

Sustained Increases in Food Prices: Effect and Policies in Malawi *

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1. Introduction

The recent rising trends of food prices around the world, particularly staples, have generated a lot of concerns on the plight of the world poor. FAO (2008a) notes that prices of staples increased substantially in 2007/08 with many developing countries facing high import bills to meet the food needs of their people. Although there are both winners and losers from such sudden increases in food prices, net food buyers are at the greatest disadvantage. It is a well-known fact that the poor usually spend a high proportion of income on food, and if they are not able to produce food on their own the consequences on livelihoods may be devastating. The plight of the poor when food prices increase is exacerbated by the low income and the limited coping strategies. Persistent high food prices are bound to lead to failure in achieving the Millennium Development Goal of halving poverty by 2015. On the other hand, higher global food prices provides opportunities for agricultural development in poor countries by making staple food production if relative prices of food prices and input prices increase, and given the tradability of food staples. Although, recently prices of food are declining, they still remain high. Governments have responded to high food prices differently, from trade liberalisation to trade restrictions, production support and price support and in some cases policies have been so interventionist.

Many factors have been attributed to the rising trends in food prices (ADB, 2008; FAO, 2008a; IFPRI, 2008; OECD, 2008). On the demand side, literature attributes the rising food prices to a surge in demand including rising energy prices, income and population growth, urbanisation, subsidized bio-fuel production, use of food crops in derivative markets. Supply side factors include low productivity, high input prices and lack of access to inputs, underinvestment in infrastructure and innovation, increasing transport costs, variability in weather. Other important factors include speculative behaviour and expectations by governments, traders and consumers.

Malawi, like any other country, has not escaped from this crisis given its agricultural nature of her economy and the importance of food expenditure in household budgets. The Malawian economy is predominantly an agricultural economy, in which the agricultural sector contributes more than 35 percent of Gross Domestic Product (GDP). Agriculture is also a major source of livelihoods for more than 85 percent of the population which is mostly rural. National surveys estimate that crop production accounts for 74 percent of all rural incomes and agriculture is the most important occupation for 71 percent of rural population. The main crop grown by the smallholder farmers is maize, the main staple crop in Malawi. Maize is cultivated by smallholder farmers mainly to meet their subsistence needs, with less than 20 percent produced as marketed surplus. However, a large proportion of smallholder farmers do not produce adequate food to last them from one season to another and therefore rely on the market to provide food supplies. The poverty incidence is also high in Malawi, with 52 percent of households living below poverty (NSO, 2005). It is also evident that the poor are likely to be food insecure in Malawi. According to NSO (2005) the ultra-poor who cultivate on average 0.84 hectares produce 48.5 kilograms of maize compared to the non-poor who cultivates 1.1 hectares and produce 115.8 kilograms of maize.

This paper assesses the effects of high food prices and the policies that have been implemented in response of the price swings in Malawi. The paper is organized into five sections. The next section describes the food price trends in Malawi, particularly focusing on the prices of maize. We also discuss the relationship between domestic prices and international maize prices and the extent to which price transmission occurs. Section 3 the impact of high food prices on different types of households in Malawi. Section 4 assesses the recent policies that have been implemented to minimize the adverse effects or those that have been implemented in response to high maize prices in Malawi, including their effectiveness in minimizing the adverse effects of price swings. Finally, section 5 presents concluding remarks.

2. Trends in Food and Maize Prices in Malawi

2.1 General Food Price Trends

Owing to weather variability and other exogenous factors, rising food prices and price swings are not new in Malawi. We use the domestic food price index, the food consumer price index (CPI) to show the trends in food prices. It is however, important to note that maize is a dominant commodity in the computation of the food price index in Malawi, and the food price index is the main driver of the overall consumer index. Figure 1 shows the trend in overall consumer price index and the food price index between 2000 and 2008 using monthly data. It is evident that since 2001 the trend in food prices has been upwards. The upward trend is also characterized by swings in monthly prices. There are, however, seasonal patterns in the movement of prices. The downturns occur mainly in the post-harvest period between May and July while the upturns generally occur in the lean season of maize availability between December and March. Interesting to not as well is the fact that the swings in food prices have been spectacular since 2004 and are more pronounced more recently in 2007 and 2008.

