



UNITED NATIONS
UNIVERSITY

UNU-WIDER

World Institute for Development
Economics Research

WIDER Working Paper No. 2013/026

The political economy of food price policy

The case of Kenya

Jonathan Makau Nzuma*

March 2013

Abstract

This paper evaluates Kenya's food price crisis over 2002–11 using a political economy approach. Kenya's food prices have been high and volatile relative to world food prices. Moreover, domestic food markets are highly integrated while about 30 per cent of the changes in world market prices are transmitted to domestic markets in Kenya. The study finds a relatively slow speed of adjustment of domestic food prices in Kenya of between three to five months. In response, the government implemented both supply-side and demand-side policies. However, the implementation of these policies has not been fully institutionalized and relies on the most part on the executive. These findings lend credence to calls to institutionalize the policy-making process in Kenya.

Keywords: political economy, food prices, policy processes

JEL classification: B15, B25, D72, D73, D78

Copyright © UNU-WIDER 2013

*University of Nairobi, email: Jonathan_nzuma@yahoo.com

This study has been prepared within the UNU-WIDER project 'Political Economy of Food Price Policy' directed by Per Pinstrup-Andersen.

UNU-WIDER gratefully acknowledges the financial contributions to the research programme from the governments of Denmark, Finland, Sweden, and the United Kingdom.

This publication was supported by an agreement with Cornell University Division of Nutritional Sciences under Subagreement No. 60891-9461.

ISSN 1798-7237

ISBN 978-92-9230-603-8



Acknowledgements

The author acknowledges all institutions that provided valuable data and information for this study particularly the Kenya National Bureau of Statistics, the Ministry of Agriculture, the Central Bank of Kenya and the Regional Agricultural Trade Intelligence Network of the Eastern Africa Grain Council. The data collection efforts of Henry Mwololo, the Research Assistant in this study, are greatly acknowledged. Finally, the author salutes the numerous key informants who provided information to validate the data presented in this report.

The World Institute for Development Economics Research (WIDER) was established by the United Nations University (UNU) as its first research and training centre and started work in Helsinki, Finland in 1985. The Institute undertakes applied research and policy analysis on structural changes affecting the developing and transitional economies, provides a forum for the advocacy of policies leading to robust, equitable and environmentally sustainable growth, and promotes capacity strengthening and training in the field of economic and social policy making. Work is carried out by staff researchers and visiting scholars in Helsinki and through networks of collaborating scholars and institutions around the world.

www.wider.unu.edu

publications@wider.unu.edu

UNU World Institute for Development Economics Research (UNU-WIDER)

Katajanokanlaituri 6 B, 00160 Helsinki, Finland

Typescript prepared by Lisa Winkler at UNU-WIDER.

The views expressed in this publication are those of the author(s). Publication does not imply endorsement by the Institute or the United Nations University, nor by the programme/project sponsors, of any of the views expressed.

1 Introduction

Over the last five years, international food prices have witnessed unprecedented increases. The United Nation's Food and Agriculture Organization (FAO) food price index (FPI) rose by 57 per cent between March 2007 and March 2008 as compared to an increase of 9 per cent in 2006 (FAO 2008). In the first three months of 2008, international real prices of all major food commodities reached their highest levels in nearly 30 years (Von Braun 2008). However, food prices began to fall in July 2008 and trended downwards until the start of 2009. While global food prices stabilized in 2009, they remained relatively high in comparison to their pre-peak season in 2007. In the second half of 2009, food prices began to rise again, albeit marginally, but surged throughout 2010 to reach an unprecedented peak in January 2011.

Domestic food prices within Eastern and Southern Africa (ESA) countries show a different pattern from world food prices (Meijerink, Roza, and van Berkum 2009). While global food prices rose sharply and peaked in the first half of 2008, food prices within the ESA region increased too, but at lower rates (Karugia et al. 2009). Although global commodity prices slumped in the second half of 2008 and stabilized throughout 2009, food prices within the ESA region defied the international food price trends. In 2010 and 2011, food prices within the ESA region have continued to rise in tandem with world food price trends. While high food prices may no longer be making headlines in rich economies, the food price crisis has remained a topical issue in the policy arena of ESA countries, in particular Kenya.

At the onset of the food price surge in 2007, a number of possible causes were identified (FAO 2008; von Braun 2008). These included low levels of world cereal stocks; crop failures in major exporting countries; population growth; urbanization; rapidly growing demand for biofuels; and rising oil prices. As the price surge accelerated, several other factors emerged to reinforce the crisis, most importantly, export restrictions by main exporting countries, a weakening of the US dollar and an increase in speculation, and the global fuel and financial crisis. For Kenya, the post-election events compounded the crisis culminating in an unprecedented price increase that fuelled food price volatility. The causes of the price increase have been extensively described in earlier studies. This paper does not dwell on them, but instead focuses on food price trends and what has been done in response to the food crisis in Kenya.

The impacts of the food price crisis in Kenya have been diverse. Contrary to popular belief that farmers would benefit from the high food prices, the food crisis has worsened the food security situation of most Kenyan households since a majority of these households are net food buyers. Estimates from the recent Kenya Integrated Household Budget Survey (KIHBS 2006) indicate that about 63 per cent of crop and livestock producers are net buyers. In addition, food purchases constitute about 60 per cent of total expenditures of farming households. For these households, any food price increases negatively affect their food security status. Moreover, high and volatile food prices are not a new phenomenon to such households (Chambers, Longhurst, and Pacey 1981).

The surge in food prices has different effects on different members of the community. It can deliver tremendous benefits to the farming communities. However, such benefits accrue mainly to net-producing households. Commercial farmers, who can respond to the increase in prices by increasing production, can potentially benefit from the price boom, provided that changes in the prices are transmitted to them through the value chain. Using information

generated by the Kenya Food Security Steering Group, Okello (2009) documents the impacts of the high food prices on Kenyan households. Evidently, the food price crisis has worsened an already bad food security situation in Kenya. The rising food prices put the country at risk of a reversal in gains made towards the attainment of the Millennium Development Goals (MDGs) especially MDG 1 on reducing hunger and poverty. The impacts of the high food prices in the country are complicated by unstable macro-economic conditions and other regional factors such as persistent droughts and political conflicts that keep food prices high.

In response to the food price crisis, Kenyan policy makers adopted a broad spectrum of policy responses. The policy responses adopted vary widely but can be broadly classified into demand-side (food safety nets and tax reductions) and supply-side policies (subsidies and price support). The most common responses aimed at ensuring an adequate and affordable food supply for the majority of consumers. Safety nets are provided for the most food insecure and the vulnerable. They also aim at fostering a positive agricultural supply response. The food price crisis re-affirms the need for adequate investments in the agricultural sector, with a focus on the increasing productivity through improved access to inputs and markets so that farmers are less vulnerable and capable of responding to production incentives.

While there is ample description of the global food price crisis, relatively little is known about the food price crisis within the Kenyan context. Yet, such knowledge is important to prepare for the possibility of future food price crises within the country. Furthermore, the role of policy in precipitating rather than preventing the past and possible future food crises has been largely ignored.

This paper evaluates the food price crisis and the accompanying food policy interventions within Kenya using a political economy approach. The remaining sections of this paper are organized as follows. While Section 2 presents the methodology adopted, Section 3 provides the country context followed by an analysis of the food price trends in Section 4. Section 5 describes the policy responses adopted and the paper finally summarizes the key findings in Section 6.

2 Study approach

This paper adopts the use of both qualitative and quantitative data to evaluate the political economy of the food price crisis in Kenya. While the qualitative data on food policy interventions is used to examine the political economy of food policies in Kenya, the quantitative data on food prices is used to explore the transmission of international prices into domestic markets. The qualitative analysis provides an excellent natural experiment for better understanding why governments behave the way they do.

The conflicting interests of producers and consumers of a commodity in an economy are fundamental problems for government policy decisions (Timmer, Falcon, and Pearson 1983). The behaviour and dynamics of visible and invisible actors within the food sector therefore can only be understood in terms of their power and class position in the larger social system. In practice, however, economists rely on two frameworks namely; public choice and the traditional political economy approach (De Gorter and Swinnen 2002). Public choice is the use of modern economic tools to study problems that are traditionally in the province of political science. Public choice makes particular assumptions about what it is governments are maximizing. Economists model governments as though they maximize their chances of

remaining in power. The government's decision-making process can be represented through constrained utility maximization, game theory, and decision theory. Politicians attach particular weights to each stakeholder group and will formulate policies based on the influence of each group.

Given the weaknesses of the public choice approach, many studies have tended to apply the political economy approach. Political economy models of agricultural policy have considered four key elements; individual preferences of the citizenry, collective action by lobby groups, preferences of politicians and political institutions. The political economy approach assumes that resources are allocated not on the basis of relative efficiency or merit but according to power (Swinnen 2010). Policy decisions incorporate various perspectives found within the domestic economy. Decisions made within government are a result of group interaction. The political equilibrium that is represented by a government's decision is presumably the balancing point between those wanting more and those wanting less of a policy. This balancing point can be derived by an analysis of the historical context of policy-making in a particular country.

This paper employs the political economy framework in seeking to understand why governments choose a certain policy option over others in attempt to respond to food crisis. The paper focuses on the price trends and policies of three major staple food crops in Kenya, maize, wheat, and rice. It explores prices at the wholesale and retail levels and describes the policy context within the food sector. The price data used in this study is compiled from the Ministry of Agriculture, the Kenya National Bureau of Statistics (KNBS), and the East Africa Grain Council.

3 Country context

This section describes the broad socio-economic context in Kenya along with the recent political history, the structure of agriculture, and the recent agrifood policies.

3.1 Macro-economic indicators

Kenya is classified as a developing country with a population of about 40 million people and a per capita gross domestic product (GDP) of about US\$808 billion (Table 1). Between 1990 and 2010, Kenya's nominal GDP surged from US\$12 billion to US\$32 billion (Table 1). Over the same period per capita incomes rose from US\$504 in 1990 to US\$808 in 2010. While the country's GDP has grown steadily in the last ten years, the population growth rate declined from 3.2 per cent in 1990 to a low of 2 per cent in 2005 before gaining momentum again in 2010.

