to non tariff charges. A review of the six studies indicates that there is no regional policy on non tariff charges which bind EAC, COMESA and SADC countries. Each country is therefore free to introduce the charges as it deems fit. The only guiding framework is the WTO GATT agreement which discourages imposition of tariff like charges on imports.

Among the six studies, only the Tanzania case study had an elaborate analysis of the non tariff charges which maize imports are subjected to. The details are summarized in Table 3.

Table 3: Summary of Non-tariff Requirements for Importation

Non Tariff Item	Description	Charges	Estimated Cost per 1 tonne US \$
Pre-inspection charges	Pre-inspection by COTECNA for goods of value greater than US\$5000. Requires completed Import Declaration Form (IDF)	1.2% of FOB.	1.74
Phyto-sanitary charges	Phytosanitary certificate and fumigation (if required) Post entry plant quarantine station inspection	US\$15 per export consignment.	15
Port Wharf age fees	Paid to Tanzania Harbours Authority for goods while docked or leaving port.	1.5% of CIF	2.61
Tally Fee	Payable to the Shipping Agency	US \$1 per ton	1
TFCB Booking Fees	Tanzania Central Freight Bureau (TFCB) fee - for enforcing fair freight charges for exports and imports.	2.5 % FOB or CIF	3.63
Clearing Agents Fees	Agent Fee	Negotiable as a % value of goods	
	Documentation fees	TSh 100,000 (estimated)	78.43
Loading and unloading	Re-bagging, transport, silo charges etc.	US 20 per tonne	20
Health and food safety standards	Tanzania Foods and Drugs Authority Permit processed in Dar.	TSh 1000. Additional testing fees.	.78

A regional policy on non tariff charges is desirable in order to ensure that non tariff charges do not negate the objective of zero rating intra-regional trade.

2.1.6 Food crops taxation

Among the six studies, only the Tanzanian case study revealed application of food crop taxation. This is at the local government level where the Authority taxes both export and food crops. The effect of taxation is the reduction of farmers' revenue from crop sales because traders buy at lower prices to compensate for the taxes. The level of taxation varies across districts because taxes are collected by Local Government Authorities (LGAs). LGA's levies or cess were partly responsible for the low shares of producers' income from trade. In the 1992 Finance Act, the Government directed LGAs not to tax agricultural products in excess of 5 percent of farm-gate selling price.

2.2 Other associated policies

2.2.1 Product quality standards

There is an indication in each of the six countries studied that trade in maize is subjected to quality standards requirements. The EAC has a standard that was agreed upon in 2005 and it is the one which Kenya and Tanzania, and indeed all the other EAC countries are applying. There has been attempt at the by EAGC in collaboration with EAC and COMESA to

harmonize the EAC and COMESA maize standards. This process is ongoing under the EAC/COMESA/SADC tripartite arrangement.

In the meantime, all other EAC countries are applying national standards on maize imports. According to the Malawi study, the general quality standard requirement is that the maize should be fit for human consumption. Malawi requires that maize should meet the following quality aspects: maximum of 14 percent moisture content, maximum of 2.6 percent of foreign matter, maximum of 11 percent of broken grains, aflatoxin of 3ug per kilogram and 100 kilogram bagging (RATES, 2003). Compared with other COMESA countries, the Malawi standard has fewer quality requirements and the standards are less restrictive to trade (RATES, 2003).

The ideal situation as far as standards are concerned would be a regional (EAC/SADC/COMESA) maize standard, in support of intra-regional trade in maize.

2.1.2 Sanitary and Phytosanitary measures

Compliance with Sanitary and Phytosanitary measures is a mandatory requirement for international trade in agricultural produce. Thus maize imports are expected to comply with the SPS measures that are prescribed by the importing country. The six studies confirmed that SPS regulations are indeed administered on maize imports, without going into the details of SPS issues in facilitation of intra-regional trade in maize.

SPS issues that are pertinent to intra-regional trade in maize include SPS specifications and measures, SPS documentation and administrative procedures, accessibility to SPS services, institutional capacity – presence at exit points, among others.

At the regional level, SPS policy is also pertinent as a framework for national SPS systems. The studies did not cover this vital angle which is critical to ensuring that SPS measures are facilitative to intra-regional trade.

COMESA has made some move to address SPS issues at regional level through the COMESA SPS Protocol. EAC is in the process of developing an SPS protocol. The challenge is in implementation of the COMESA SPS protocol, in principal to operationalize the green channel system for select products. This will be a useful model of EAC to adapt as it proceeds with the development of the EAC SPS Protocol.

2.1.3 Policies in support of production

Stability of the maize trade policies depends to a large extent on the ability of any country to meet the domestic demand for this staple crop. As demonstrated in all of the case studies, the tendency in all countries is to depend on domestic supplies. The import of maize from a food security point of view is treated as a last resort response to a shortfall in a country's maize requirements.

Production policies are therefore pertinent and an important aspect to consider in view of the correlation between stability of trade policies and availability of maize. In this paper we provide synopsis of the production policies as documented in the case studies with a view to drawing lessons for informing future policy formulation.

The production related policies cited in the case studies as having been instrumental to increased production of maize grain in the region include those associated with credit and

input delivery systems, seed production and distribution policy framework, agricultural extension services, research and development and post-harvest handling

3. Summary

The paper has provided a synthesis of trade and related policies used in East and Southern African Grains markets. It has highlighted instances where these may deviate from existing regional frameworks. In stressing the significant potential for increases in intra-regional trade, it notes that tariff measures alone do not appear to be a significant factor in constraining this potential. Rather, a complex of often ad hoc interventions and non tariff barriers are identified as key constraints to increased trade in grains within the region, suggesting a rationale for further rationalisation and harmonisation of such measures.

The paper served as an input to a consultative workshop convened by FAO and EAGC in June 2009 and as the basis for an associated paper on the impacts of trade and associated policy use on the region's grain markets.

4. References

The paper synthesised findings from the following case studies:

Maize trade and marketing policy interventions in Kenya - Joshua Ariga and T.S. Jayne

Assessment of maize trade and market policy interventions in Malawi - Ephraim W. Chirwa

Alternative staple food trade and market policy interventions: Country level assessment of South Africa - Lulama Ndibongo Traub and Ferdinand Meyer

Maize trade and marketing policy interventions in Tanzania - Andrew E. Temu, Appolinary Manyama and Anna A. Temu

Assessment of alternative maize trade and market policy interventions in Zambia - Jones Govereh, Antony Chapoto, and T.S. Jayne

Current Mix of Policies in Place in Mozambique and its Impact on Food Markets: The Case of Maize Grain - Danilo Carimo Abdula

The Impact of Trade and Associated Policies in the Eastern and Southern Africa Grain Sector: The Case of Maize

1 Introduction

This paper, drawing on six case study examples from Eastern and Southern Africa⁵, highlights both the positive and negative aspects of existing trade and associated policies and impacts brought about by reforms.