Figure 1 Food Price Trends in Malawi, 2001 - 2008

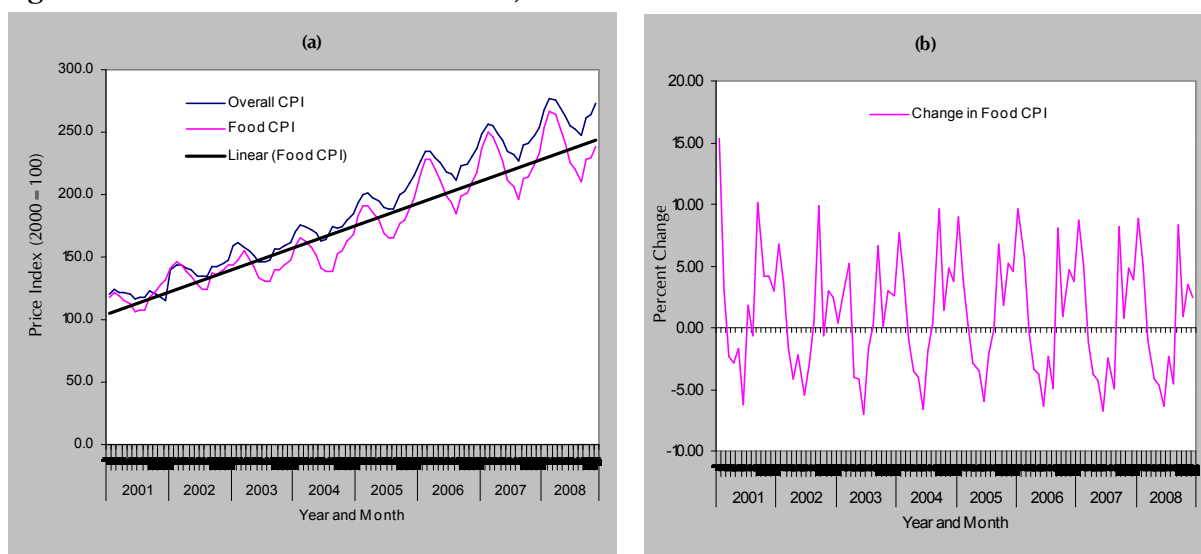


Figure 1 (b) shows that prices of foods also vary considerably month to month. The major price increases tend to occur around August/September the period when most of the households run out of stock of own food production and in February/March which is defined as the lean season just before maize harvest in Malawi. On the other, hand major price declines occur in April/May/June which is the period just after harvest by which time most households have maize from own production. However, it should be noted that massive changes in prices are not a recent phenomena in Malawi. The upper bound of price increase is nearly 10 percent mark while the lower bound decrease is 5 percent, implying that on average households face greater risks of increases in food prices.

Table 1 shows the extent of food price volatility over time. Using the standard deviation of prices within a year, the data shows that the levels of prices and the volatility in the prices have been increasing. Average annual prices have been increasing while at the same time there has been an increase in food price volatility. The food inflation has been variable but on average food prices have been increasing by 11.6 percent per annum between 2000 and 2008. The food inflation was highest in 2001 and lowest in 2003. However, more significant in terms of the concerns of the recent high food prices is the increasing volatility associated with such high prices. The standard deviation of monthly prices and the coefficient of variation show the extent of price variability and the risk that net food buyers face due to changes in prices.

Table 1 Food Price Index and Food Inflation, 2000 - 2008

Variable	2001	2002	2003	2004	2005	2006	2007	2008
Food CPI (2000=100)	117.7	136.4	141.9	154.4	181.0	209.1	224.7	239.3
Annual Food Inflation (%)	17.66	15.92	4.03	8.82	17.21	15.55	7.43	6.54
Standard Deviation (monthly)	8.14	7.59	7.69	10.25	10.59	13.94	16.64	17.38
Coefficient of Variation	0.069	0.056	0.054	0.066	0.059	0.067	0.073	0.074

2.2 Trends and Swings in Maize Prices

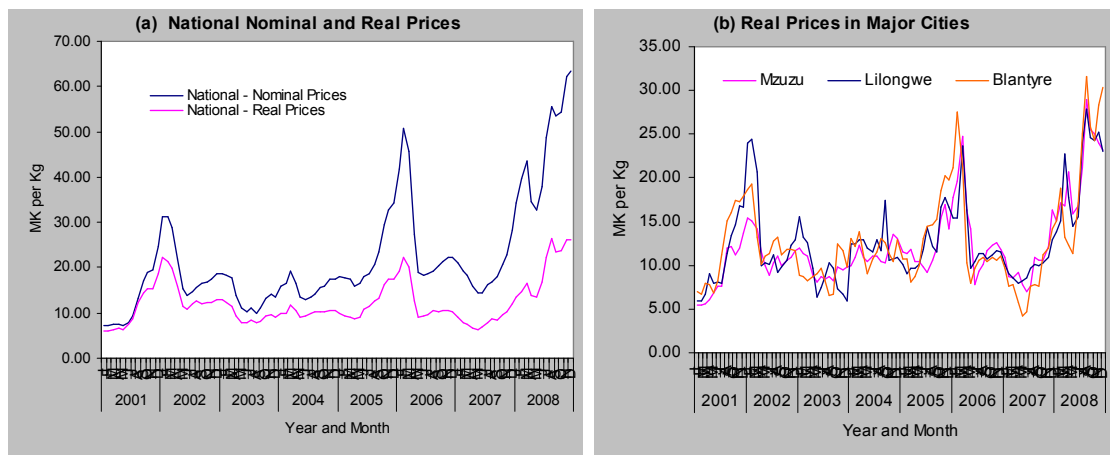
Maize is the main staple food in Malawi, and household insecurity is usually associated with inadequate supply of maize at household and national levels. The movements in prices of maize do affect households that purchase maize to meet their food requirements. The movements in maize prices are similar to the trend in the general food prices. The analysis of maize price show similar trends to the general food price movements. Figure 2(a) shows the monthly national nominal and real prices of maize between 2001 and 2008. It is evident that the surge in maize prices in Malawi is not a new phenomenon. The surge in prices have occurred in the 2001/02, 2005/06 and 2007/08 agricultural seasons. However, of these price surges in the three seasons, there seem to be a long period of sustained price increases. Nonetheless, it can be observed that increases in nominal prices are much higher than the price increases in real terms. The trend in national maize prices is replicated at major urban cities in Malawi (Figure 2b). The data show high correlation between prices in the three major urban centres,

however, real maize prices are generally higher than prices in the other cities. Several factors explain the occurrence of surges in maize prices in Malawi including weather conditions, the movements in world markets, efficiency of domestic markets, asymmetric and imperfect information about domestic supplies, timing and extent of state marketing interventions and speculative behaviour of maize market participants.