Table 1: Kenya's GDP and population growth

Year	GDP (US\$ billion)	GDP per capita (US\$)	Real GDP growth (%)	Agriculture share of GDP (%)	Population (Million)	Population growth (%)
1990	12	504	4.1	28	24	3.2
1995	12	433	4.3	25	28	2.3
2000	12	399	0.6	24	31	2.4
2005	19	547	6.0	26	34	2.0
2010	32	808	5.6	24	40	3.0

Source: IMF, available at: www.imf.org/external/data.htm

The main productive sectors of Kenya's economy are agriculture, industry, and services. The agricultural sector includes crops and livestock, fishing, and forestry. The industrial sector comprises of manufacturing, building and construction, mining and quarrying. The services sector is the largest and consists of finance, real estate and business, transport storage, communication, trade, restaurants and hotels, electricity and water, private households, and government services among others.

The contribution of agriculture to GDP has shrunk from 28 per cent in 1990/95 to 26 per cent in the period 1996/2000 (Table 2). In 2001/10, the contribution of agriculture fell to about 24 per cent of GDP. The decline in the contribution of agriculture could be partly attributed to its low productivity. The decline in the contribution of agriculture to the national wealth has resulted in relatively low rural incomes, increasing poverty and inequality.

Poverty trends

Three national surveys conducted in the 1990s provide valuable information about poverty in Kenya. Several poverty profiles have been constructed spanning 1991/92, 1994, and 1997. Poverty is measured by two commonly used definitions; the absolute poverty i.e. having less than KES 978 per capita per month per adult equivalent in the rural areas, KES 1490 in urban areas, and food poverty i.e. food consumption is below a minimum 2250 calories per adult equivalent per day, about KES 700 per adult equivalent per month (MoFP 2000).

Table 2: Poverty levels in Kenya

Year	Rural	Urban	Total
1992	47.9	29.3	44.8
1994	46.8	29.0	40.3
1997	52.9	49.2	52.3
2000	56.0	49.2	52.6
2005	49.1	33.7	45.9

Source: KIHBS (2006).

In 2006, the KIHBS provided further information on absolute poverty levels and characteristics in the country. The proportion of the population living in poverty rose from about 45 per cent in 1992 to 53 per cent in 2000 (Table 2). The proportion is estimated to have risen to more than 56 per cent in 2003. In 2005, however, the proportion of people living in poverty reduced to 46 per cent. Rural poverty rose from 48 to 56 per cent between 1992 and 2000, but declined in 2005 to 49 per cent following the implementation of the economic recovery strategy that saw the upward turn of the economy since 2003. During the same period, urban poverty increased from 29 to 49 per cent but fell to 34 per cent in 2005 (Table 2). Kenya vision 2030, which is the new development strategy for the country projects further reduction in poverty following the anticipated, enhanced economic growth of between 8 and 10 per cent.

3.2 Recent political history

The key salient features of Kenya's recent political history are the reintroduction of multi-party democracy in 1992 and the recent enactment of a new constitution in 2010. The first two administrations under Jomo Kenyatta (1963–78) and Daniel Arap Moi (1978–2002) exercised control over both the state and markets. Policy decisions were basically made by the executive even though multi-party democracy was allowed under President Kenyatta. After an attempted coup in 1982, President Moi concentrated state authority by making

Kenya a single party state. The state pursued inward looking policies mainly meant to protect food producers but at the same time subsidize urban consumers.

The state-controlled food production and marketing by subsidizing production and administering controlled product prices. Official crop prices were gazetted and announced by the Agriculture Minister before the crop was planted each year. Decisions to import or export food were made by the cabinet and enforced through a monopoly state enterprise, the National Cereals Produce Board (NCPB). The price controls tended to benefit large-scale food producers, processors, and urban consumers who had the power to lobby the state.

After a decade of single party rule, multi-party elections were held in 1992, creating an opportunity for the opposition to check on the executive in policy decision-making. The advent of multi-party politics coincided with the era of market reforms where state control on marketing and trade of food commodities was reduced, while the private sector was allowed a greater say in markets and trade.

The key policy-making institutions in the multi-party era have continued to be the Ministries of Agriculture and that for Finance. In these Ministries, the minister and permanent secretary are the key policy actors. A new constitution was enacted in Kenya on 27 August 2010. The new constitution devolves decision-making to county governments rather than concentrate it on the central government. This would encourage wider participation of stakeholders. In the recent past, producer associations under the umbrella of the Kenya National Producers Federation have been lobbying government before the national budget is read in parliament. Similarly, the parliamentary budget committee has been allocated wider powers in budget-making. These recent developments have tended to widen stakeholder participation in policy-making.

3.3 Structure of agriculture

The agricultural production systems in Kenya are characterized by the existence of numerous heterogeneous smallholders alongside a few large-scale farmers. Smallholder farmers on average operate 2 ha of land and are estimated to number 3 million. They produce around 70 per cent of all agricultural outputs but contribute only 30 per cent of the marketed surplus (Wangia, Wangia, and de Groote 2001). In contrast, large-scale farmers operate more than 20 ha of land and account for about 70 per cent of marketed output.

The dominant agricultural enterprises in Kenya include the production of export crops (e.g., tea, coffee, and horticulture), food crops (e.g., maize, wheat, and rice), traditional food crops (e.g., pulses, roots, tubers, millet and sorghum), industrial crops (e.g., sugar, pyrethrum, cotton, tobacco, and sisal) and livestock products such as milk, meat, and eggs (Nyangito 1997). According to the 2004 Strategy for Revitalizing Agriculture (SRA 2004), commercial crops (industrial and export crops) account for 68 per cent of the total value of marketed production while livestock and food crops account for 28 and 4 per cent, respectively. While cash crops (industrial and export crops) dominate the marketed crop value, food crops occupy the largest area. The major food crops grown in Kenya across all agro-ecological zones include maize, wheat, and rice.

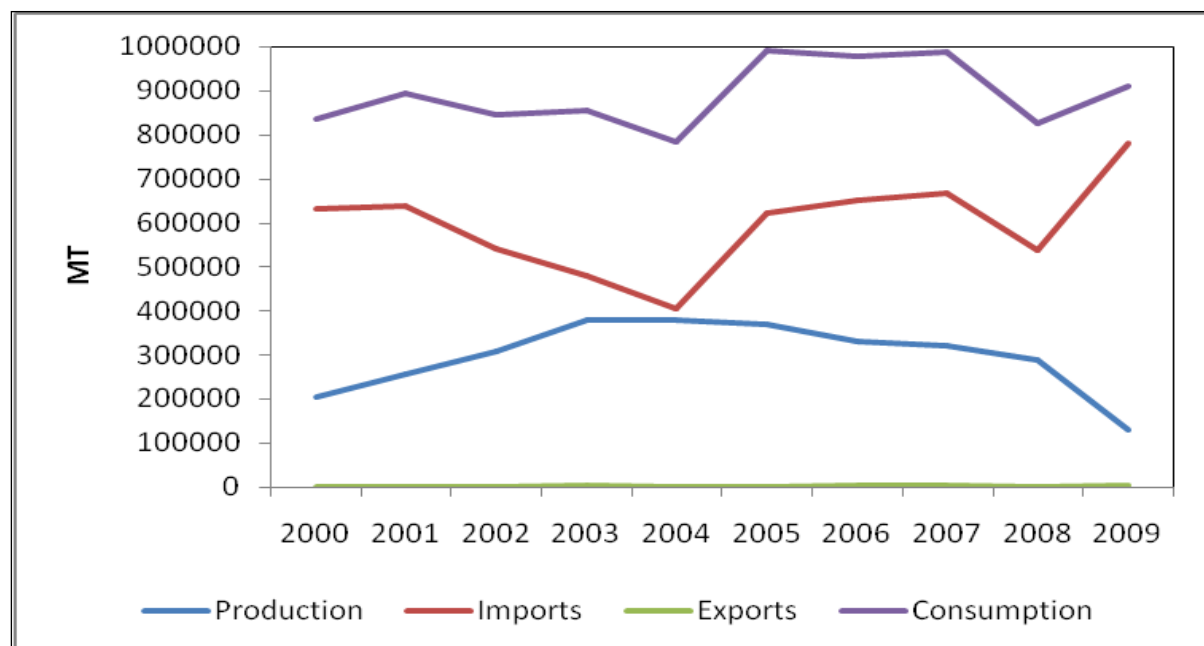
Figure 1: Trends in maize production and consumption, 2000–09



Source: FAOSTAT (2000–09).

Maize is Kenya’s main staple food. The area under maize cultivation has stabilized at around 1.6 million ha, producing about 2.5 million metric tonnes (MT) per annum against an estimated consumption of 3 million MT (Figure 1). In an effort to bridge the supply deficit, Kenya has been importing maize formally and informally from the neighbouring countries especially Uganda and Tanzania. Large offshore imports are also sourced from as far as South Africa, Malawi, the USA, and South American countries such as Brazil and Argentina (Jayne, Myers, and Nyoro 2005). On average, maize imports represent 15 per cent of total consumption since 2000 (Figure 1). However, there was a surge in maize imports in 2009 following Kenya’s 2008 post-election crisis that disrupted maize production. As a result, the maize output fell over the 2008–10 period.

Figure 2: Trends in wheat production and consumption

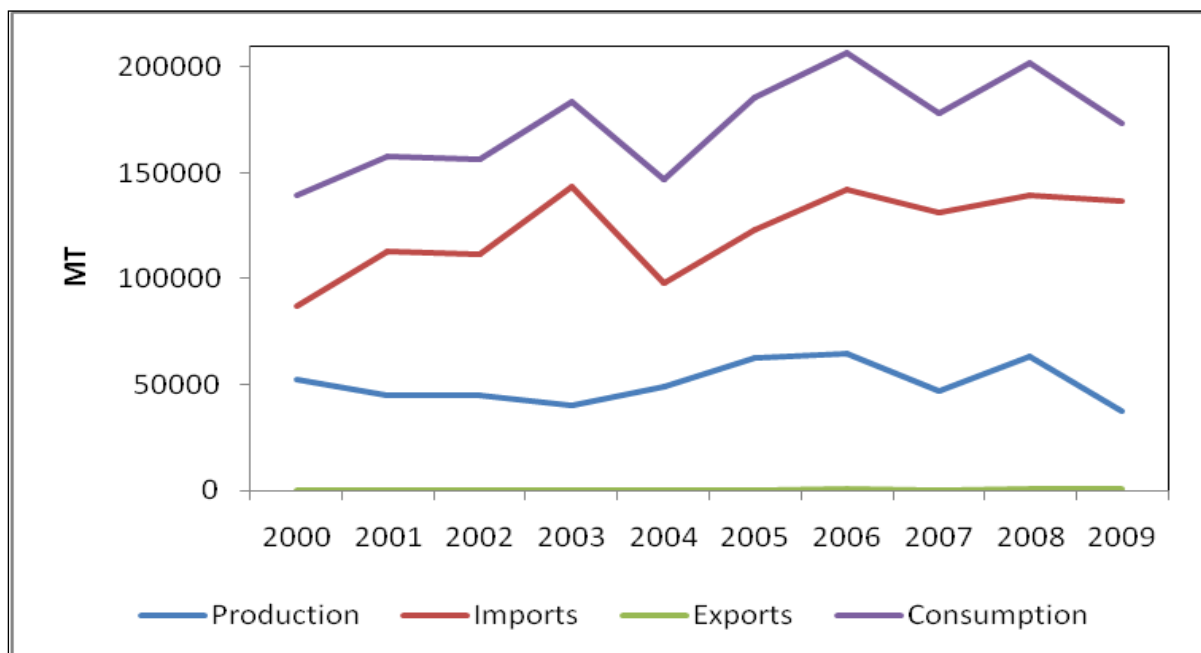


Source: FAOSTAT (2000–09).

