

REVIEW OF MAIZE MARKETING IN KENYA: IMPLEMENTATION AND IMPACT OF LIBERALISATION, 1989-1999.

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ABSTRACT

Maize is the key food crop in Kenya, with estimated production (1998) of 3 million tons of which about 40% are marketed. The Government strictly controlled all aspects of maize marketing until 1986 when gradual liberalisation started and this was completed in 1995. The objective of this study is to assess the degree of policy implementation and the impact of liberalisation of maize marketing on stakeholders between 1989 and 1999. The method of the study included review of available literature, conduct of interviews with stakeholders and the authors' personal observations of maize marketing activities. Results indicate that liberalisation was implemented without the formation of alternative marketing institutions. Also, maize prices fluctuated substantially according to competitive market forces with limited moderating effects from the Government through open market interventions and import tariffs. But soon the rules of regional and worldwide trading organisations will render this impossible. Private sector participation at all levels in the marketing system increased substantially. There is easy maize flow and supplies to all parts of Kenya. One recommended intervention is to form maize farmer-based institutions for the marketing of maize, provision of maize market information and credit. Further studies should assess the impact of liberalisation and continued regulation of maize imports on producers and consumers.

Keywords: Maize, marketing, Kenya, liberalisation, policy analysis.

INTRODUCTION

An Overview of the Maize Sector in Kenya

Maize is the key food crop in Kenya, constituting 3% of Kenya's Gross Domestic Product (GDP), 12% of the agricultural GDP and 21% of the total value of primary agricultural commodities (Government of Kenya, 1998). Maize is both a subsistence and a commercial crop, grown on an estimated at 1.4 million hectares by large-scale farmers (25%) and smallholders (75%). As shown in Figure 1, the total average annual production of maize between 1988 and 1998 was 2.3 million metric tons fluctuating from 1.7 million metric tons in 1993/94 to 3.14 million tons in 1988/89 (Government of Kenya, 1998; Argwings-Kodhek, 1998; Nyangito, 1997). Approximately 40% of maize produced in Kenya is marketed while the balance is used for subsistence. < Figure 1. Maize production and trade in Kenya 1976-1996. Figure 2 shows the main maize surplus and deficit districts of Kenya. The major maize surplus areas are in the Rift Valley Province (Nakuru, Nandi, Kericho, Uasin Gishu and Trans Nzoia). These areas account for about 95% of the total marketed maize in Kenya. Other surplus areas include Western, Nyanza and parts of Eastern Provinces. Most arid and semi-arid lands (ASAL) of Eastern, North Eastern, Coast and Northern Rift Valley are perennial deficit areas in maize production. Figure 2: Maize Surplus and Deficit Districts of Kenya, 1998.

The Government strictly controlled all aspects of maize marketing until 1986 when there was a major policy shift towards liberalisation that was completed in 1995. State corporations that controlled maize marketing were reduced to "buyers and sellers of last resort" and were kept for

maintaining strategic reserves. The general shift in policy was a trend in Eastern and Southern Africa countries that had strictly regulated the marketing of maize.

Objectives of the Study

The main objective of this study is to understand the trend, implementation and impact of liberalisation of maize marketing in Kenya between 1989 and 1999. This period covers a period of gradual liberalisation (1989-1995) and full liberalisation (1995-1999).

METHODS OF THE STUDY

This study used three different sources of data. The key source is the extensive literature on maize marketing before and after liberalisation (Appendix 1). The literature was intensively reviewed to critically assess the implementation and impact of liberalising maize trade. The other main source was oral discussions with various stakeholders (policy makers, agricultural specialists, university students, traders, millers, transport agents, farmers and consumers) during informal and formal gatherings and sessions. The discussions were assessed on the basis of the general impression of the respondents. The third source of information was based on the authors' general observations of marketing events and issues before and after the liberalisation. Their views were assessed on the basis of what was expected and what they observed and their personal conclusions of what they observed. The information collected was analysed using descriptive methods, trend analysis, tables and geo-mapping to evaluate trends, status and degree of implementation and impact of liberalisation.