2.2.1 Weather Conditions

The agricultural system in Malawi is heavily dependent on rain-fed agriculture with less than 1 percent of the land under irrigation cultivation (Chirwa et al., 2008). This makes agricultural production highly prone to adverse weather conditions such as drought and floods. Thus, some of the maize price surges can be explained by variability in weather conditions. The variability in weather conditions and low input use result in variability in maize production and this partly explain the surges in maize prices in the 2001/02 and 2005/06 season and not necessarily in the 2007/09 and 2008/09 agricultural season. The price increases in the 2001/02 season is associated with a drop in national maize production in 2000/01 season following heavy rains in March and dry spells and floods in some areas exacerbated by low input uptake (ICL et al, 2007). Similarly, the high prices in the 2005/06 season are partly attributed to poor harvest in the previous season due to late distribution of inputs and poor rains in many areas. However, the surges in maize prices in the 2007/08 and 2008/09 season cannot be attributed to supply side issues because of the good rains and improved access to improved seeds and fertilizer under the agricultural input subsidies that has been implemented since the 2005/06 agricultural season. During these seasons, Malawi had favourable weather conditions, combined with the effects of the agricultural input subsidy, leading to substantial estimated surpluses in maize production.

Figure 2 Trends in Nominal and Real Maize Prices, 2001 - 2008



2.2.2 International Price Transmission

It has been generally argued that high food prices at international level partly explain the behaviour of domestic food prices. However, the extent to which high food prices at international markets can have effects on domestic prices depends on the integration of markets through the price transmission mechanism. There is evidence that most of the maize markets in Eastern and Southern Africa are integrated with international markets as revealed by co-movement of international and domestic maize prices in the long-run (FAO, 2008b). Although earlier studies established a weak link between international and domestic maize prices (Chirwa and Zakeyo, 2006) recent evidence suggests that the world maize prices are linked with domestic maize prices. Table 2 presents the extent of market integration between international maize prices, world and South African prices, and selected domestic markets in Malawi. There is generally strong price transmission between international prices and most of the markets in Malawi. Most of these selected domestic markets are in the border districts with neighbouring countries; hence we expect high price transmission through informal cross-border maize trade. The domestic markets that have weak link with international prices such as Mzimba and Salima are far from the international border although Mchinji that has weak links is close to the border.

Table 2 International and Domestic Maize Market Integration

	Chipita	Karonga	Rumphi	Mzimba	Mzuzu	Mchinji
Co-movement with						
P^w , world price	strong	strong	moderate	weak	strong	weak
P^{SA_w} , South African price (white maize)	strong	strong	strong	weak	strong	weak
Causality	$P^w, P^{SA_w} \rightarrow P$	$P^w, P^{SA_w} \rightarrow P$	$P^w, P^{SA_w} \rightarrow P$	-	$P^w, P^{SA_w} \rightarrow P$	-
Months to full adjustment to $P^w(P^{SA_w})$	6.6 (5.0)	4.7 (4.8)	(8.3)	-	5.5 (6.1)	-
	Salima	Mitundu	Liwonde	Lizulu	Bangula	
Co-movement with						
P^w , world price	weak	strong	strong	strong	strong	
P^{SA_w} , South African price (white maize)	strong	strong	strong	strong	strong	
Causality	$P^{SA_w} \rightarrow P$	$P^w, P^{SA_w} \rightarrow P$	$P^w, P^{SA_w} \rightarrow P$	$P^w, P^{SA_w} \rightarrow P$	$P^w, P^{SA_w} \rightarrow P$	
Months to full adjustment to $P^w(P^{SA_w})$	(5.3)	5.8 (5.0)	7.7 (6.4)	7.1 (5.5)	3.8 (4.7)	

Source: FAO (2008b)

2.2.3 Market Integration and Efficiency

There is also a problem of spatial price variations in Malawi. Such spatial variations may indicate the inefficiency of domestic markets and the poor flow of food products from surplus to deficit areas. Thus, high food prices can be sustained in different markets if there is lack of market integration. However, studies in Malawi have shown that domestic markets are highly integrated (Chirwa, 2001; Chirwa and Zakeyo, 2006; Myers, 2008). Myers (2008) using the threshold autoregressive model concludes that the private maize marketing system in Malawi works efficiently to facilitate inter-regional and spatial trade, regardless of the controls that exist in the market. Jayne et al. (2008) find that the maize market is characterized by many players of different sizes including small, medium and large scale traders. Chirwa and Zakeyo (2006) find high level of market integration in crops that were completely liberalized than in maize in which a system of price controls prevails. Although, the price transmission indicates a relationship between prices in various markets, prices have remained high in some of the markets (even within districts) in Malawi raising questions whether it is the high transaction costs that limit the extent to which traders utilize arbitrage opportunities. Another contributing factor to high maize prices in some areas is the lack of competition between maize traders. Over time, there has been an increase in the number of traders in maize trade, but most of the traders have monopsony power in their local market and do not face intense competition (Mvula et al, 2003). This situation may lead to sustained high prices in specific markets.

2.2.4 Asymmetric and Imperfect Information on Domestic Supply

The quality of information about domestic maize supply and maize stocks can affect the behaviour of food prices. There has recently been a debate in Malawi about the accuracy of crop estimates as provided by the Ministry of Agriculture and Food Security. This is particularly so for maize and root crops such as potatoes and cassava. World Bank (2003) has observed that crop estimates do overstate food production in Malawi. For instance, for the past three seasons that the government has implemented an agricultural input subsidy programme, maize production estimates have shown surplus national production. However, prices of maize have remained high and the period has witnessed sustained price increases. It is also important to note that there is a lot of uncertainty over the extent of international trade flows on maize, which exacerbate the imperfect nature of available maize stocks. The mismatch between production estimates and the behaviour price movements may signal food shortages even in light of surplus production estimates.