Wheat is the second most important grain after maize in terms of both production and consumption. The crop is grown largely for commercial purposes on a large-scale. Local wheat production is estimated at about 300,000 MT while consumption is estimated at about 900,000 MT (Figure 2). Between 2000 and 2009, wheat imports account for about 66 per cent of consumption largely because Kenya only produces soft wheat and imports all of its hard wheat. The major sources of wheat imports to Kenya are the USA, Argentina, Australia, and Canada. Surprisingly, Kenya has over the years dominated the ESA region in the supply of wheat products. Over this period, wheat re-exports accounted for less than 1 per cent of production. This is because the country has a well-developed milling industry for wheat and a good infrastructure for transporting wheat imports to milling plants located in major towns when compared to other countries within the region.

Kenya's rice production in the 2000–10 periods has ranged between 40,000 MT and 65,000 MT, against a consumption of about 300,000 MT (Figure 3). The balance of the country's rice requirement is met through imports mainly from Tanzania, Asian countries (Vietnam and Pakistan), and some other African countries. There are some small quantities imported from the USA. On the average, rice imports into Kenya have averaged 70 per cent of consumption in the 2000–09 period (Figure 3). About 95 per cent of the rice in Kenya is grown under irrigation in paddy schemes managed by the National Irrigation Board (NIB). The remaining 5 per cent of the rice is rain-fed.

Figure 3: Trends in rice production and consumption



Source: FAOSTAT (2000–09).

Cereal sector policies in Kenya

Kenya's historical perspective on agricultural policy development can be divided into various phases that depict the governments in power and the underlying economic paradigms at that time. These would revolve from the colonial period to the successive three independent governments that show different approaches to policy formulation. Kenya's agricultural policy development cannot be discussed without continually referring to the policies and attitudes that were initiated at various stages of the colonial era, which contributed to the structure, performance, and problems, that have been observed in the agricultural sector. A

number of chronological phases exist over the entire colonial period from the initial settlement through the agrarian revolution of the 1950s to independence in 1963 and further on to the successive independent governments. Overall, Kenya's agricultural policies can be broadly grouped into two distinct classes; the pre-independence (period before 1963) and the post-independence (period after 1963) policies. Agricultural policy development in Kenya was influenced by different actors throughout these two policy regimes.

Pre-independence agricultural policies

Kenya's pre-colonial agriculture was characterized by the regional production of crops such as pumpkins, watermelon, pawpaw, pineapples, and tobacco. These crops had entered the Kenyan agricultural production system as early as 1492 from America and were grown in exclusively in earmarked regions. The regional differences in production provided the basis for extensive trade between different tribes. However, it was not until the entry of the colonialists that the actual documentation of the agricultural policy regimes in Kenya began. Much of the literature on the colonial era agricultural policies is derived from Brown (1970).¹ The policies pursued during this period can be broadly categorized into policies applied during the early colonial period (before 1945) and those applied during the agrarian revolution of the 1950s.

Colonial period

Early agricultural policy developments from the turn of the century to the depression years in 1930 were almost entirely European settlers oriented with scant attention paid to African agriculture. European settlers were encouraged to undertake agricultural activities and were protected by the colonial government through provision of exclusive rights to land ownership alienated from Africans, control of labour supply through poll tax and development of residence labour (squatter system), control of production of specific crops (coffee, sisal, wheat, dairy cattle), and monopoly to research and advisory services. Africans were restricted from occupying particular areas and from growing particular crops that were designated as settler crops. They were designated to live in settlement schemes referred to as reserves. The colonial government used pricing, marketing, and credit policies to subsidize settler activities and this was maintained for a long time even after independence. These policies generated problems of landlessness and land degradation. The colonial government then began to pay some attention to African agriculture but even then these were basically land conservation and livestock destocking measures.

To effectively implement agricultural policy, extension and research divisions were established in the then Department of Agriculture. The establishment of these divisions encouraged the development of sisal, coffee, and pyrethrum industries for the large scale European farmers. To control production and marketing, several production and marketing boards/organizations were formed to organize production and marketing and set a basis for economic growth and achievement of agricultural policy objectives. These boards included; the Kenya Co-operative Creameries 1931 for dairy products, the Coffee Board 1933 for coffee, and the Pyrethrum board 1938 to oversee the production and marketing of pyrethrum. Other existing boards established during this period included the Sisal Board, the Flax Board, the Passion Fruit Board, and the Pig Industry Board.

¹ L. H Brown served in the colonial agricultural service from 1940–63.

The agrarian revolution of the 1950s

The major agrarian revolution in African agriculture occurred in the 1950s with the introduction of the Swynnerton plan of 1954, which laid down the foundation for most of the developments in African agriculture. The plan reflected a continuation of post-war policies in which soil conservation, livestock improvement, construction of water supplies and experimentation into farming systems for crops, methods of cultivation, fertilizer and pasture research were implemented. However, it saw little settlement of Africans as a solution to the agriculture problem and highly discouraged land fragmentation. The plan also emphasized increased expenditure in extension, research credit, and marketing development to support commercial farming on small farms. The importance of co-operative marketing was recognized but it was felt that marketing was too important to be entrusted to Africans. Thus the necessity of marketing boards to control the marketing system was recommended and a wide range of boards started.

Some of the boards formed during this period included the Tea Board in 1951, the Coffee Marketing Board 1946, the Maize and Produce Control Board in 1950, the Wheat Board 1952, and the Cotton Lint and Seed Marketing Board 1955. The importance of the semi-arid areas for livestock production was recognized and a central abattoir, the Kenya Meat Commission, was established. The abattoir was a follow up to the establishment of the Meat Marketing Board in 1947 and the Kenya Meat Commission in 1950 which took over the functions of Meat Marketing Board. Irrigation schemes were also recommended as a way of developing African agriculture and hydrological surveys were recommended to identify such areas. The plan formed the basis of policies, which were followed later at independence and was largely driven by technocrats.

Post-independent agricultural policies

The first independent government weathered a period of protectionism that saw a lot of external pressure yield to structural reforms in the second administration that were enhanced by trade liberalization and the current multi-lateral trading systems. Thus, agricultural policies in independent Kenya can be grouped into two distinct categories. First, policies whereby direct government controls and participation dominated agricultural production and marketing (the era of government controls from 1963 to 1980). Second, those whereby government participation was reduced and market forces and private individuals or organizations have played major roles in agricultural production, marketing and investment (liberalized period).

Era of government controls

After independence, agricultural policies were underpinned on Sessional Paper No. 10 on 'African Socialism and its Application to Planning in Kenya' that focused on problems of transition (Kenya 1964). The immediate concern was Africanization of land ownership with financial support sought from various sources, resettlement of the landless and selection of suitable forms of organization. This typified the Kenyatta regime and saw the resettlement on one million acre schemes probably the greatest policy success this far. Farm organizations adopted the existing forms of national farms, co-operatives, companies, partnerships, and individual farms. Land use was to be closely monitored to prevent mismanagement and idle farms. Appropriate legislation and land use policy was proposed under the 1970–74 planning period. In addition, a policy of placing statutory management orders on mismanaged farms

was reinforced and the reform of customary land tenure systems into a modern legal system was started.

Kenya inherited several statutory marketing institutions from the colonial regime. Virtually all important commodities had state boards, which regulated their production and marketing. These included The Sisal Board of Kenya, Kenya Sugar Authority, Coffee Board of Kenya, Tea Board of Kenya, Pyrethrum Board of Kenya, Kenya Dairy Board, the Cotton Board of Kenya, the Dairy Board and the Kenya Meat Commission. Smallholder production and marketing was organized under co-operatives to assist in the procurement of production inputs and in the marketing of produce. A majority of these co-operatives were affiliated to the Kenya National farmers Union. A number of state-run farmer organizations were also set up to support the production and marketing of most commodities. These included Kenya Tea Development Authority (KTDA) for tea, Kenya Co-operative Creameries for milk, NCPB for cereals, NIB for irrigated crops, Horticultural Crops Development Authority for horticulture.

Similarly, price controls that predated the Second World War and covered virtually all sectors drawing legal basis from the Price Control Ordinance of 1956 that was later renamed Price Control Act of 1972 were applied. Price controls operated at both the production and retail levels depending on the commodity mainly maize, wheat, and milk that were considered essential foodstuffs. In the 1970s producer prices were set based on parity prices to discourage export surpluses during this period when Kenya was a net exporter of wheat and maize. Subsidized agricultural credit was availed through the Agricultural Finance Corporation (AFC), Land Agricultural Bank (LAB), and co-operatives. Later on LAB was absorbed by AFC once most transfer of land had been finalized.

The policy on research inherited at independence over-emphasized cash crops and a few food crops. After independence research efforts were geared towards both small and large African farmers. The government increased expenditure on agricultural research and extension. The policy on extension was to retain existing staff and expand their numbers and as such Egerton College was expanded to train increased staff. However, most of the extension agents were primary school graduates with little or no technical training. These problems were recognized in 1970 and a new policy was formulated to recruit school certificate graduates and train them for two years at agricultural training institutes.

The liberalized period

The 1980s to early 1990s were a period of policy reforms in Kenya. The policy reforms were aimed at reducing the involvement of government in economic activities and therefore letting the country move towards a free market economy. Market liberalization policies started from the 1980s under the structural adjustment programmes of World Bank and International Monetary Fund. The impetus of the reforms, however, gained momentum in 1982 with the requirements of the World Bank for removal of distortions in the economy as a conditionality for the disbursement of the World Bank's loans. However, it was not until 1986 that the government officially spelt out the wide range of policy reforms for the whole economy in Sessional Paper No. 1 on 'Economic Management for Renewed Growth'.