Acknowledging that an improved understanding of the impact of trade policies on intra-regional trade plays an important role in countries seeking to leave the comfort zone of the restrictive trade policies and to embrace more enabling trade policies, the paper first contrasts the implications of comprehensive reform programmes with those related to more partial reforms.

It then provides a series of avenues for further research and debate, aimed at improving the level of dialogue as to the appropriate set of agricultural trade policies for the region's grain markets

2 The impact of the reforms in pricing and marketing policies

Reforms in pricing and marketing policies can be divided into two categories. The first category includes the complete reform in the pricing and marketing policies leading to total reliance on markets to determine prices and to stimulate supply. This is the case in South Africa. The second category includes partial reform, where pricing and marketing policies have been liberalized, thus allowing the private sector to play a key role in the maize trade, while reserving the right for the State marketing Agency to intervene for purposes of food security. This is the case in the other countries reviewed.

The impacts of these two categories of policy changes are assessed at different levels of the value chain, as documented in the six studies.

2.1 Impact of full reform of pricing and marketing policies

South Africa provides an example of a country that has undertaken extensive reforms (as documented in the associated paper on the use of trade policies in the ESA region). Reforms commenced in 1984 and deepened in the mid 1990s. Table 1 provides a summary of the impacts of specific components of the reform programmes on different stakeholder groups.

As illustrated in the table, reforms began with the White Paper of 1984, which established production, marketing and food self-sufficiency goals in order to ensure that factors of production would be used optimally as well as to achieve economic, political and social development and stability. The production objective was to maintain potentially productive land for agricultural purposes. The marketing goal was to pursue orderly marketing while considering the principles of the free market system. The food self-sufficiency objective was to protect large-scale producers from international competition through direct subsidies.

⁵ South Africa, Zambia, Kenya, Malawi, Tanzania, Mozambique

Table 1: Impact of full reform of pricing and marketing policies in South Africa

Value Chain level	Relevant Domestic & Trade Policy	Impact
Producers	<p>Marketing of Agriculture Product Act of 1996 & White Paper on Agriculture 1984 and 1995 <i>Removed both direct and indirect subsidies to commercial maize grain farmers; removed pan-territorial and pan-seasonal pricing.</i></p>	<ul style="list-style-type: none"> • Resulted in a change in cropping patterns – with a shift away from maize grain and into higher value commodities. Increased irrigated land use was observed. • Producers faced with a variety of methods for selling their grain; these include, pool system, back-to-back options, outside purchase, and/or hedging through SAFEX
	<p>Land Reform – LRAD & CASP Programs <i>Restoring traditional lands seized under the apartheid regime</i></p>	<ul style="list-style-type: none"> • Resulted in decrease in area planted to maize as well as adoptions of improved technology in order maintain/increase yields.
	<p>Labour Relations Act; Basic Conditions of Employment Act; Skills development Act Employment Equity Act <i>Applied labour laws to farmer workers and established a minimum wage.</i></p>	<ul style="list-style-type: none"> • Resulted in a decline in total employment on the commercial farms, a switch from labour-intensive to capital-intensive farming practices, and an increase demand for skilled workers
	<p>Tariff Dispensation on Maize <ul style="list-style-type: none"> • Currently set at 0% tariff rate on maize grain seed • Removed quantitative restrictions and specific duties with tariffs </p>	<ul style="list-style-type: none"> • Encouraged use of hybrid seeds • Resulted in producers exposure to international maize markets
Storage Industry	<p>Marketing of Agriculture Product Act of 1996 & White Paper on Agriculture 1984 and 1995 <i>Removed price control, and maize boards control over storage cooperatives.</i></p>	<ul style="list-style-type: none"> • Resulted in former storage cooperatives converting into joint-equity companies which are closely tied to producers through their provision of inputs, insurance, financing, etc.

Value Chain level	Relevant Domestic & Trade Policy	Impact
Traders/Retailers	<p>White Paper on Agriculture 1984 and 1995 Subsidies and territorial and pan-territorial pricing <i>Removed both direct and indirect subsidies to commercial maize grain farmers; removed pan-territorial and pan-seasonal pricing.</i></p> <p>Trader registration <i>Removed requirements on trader registration, as well as restrictions on grain movement.</i></p> <p>Tariff dispensation <i>Removed quantitative restrictions and specific duties with tariffs</i></p>	<ul style="list-style-type: none"> • <i>Traders faced with a variety of methods for selling their grain; these include, pool system, back-to-back options, outside purchase, and/or hedging through SAFEX</i> • <i>Resulted in entrance into market by both domestic and multinational grain trading companies</i> • <i>Reduced risks associated with seasonal quantitative restrictions and thus encourage private sector investments in this segment of the value chain</i> • <i>Development of the secondary market for maize</i>
Processors	<p>White Paper on Agriculture 1984 and 1995</p> <ul style="list-style-type: none"> • <i>Removed requirements on miller registration, restrictions on grain movement, and control on maize marketing margins.</i> • <i>Tariff Dispensation on Maize - Currently set at 5% on maize meal and/or hulled, pearled, sliced or kibbled.</i> 	<ul style="list-style-type: none"> • <i>Processors are faced with a variety of methods for procuring maize grain; most common method is a forward contract.</i>

Source: Sources: Essinger et al., 1998; Kirsten, et al., 2006.

To concretize these objectives, the following policy measures were pursued:

- Maize Board shifted away from cost-plus pricing procedures towards more market-based pricing systems.
- Shift to pool-type pricing for maize in 1987.
- Reduction in the use of price controls and registration requirements as instruments of marketing policy. For example, in mid-1980 the prohibition on the erection of maize grain silos was repealed.
- In 1990/91,
 - ✓ Price controls on maize meal and fixing of millers' margins were removed.

- ✓ A system of tariff rate quotas replaced import and export licenses as well as quotas for maize and wheat grain.
- ✓ Maize and wheat farmers received a final direct subsidy in the form of a drought relief payment.

Further impetus for policy reform in the maize sub-sector was imbedded in the White Paper of 1995 which called for transparency and inclusiveness of all market participants; product marketing to become market orientated; and price-fixing by the government to be limited. The following specific policy measures were pursued in fulfilment of this aspiration: -

- Reconstruction and Development Program (RDP), which sought to mobilize the country's resources towards the final eradication of apartheid and the development of a democratic non-racial country was adopted.
- Department of Agriculture developed the Broadening Access to Agriculture Thrust (BATAT) – aimed at achieving the goals of the RDP through land reform as well as the redirection of government support away from commercial farmers towards small-scale subsistent and newly emerging black commercial farmers.
- ANC Policy Document on Agriculture was drafted – the overall goal of this document was to ensure food security. Three goals were established; (1) removal of most agricultural marketing boards except in cases of strategic commodities such as maize, (2) removal of uniform national pricing of commodity prices, (3) government regulation of agricultural commodities was limited to instances of monopoly power, food insecurity, world market conditions, or to promote agro-industrial linkages.
- Maize Board activities were scaled down to buyer of last resort.
- South Africa became a signatory, thereby becoming party to, all WTO agreements including the Agreement on Agriculture (AoA) and Sanitary and Phytosanitary (SPS) Agreements
- In 1995/96 the following policy measures were pursued: -
 - ✓ Marketing of Agriculture Product Act 47 of 1996 – primary goal of this act was to improve market access, agricultural efficiency, and to optimize export earnings through the creation of market-driven marketing system.
 - ✓ SAFEX Agricultural Markets Division listed its first commodity; physical settled beef contract.
- In 1996/97: -
 - ✓ Maize and Wheat Boards were abolished, leaving prices in both industries to be based entirely on negotiation between market actors.
 - ✓ SAFEX introduces trading derivatives (futures and options) for white maize, yellow maize and wheat.