2.2.5 International Maize Trade Management

Maize is considered a strategic crop as the main staple food in Malawi and within the region. As a result, the trade regime with respect to maize is highly restrictive. Formal exports and imports require private traders to hold an import or export licenses in order to engage in international trade maize. However, there is a lot of informal cross-border trade with neighbouring countries. This trade is partially monitored, with increasing

maize imports from Mozambique particularly during the periods of short supply in Malawi.

Following a surplus projection of 600,000 metric tonnes from the 2006/07 harvest, export trade was allowed, specifically to export 400,000 metric tonnes to Zimbabwe. By February 2008, only 302,000 metric tonnes of maize were exported to Zimbabwe by the private sector through the National Food Reserve Agency (NFRA) and Malawi failed to satisfy the contract of maize exports to Zimbabwe (FWES NET, 2008a). The private sector was finding difficulties in sourcing maize from the market and this sent signals that there were supply shortages and the prices began to increase substantially. The unsatisfied contract from the 2006/07 harvest also signalled speculation that maize trade to Zimbabwe will continue from the 2007/08 harvest which was also a surplus year according to the crop estimates.

2.2.6 State Marketing Interventions and Behaviour

The government continues to intervene in maize markets through the activities of state marketing agencies, ADMARC and NFRA, and direct pricing policy for maize. In terms of pricing, the government imposes a price band for the purchase and sale of maize in the domestic market. The band allows for spatial and intra-seasonal variation in prices. Prior to government setting a new price band, the behaviour of the state marketing agency - ADMARC and the NFRA, fuelled the price increases immediately after the 2007/08 harvest. For example, in order to replenish stocks in the strategic food reserves, the NFRA were buying maize in June/July at MK65 per kilogram from private traders, and at the same time ADMARC was buying maize from farmers at MK50-60 per kilogram (FEWS NET, 2008b). During this period the average maize prices in private markets averaged less than Mk50 per kilogram.

The high prices offered by ADMARC and NFRA contributed to rising maize prices witnessed in the month of August 2008. This prompted the Government to intervene in the market by imposing a ban in the participation of the private sector in maize trade and gave exclusive monopsony to ADMARC to buy maize at MK45 per kilogram and sell maize at no more than MK52 per kilogram (FEWS NET, 2008c).¹ There were also desperate statements made by the government to institute an inspection regime in order to prosecute the private traders that were believed to have been hoarding maize. Although maize prices in some markets began to fall due to the imposition of the price band, more than 70 percent of the markets were selling maize above the maximum price set by the Government. The price band may have been well-intentioned as a response to high maize prices, the desperate measures and the threats that were directed at the private sector may have signalled shortages of maize in the market and this pushed up the prices further. The maize prices have remained above the maximum set price and ranged between MK70 – MK106 per kilogram in markets in Southern Malawi in January 2009.

¹ However, two weeks after the ban, the Government clarified that the ban did not apply to the small scale private traders in rural markets.

2.2.7 Speculative Behaviour

The high international food prices have led to increasing speculation on the domestic maize market. The maize production surplus recorded in the 2007/08 harvest also raised speculation about the possibility of relaxation of export trade particularly to Zimbabwe as was the case in the 2006/07 harvest, and this time at even higher prices. The prices at the international market were expected to remain high. This speculative behaviour resulted in competitive buying of maize, particularly with the large private traders overpricing small private traders and private traders and the state sector outbidding each other in the purchase price of maize. Most of the private traders had bought the maize at high prices in anticipation of high international prices.

3. The Impact of High Food Prices on Households

Malawi produces a number of food products including maize, rice, millet, sorghum, beans, cassava, potatoes and groundnuts, but maize remains the dominant staple food. Table 2 shows the importance of maize in the typical diet of a rural household in Malawi, a day before the day of the interview. The data reveals that 94.8 percent of the sample households take maize as their main staple food, against 4.8 percent for cassava. In addition, for the few households that could not have access to maize they opt for other food crops such as rice, sorghum, cassava and millet. It is apparent that *nsima*, made from maize flour is the dominant main dish for lunch and supper. *Nsima* from cassava and rice are not typical dishes in rural Malawi, and the availability of these food crops at household level may not coincide with their preferences.

Table 2 Maize in a Typical Diet of a Rural Household 2002

Main Food Item	Lunch (%)	Supper (%)
<i>Main Meal</i>		
<i>Nsima</i> (maize)	77.97	82.37
<i>Nsima</i> (cassava)	1.94	1.69
Rice	1.40	2.66
Other	8.86	8.62
No Meal	9.93	4.66
<i>No. of Households</i>	826	826

Source: Chirwa and Zakeyo (2003)

The dominance of maize in the diet of most households imply that high prices and price swings in maize are likely to have major implications on livelihoods of poor households. SOAS et al. (2008) find that about 56 percent of smallholder farmers and maize-buying households are generally the poorest and have relatively small farm sizes and asset holdings in Malawi (Table 3). This implies that the poor face the greatest risks of being hurt by high and rising maize prices. The data shows that only 10.2 percent of households are net maize sellers while 29 percent did neither buy nor sold maize from the 2006/07 harvest. The high proportion of maize buyers implies that price rises do affect many smallholder farmers in Malawi.