The liberalization period also coincided with multi-party politics in Kenya and a period after an attempted coup in 1982 that shook the administration under President Moi. There was a complete failure in policy formulation and such efforts were disjointed and uninformed by local conditions. After the second multi-party elections, donor support was withdrawn on governance grounds and the government lost interest in agriculture. There was insufficient

money voted to agriculture. Moi's interest in agriculture was exercised through patronage on maize, milk, and tea with negative effects on coffee. In the last days of the Moi regime, an attempt was made to save the regime's image by composing a team of technocrats popularly known as the 'dream team' to tame corruption and spearhead policy formulation. However, they happened to arrive at the scene a bit too late when the horse had bolted and as expected they did not get the expected political good will to formulate and implement policies.

The third political administration rode to power on promises of ridding the country of corruption and has made an attempt to institutionalize policy formulations by appointing qualified technocrats to positions of policy-making and giving them autonomy to do so. The new administration under President Kibaki that came to power at the end of 2002 wanted something to be identified with in the agricultural sector. The ministers for agriculture and livestock therefore asked their respective permanent secretaries to prepare a strategy document (political expediency) towards this goal. Tegemeo Institute was asked to assist in the crafting of the document while USAID was also willing to assist. The team borrowed heavily from the Kenya Rural Development Strategy (KRDS) to develop the Strategy for Revitalization of Agriculture (SRA).

KRDS had been prepared earlier in year 2000 with efforts spearheaded by Professor Shem Migot-Adholla a member of the so called 'dream team' in President Moi's era. KRDS was broad in coverage and extensively participatory unlike SRA that was not fully accepted by stakeholders. The SRA mainly related to the organizational/institutional reform of ministries (downsizing) rather than agricultural sector policies. Nonetheless, the SRA has now been developed as a strategy for the next ten years as a sectoral implementation of the ERS. The focus is on raising productivity of agriculture mainly through providing support (public goods), private sector development, and democratization of policy-making. There is renewed emphasis to improve the institutional governance of stakeholder organizations and groupings.

However, the culture of ministries is still very much personality-driven by the permanent secretary. Moreover, the design of much of the legislation has vested too much power in the directors of agriculture and livestock, hence making other decision makers irrelevant or having to accept the director's decision (even the PS in this position on some issues). Each line ministry now has a Central Planning Unit (CPU). Heads of planning departments who head the CPU's are seconded from the Ministry of Planning as are many staff under the Economics Scheme of Service. However, there are insufficient staff and capacity from this source so the planning departments have staff with agricultural economics training seconded from the 'technical' departments to assist in the work and provide technical expertise, which provides new synergies.

At the CPUs, a new policy preparation process has been devised where documents are passed from the ministry to a cabinet committee after which they may or may not be sent to the attorney general for legal interpretation depending on the seriousness of the issue at hand. After this stage the policy is then sent to parliament for debate. Again there is a high staff turnover in the Economics Scheme of Service with a lot of staff joining policy research institutes. The 10-year government embargo on employment led to a decline in this scheme staffing levels and permission was given to recruit 100 graduate economists. It is hard to retain officers within government terms, which has led to the 9 am to 5 pm mentality that has demoralized the service. Clearly there is a need to retain and strengthen CPU for institutional memory. There is also need to build capacity among officers on negotiating skills with regard to international trade issues such as WTO. Moreover, the civil service within ministries in the Kibaki administration has been weakened and demoralized by the retention of retired officers

as key decision makers. There is also a return of ethnicity and corruption in public sector recruitments.

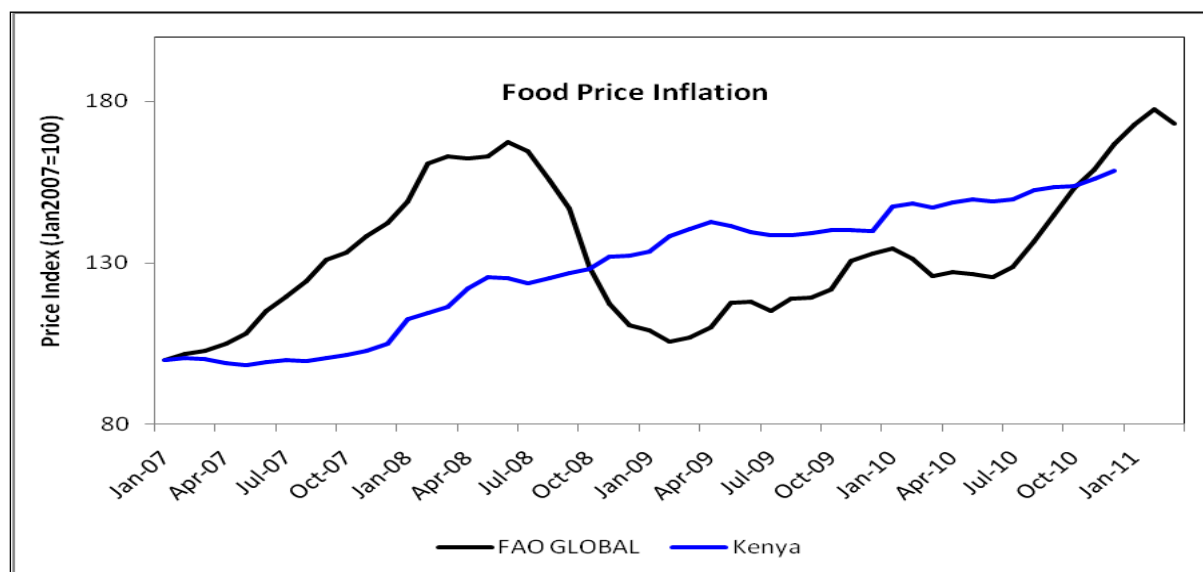
4 Food price trends and shocks

This section analyses the food price trends in Kenya using wholesale market prices relative to the international prices for the period 2007–11. The wholesale price data used in this study is collected from the Ministry of Agriculture and KNBS.

4.1 Food price trends

Overall, food prices within the 2007–11 period have been characterized by high levels of volatility both in the global and in the domestic Kenyan markets. The FAO’s FPI shows that international food prices surged in 2007 and continued to rise in the first half of 2008 (Figure 4). However, food prices began to fall in July 2008 and trended downwards until the start of 2009. While global food prices stabilized in 2009, they remained relatively high in comparison to their pre-peak season in 2007. In the second half of 2009, food prices began to rise, again albeit marginally, but have surged throughout 2010 to reach an unprecedented peak in January 2011 (Figure 4).

Figure 4: Monthly trends in food prices, 2007–11 (January 2007=100)

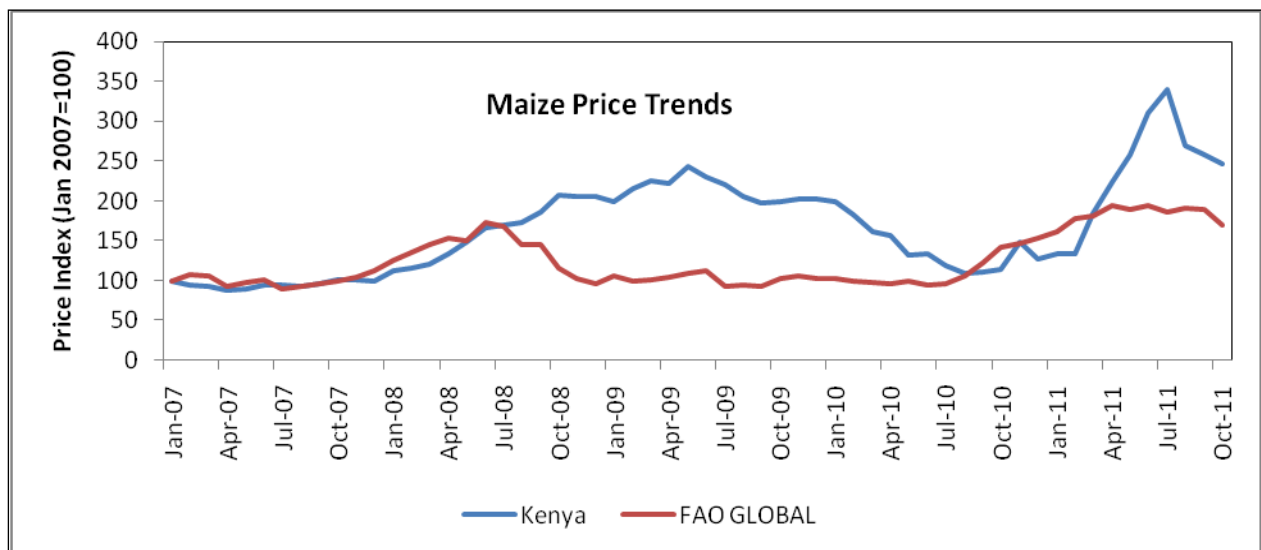


Source: FAOSTAT (2000–09) and KNBS (2007–11).

In contrast, food prices in Kenya rose gradually when global food prices surged in 2007, but defied the global food price trends to continue rising in the second half of 2008 when global food prices fell (Figure 4). While international food prices stabilized in 2009 at levels that were roughly comparable to their January 2007 level, food prices in Kenya continued to rise throughout 2009–11 and remained high relative to the world food prices (Figure 4). The Kenyan food price movements are heavily dependent on rainfall patterns since Kenyan agriculture is largely rain-fed. The main downward turns in food prices coincide with the arrival of the long rains season harvest which constitutes close to 85 per cent of the national output for maize. From Figure 4, the main downward swing occurs around July–September as the main harvest period for South Rift and the Central Highlands materializes. The main upward price shifts are about May–June just before this main harvest.

Underlying the domestic food price volatility are price increases in key staple crops such as maize, wheat, and rice. Maize is a major staple crop in Kenya and food security in Kenya is equated to the availability and lack of maize. It carries a weight of about 13 per cent in computation of food inflation and is the highest proportion attributable to a single food commodity. Unlike the international maize prices which fell in the second half of 2008 and stabilized throughout 2009 and the first half of 2010, maize prices in Kenya rose throughout much of 2007, 2008, and 2009 (Figure 5). The stable global maize prices persisted up to July 2010 when prices began to climb and have been on an upward trend up to the fourth quarter of 2011. In contrast, maize prices in Kenya have remained relatively high but fell in the last quarter of 2010 but rose sharply since the start of 2011 (Figure 5).