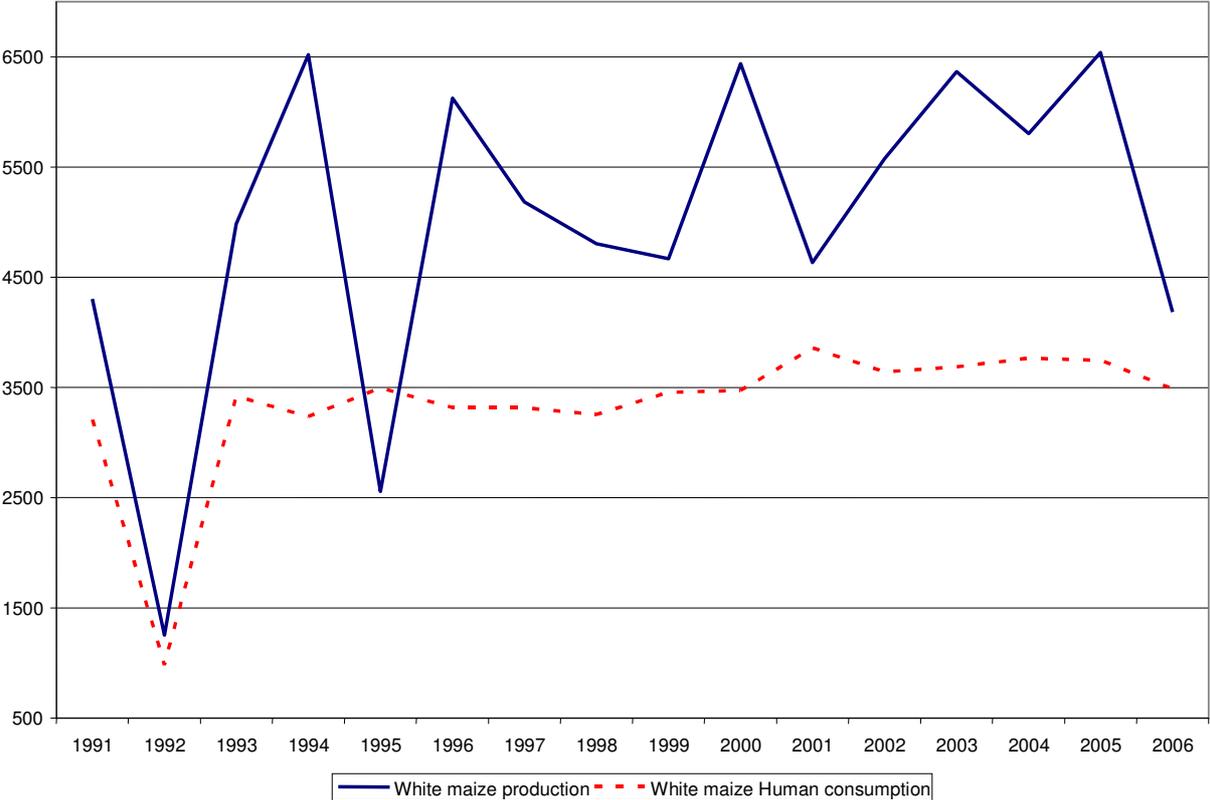
2.1.1 Impact on production

Although it is difficult to establish causality between reforms and production levels, as Figure 1 shows, production has been higher than the domestic consumption of white maize throughout the reform period. This clearly demonstrates that domestic producers were able to meet domestic consumption needs despite the transition from a controlled to a free-market system.

The transition from a controlled marketing to an increasingly free-market system made it imperative that domestic producers adopted improved technology as well as farming practices

in order to remain competitive. To accomplish this, the practice of planting to marginal land stopped while there was a significant increase in the maize area planted under irrigation. In the 1980's the total area of maize planted was approximately 4 million hectares; this decreased to less than 3 million hectares by the late 1990's. However, despite the decline in area planted, production remained relatively constant (and even increased) while average maize production became relatively more stable.

Figure 1: South Africa white maize production and consumption (figures in metric tonnes)



2.1.2 Impact on exports

After deregulation, exports to the top ten destination markets increased tremendously to 90.6% compared to 78.3% for the period before regulation, indicating an increasing level of concentration in terms of export volumes to certain global markets. As shown in table 2, the mix of recipient countries changed, with more maize going to the regional market. As a result, approximately 72% of total maize exports was exported towards African countries compared to 2.7% under the pre-reform period. The change in the make-up of export markets can be attributed to various factors. For instance, the major reason for increased intra-regional exports is the drastic decrease of exports towards Japan (from 41.1% to 10.8% and the increase of exports towards Zimbabwe (from 2.7 to 39.9%). Further factors include; the removal of sanctions within the Southern African region, and South Africa's involvement regional and continental agreements such as the New Economic Partnerships for African Development (NEPAD), African Union (AU), and SADC.

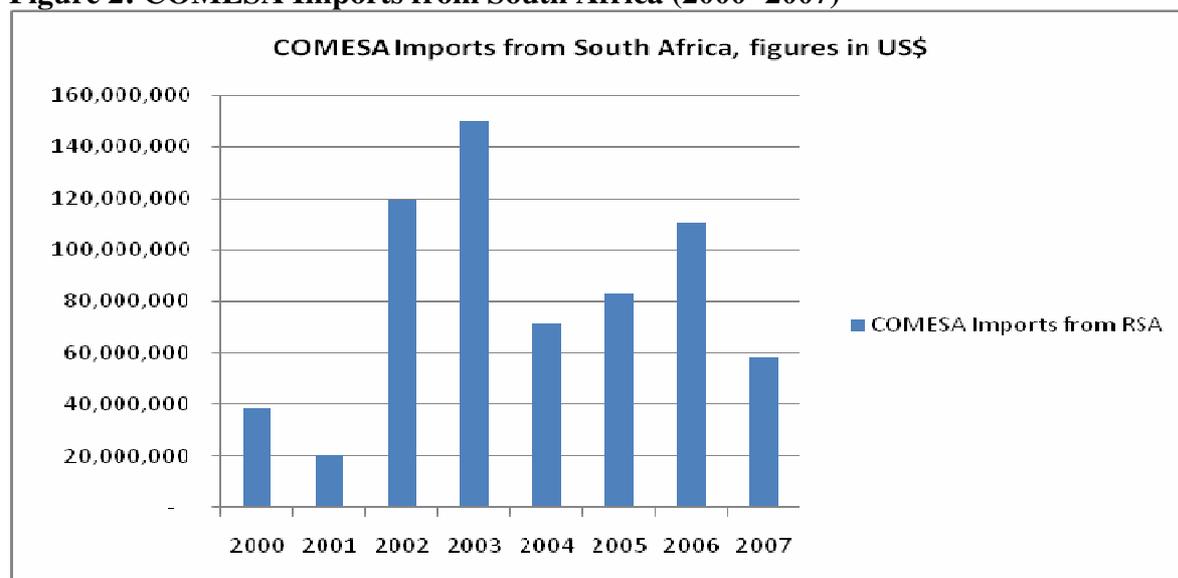
Table 2: The main international markets for maize grain by share