Table 3 Household Maize Trade Position and Wealth Characteristics 2007

Household position with respect to the maize market 2006/07 season	% of total households in sample (n=2591)	Value of household assets (USD) 2007	
		Mean	Median
Sold maize/did not buy	7.10%	519.94	127.04
Bought maize and/or maize meal/did not sell	56.40%	211.77	42.04
Bought and sold – net seller	3.10%	599.35	157.71
Bought and sold – net buyer	4.10%	154.42	69.29
Bought and sold – net zero	0.30%	348.18	45.64
Neither bought nor sold – autarkic	29.00%	339.99	82.71

Source: SOAS et al. (2008)

Consumers will react differently to changes in maize prices. According to Polaski (2008), rising food prices can either reduce or increase poverty, depending on how poor households earn their income and how they spend their income. In the short-term price increases can lead to a reduction in the consumption of their preferred foods and switching to other cheaper foods particularly for poor households. In the long-term, high food prices can dictate the extent of diversification and the scale of subsistence production, depending on the resource endowments of households. The impact and response to food price swings will vary according to the extent of poverty, the net market position of consumers (whether net food buyers or net food sellers), the liquidity position of households. Some studies such as Wodon and Zaman (2008) find that a 50 percent increase in the prices of selected foods results in a 3.5 percent increase the poverty headcount in sub-Saharan Africa. For net maize sellers, high maize prices are good for achieving higher rates of profitability and higher return to agriculture particularly for those farmers that did not benefit from the subsidy but had to go on the local market to purchase fertilizers. Polaski (2008) argues that high food prices may also be pro-poor particularly when they spend less of their income on food, and rising food prices may transfer incomes from the rich to poor households.

Using the integrated household survey of 2004, FAO (2008b) simulated the impact of rising food prices on different categories of households in Malawi. Table 4 presents simulations of the impacts of price increases on consumption and food expenditures. Maize is the main food in Malawi and accounts for nearly 40 percent of total expenditure. The data shows that a 50 percent increase in maize and cereal prices increases total food consumption by 10 percent for all households and by 16 percent for food insecure households and by 5 percent among food secure households. For food insecure households, there is a reduction in the quantity of maize, cassava and other foods consumed by 5 percent, 2 percent and 3 percent respectively. However, the share of expenditure on maize increases by 16 percent while the shares on all other foods decline. For the food secure households, food consumption only increases by 5 percent, but maize consumption decreases by 12 percent in favour of other cereals and the consumption of other foods only decline by 1 percent.

Table 4 Impact of Price Shocks on Consumption and Expenditure

Variables	Price Shock: 50% increase in maize and cereals			Multiple Shock: 50% increase in maize and cereals and 20% increase in meat prices		
	Average: All households	Average: Food insecure households	Average: Food secure households	Average: All households	Average: Food insecure households	Average: Food secure households
Number of households	0.00	12.77	-10.67	0.00	13.02	-10.88
Total food consumption	10.31	15.69	4.63	9.68	15.94	3.17
<i>Quantities consumed</i>						
Maize	-8.60	-4.79	-11.78	-8.42	-4.40	-11.79
Cereals	6.86	6.71	6.98	-19.24	-17.17	-20.97
Cassava	0.99	-2.01	3.50	-2.27	-5.32	0.27
Roots	9.12	7.57	10.41	2.85	0.14	5.11
Meat	1.74	0.78	2.54	-0.60	-1.98	0.55
Fruit & vegetables	2.49	3.95	1.27	5.43	7.28	3.89
Pulses	8.49	10.17	7.09	7.84	9.17	6.73
Other foods	-2.03	-3.15	-1.09	-3.95	-4.90	-3.16
<i>Food Expenditure shares</i>						
Maize	14.34	16.13	12.84	14.21	16.26	12.50
Cereals	-3.12	-6.66	-0.17	6.64	4.46	8.46
Cassava	-8.52	-13.11	-4.68	-9.70	-15.71	-4.68
Roots	-3.02	-6.64	0.00	-7.22	-11.21	-3.88
Meat	-6.30	-10.86	-2.49	-8.43	-13.75	-3.98
Fruit & vegetables	-10.15	-11.89	-8.70	-8.05	-9.52	-6.83
Pulses	-6.17	-7.08	-5.42	-6.59	-8.00	-5.42
Other foods	-9.59	-16.17	-4.10	-11.23	-18.10	-5.48

Source: FAO (2008)

The introduction of an additional shock of a 20 percent increase in meat prices does not change the situation significantly. Total food expenditure increases by 16 percent in spite of the contraction in consumption. In relation to poverty, the simulations show that a 50 percent increase in the price of maize and cereals increases the proportion of food insecure households by 13 percent. One striking difference between food insecure and food secure households is that there is more shift to increasing consumption of alternative foods among food secure households than it is the case for food insecure households.

4. Policies and Policy Responses to High Food Prices

Governments around the world have responded differently to rising food prices and price swings that have occurred over years. In Malawi, there has been a long tradition of policy intervention directed at maize supply and maize prices. These policies have been in areas of production support through input subsidy programs, price support through price floors and ceilings, marketing support through the activities of state marketing agencies and management of international maize trade.