Figure 5: Maize price trends, Kenya

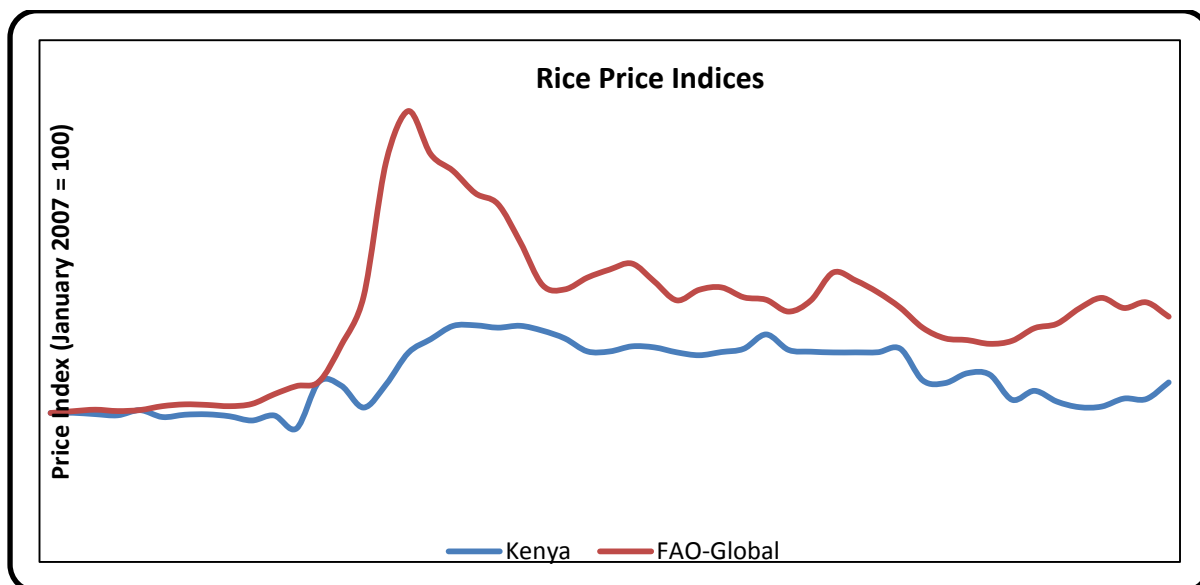


Source: FAOSTAT (2000–09) and KNBS (2007–11).

The rise in maize price can be attributed to a less than optimal maize harvest three consecutive long rains harvests during 2007–09. For instance, the 2009 long rain harvest was estimated at about 28 per cent below normal. Although the food prices continued to increase well into early 2009, a slowdown in the increase is visible from April 2009. The domestic maize price movements in Kenya seem to track international maize prices throughout much of the period under analysis. This is indicative of the possibility of integration between global and local markets.

The food price pressures in Kenya could also stem from price-induced consumption shifts from traditional food staples, such as maize, to other imported commodities such as rice and wheat which are readily available on the international market. Between January and May 2008, international rice prices rose to unprecedented levels (Figure 6). Over the same period, rice prices in Kenya were lower than the global prices but also rose to reach their peaks three months later in September 2008 (Figure 6). In the second half of 2008, international rice prices fell to stabilize in early 2009, a trend that has persisted throughout 2010 and well into 2011 (Figure 6). In tandem with the global trends, rice prices in Kenya remain stable over the 2008–11 period.

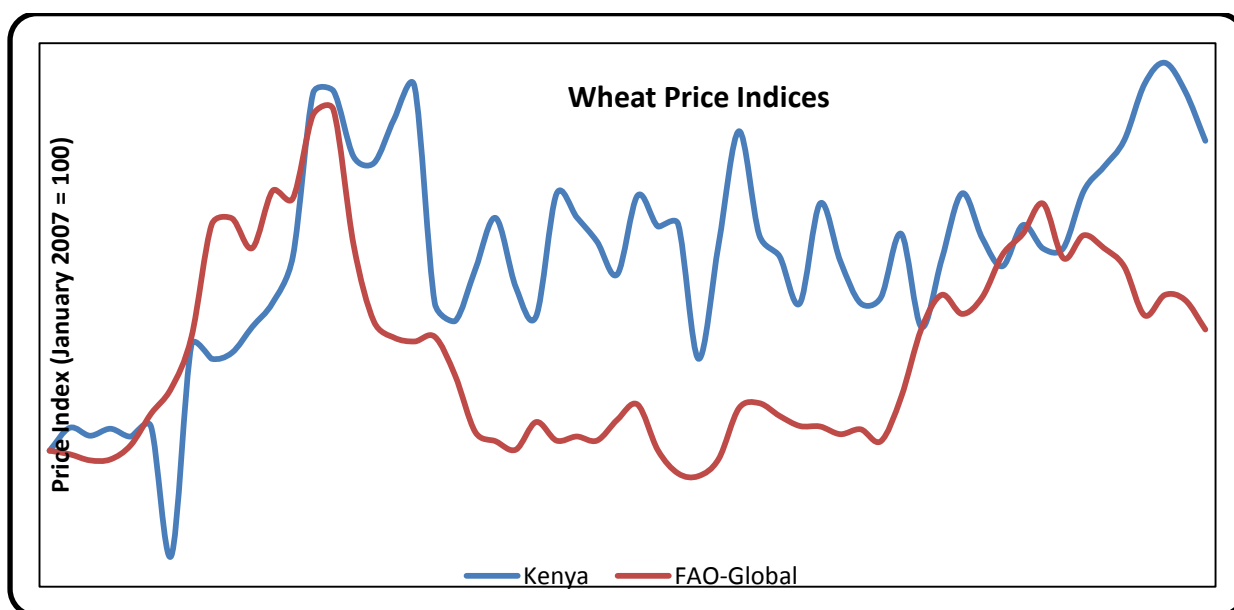
Figure 6: Rice price trends, Kenya



Source: FAOSTAT (2000–09) and KNBS (2007–11).

On the other hand, wheat prices in Kenya rose sharply relative to the international wheat prices throughout 2009 and 2010 (Figure 7). In the second half of 2010, international wheat prices began to climb and have been on an upward trend up to March 2011. However, domestic wheat prices within Kenya have exhibited mixed trends over the same period. Between 2009 and 2011, wheat prices in Kenya have been on a downward trend but have been characterized by high volatility as indicated by the frequent price swings (Figure 7). A key observation with regard to the domestic wheat prices within Kenya is that they increased at a higher rate than the international wheat prices, suggesting the existence of protectionist domestic policies.

Figure 7: Wheat price trends, Kenya

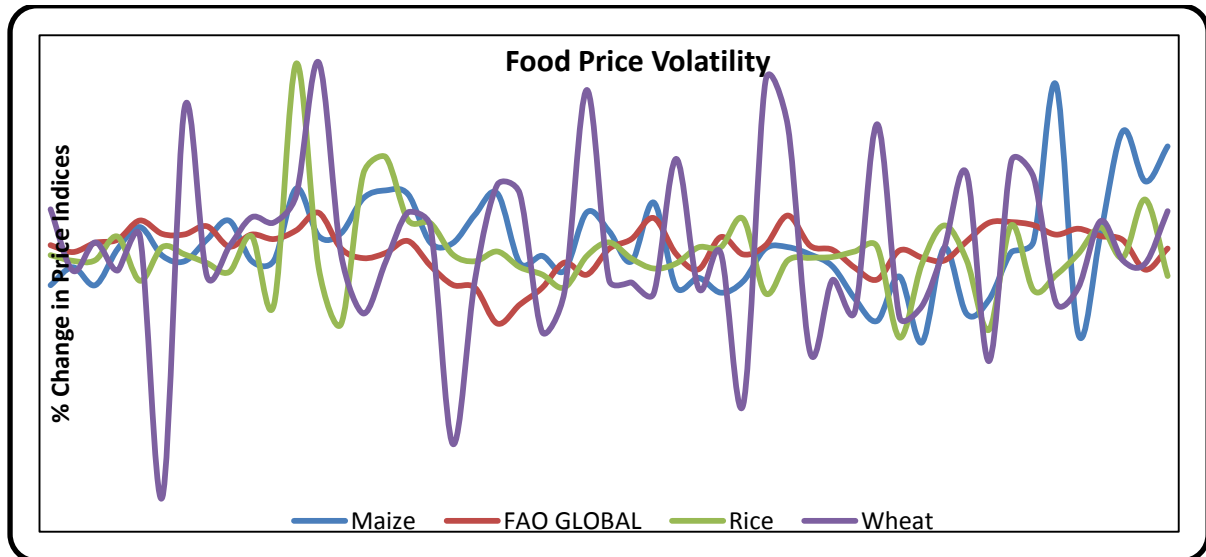


Source: FAOSTAT (2000–09) and KNBS (2007–11).

During the period February 2007 to February 2008, the volatility of domestic food prices in Kenya, as measured by month on month percentage changes in the price indices, was lower

than the volatility of international food prices (Figure 8). However, the food price volatility in Kenya over 2009–11 was higher than the volatility experienced in world market prices. The most volatile food prices in Kenya were those for wheat and maize while the price of rice was relatively stable. These food price trends indicate a destabilizing food price scenario in Kenya, which could adversely affect the food security status of the country.

Figure 8: Percentage changes in food price indices, Kenya



Source: author's computations.

Of particular concern from a food security perspective are indications that prices in Kenya remain persistently high in 2009 despite the precipitous decline in international prices. These persistently high food prices indicate a poor degree of price transmission from international markets to domestic markets in Kenya. Price transmission effects provide insights into the nexus between domestic and international food prices (Karugia et al. 2009). They indicate the extent to which domestic markets are integrated into global markets and therefore the degree to which changes in global prices might influence domestic prices.

Obviously the links between international prices and local prices are complicated; the first determinants of how international prices translate into site-specific prices relate to exchange rate movements and a country's net trade position. Furthermore, the existing domestic trade policies and the manner of their implementation, often determine the extent to which individual producers are able to respond to market signals. Local price movements, meanwhile, reflect a multitude of factors, ranging from weather conditions, shifts in local production, disease and consumption shocks, inflation, changing informal trading patterns among others. However, that said, a cursory review of monthly price movements in Kenya reveals a trend of puzzling persistently high and increasingly variable food prices, which have a negative effect on the country's food security.