Pre-deregulation (1988 – 1996)		Post-deregulation (1997 -2006)	
Country	Average Market Share (%)	Country	Average Market Share (%)
Japan	41.1	Zimbabwe	39.9
Iran	8.6	Kenya	10.9
Malaysia	5.7	Japan	10.8
Kenya	4.7	Zambia	8.3
Korea	4.5	Mozambique	5.8
Taiwan	3.2	Malawi	4.6
Venezuela	2.8	Iran	2.9
Zimbabwe	2.7	Angola	2.8
Indonesia	2.5	Venezuela	2.7
Mexico	2.5	Tanzania	2.0
Top countries	78.3	Top countries	90.6

Source: SADC Trade Database (as quoted in the South Africa case study)

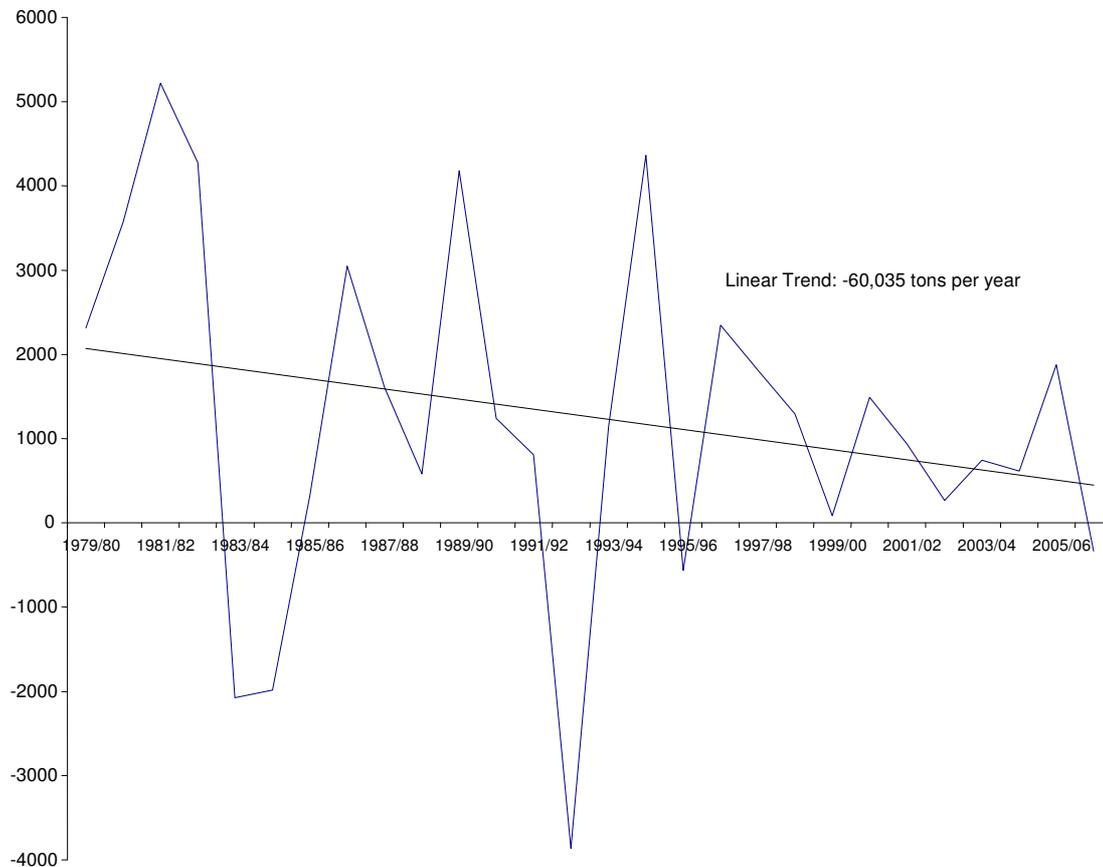
These policy reforms have contributed to South Africa being a net exporter of maize into the region, as evidence in COMESA imports of maize from South Africa for the period 2000 to 2007 in Figure 2

Figure 2: COMESA Imports from South Africa (2000- 2007)



Trade reforms in the maize sub-sector may also have had an impact on the balance of trade in terms of maize grain and products. Figure 3 demonstrates the movement in net export volumes of maize grain and products.

**Figure 3: Net Exports of Maize Grain and Maize Meal - South Africa
1979/80 to 2006/07 ('000 MT)**



Source: SAGIS, <http://www.sagis.org.za/> (as quoted in the South Africa case study)

As observed in the South Africa case study, it is clear from Figure 3 that South Africa's maize grain sector generates a trade surplus in terms of maize grain and products. It is only in years of drought, that a maize deficit occurs (marketing years 83/84, 92/93, 95/96 and 2006/07).

However, despite maintaining a trade surplus, net export volumes have been decreasing at an average rate of 60,035 metric tons a year throughout the observation period. When the period is divided into a pre-reform (1979/80 to 1996/97) and post-reform (1996/97 to 2006/2007) periods, the rates of decline in net exports vary significantly. In the pre-reform period, net exports decline on average by 99,809 tons per year, compared to 51,000 tons per year in the post-reform period. This indicates that the rate of decline in net export volume has slowed following full market deregulation and trade policy reform. This reduction in the rate of decline in net export can be largely attributed to two factors, namely; improved technology and changing consumption patterns as well as political developments of the 1990s. International politics played a role as well.

2.1.3 Impact on monthly trends in price levels

Following the removal of price controls and the opening of the South African economy, producer⁶ and wholesale⁷ prices decline over the observation period, while retail⁸ maize meal prices exhibited an upward trend.

Overall, the regression results provide evidence of real producer and wholesale prices declining over the post-reform period. Time-trend coefficients for both series imply that the average monthly decline in producer and wholesale maize grain prices were 0.21% and 0.09% per month; respectively, after the removal of price controls in 1991. In terms of real retail maize meal prices, the regression results imply an increasing trend following market reform. The coefficient estimate on the post-reform time trend indicate an average monthly increase in retail maize meal prices of 0.11% per month.

Monthly trends in price levels

The phase out of price controls and the opening of the South African economy triggered a decline of the producer⁹ and wholesale¹⁰ prices over the period May 1976 and December 2007. Theoretically producer and wholesale price decline is a manifestation of increased productivity, which although the South African case study did not document it, may be as a result of increased investment in capital intensive technology in production of maize coupled with the urge for producers to attain international competitiveness given that demand in south Africa was not sufficient to absorb maize production.