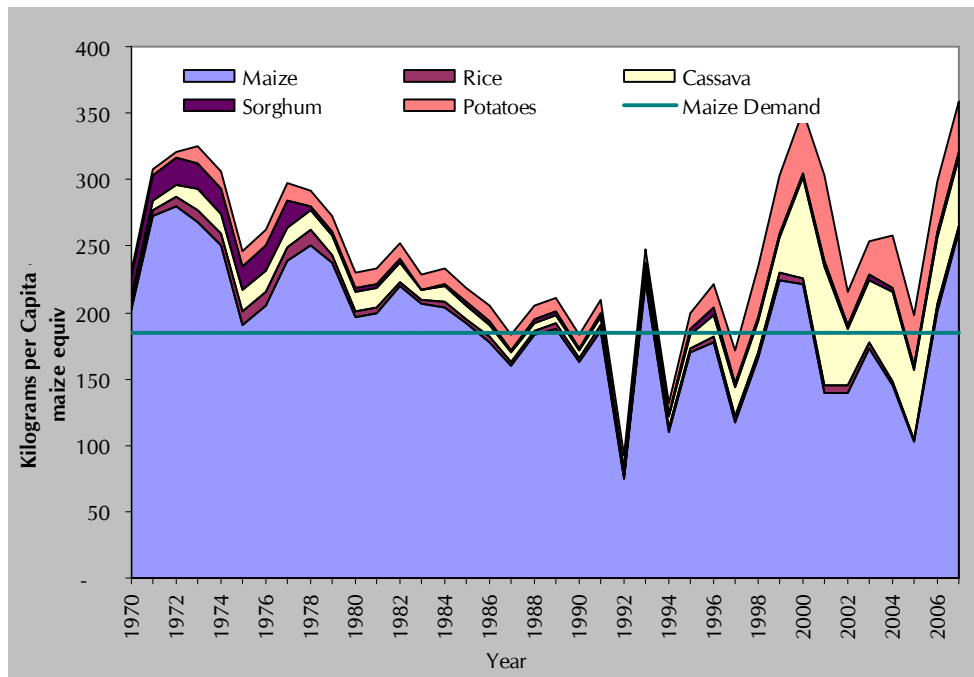
4.1 Production Subsidies

Malawi has a long history of intervention in the maize production processes, ranging from subsidization of inputs, provision of targeted free inputs, provision of agricultural credit, funding for technology development, provision of extension services, and provision of agricultural marketing services. There has been extensive research in maize leading to development of high yielding maize varieties (Smale, 1995). This research was supported by extension services throughout the country which facilitated the adoption of new technologies (hybrid maize and application of fertilizers). However, over time government support towards research and development and extension services had fallen with the declining share of agriculture in the national budget (Chirwa et al., 2008). In addition, the government, prior to 1990 also provided subsidized credit and inputs to the smallholder sector delivered through farmers' clubs that facilitated adoption of technologies. However, within structural adjustment programs adopted in the 1980s there was phased removal of fertilizer subsidies albeit with numerous policy reversals. Harrigan (2003) notes that fertilizer subsidies were re-introduced at 22 percent in 1987, a level that was higher than that applied during the pre-reform period.

More recently, the Government has been implementing a targeted agricultural input subsidy program since the 2005/06 season, focusing on improved seeds and fertilizers for maize and fertilizers for tobacco. The subsidy targets about 2.8 million farming families, mainly smallholder farmers that cannot afford to buy fertilizers at commercial rates. The scope of the subsidy has increased from 132,000 metric tonnes of fertilizers in 2005/06 to about 216,000 metric tonnes in the 2007/08 agricultural season. Initially, the government provided more than 67 percent subsidy on the purchase of fertilizers for smallholder farmers with subsidy coupons (ICL et al., 2007). However, more recently, with the increase in the price of fertilizers, the subsidy has increased to 90 percent of the average price of fertilizers. Combined with the good weather conditions that have existed during the implementation of the subsidy, overall the program was a qualified success, with many coupons reaching smallholder farmers and farmers using the coupons rather than offering them for sale (SOAS et al., 2008).

Figure 3 shows the trends in food production since 1970. It is apparent that there have been noticeable swings in the production of maize in Malawi and this has led to recurrence of food shortages. However, since the implementation of the agricultural input subsidy program, there has been an increase in the production of maize with surpluses in production recorded in the 2006/07 and the 2007/08 agricultural seasons. For instance, using the standard per capita consumption of a staple of 185 kilograms per capita per year, recent production figures show that the country produced more than it needs at national level. While maize production has increased recently, the prices of maize have not stabilized and have continued to rise in spite of the recorded maize surpluses. Apart from failing to stabilize the prices, there have been other areas of concern about the efficiencies in implementation, efficiency in beneficiary targeting, the expansion of the program and the extent to which it is negatively affecting the development of the private marketing system for agricultural inputs (SOAS et al., 2008).