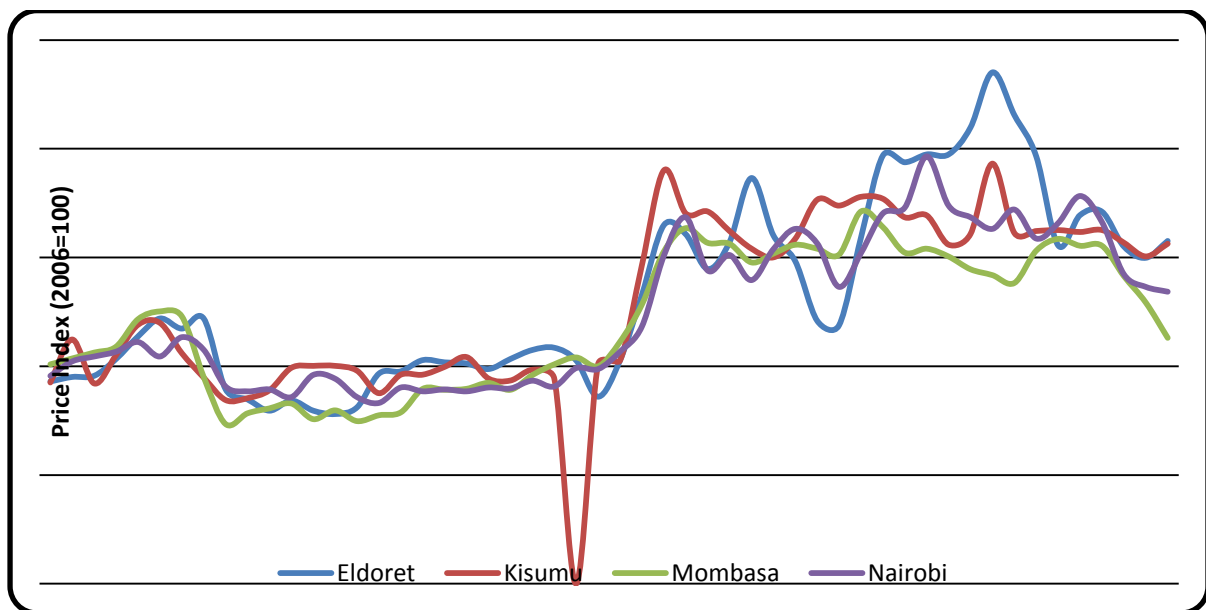
4.2 Domestic market integration

Several models were employed for the purpose of analysing market grain integration in Kenya across five markets, Nairobi, Mombasa, Nakuru, Kisumu, and Eldoret. The first approach involved a visual inspection of the price trends in each of the markets. A second approach involved computing partial correlation coefficients for prices from the four markets.

Finally, an error correction model (ECM) is used to derive the transmission of international prices to domestic markets.

Figure 9 presents the trends in real maize prices in major towns in Kenya: Eldoret, Kisumu, Mombasa, and Nairobi. The trends suggest that maize markets within the country are integrated. The lowest prices on average are recorded in Eldoret which is a major producing town. The volatility, however, seems worse for Eldoret than the other towns. Eldoret experienced a price surge between March 2009 and November 2009 compared to the 2006 average. The rise in price can be attributed to the disruption of production following the 2008 post-election crisis. Eldoret is regarded as one of Kenya's key bread baskets, yet it was the epicentre of the post-election violence following which several farmers were displaced from their farms.

Figure 9: Trends in maize price for selected towns, January 2006–March 2010



Source: KNBS (2006–10).

The results of the correlation analysis of the maize price are presented in Table 3. The partial correlation coefficients are positive and quite high in the range of 0.90 to 0.96 (Table 3). In addition, all partial correlation coefficients are significant at the 1 per cent level (Table 3). These findings suggest that domestic maize markets in Kenya are highly integrated. Markets close to each other, such as Eldoret and Kisumu, show higher correlation coefficients, as do markets that are connected by better transport infrastructure, such as between Nairobi and most of the other markets. The results seem to support the generally accepted notion that shorter distances and improved infrastructure among markets lead to lower transaction costs, making arbitrage profitable and thereby enhancing integration of such markets.

Table 3: Correlation between maize markets

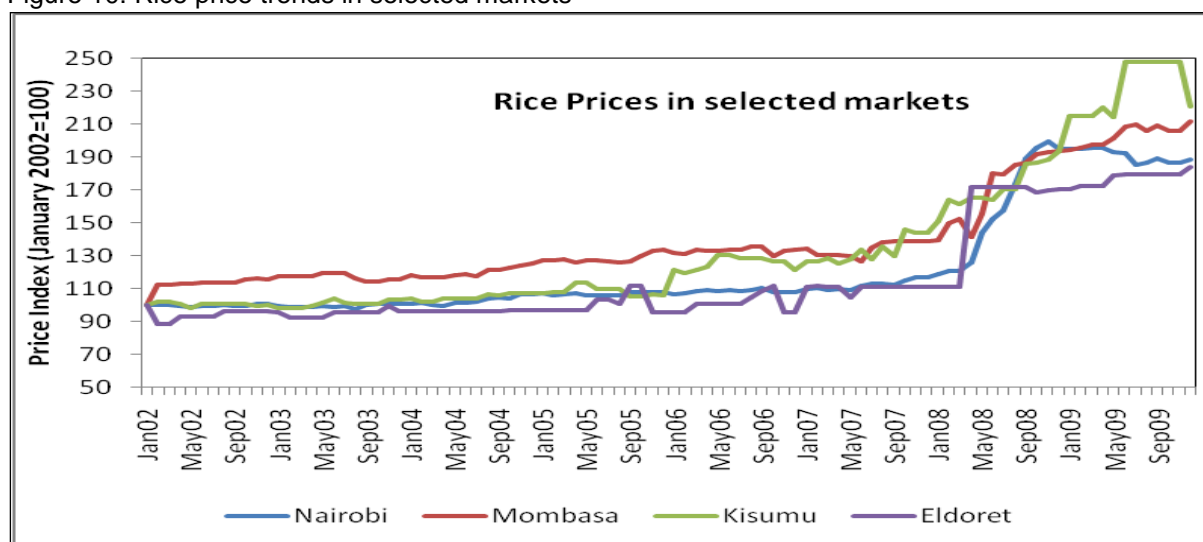
		Pearson correlations coefficients			
		Nairobi	Mombasa	Kisumu	Eldoret
Nairobi	Correlation	1	0.957**	0.935**	0.920**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	96	96	96	96
Mombasa	Correlation	0.957**	1	0.919**	0.906**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	96	96	96	96
Kisumu	Correlation	0.935**	0.919**	1	0.920**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	96	96	96	96
Eldoret	Correlation	0.920**	0.906**	0.920**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	96	96	96	96

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Source: author's computation from KNBS data (2006– 11).

The trends in rice prices across selected markets are presented in Figure 10. The rice prices across the four selected markets seem to band together over the period under analysis. Over 2002–07, rice prices in the four selected markets were stable but began to climb at the start of 2008. The upward trend has been observed in all four markets from January 2008 to September 2009 (Figure 10). These price trends are indicative of integrated markets. The finding that domestic rice markets in Kenya are integrated is not surprising given the country imports about 70 per cent of its rice.

Figure 10: Rice price trends in selected markets



Source: KNBS (2002–09).

A partial correlation analysis of the rice price trends across the four markets is presented in Table 4. The magnitudes of the correlation coefficients for rice are much higher when compared to that of maize and are in the range of 0.93 to 0.98 (Table 4). In addition, all the correlation coefficients are significant at the 1 per cent level, which seems to imply that domestic rice markets in Kenya are highly integrated.

Table 4: Correlation between rice markets

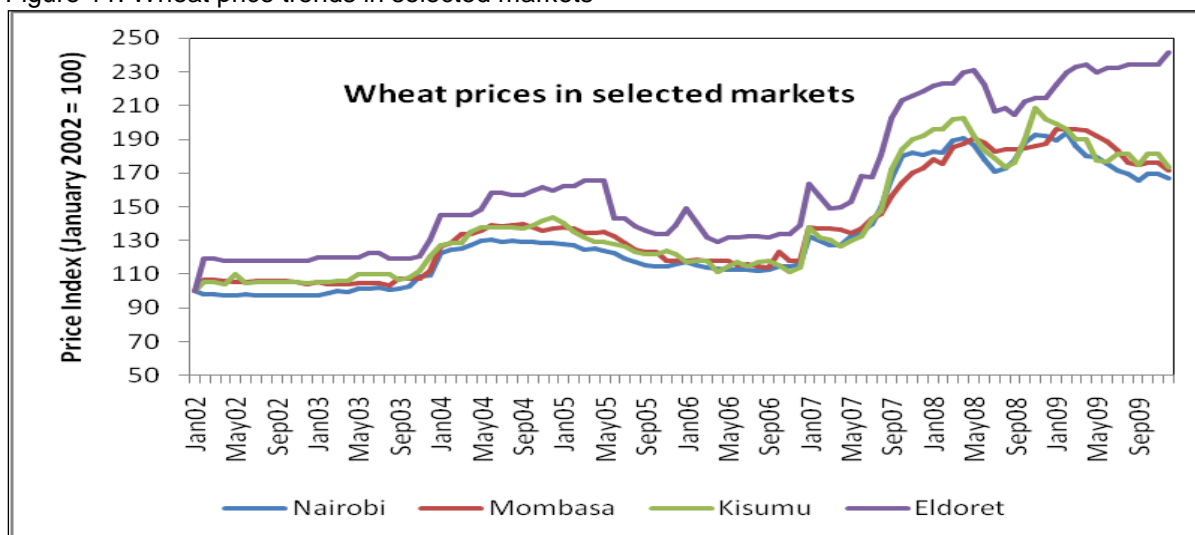
		Pearson correlations coefficients			
		Nairobi	Mombasa	Kisumu	Eldoret
Nairobi	Pearson correlation	1	0.977**	0.943**	0.957**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	96	96	96	96
Mombasa	Pearson correlation	0.977**	1	0.971**	0.952**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	96	96	96	96
Kisumu	Pearson correlation	0.943**	0.971**	1	0.934**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	96	96	96	96
Eldoret	Pearson correlation	0.957**	0.952**	0.934**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	96	96	96	96

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Source: author's computation from KNBS data (2006–11).

The country imports about 60 per cent of its wheat consumption. Figure 11 presents the trends in wheat prices across the four selected markets. Prices in the four markets seem to have the same trends over the period under analysis which is indicative of the existence of integrated markets.

Figure 11: Wheat price trends in selected markets



Source: KNBS (2002–09).