The retail¹¹ maize meal prices, however, exhibited an upward trend over the same period. Though no technical explanation was given in the South Africa case study, this is a manifestation of the market structure at the processing and retail level of maize meal, coupled with cost structures for processing. Ideally as the producer prices decrease, the retail maize meal prices should decline as well. To understand the reasons behind increase in retail maize prices, there may be a need to establish whether the maize meal also targets the international market or merely the domestic market and the extent to which the domestic market for maize meal is shielded from external competition through tariffs and non tariff measures.

The figure below depicts the movement of CPI deflated monthly average producer, wholesale and retail prices in the maize market between May 1976 and December 2007. The figure divides the sample period into three phases of marketing policy. Phase 1 represents the

⁶ Producer from 1975 to 1996/97 prices are from the Maize Board South Africa. From 1997/98 onwards, producer prices are estimated as the SAFEX/Randfontaine monthly spot price minus the median transport cost from various production points to Randfontaine as published by SAFEX.

⁷ From 1975 to 1994/95 marketing seasons, wholesale prices were defined as the Maize Board's controlled selling price to millers. From 1995/96 onwards, millers' procurement cost of maize grain is approximated as the maize spot prices quoted monthly on SAFEX.

⁸ Retail prices were obtained from the Maize Board Annual reports from January 1975 to April 1994, and thereafter from the Central Statistical Services of South Africa (StatsSA) and the National Agricultural Marketing Council.

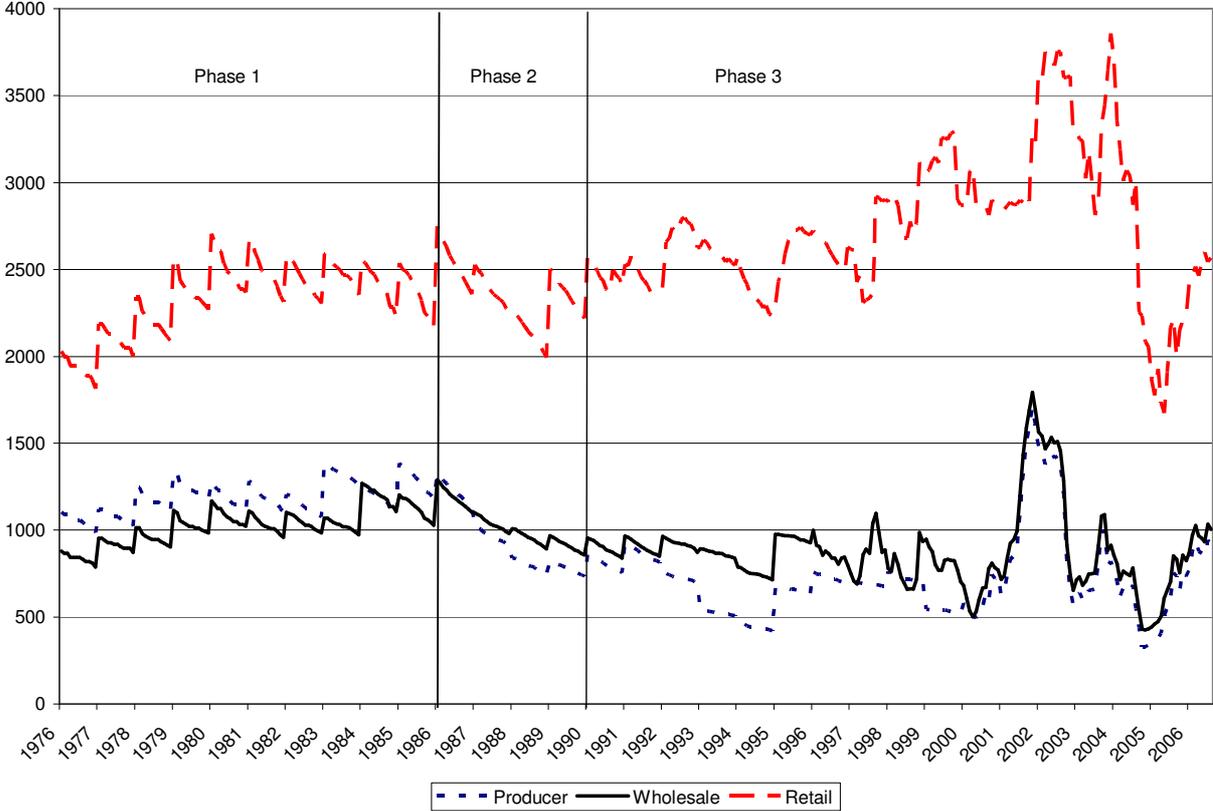
⁹ Producer from 1975 to 1996/97 prices are from the Maize Board South Africa. From 1997/98 onwards, producer prices are estimated as the SAFEX/Randfontaine monthly spot price minus the median transport cost from various production points to Randfontaine as published by SAFEX.

¹⁰ From 1975 to 1994/95 marketing seasons, wholesale prices were defined as the Maize Board's controlled selling price to millers. From 1995/96 onwards, millers' procurement cost of maize grain is approximated as the maize spot prices quoted monthly on SAFEX.

¹¹ Retail prices were obtained from the Maize Board Annual reports from January 1975 to April 1994, and thereafter from the Central Statistical Services of South Africa (StatsSA) and the National Agricultural Marketing Council.

Control Period in which maize was marketed under a single-channel fixed price scheme; Phase 2, the Partial Reform period in which Maize Board eventually became the buyer of last resort; and Phase 3, the Full Reform period where retail price controls were removed, Maize Board dismantled, and South Africa became signatory to the WTO.

Figure 4: Producer, Wholesale and Retail Maize Grain and Meal Prices, South Africa, May 1976 to December, 2006 (Constant 2000 rands)



Source: Traub and Meyer (2008)

Price variability

The pricing and marketing reforms appeared to have had no consistent effect on producer and wholesale price variability. This evidenced in the results of the analysis of price variability. The South Africa case study noted that ‘between Phase 1 and Phase 2 periods, average monthly producer prices declined by 30 percent and became slightly more volatile, while wholesale maize grain prices declined by 9 percent and became less volatile. During the same period, average monthly retail prices remained roughly constant and became less volatile. In the Phase 3 period, from May 1991 to December 2006, the decontrolled average producer and wholesale prices declined even further in real terms while both become substantially more volatile. The coefficients of variation for producer prices increased from 9.8 to 35.2 as we move from Phase 2 to Phase 3, and 7.0 to 26.8 for wholesale prices. These increases in volatility indicate increasing price risk to both producers and grain traders. This outcome is not surprising, since the grain industry underwent extensive structural adjustment between Phase 2 and Phase 3. During the transition from Phase 2 to Phase 3, market reforms included the removal of miller registration, the scrapping of price control on maize meal as well as maize marketing margins, and the establishment of the maize board as the buyer of last resort. However, while price variability clearly increases between the two periods, it is not possible to use the data presented to determine precisely what portion of increased price variability

may be attributed to government program and policy changes. To do so, one would have to control for other factors such as production levels, seasonality, and time trends’.