Figure 3 Maize Production Trends 1970 - 2007



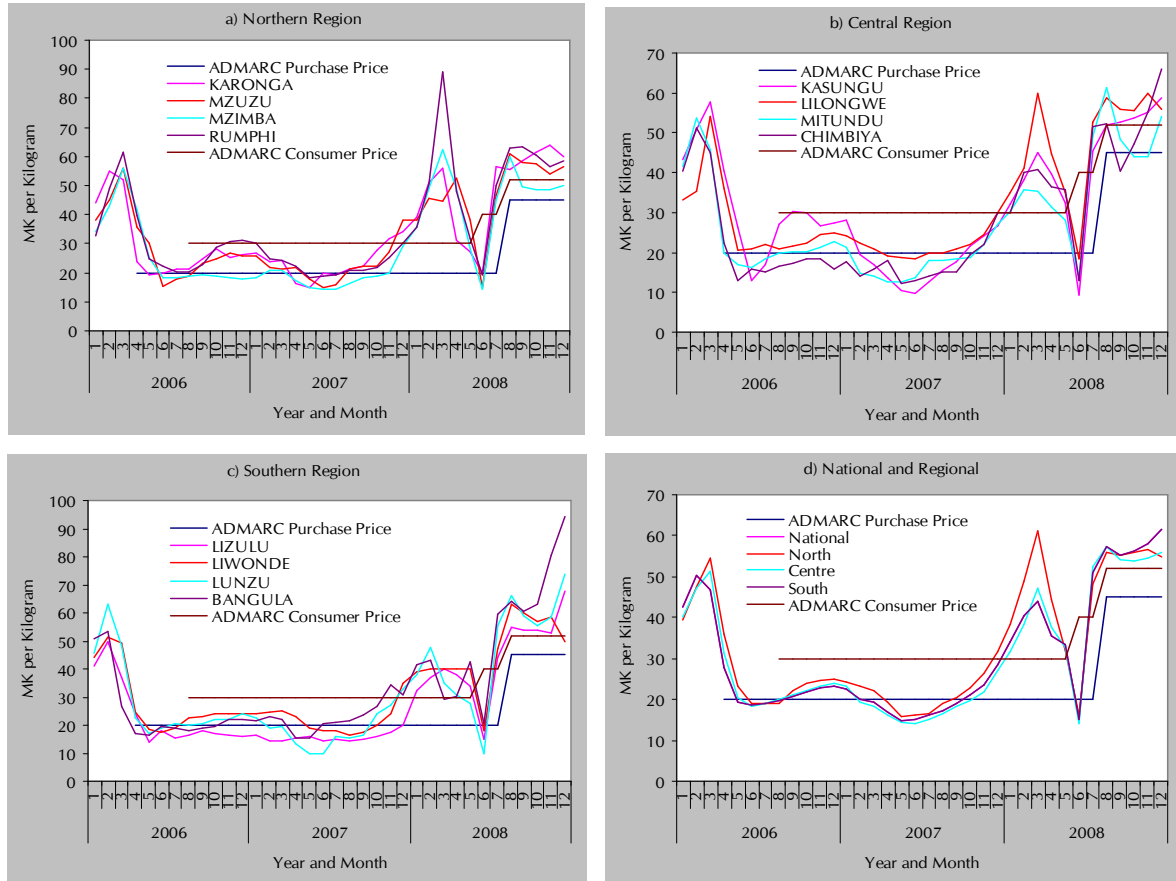
4.2 Maize Price Band

The maize price policy has been central in government's effort to make maize affordable to poor consumers in Malawi. Since Independence, maize has been under some sort of price control or regulation. There has been very little change to the policy stance in maize pricing although price and market controls have been liberalized for most other crops (Chirwa, 1998). The recent intervention in the price of maize has been in the form of the price band, first introduced in 1996. The price band was expected to be defended by the state marketing agency, ADMARC. The policy of setting buying prices is motivated by 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 commercialisation of maize. Government has also been setting the consumer price of maize in order to make maize affordable to poor net food buyers.

The recent price band was set following the 2005/06 harvest – the first harvest from the agricultural input subsidy – in the wake of improved maize production. This price band was set at MK20 per kilogram buying price and MK30 per kilogram selling price, and this band covered the 2007/08 season. However, due to rising food prices and maize prices following the 2007/08 harvest, the government revised the maize band upwards to MK45 per kilogram as the buying price and MK52 per kilogram as the selling price. Figure 4 shows the nature of the maize pricing system relative to average prices under private marketing. It is clear from the data that the price band is narrow and has proved to be ineffective in containing the prices within the price band. In 2006 and 2007, most

of the prices were below the price band and in 2008 prices have moved below and above the price band.

Figure 4 Price Band and Average Maize Prices



There are several reasons that can be attributed to the ineffectiveness of the price band. First, is the issue of enforceability of the price band. This is a problem because most of the private traders that are engaged in maize trade are informal small –scale traders operating in localized markets. Although the government expects the private traders to observe the price band, it does not have the instruments for enforcing the price regime and in most cases the private sector has ignored the price band choosing to sell within in some markets and below and above the price band in other markets. Secondly, the price band was set when maize prices were already above the maximum price and the fact that some of the traders bought the maize at high prices, they were reluctant to sell the maize stocks at a lower price in order to comply with the price band. Thirdly, ADMARC is expected to defend the band by buying maize if the price falls below the band and selling maize when the price increases above the band. Although government has given this mandate to ADMARC, its role in produce marketing has diminished and it lacks the necessary financial resources to stock adequate maize that it can sell to consumers in periods of high maize prices in private markets. More recently, ADMARC has been

rationing its sales of maize to consumers, and usually when maize is available at the markets it runs out in 1 to 3 days (FEWS NET, 2009). Fourthly, the price band is narrow, as such, it does not offer adequate margin to the private sector to cover the cost of purchase. Finally, there is no provision of strategic reserves for purposes of stabilisation of prices. Although the NFRA has held stocks above the minimum required for emergency situations, they have not utilized the excess to supply the consumer market in order to stabilise prices.

4.3 Domestic Trade Restrictions

The maize pricing policy has also been supported by direct interventions in the marketing of maize. Although maize marketing has been progressively liberalized, the state marketing agency, ADMARC, remains a major player in the market. Competition from private traders and the decline in subsidization from the central government further weakened the efficiency and performance of ADMARC. As a result, there has been a sharp reduction in the number of marketing establishments operated by ADMARC. In 2001, ADMARC operated only through 441 seasonal markets, 343 unit markets, 24 parent markets, 10 depots and 14 district headquarters markets (Mvula et al., 2003). The financial position of ADMARC has further deteriorated due to limited support from central government. ADMARC has therefore not been a major player in the marketing of maize in recent times (Jayne et al., 2008). Although, it continues to implement government pricing policy, it hardly buys maize from smallholder farmers due to lack of funds. Furthermore, due to lack of funds ADMARC opens its markets late and it tends to quickly run out of cash to pay farmers.

In responses to rising maize prices in the 2008/09 season, the government places restrictions on the marketing of maize by the private traders. From August 2008, government banned large private traders in maize trade, although small scale traders operating in rural markets were exempted from this ban. Only ADMARC was given the mandate to buy maize from smallholder farmers and traders were encouraged to sell maize to ADMARC. ADMARC was also given the exclusive mandate to sell maize to consumers at the government's prescribed price. However, due to the weak financial position of ADMARC it was not able to sell adequate maize to consumers at official prices. Jayne et al. (2008) notes that the rapid rise in prices of maize affected ADMARC's ability to buy maize from smallholder farmers as it initially offered to buy maize at as low as MK30 per kilogram when the private traders were already buying maize at MK60 per kilogram.