RESULTS OF THE STUDY

Liberalisation of Maize Marketing in Eastern and Southern Africa:

This section reports on trends in the control and liberalisation of maize marketing in Eastern and Southern Africa. As shown in Table 1, there are great similarities in the trends in the marketing of maize in the region, except for Uganda and Zimbabwe.

Franzel et al. (1992) and Legesse et al. (1992) reported that before the Ethiopian revolution in 1974, the marketing of maize was dominated by the private sector (70%) while retailers and consumers handled 30%. However, in 1976 the Ethiopian Government established the Agricultural Marketing Corporation with the mandate to buy and distribute maize and tef at fixed prices. In 1987 the Corporation purchased 570,000 tons of grain, 30-40% of the nation's marketable surplus. Concurrently, the role of private sector was sharply curtailed. By the late 1980s it was evident that the marketing system was inefficient, inequitable and resulted in chronic food shortages. As a result, in 1990 Ethiopia liberalised grain marketing, although the state still retains a significant role in grain production and marketing. Table 1: Trends in Liberalisation of Maize Marketing in Eastern and Southern Africa

In Kenya, Mozambique, Malawi, Zambia and Tanzania, the state monopolised maize marketing through Statutory Marketing Boards from the colonial era till the mid-1980s. Between mid-1980s and 1995, the sector was gradually liberalised. After 1995, the sector was fully liberalised while retaining the statutory Boards with the role of maintaining strategic food reserves and market moderation (Ackello-Ogutu and Echessah, 1997, 1998; Minde and Nakhumwa 1998; Jayne et al., 1999; DAI 1989; Guantai, 1993; Nyangito, 1998; Argwings-Kodhek, 1999a). Zimbabwe has continued to control maize marketing through a statutory Board while Uganda has never controlled the maize sector.

Maize Marketing in Kenya before Liberalisation, 1989

The Development Alternatives, Inc. (DAI) study of 1989 provided a thorough exposition of the maize marketing status up to 1989 and set the stage and strategies for the liberalisation of the sector under the Kenya Market Development Program (KMDP) funded by USAID. The review of the maize marketing status before the liberalisation is based on the DAI report of 1989.

Kenyan policy towards maize marketing has gone through a series of distinct periods as indicated in Table 1. The colonial government tightly controlled the maize sector to provide economic support to white settler farmers in the Kenya highlands. After independence in 1963, this control was maintained for another 27 years for several reasons (DAI 1989; Guantai, 1993). First, the control guaranteed an orderly and efficient marketing with a reasonable balancing and stabilising of producer and consumer prices. Table 2: Milestones in the Reform of Maize Marketing in Kenya, 1940s-1999.

Second, the control assured food security through strategic reserves by the state boards. Third, the controls ensured regulated domestic movement of maize with strict management of imports and exports. Implicitly the state had a "social contract" with the majority of citizens to ensure the

supply of maize at cheap and stable prices (Jayne, et al., 1999).

Maize marketing during the pre-liberalisation era consisted of the formal and informal systems operating side by side. The formal maize marketing system was strictly regulated and managed by the National Cereal and Produce Board (NCPB), the successor of two previous maize boards. The informal system was free, unregulated and unofficial with many market participants operating parallel to the formal system (Schmidt, 1979; and DAI 1989).

The NCPB did not provide a sure outlet for maize of all farmers and did not supply maize to many of the rural areas. The vacuum left by the Board was the niche and opportunity that the informal system filled. The informal system that had an extensive network of rural markets and traders handled 50-60% of all marketed maize in Kenya, despite the strict movement and price controls (DAI, 1989). The formal maize marketing system was mandated to purchase all maize offered for sale. This amounted to 50% of all marketed maize in the country and 25% of total domestic maize production. The Board operated through a network of Primary Marketing Centres (PMCs) purchasing (21%), cooperative societies (23%), agents (3%), and individual farmers delivering directly to the Board (53%). The Board stored the maize in a network of 90 depots located in the major towns of Kenya. The maize was subsequently resold to the few registered millers of sifted flour, traders and consumers at controlled prices.

The monopoly and monopsony powers of the NCPB made maize the property of the state once harvested. In addition, the Board controlled maize movement through the use of movement permits that had to accompany any shipment of maize of more than one bag (90kg). This was increased to ten 90 kg bags under the Cereal Sector Reform Program (CSRP) in 1988/89. The permits were costly and time-consuming and cumbersome to procure and were a source of corruption and political influence.