The retail maize meal prices were observed to have become more variable and to have steadily risen. ‘In the past 12 years of the sample period (1994 to 2006), real maize meal prices were 20% higher than they were prior to price deregulation in 1991, and were more than 3 times higher than the wholesale price of maize grain’.

Price volatility seems not to have deterred private sector response to the pricing and marketing reform because despite the increased price volatility, private sector investment within the grain sector expanded after market reform. The study noted that, ‘industry experts point to increased export opportunities as well as the introduction of innovated marketing processes (i.e. commodity trading on SAFEX) as major reasons underlying increased investment within the sector (Kirsten, et. al., 2000)’.

2.1.4 Impact on market performance

Marketing Margins¹²

The average/retailing margins increased following the policy shift from a controlled marketing system (phase 1) into an open, market-orientated system (Phase 3). The South Africa case study showed that between Phase 1 and Phase 2 periods, the average margin increased by 9% whereas, between Phase 2 and Phase 3, the maize meal price deregulation period (5/1991 - 4/1994), the average margin increased by approximately 27%.

Since maize meal is considered a staple food, particularly among the poor, the upward trend in monthly maize marketing margins is indeed worrisome. Although more empirical research needs to be conducted to better understand the market structure and price formation in both the milling and retail sectors other studies, however, have asserted that a concentrated market structure may be partially responsible.

2.2 Impact of partial reform of pricing and marketing policies

Other than in South Africa and Mozambique, in the other four countries studied (Kenya, Malawi, Tanzania and Zambia), the State grain marketing agency has played a role in the pricing and marketing of grain. Whereas these countries have made significant reforms by reducing the role of these agencies and introducing a marketing structure that allows the private sector to participate in maize trade, these agencies through government support intervene in the maize market for food security reasons. They enter the market to buy grain for the strategic reserve of to normalize the prices.

The studies have recorded negative impact of these agencies’ involvement in the maize market. They therefore contrast with South Africa’s case where such control was done away and which could serves as an example for the region as to the elimination of such controls in certain contexts. We document examples of the negative impact of such controls below.

¹² Methodology based on Lulama Ndibongo Traub and T.S. Jayne’s approach to examining the impact of price deregulation on marketing margins within the South African maize grain sector.

Table 2: Impact of pricing and marketing policies under partial liberalization regime

Country	Nature of pricing and marketing	Impact
Zambia	Maize price set by ADMARC.	<ul style="list-style-type: none"> • The policy has benefited a few farmers that have been fortunate to sell their maize to ADMARC before ADMARC runs out of money. It has also benefited small-scale traders that bought the maize at lower prices. • The setting of higher prices by government inevitably increases the price of maize when ADMARC is actively involved in the purchase of maize and makes maize from ADMARC more expensive in the lean season. For instance, the maize that ADMARC procured at MK20 per kilogram in the 2005/06 season was being sold at MK30 per kilogram when the private sector was selling maize between MK10 – MK15 per kilogram.
Kenya	The NCPB still continues to exert a major indirect effect on maize prices and therefore smallholder welfare by setting prices it buys maize from the farmers at harvest season	<ul style="list-style-type: none"> • Between 1995 and 2005, the NCPB's operations raised wholesale market prices by 17 to 20 percent (Jayne, Myers, and Nyoro (2006)). Over this period, the NCPB cumulatively purchased 30% more grain from farmers than it has sold to millers and other domestic buyers. Hence the NCPB's operations contributed to tightening of the supply-demand balance in domestic markets, which had a price-raising effect on wholesale markets. • Secondly, the NCPB has generally set its purchase prices above those in domestic markets, which also would put upward pressure on local market prices. This has contributed to making the maize grain prices in Kenya amongst the highest in the Eastern and Southern Africa region • The liberalization process in Kenya has created additional risks for private investment associated with the uncertainty over the eventual dispensation of NCPB assets. Private investment in dedicated capital outlays, such as storage facilities, has been impeded by the high degree of uncertainty over the disposition of the NCPB's storage facilities and other assets. New private investment in storage facilities could be vulnerable to huge losses if the NCPB continued to be a major player in the market, offer prices to farmers and millers that did not rise through the marketing season (pan-seasonal prices), and set a narrow margin between its buying and selling prices that was covered by the treasury – all of which happened during much of the 1990s.
Tanzania	The government has liberalized marketing and pricing of maize. Consequently, maize marketing is now a key responsibility of the private	The role of the SGR has gradually diminished. Competition from private marketers and traders, as a result of the liberalization policy, is a force to reckon <i>In</i> Tanzania, since liberalization, it is widely accepted that, though liberalized, the food market is still performing sub-optimally due to lack of strong regulatory

Country	Nature of pricing and marketing	Impact
	sector. The role of the government is being seen as one of strengthening competition.	mechanism, poor rural infrastructure (rural roads, markets, processing and storage facilities), and organization in the local grassroots especially village level marketing.
Zambia	Heavy role of government in maize purchasing ¹³ . The Food Reserve Agency has opened over 600 buying depots in the country to buy maize from smallholder farmers at pan-territorial prices far above wholesale market prices (e.g., \$192 per ton in 2006 and \$186 in 2007)	<ul style="list-style-type: none"> • First, marketing board costs escalated as the scale and complexity of their activities increased. Losses consisted of two types: those which government forced on the board by mandating it to carry out activities that were unprofitable but fulfilled “social” functions like buying maize at above-market prices in remote areas (which encouraged maize production expansion), and those related to operational inefficiency (which probably had little effect on smallholder maize production). Pan-territorial pricing was particularly burdensome in Zambia, since it raised the share of grain delivered to the boards by smallholders in remote (but often agronomically high-potential) areas where transport costs were high. Stockpiling white maize, a consequence of government preoccupation with maize self-sufficiency, was also costly (Howard and Mungoma, 1996). Operational inefficiency and allegations of corruption were widespread. • The treasury costs of state fertilizer and maize marketing operations were so large that they contributed to macroeconomic instability and hyperinflation (Jansen and Muir 1994). Zambia’s National Agricultural Marketing Board’s operating losses were roughly 17% of total government budgets in the late 1980s (Howard and Mungoma 1996). • Zambia’s agricultural liberalization period from 1990 to 2004 presents a picture of declining maize production and rising production of many other crops, as farmers substituted maize for these other crops when subsidy program faced limitations..
Mozambique	In late 1990s, restrictions on maize grain movement across district and provincial boundaries were removed. In 1991, Cereal markets were liberalized, with the abolition of the minimum prices for maize and several other commodities.	Emerging evidence in the North of the country that informal traders in rural areas had begun to compete with some of the previous monopolists in cereals. This was more visible in provinces such as Zambezia and Nampula, provinces with high production of maize grain,

¹³ The rationale behind the renewed government involvement in maize marketing has been to provide renewed production incentives for maize and to become self-sufficient in the primary staple food

2.2.1 Export and Import restrictions

All the case studies show maize export and import restriction as policy tools that have been applied in all the countries at some point in time. Seasonal import restrictions have been used to protect domestic market against competition from imported maize grain. On the other hand, an export restriction might be pursued during seasons of projected maize short fall, for food security concerns. The table below gives the impact of these policies as documented in the six case studies.