4.5 International Trade Restrictions

Malawi phased out quantitative restrictions on international trade except for a few products whose restrictions are largely based on health, safety and national security reasons. Only 5 percent of all goods imported into Malawi require an import licence. Although maize is not on the list of restricted products requiring import license, it is subject to regulated imports. Thus, while domestic marketing of maize has been liberalized international trade policies on maize have remained unchanged. Maize is considered a sensitive crop in the food security equation in Malawi. The import

licensing of maize have not been lifted. 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.

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. Chirwa and Ngalawa (2006) note that the most of the surges in imports of maize occur in the years of bad weather conditions. In terms of tariffs, maize grain is tax-free in the tariff schedule, which is consistent with the regional policy of ‘maize without borders’, save the quantitative restrictions imposed on maize.

Similarly, export of maize is restricted and maize is subject to intermittent export bans and export licensing. Maize export licensing has always been imposed even after 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 issue export licenses. Thus, whether the ban is lifted, export licenses are always required for maize exports.

Nonetheless, there is always trade occurring through cross-border informal trade. Table 5 compares formal and informal maize trade using annual series. Data on informal trade is only available from 2004. The data shows that formal exports of maize are much higher than informal maize exports. On the import side, it appears that the volume of formal maize trade is similar to informal maize trade, with the 2005 figure of informal imports not statistically different from the volume of formal imports. It is also evident that both informal and formal maize trade has been increasing. With the bumper harvest in 2007, government has allowed more formal exports of maize amounting to 400,000 tonnes particularly to Zimbabwe through granting of export licenses to exporters including ADMARC that had unsold stock from the 2006 harvest. ADMARC has been granted permission to export up to 100,000 metric tonnes of maize, while the rest is exported by the private sector. The lifting of the export ban is likely to promote informal trade in maize through cross-border trade.

Table 5 Annual Formal and Informal Maize Trade 2004 – 2007 (MT)

Year	Formal Maize Exports	Informal Maize Exports	Formal Maize Imports	Informal Maize Imports
2004	10,980	687	95,700	76,206
2005	17,150	1,205	165,720	165,451
2006	-	3,766	-	79,525

Source: FEWSNET and FAOSTAT data

5. Conclusions and Policy Options

The government has intervened in the food market, particularly in the maize market in Malawi in an attempt to ensure that food is available at prices affordable by a majority of the population. Most of the interventions are long standing policy of the government, but they tend to be re-emphasized in periods of critical supply of maize and when prices rise. The biggest risk for most households in Malawi in food markets is the variability in maize prices across spatial markets and within a market over time. These price swings endanger the lives of households that purchase food from the market in order to meet their food requirements. It is quite possible that without the interventions households could have experienced much high prices and larger price swings. However, the recent evidence show that large price swings persist in maize markets suggesting that the interventions have been less effective in preventing maize price swings in Malawi. With surplus maize production, price ceiling and restrictions on domestic and international maize trade, Malawi continues to experience high maize prices.

However, one factor that might have affected the effectiveness of government's interventions is the fact that the government has applied different policies at different times in its intervention, but most of these policies have been inconsistent with each other due to lack of coherence and coordination. It has failed to strategically combine the various policy options. Most of the policies have not been based on the evidence. For example, the setting of a price band in which the maximum official price (sale price) was less than the price at which the private sector was paying farmers (purchase) price is a clear indication of lack of analytical capacity to design appropriate policies based on the available evidence. Some of the policies have been in direct conflict with each other. For example, the production support through input subsidies has to be supported by a more open trade regime for maize yet there are a lot of restrictions on the international trade of maize. Similarly, outbidding of the private sector by state marketing agencies sent wrong signals of supply shortages and panic by the government and this led to sustained increases in maize prices in Malawi. State interventions therefore exacerbated the price swings in Malawi.

The agricultural input support programme can act as an anchor in moderating price swings in Malawi from the supply-side, but it has to be supported by other policies in a more strategic way. Hence, maize trade and pricing policies, social protection policies and other agricultural service policies should be designed in such a way that they complement the subsidy policy in stabilizing food prices in Malawi. It must be recognized that the agricultural sector in Malawi faces maize productivity – poverty trap with unstable maize prices locking farmers in low productivity maize production, leading to low investment which in turn leads to unstable prices. Low productivity in maize leads to low income and increases vulnerability, consequently leading to low demand for non-agricultural products. The input subsidy program helps to unlock the trap by addressing the financial constraint that farmers have in engaging in high productivity maize production through the use of inorganic fertilizers. This leads to surplus production, with good weather conditions, and can lead to sustained stable maize prices if supported by complementary policies. It is therefore important that the

government intervenes in the food (maize) market strategically, but this will also require quality information to help in credible policy making.

Government's response to the sustained high food prices and price swings has not been systematic and has not provided a conducive environment for private sector participation in the market. The response has been characterised by trade restrictions and threats against the activities of private traders and this has fuelled speculation that the country is in short supply of the main staple. Inventory management by the government and the behaviour of state marketing agencies tend to exacerbate price swings in maize. Open market operations do not result in market prices moving inside the price band set by the government, mainly because of liquidity constraints that characterize the intervening agencies as well as informal trade. There is a need for more transparent rules for government intervention and cooperation between the government and private traders. For example, setting a realistic price band that signals government intervention if it can be stated that the government will intervene only when the prices are outside the band. This requires proper management of strategic reserves for price stabilisation supported by countercyclical budget.

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