The Government set the prices of maize at various levels of the marketing system from producers, traders, NCPB, millers, wholesalers and consumers. The basis of pricing was cost of production and marketing and world prices. The announced prices usually lasted twelve months corresponding to one crop year from July to June. The difficult question was to determine the "right price". Furthermore, the uniform seasonal price policy did not offer any incentive to either farmers or traders to hold stocks to be sold later in the crop year, except in the informal and illegal trade.

The NCPB's monopoly powers, inefficient management and the suppression of normal market function and private sector involvement resulted in a number of problems. They included poor stock management and under-utilisation of storage capacity, excessive management and transportation costs, excessive debt, and inability to pay farmers promptly for deliveries. It became evident that the controls were costly to the Government, while providing excessive margins to a few privileged market participants. The operating losses in 1986/87 were about KSh 1.8 billion in addition to losses of KSh 3.5 billion incurred in the previous five years. These losses were written off in 1988 under the CSRP. These losses and inefficiencies were the basis for many studies and liberalisation. Initially, the Government resisted liberalisation arguing that maize was a strategic food that could not be entrusted to the private sector. In addition, the Government feared the exploitation of

farmers and consumers by traders. Policy makers believed that liberalising maize marketing would lead to price and supply instability and uncertainty, possibly leading to food riots and political unrest and adverse political repercussions of the liberalisation. Thus, the Government would retreat on the reform process. Even then, the DAI (1989) study designed the policy agenda for the liberalisation of the maize sector under the KMDP. The GOK agreed to start price and movement decontrols immediately, but gradually. In turn, the KMDP would reinforce longer-term adjustments in the formal sector together with the EEC and World Bank.

Implementation and Impact of the Liberalisation Program, 1989-1998.

The liberalisation of maize marketing was implemented in four major areas:

- Elimination of the movement controls on maize
- Reduced food security stock and price stabilisation roles of the NCPB.
- Institutionalisation of Government units for improved market information and food security policy planning.
- Implementation of three changes in Government policies affecting road construction and maintenance, to ensure future sustainability of the key market-to-market linkage roads, the upgrading of which would be financed with local currency funds under the KMDP.

The implementation of the liberalisation of maize marketing was a major component of the economic recovery program (ERP) in the 80s and 90s. The EEC and World Bank supported the Cereal Sector Reform Program (CSR). The liberalisation was further supported by USAID under the KMDP from 1989, although significant implementation started in 1993. Implementation of the liberalisation process by the Government during the 1990s was gradual and on course. This was because of the donor condition of tying donor lending and support to liberalisation (Nyangito, 1998; Argwings-Kodhek, 1999b). For the same reasons, the reforms are still intact although the Government, through the NCPB, has tended to renege on a number of issues as reviewed below.

The removal of controls of maize movement was politically acceptable to the GOK and was fully and gradually implemented over three years. Until 1988 the limit was one 90 kg bag of maize. This was increased to ten 90 kg bags in 1989/90, then to forty four in 1990/91, eighty eight bags in 1991/92 and complete decontrol after 1993 (Gordon and Spooner, 1992; Nyoro 1992; Omamo, 1995; Argwings-Kodhek, 1992). There was mass media publicity by the GOK utilising funds from KMDP. A special campaign was targeted at District Administration and police to ensure that they did not interfere with the movement of maize within and outside their districts.

As a result there were more market outlets, improved distribution and availability of maize in all parts of Kenya (Mutahi, 1996; Nyangito, 1997 and 1998; Nyangito and Ndirangu, 1997; Argwings-Kodhek, 1998). Argwings-Kodhek (1998) reported that 59% of Kenyan households reported better availability of maize in the post-liberalisation era, 31% in the pre-liberalisation era and 10% saw no change in availability. On convenience of selling maize, 88% of the households preferred the present system, 7 % the old system and 5% saw no change. Overall, 61% of households prefer the present system, 34% the old system and 5% saw no

change. A key impact on the maize market of decontrolling maize movement was the reduction in the costs of transportation since economies of scale were realised with larger volumes (Omamo, 1995). In addition, the number of private sector participants and fair competition increased substantially. This also improved income redistribution in the country. However, the strict conditions of delivering to the NCPB discouraged farmers from selling maize to the Board.