Table 3: Impact of export/import restriction on maize exports

Country	Current Status	Impact
Kenya	Export ban imposed in December 2007.	Although this action was very critical in resolving the maize crisis of 2008, it introduces risks among the farmers and traders.
Malawi	Export of maize is restricted and maize is subject to intermittent export bans and export licensing. Maize imports, though not restricted are regulated. Only ADMARC is allowed to import. Private sector is normally subcontracted to import an allocated amount. Once the maize is in the country, the government makes it available in all areas at a subsidised price through a well-established network of a state-owned enterprise, ADMARC	<ul style="list-style-type: none"> • These policies are highly unpredictable. The periodic export bans have sent mixed signals to the private sector. • Effectively, the period of the export bans on maize are longer and only small windows exist when the export ban is lifted, because government seldom issues export licenses.¹⁴ Thus, whether the ban is lifted, export licenses are always required for maize exports. The policy of export bans and export licensing is bound to be continued as government strive to avoid a food crisis similar to the 2001 when maize exports were liberalized.¹⁵ • With exception of 2000 in which more maize was exported, Malawi was a net importer of maize for the period 1990 to 2005. <p>In view of this, it is very difficult for private traders to import large quantities of maize in a private arrangement and find a market for it at a commercial price.</p>

¹⁴ In any case, even when the ban is pronounced lifted export are subject to export licensing, and what the authorities do is never to grant export licenses to exporters – effectively imposing an export ban.

¹⁵ The export of maize in 2001 by the National Food Reserve Agency (NRFA) before information of the 2001 harvest created immense political problems for the government. This contributed to the food crisis in the 2001/02 season, leading to massive humanitarian operations (IMF, 2002). There were arguments about the role of the international financial institutions, particularly in the advice of the International Monetary Fund (IMF), in the 2001/02 food crisis (Devereux, 2002).

Country	Current Status	Impact
Mozambique	The government has continued to issue export licenses and sometimes impose export bans on maize periodically, particularly in periods of food shortages.	Such export bans have largely affected the formal sector, while informal trade has thrived under such conditions. There is a lot of informal cross-border trade in maize, particularly maize from Mozambique entering into Malawi through the southern borders. For instance, FEWSNET (2005) estimated that informal imports of maize from Mozambique to Malawi amounted to 55,930 metric tonnes between April and September 2005. Imports from other neighbouring countries within the same period were low - 1682 metric tonnes from Tanzania and 70 metric tonnes from Zambia.
South Africa	Export/import licensing of maize was abolished under the cereals sector reform program	This has reduced risks in the maize sub-sector and consequently encouraged investments along the value chain = production and trade.
Tanzania	Both imports and exports of maize are subject to licensing. An exporter has to have a time bound permit, normally of one-month, stipulating the quantity	This policy has encouraged informal cross border exporting and importing of maize, often at high transaction costs.
Zambia	The Authority control over the flow of maize imports and exports through the Control of Goods Act, Agriculture Regulations (GRZ, 1954).	The issuing of permits has become much tighter since 2005. The Ministry is allocating export quotas and permits to FRA and agribusiness associations on a selective basis. This change in policy is forcing individual traders to affiliate with associations in order to utilize the relevant association's permit.

The critical challenge for all the countries practising export restrictions or bans is the ability of the markets to ensure availability of maize, especially during periods of poor harvest. Malawi, for instance, has had several bad experiences of completely opening up maize export trade, leading to severe shortages and leading to massive costly imports. In addition, availability of maize in Malawi is a highly political issue, with free exports of maize that lead to shortages in domestic supply being taken as government's deliberate policy to starve its population.

3. Alternative Policy approaches

Reflecting on the potential impacts of different policy interventions used in ESA countries, the final section of this paper sets out a number of areas for further consideration and research

1. Nurture the development of risk shifting market institutions

The region needs to tap the potential for using market-based instruments to manage food sector risks. For example, the Kenya case study observes that 'there has been little use to date of these instruments in low-income countries for a number of reasons'. The issues to address in development of risk shifting market institutions include: -

- Contract enforcement, which is said to be difficult for food staples in times of local shortage.

- Lack of the market intelligence systems, grades and standards systems, communication systems, storage and marketing infrastructure, and experience and education to use these markets effectively.
- Basis risk, which is said to be another major impediment to both futures and options trading and index-based weather insurance.
- Continued government interventions in food markets. These policies are said to reduce or destroy the incentive to participate in market-based risk management mechanisms because there is no incentive to manage risk when prices are being effectively stabilized via policy, and because such policies tend to disconnect local prices from world prices which reduces the hedging potential of the global markets. Furthermore, if government interventions are discretionary and difficult to predict then they can add another layer of risk that individuals and firms may find difficult to hedge using available market-based risk management instruments.

2. Phase out maize export/import restrictions

Maize import policy: the import licensing requirement for maize should be phased out. This is likely to have a positive effect on food security by augmenting domestic supply. First, free importation of maize will allow stakeholders, particularly the private sector, to respond quickly to food shortages. Second, imports of maize can introduce competition which may benefit domestic farmers by providing incentives to adopt more productivity enhancing farming methods. In cases, of domestic maize surpluses and if a country is an efficient maize producer, imported maize may not have depressing effects on domestic price of maize. Finally, pressure put on government budget will ease as the market forces deliver the required maize.

Maize export policy: The region should build a regional marketing platform that allows free movement of maize to facilitate flow of maize from the surplus to the deficit countries. The phase-in of this regional marketing platform should include elimination of export bans and gradual replacement of export licensing system with a functional regional maize market network system.

This in part requires better organisation of private grain traders with credible mechanisms to monitor the supplies of grains available in the domestic economy. Improved cooperation between the government and the private grain traders based on mutual trust, can improve the exchange of information that may allow a more flexible export regime for maize.

3. A more transparent and consultative framework for public-private sector dialogue

One which moves toward greater coordination and predictability in government behaviour. Regular consultative meetings between the Ministries of Agriculture and Finance, millers, traders, farmer lobby groups, and other stakeholders in the sector can build trust and communication between the public and private sectors that is needed to reduce market risks and promote long-term investment in the maize value chain.

4. Public good investments to support the development of food markets.

Markets require investments in public goods to function effectively – roads, rail systems, port facilities, solid regulatory frameworks to support the development of transport, communication, and financial services, crop science and farm extension services to help farmers increase surplus production and fuel market expansion. Reallocating budget

resources from price supports to cost-reducing / productivity-enhancing investments may better provide incentives for surplus-producing farm households to intensify food production and raise their incomes while simultaneously benefiting net-purchasing rural households and urban consumers through lower food prices. As observed in the Kenya case study, public investments that have a proven track record in terms of enhancing crop productivity include agricultural crop research and development (Byerlee and Eicher, 1997; Howard and Mungoma, 1996; Oehmke and Crawford, 1996; Alston et al., 2000), investments in physical infrastructure to reduce marketing costs (Antle, 1983), and well-structured extension programs (Evenson and McKinsey, 1991).