A correlation analysis of the wheat price trends across the four markets was also undertaken. Like in the previous two cases of maize and rice, the correlation between domestic wheat market prices in Kenya is positive and significant at the 1 per cent level (Table 5). The correlation coefficients of the wheat prices are much higher than those of maize and rice and are in the range of 0.97 to 0.99 (Table 5). These highly correlated prices across markets are indicative of the existence of integrated wheat markets in Kenya. The high correlation coefficients on domestic wheat prices in Kenya are expected given the fact that wheat is a highly traded commodity in Kenya with a high proportion of imports.

Table 5: Correlation between wheat markets

		Pearson correlations coefficients			
		Nairobi	Mombasa	Kisumu	Eldoret
Nairobi	Pearson correlation	1	0.985**	0.992**	0.971**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	96	96	96	96
Mombasa	Pearson correlation	0.985**	1	0.976**	0.976**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	96	96	96	96
Kisumu	Pearson correlation	0.992**	0.976**	1	0.969**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	96	96	96	96
Eldoret	Pearson correlation	0.971**	0.976**	0.969**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	96	96	96	96

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Source: author's computation from KNBS data (2006–11).

4.3 International price transmission

An ECM of price transmission was estimated using monthly domestic wholesale maize prices for five markets (Nairobi, Mombasa, Nakuru, Eldoret, and Kisumu) and the South African Futures Exchange (SAFEX) white maize price for the period January 2002 to December 2011 (Table 6).

Table 6: Transmission of SAFEX maize prices to domestic prices in Kenya

Market	ADF	PP	Johansen test (Co-integrated)	Speed of adjustment	Short-run adjustment	Long-run adjustment
Nairobi	No	Yes	Yes	-0.305***	0.103	0.304***
Mombasa	No	No	Yes	-0.287***	0.114	0.287***
Nakuru	Yes	Yes	No	-0.428***	0.047	0.212***
Eldoret	Yes	Yes	No	-0.350***	0.253***	0.259***
Kisumu	Yes	Yes	No	-0.191***	0.024	0.368***

Note: ***significant at the 1% level.

Source: author's computation from KNBS data (2006–11).

The results show that out of the five markets, only two (Nairobi and Mombasa) have a significant long-run relationship with SAFEX maize prices. This is expected given that Kenya is a net maize importer that regularly imports maize through the port of Mombasa that is well-connected to Nairobi by both road and rail. However, the transmission of international prices to other domestic markets might be hampered by infrastructural constraints. The elasticities of price transmission in these two markets were about 0.3 (Table 8). Although no significant long-run relationships existed between SAFEX prices and other market prices in Kenya, the elasticities of price transmissions were in the range of 0.2 to 0.3 implying that between 20 and 30 per cent of the changes in SAFEX maize prices are transmitted to Kenyan markets.

Similarly, the speed of adjustment of domestic prices to the long-run relationship across the five markets was in the range of 0.2 to 0.3 (Table 6). The implication that can be drawn is

that domestic maize prices take about 3 to 5 months to fully adjust to changes in world prices. The findings of this study are comparable to earlier transmission studies undertaken in the country. Rapsomanikis (2009) finds a relatively slow adjustment of domestic food prices in Kenya to international prices with domestic prices taking 11 to 7.7 months for the SAFEX white maize price. While reliance on rain-fed agriculture and therefore, weather shocks, is one cause of price volatility, poor infrastructure is another contributing factor.

Poor roads especially, in isolated producing and consuming regions within a country leading to increases in price variability. It has also been argued that poor infrastructure may, however, insulate domestic markets from international shocks. Rapsomanikis (2009) shows evidence of a strong long-run co-movement between prices in major Kenyan markets with the international price. Maize price in Eldoret (the main producing market) and Kisumu at the western part of the country, strongly directly co-move with both the international yellow maize price and the SAFEX white maize price. Strong co-movement suggests that international maize upturns would, in the long-run, likely affect white maize in these markets.

Apart from poor infrastructure, rapid international price transmission may be hindered by state involvement in the procurement of both domestically produced and imported maize, and the subsequent release of the same at predetermined price. This may partly be responsible for the weak relationship (moderate co-movement) between the SAFEX white maize price and the Nairobi and Mombasa maize prices.

5 Policy responses

The government of Kenya has used a combination of policies to respond to the food price crisis. The policies pursued have included both supply and demand-side policies. Table 7 provides a timeline of these policy interventions while the discussion that follows categorizes these actions into market-oriented interventions, safety nets, and supply response stimulation policies.

Table 7: Timeline of government responses to the food price crisis

Year	Policy action	Remarks
2002–05	NCPB intervention in the operation of a strategic grain reserve	Stabilized market prices
2002–05	Import tariffs	Tariff reduction to increase import access
2002–05	Zero rating of imports from EAC and COMESA	Deepening of regional integration
2008	Export ban on maize	Retaliation from neighbouring countries
2008	NCPB maize importation	Arrival of imports delayed by 3 months
2008	NAAIP launched Kilimo pus Kimlimo Biasha Partners, Equity Bank, AGRA, FAO, IFAD	Fertilizer and seed subsidy
2008	Irrigation subsidy	Economic stimulus package
March 2008	NCPB procures 30% of national fertilizer requirement	Fertilizer subsidy
June 2008	Reduction of wheat import tariff from 35 to 10%	Prices rose owing to a surge in world prices
June 2008	Zero rating of maize , wheat, and milk	Prices rose owing to a surge in

December 2008	Urban consumer price subsidy on maize meal (prime minister)	world prices Poor targeting, inaccessible to the poor, food riots, flawed distribution
December 2008	NCPB producer price subsidy of KES 200/90kg bag	Farmers decline to release stocks
February 2009	Consumer subsidy policy reversal	Maize meal subsidy withdrawn
February 2009	Food price taskforce formed	Multi-sector task force on food prices formed
March 2009	Cash for work programme launched by the prime minister	Poor targeting
March 2009	Fertilizer price subsidy announced by the president	Poor targeting

Source: author's compilation.

5.1 Market-based interventions

Market-based policies attempt to reduce the cost of food, and increase its availability. Such policies change the market conditions and therefore potentially affect all households. Prior to the 2007/08 food price crisis, the government of Kenya intervened in markets through the operation of the NCPB and the imposition of import tariffs on food imports. Though charged with the responsibility of maintaining a strategic grain reserve, its food procurement activities have the effect of stabilizing market prices. On the other hand, the imposition of food import tariffs that were in the range of 25 to 50 per cent over the 2000 to 2005 period has the effect of limiting imports and increase domestic prices.

After the 2007/08 food price crisis, the Kenyan government implemented export restrictions on maize in 2008 while at the same time embarking on an aggressive importation of maize through the NCPB to build up stocks for the national strategic grain reserve. At the start of 2008, the government had licenced large-scale traders to export maize to neighbouring countries such as South Sudan. Much of these maize exports were procured from trader stocks and the NCPB strategic grain reserve. On realizing that the national strategic reserve was depleted while supply was constrained by the impacts of the post-election crisis and a draught, the government imposed an export ban on maize. In response to the draught experienced throughout most of east and southern Africa, Kenya, Malawi, and Tanzania imposed maize export bans. The maize export bans in countries as Tanzania and Malawi limited the country's ability to increase supply and curb the price surge through quick imports.

As the crisis worsened, and the imports failed to arrive on time, the government turned to domestic procurement through the NCPB largely as a result of pressure being exerted by consumers following high maize meal prices. Although the government set a high price of KES 1,750 per 90 kg bag, farmers held on to their stocks in anticipation of higher market prices later in the season. They demanded a 20 per cent increase to KES 2,200 per 90 kg bag. The government over the same period increased the producer price from KES 1,750 per 90 kg bag to KES 1,950, but directed the NCPB to sell the same to millers at KES 1,750. This translated to a producer subsidy of KES 200 per 90 kg bag.

The government maize imports did not arrive until March 2009. Moreover, there were flaws in the distribution of the subsidized maize to millers. The NCPB imports were sold to briefcase traders posing as maize millers who were licensed to procure grain from NCPB in an effort to support a maize meal subsidy programme pioneered by the prime minister (see discussion under consumption subsidies). This undermined the effect of the subsidy

programme. In addition, NCPB sold the subsidized maize only in bundles of 50 kilogrammes making it unaffordable to the poor.

The export restriction may have been ineffective given the existence of substantial informal cross-border trade with its neighbours. Despite the export ban on agricultural commodities in Tanzania, substantial volumes of maize were exported into Kenya in 2009 (LEI 2008). Although export restrictions are aimed at protecting consumers by keeping the price low, they potentially increase transaction costs through the informal trade routes, effectively hurting the consumers. Jayne, Myers, and Nyoro (2008) observe that export bans increase smuggling costs, depress producer prices, and raise consumer prices.

Other trade policies that were adopted included the reduction of import tariffs and taxes on maize and wheat. In June 2008, import duty on wheat was reduced by 25 per cent (from 35 to 10 per cent) while that of maize was zero-rated following the intervention of the Ministry of Agriculture. Other fiscal measures included zero-rating value added on wheat and maize flour, and milk. Despite these efforts, the price of maize continued to rise and by October/November 2008, the government shifted its strategy to a direct protection of consumers through food subsidies. This decision followed near food riots in Nairobi owing to pressure from urban populations.

5.2 Consumption subsidies and safety nets

While universal food subsidies are ideal as a quick response in improving access to food and in mitigating the initial impacts of a price surge, they are costly and often fail to target those most in need. In December 2008, the Kenyan government adopted a direct consumer price subsidy by introducing a dual pricing system for maize meal. This urban maize meal subsidy programme was the brain child of the prime minister, whose urban constituency covers Kibera, the largest slum in Nairobi. The Ministry of Finance and Planning initially opposed the maize meal subsidy programme, but later on grudgingly accepted. A 2 kg packet of maize meal was supposed to sell at a commercial rate of KES 72 and a subsidized rate of KES 55. The later was supposed to benefit the poor. The subsidy programme was largely supported by the milling industry that was licenced to procure maize from NCPB, mill it, and sell it at subsidized prices but later on apply for rebates from the Ministry of Finance and Planning.

Other than transporting the subsidized meal to the informal settlements and other low-income neighbourhoods, there were no other targeting criteria. Furthermore, the subsidized pack was retailed in 5 kg bags which made it inaccessible to the poor. Within a short period, the urban maize meal subsidy programme became untenable owing to financing and distribution bottlenecks and was eventually discontinued. The subsidy programme raised some political overtones given the composition of the grand coalition government where the prime minister, who supported the programme came from one wing of the coalition while the minister for finance, who came from another wing of the coalition, opposed it.