De-control of Prices of Maize

Figure 3 shows the movement of maize prices paid to farmers by the NCPB before and after the decontrol, 1976-1996.

Prices of maize and products at all levels in the marketing channel were decontrolled fully in 1995. There was substantial price increase and fluctuation in the post-liberalisation era (1994-98). There were wider disparities between the open market prices in deficit and surplus areas (Nyangito, 1997). In 1995 prices offered outside the NCPB were relatively lower (KSh 400 to 550) than the floor price of KSh 600 per 90 kg bag set by NCPB (Nyangito, 1997). Consumer prices showed a similar trend, although they were higher than producer prices, except in 1996 when they were lower.

As shown in Table 2, import parity prices increased rapidly from KSh 550 per 90 kg bag in 1992 to KSh 1,190 in 1993. These declined to KSh 1,141 and KSh 798 in 1994 and 1995, respectively, due to large global supplies. Import parity prices rose to KSh 1,376 in 1996. This price movement during these years benefited mainly urban consumers and farmers and consumers in deficit areas. Conversely, producers in surplus areas and consumers in deficit areas suffered. Despite the higher price offered by NCPB, only 36% of marketed maize was sold through this outlet compared to 64% in the private sector. The strict NCPB conditions of 100% clean maize, dusted with insecticide, in new bags and with moisture content of 12% discouraged farmers from selling maize to the Board. Table 2: Domestic and Import Parity Prices for Maize in Kenya KSh/90 kg bag.

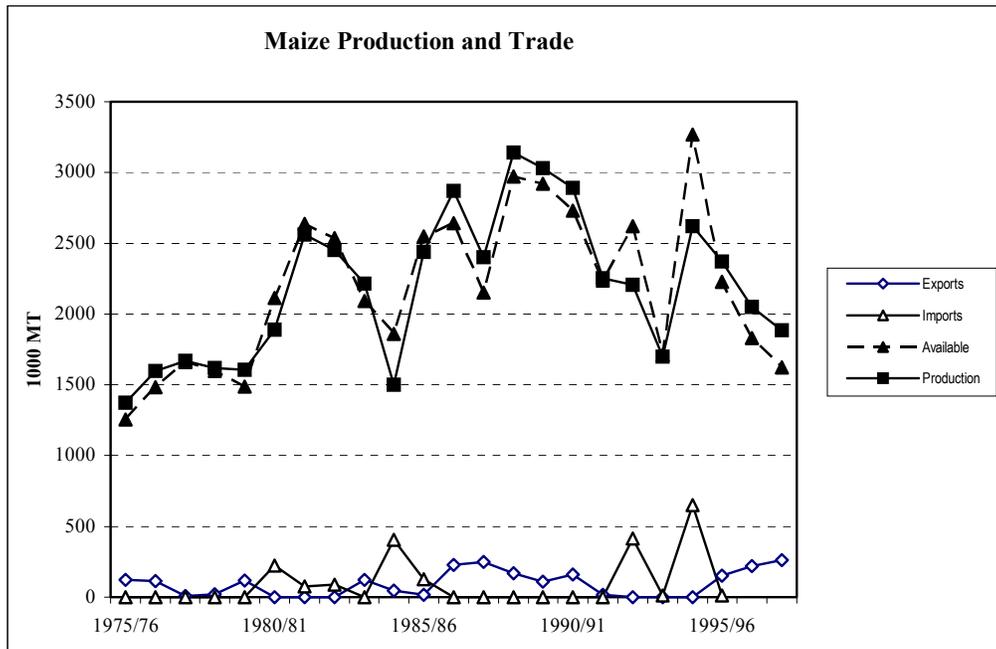
Despite the fact that "price" is an important factor in production, marketing, processing and consumption, there are no proper mechanisms and forums for setting the price of maize. Various stakeholders try to optimise prices through political pressure and noise, threats and advocacy without objective and factual justification for the prices demanded. Indeed, stabilisation of producer maize prices remains a big riddle due to instability in production and uncertainty in market outlets. (Nyangito, 1997 and 1998; Argwings-Kodhek, 1999a; Nyoro, 1992). Nyangito (1997) has suggested the use of buffer stock, buffer funds and compensation funds to deal with price fluctuation.