5. Streamlining regulations and trade barriers for international trade

Regional trade, in combination with good transport infrastructure between countries, has the potential to expand the size of the market, increase the elasticity of demand facing farmers, and reduce price instability. Local production shocks can be mitigated by regional trade, which tend to stabilize markets by linking together areas with covariate production. It is therefore imperative that the following trade regulatory requirements be streamlined to ensure that intra-regional trade is facilitated with efficiency: Customs documents and clearance procedures; standards and SPS specifications and application procedures.

Streamlining the regulatory processes for regional trade can reduce downside price instability that often depresses farmer incentives to sustain their use of productivity-enhancing cash inputs.

6. Develop warehouse receipt systems

Warehouse receipt systems offer another alternative for facilitating private storage, as well as helping farmers and traders get better access to formal credit markets and improving the efficiency of the food marketing system in general (Lacroix and Varangis, 1996; Coulter and Onumah, 2002; Coulter, 2005). Warehouse receipts are already widely used in grain marketing systems around the world to provide secure collateral for credit and as an instrument for delivering traded commodities. To be successful, these systems must: (i) have an effective system of grades and standards in place; (ii) have sufficient trust, integrity, and quality control that there is essentially no default risk in using them; and (iii) have regulatory procedures and oversight to ensure the integrity of the system. South Africa has developed a substantial warehousing industry for agriculture but such services are in very short supply in other southern African countries. Government has an important role to play in ensuring the integrity of the system.

7. Turning some grain marketing board silos and go-downs into storage leasing operations

In view of the reduced role of state marketing agents as a result of cereal sector reform, it is recommended that some grain marketing silos and go-downs be turned into storage leasing operations. This policy response will be helping to address the current situation which is characterized by a general shortage of storage space for grain, especially in urban areas, but little incentive for investment in commercial storage.

For instance, the Kenya study identified the potential for farmer groups or traders to rent out storage space under 10-15 year leases. Leases of this time length are generally required to allow traders (the renter) to recoup the costs of the required rehabilitation investments to make the silos operational again. Greater storage facilities, coupled with better financing

arrangements, could help the commercialized grain marketing system to defend against downside price risk.

8. Support the development of rural financial markets to improve traders' capacity to absorb surplus production

While the importance of small farmer credit in promoting the uptake of improved farm technology is well recognized, the role of trader finance is also crucial. A major source of inelastic demand in traditional food markets is the constrained supply of trader finance (Coulter and Shepherd, 1995). The Kenya case study observes that 'market institutions such as warehouse receipt systems can inject needed liquidity into grain marketing systems and thus allow the system to better absorb surplus production in good years'. However, the development of these market institutions will depend on supportive government policies. Experience so far shows that attempts to develop warehouse receipt systems and other innovative sources of trader finance in staple food assembly and wholesaling markets (e.g., Ghana and Zambia) have floundered due to direct government operations in markets that have been incompatible with the development of these institutions.

9. Changing the boards' longstanding practice of setting pan-seasonal buying and selling prices

If marketing board operations are to continue as part of a transition strategy, market stability could be facilitated by changing the boards' longstanding practice of setting pan-seasonal buying and selling prices (prices that are constant throughout the marketing year). By offering pan-seasonal prices, the boards eliminate incentives for farmers to store grain after harvest or to invest in storage facilities. It also reduces the incentives of wholesalers and millers to invest in adequate storage facilities, since they can buy from the boards at the same price throughout the year. And, even though food prices in wholesale markets fluctuate freely since the liberalization process began, the behaviour of these markets is influenced greatly by marketing board pricing, which continue to be pan-seasonal.

10. Work with WFP and bilateral food aid donors to develop mutually beneficial policies toward food aid (and subsidized non-commercial imports)

This action is motivated by need to ensure that the local farmers interest, which are otherwise well served by the regional market, are not undermined by subsidized food imports, particularly if this alters long run food consumption patterns.

11. Consider developing specific risk-management marketing arrangements where feasible

Market-based risk management instruments have some clear advantages for managing food price risks in low-income countries in efficient ways that allow voluntary participation. However, effective development and use of such markets is clearly not going to occur without active public policy support. There are many barriers to participation, especially for small-scale producers, traders, and processors, and the public sector can play an important role in reducing these barriers and facilitating use. Direct trading of market-based risk management instruments by public food marketing agencies to hedge government liabilities is an option that could be adopted very quickly. However, this is a risky venture for the public sector. Not only does such trading require considerable information and analytical capacity but is subject to the same problems of inefficiency and rent seeking that have plagued direct public intervention in food markets in the past, especially when there is no credible commitment regarding how the gains will be spent (and the losses financed). A preferred strategy is to encourage private sector use of these markets by making long-run investments in the standard

public goods relating to the enabling environment for finance and risk markets, including grades and standards, credit market development, communication systems, market intelligence systems, regulations, and support for locally or regionally-based commodity exchanges and insurance products. There may also be a role for policy support of market intermediaries that provide access to risk management markets for small-scale operations, particularly in the early stages of developing these markets. Perhaps most important, governments can provide a predictable policy environment that does not destroy the incentives for private individuals and firms to trade market-based risk management instruments.

12. Regional policy on bio-fuels

Production of bio-fuels using maize as a raw material presents a potential threat to the region's food security taking into account that the region has been a net maize importer. As already noted by the African Economic Research Consortium (AERC) in the East African of June 1st to 7th, 2009, this threat is real and here with us in view of the surge in global food prices of rice, maize and wheat – the main staples in African diets.

South Africa is considering the bio-fuel industry for absorption of the surplus maize grain that is presently being exported into the region. It has been observed in the South Africa case study that 'through the implementation of appropriate bio-fuel policy framework, an alternative market for maize grain can emerge. In a recent Policy Brief on the National Bio-fuels strategy prepared by the Bureau of Food and Agricultural Policy (BFAP) (2007), it was illustrated that under a favorable policy environment a local biofuel industry can be established, which can boost local consumption of maize with approximately one million tons. Most of the bio-ethanol would be produced locally to make up the E8 blend and less than 10% of local requirements would be imported. The bio-fuel industry would boost the agricultural sector's contribution to the economy (gross value added) by 4.3% and more than 10 000 new jobs would be generated in the primary agricultural industry'.

The wider region which relies on maize a staple crop needs to take this threat very seriously and embrace policies that encourage production of maize for use as food. The luxury that the region has had of resorting to imports as a last resort whenever maize is in short supply is soon not going to be an option, unless at prices which bio-fuel industries would be competing for the limited grain in the global market.

4. References

The paper synthesised findings from the following case studies:

Maize trade and marketing policy interventions in Kenya - Joshua Ariga and T.S. Jayne

Assessment of maize trade and market policy interventions in Malawi - Ephraim W. Chirwa

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