The cost of the scheme was estimated at KES 23.4 billion (US\$334 million) in subsidy and tax foregone in the fiscal year (FY) 2008/09. After a critical analysis, the cabinet withdrew the scheme in February 2009 and a commitment was made to develop an alternative, more effective scheme. In the meantime, the price was left to market fundamentals. In addition, the cabinet directed the relevant ministries to work with interested donor agencies to develop a comprehensive food subsidy programme.

Consequently, a multi-sectoral taskforce was formed in February 2009 to facilitate this process. The membership of the task force covered the Ministry of Agriculture, Ministry of Finance and Planning, Ministry of Livestock Development, Ministry of Special Programmes, Kenya Federation of Agricultural Producers, Parliamentary Committee on Agriculture, and various lobby groups on maize, wheat, and livestock. The taskforce designed a cash transfer programme initially targeting the poor informal settlements in Nairobi on a pilot bases. Where improved access to food is the objective, cash transfers would work efficiently where food markets function well. The implementation of this initiative was, however, shelved by the cabinet due to design flaws.

Another initiative implemented by the government was a cash-for-work programme named Kazi Kwa Vijana (KKV) that was mooted by the prime minister. In an environment of increasing food prices, such public work programmes increase the income of the poor and improve their access to food. The large number of unemployed youths made such an intervention very attractive. The KES 15 billion (US\$214 million) KKV programme was launched in March 2009 and aimed at creating 300,000 jobs within six months of its launch. The programme engaged the unemployed youth in infrastructure works (mainly roads) and environmental conservation exercises such as tree planting and river cleaning efforts. The programme, although bedevilled by payment problems, was successful in building some assets, notable being the clean-up of the Nairobi river.

5.3 Stimulating food supply response

During the post-liberalization period, the government through NCPB, entered into farm inputs (fertilizer, maize seeds) markets in the year 2000 with an aim of boosting the board's revenue and stabilizing the fertilizer prices in the local market. However, following the surge in fertilizer prices in 2008, the government undertook to procure 163,000 MT or 40 per cent of the national fertilizer requirement at a cost of KES 6.2 billion (US\$89 million). This excluded the tea fertilizer bought by KTDA worth KES 1.6 billion.

In March 2009, the president announced that diammonium phosphate fertilizer would be sold at a reduced price of KES 2,500 while calcium ammonium nitrate fertilizer would retail at KES 1,650 per 50kg bag from a high of KES 6,000. The price of seed was also reduced by KES 50 and KES 10 per 10 kg packet and 2 kg packet, respectively. Just like the interventions in the maize market, the implementation of the input subsidy also encountered governance challenges. Once again, some unscrupulous traders procured the fertilizer from NCPB, repackaged it and sold it to unsuspecting farmers at higher prices than those recommended by the government. This was in addition to the potential disruptions of the fertilizer business. Smuggling was rife at the Kenya-Uganda border as fertilizer prices were higher in Uganda than in Kenya.

In realization that resource poor farmers, especially those in the lowlands may not have the know-how or cannot afford purchased inputs, the Kenyan government embarked upon a National Accelerated Agricultural Input Programme. The programme was aimed at promoting food security and poverty reduction. Initially planned to subsidize fertilizers and maize seed for a limited number of districts, it was subsequently expanded to national coverage with plans to provide 2.5 million farmers with maize seed and fertilizers for one acre each, with vouchers issued to targeted farmers (with less than 2.5 acres) and subsequent redemption through private input sellers who would also be eligible for trade credit guarantees. Farmers under this input grants popularly known as *Kilimo Plus*.

Starter kits are supposed to be linked to extension, cereal banks, warehouse receipts, and participation in farmer groups. These farmers are supposed to graduate after two years into another programme: *Kilimo Biashara* (farming as a business). The expected graduation is yet to successfully materialize due to the poor harvest in late 2007 and 2008. The programme received a financial boost from FAO and the World Bank in 2008 in response to the high food prices. *Kilimo Biashara* was launched in May 2008 as a US\$50 million (KES 3 billion) loan project. Probably encouraged by the Malawi successful experience with fertilizer and seed subsidies, the Kenyan government in partnership with the Alliance for Green Revolution, International Fund for Agricultural Development and Equity Bank launched the project with the aim of targeting small-scale farmers and enterprises in the agricultural value chain.

The Alliance for a Green Revolution in Africa (AGRA) catalysed the project by setting up a US\$5 million (KES 400 million) 'cash guarantee fund'. The fund buffers the Equity Bank's risk of lending money to farmers and small agricultural businesses with little or no collateral. The loans carry a 12 per cent interest rate applied when the loans fall due, a rate well below the bank's standard lending rate of 18 per cent (as per 2008). Under the programme, farmers also receive training on improved farming techniques and business management in addition to government vouchers that enable them to purchase new farming inputs. Another government response came in form of an economic stimulus to agriculture through revival of the stalled Hola irrigation scheme in the lower Tana Delta. In September 2008 the President and the prime minister launched a KES 2 billion National Economic Stimulus Programme on food production in the irrigation scheme. However, there seems to have been no plans to market the output as extensive post-harvest losses were recorded in February 2010.

6 Conclusions and policy recommendations

Over the last four years, international food prices have witnessed unprecedented increases. FAO's FPI rose by 57 per cent between March 2007 and March 2008 as compared to an increase of 9 per cent in 2006 (FAO 2008). However, food prices began to fall in July 2008 and trended downwards until the start of 2009 when food prices began to rise again albeit marginally but surged throughout 2010 to reach an unprecedented peak in January 2011. In contrast, food prices in Kenya rose gradually when global food prices surged in 2007, but defied the global food price trends to continue rising in the second half of 2008 and throughout 2009 to 2011.

Of particular concern from a food security perspective are indications that prices in Kenya remain persistently high despite the precipitous decline in international prices. These persistently high food prices might be indicative of a poor degree of price transmission from international markets to domestic markets in Kenya. The findings of a market integration analysis seem to suggest that domestic food markets in Kenya are highly integrated. Markets close to each other, such as Eldoret and Kisumu, show higher correlation coefficients, as do markets that are connected by better transport infrastructure, such as between Nairobi and most of the other markets. The results seem to support the generally accepted notion that shorter distances and improved infrastructure among markets lead to lower transaction costs, making arbitrage profitable and thus enhancing integration of such markets.

Moreover, price transmission analysis finds that about 30 per cent of the changes in world market prices are transmitted to domestic markets in Kenya. However, the study finds a relatively slow speed of adjustment of domestic food prices in Kenya of between three to five months to their long-run relationship with international prices. The results of the econometric

analysis do not give a clear picture to explain why market prices in Kenya remain high, the evidence of highly integrated markets and a slow speed of adjustment to the world prices notwithstanding. The political economy approach adopted offers better insights.

In response to the food price crisis, the government of Kenya implemented both supply-side and demand-side policies. However, the design and implementation of these policies has not been fully institutionalized and relies mostly on the executive. This is best illustrated by the 2009 reversal of the 2008 urban maize meal subsidy programme and the challenges facing other subsidy programmes. These political economy findings lend credence to the calls to institutionalize and strengthen the policy-making process in Kenya while the slow adjustment of domestic markets to international markets could best be addressed through infrastructure developments.

References

- Chambers, R., R. Longhurst, and A. Pacey (eds) (1981). *Seasonal Dimensions to Rural Poverty*. London: Frances Printer.
- De Gorter, H., and J. Swinnen (2002). 'Political Economy of Agricultural Policy'. In B. L. Gardner and G. C. Rausser (eds), *Handbook of Agricultural Economics* Edition 1, Volume 2. Amsterdam: Elsevier.
- Food and Agriculture Organization of the United Nations (FAO) (2008). *The State of Food Insecurity in the World 2008: High Food Prices and Food Security: Threats and Opportunities*. Rome: FAO.
- FAOSTAT (2000–09). Data. Available at: faostat.fao.org/faostat/
- Jayne. T. S., R. L. Myers, and J. Nyoro (2005). 'The Effects of Government Maize Marketing and Trading Policies on Maize Market Prices in Kenya'. WP Series. Nairobi: Tegemeo Institute of Agricultural Policy and Development.
- Karugia J., M. Waithaka, A. Freeman, R. Prabhu, B. Shiferaw, S. Gbegbelegbe, S. Massawe, M. Kyotalimye, J. Wanjiku, and E. Macharia (2009). 'Responding to Food Price Crisis in Eastern and Southern Africa: Policy Options for National and Regional Action'. ReSAKSS Working Paper. Washington, DC: ReSAKSS-Eastern and Central Africa.
- Kenya National Bureau of Statistics (KNBS) (2002–11). Kenya National Bureau of Statistics Reports. Nairobi: Government Printer.
- Meijerink, G., P. Roza, and S. van Berkum (2009). 'East African Governments' Responses to High Cereal Prices'. Report 2009/102. The Hague: LEI Wageningen UR.
- Ministry of Agriculture (2004). Strategy for the Revitalization of Agriculture 2004–2014. Nairobi: Government Printer.
- Ministry of Finance and Planning (MoFP) (2000). 'Second Report on Poverty in Kenya. Volume I. Incidence and Depth of Poverty' (Based on Welfare Monitoring Survey (WMS III) of 1997). Maputo: MoFP.
- Nyangito, H. O. (1997). 'A Review of Policies on the Maize Sub-sector in Kenya'. DP 008/97. Nairobi: Institute of Policy Research and Analysis.
- Okello, J. J. (2009). 'The 2007–2008 Food Price Swings: Impact and Policies in Kenya'. FAO Discussion Paper Series. Rome. FAO.

- Rapsomanikis, G. (2009). 'The 2007–2008 Food Process Episode: Impact and Policies in Eastern and Southern Africa'. Rome: Food and Agriculture Organization, Trade and Markets Division.
- Swinnen, J. (2010). 'The Political Economy of Agricultural and Food Policies: Recent Contributions, New Insights and Areas for Further Research'. *Applied Economic Perspectives and Policy*, 32 (1): 33–58.
- Timmer, C. P., W. Falcon, and S. Pearson (1983). *Food Policy Analysis*. Washington, DC: World Bank.
- von Braun, J. (2008). 'Food and Financial Crises: Implications for Agriculture and the Poor'. Food Policy Report 20. Washington, DC: International Food Policy Research Institute (IFPRI).
- Wangia, C., S. Wangia, and H. De Groot (2002). 'Review of Maize Marketing in Kenya: Implementation and Impact of Liberalization, 1989–1999'. Paper presented at the 7th Eastern and Southern Africa Regional Maize Conference, Nairobi, Kenya.