Argwings-Kodhek, (1998 and 1999a) indicated that the majority of maize producers prefer the liberalised marketing system to the controlled one. The system is easy, free, and payment is prompt. The conclusion is simplistic since preference depends on market condition i.e. seasonal and spatial prices, national and global maize supply and demand levels and other buyers and sellers in the market.

Customs Duty and Maize Trade

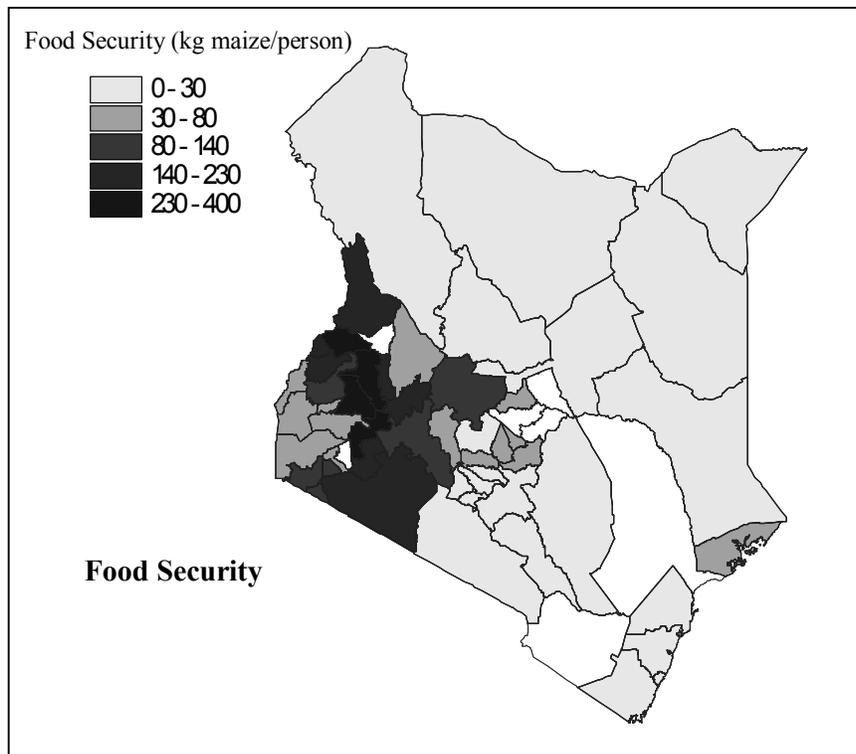
Until 1996 duty on imported maize was 15%, but this was increased to 25% in that year. In addition, suspended duty of 50% could be invoked by the Minister of Agriculture

Figure 1. Maize production and trade in Kenya 1976-1996.



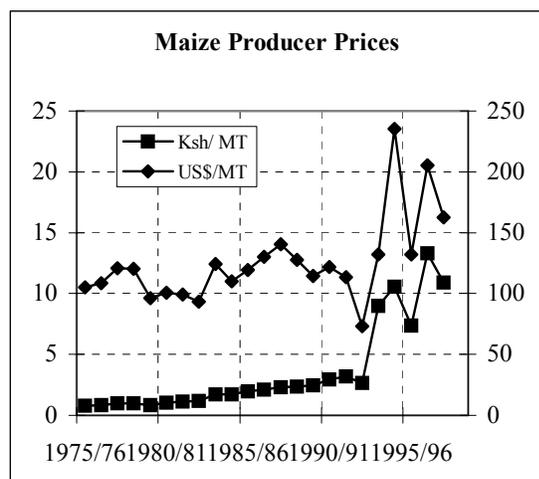
Source: Government of Kenya, Statistical Abstracts 1976-1998.

Figure 2. Maize Surplus and Deficit Districts of Kenya, 1998.



Source: Authors' design using data from Government of Kenya, Statistical Abstracts 1998.

Figure 3. Movement of Maize Prices Paid to Farmers by the NCPB before and after the Decontrol, 1976-1996.



Source: Government of Kenya, Statistical Abstracts 1976-1998

Table 1: Trends in Liberalisation of Maize Marketing in Eastern and Southern Africa

Country	Institution Controlling Maize Marketing	Monopoly control Period	Gradual decontrol period	Year of Full decontrol
Kenya	NCPB	1930s - 1986	1986-1995	1995
Ethiopia	AMC	1974-1990	1990-1995	1995
Mozambique	AGRICO, ICM	1930s-1990	1990-1995	1995
Malawi	ADMARC	Before mid 1980s	mid 1980-mid 1995	Mid 1990s
Tanzania	NMC, FSA	Before mid 1980s	1980-mid 1995	Mid 1980s
Zambia	State Board, FRA	Before early 1990s	Early 1990s-1995	1995
Zimbabwe	GMB	Before 1989	Partial control 1990s	partial control since 1990s
Uganda	none	No Controls	No controls	No controls

ADMARC- Agricultural Development and Marketing Corporation
 AMC - Agricultural Marketing Corporation
 FRA - Food Reserve Agency
 GMB- Grain Marketing Board
 ICM- Instituto de Cereais de Mozambique
 NCPB- National Cereal and Produce Board
 NMC- National Milling Corporation

Source: Various Reports as cited in text.

whenever necessary, which is tantamount to banning imports. Import duty, port charges and internal transport charges contribute 54% of the total FOB price of imported maize in Nairobi. But soon the rules of regional and worldwide trading organizations (EAC, COMESA and WTO) will render this impossible and pose a big threat to the existence of the Kenyan maize producers, unless they are cost effective. There is usually an easy flow of maize from Uganda (Nobera 1999) and Zimbabwe to Kenya or Kenya to Tanzania and vice-versa (Nyangito, 1997; Ackello-Ogotu and Echessah, 1998) that would pose a problem to the Kenyan maize farmer, unless the Government and farmers prepare for the competitive situation ahead. So far farmers and the Government are not preparing and accepting this fact of free trade.

Dissemination of Maize Market Information

Under the KMDP, market information was to be provided to stakeholders in the maize sector. This was implemented until 1995 when it was discontinued. Thus, availability of accurate information to producers, market participants and consumers remains a problem. This situation causes uncertainty in the market, leading to unjustified political noise, uneven distribution of maize in deficit and surplus areas and wide disparities between open market prices in deficit and surplus areas (Nyangito, 1997). Currently, maize prices in 15 major towns in Kenya are published once a week in the newspaper. There is an additional need for market information at the village level for farmers to make informed production, marketing and consumption decisions.

Private Sector Participation in Maize Marketing

Private sector participation in maize marketing has increased substantially although its impact has been limited by policy unpredictability. The Government still influences maize prices and imports, albeit on a sporadic basis. The private sector is left with great uncertainty, particularly about the pattern of seasonal and spatial prices. As a result, storage activities have been limited largely on-farm by small and medium producers (PAM, 1997; Sasaki, 1997). On the other hand, the private sector participation in the movement of maize is tremendous (PAM, 1997). Currently, private commodity dealers and millers serve most parts of Kenya, unless the area lacks purchasing power, such as in the current situation in Turkana.

In the milling sector the impact of liberalisation was more pronounced with large numbers of millers of sifted and whole maize flour becoming established in rural and urban areas. The severe competition of private posho millers has forced big millers of sifted flour to lower their prices in Kenya. In addition, maize milling by posho mills is more efficient and the flour is nutritious (PAM, 1997).

Food Security and Social Welfare

During the pre-liberalisation era, the NCPB maintained a strategic maize reserve and traded over 30 million bags of maize a year. In the post-liberalisation era, the NCPB maintained strategic reserves that varied between 3 and 6 million bags. The current policy is for a strategic reserve of 3 million bags that can last 3 months while awaiting imports and US\$ 60 million that can be used to import another 3

Table 2: Milestones in the Reform of Maize Marketing in Kenya, 1940s-1999.

Period	Role Of Government And Other Agencies In Maize Marketing	Outcomes
1940s-1963	Strict control of maize price, movement and storage Under the MCB.	Stable prices and incomes to white settlers in the highlands, assured market
1963-1979	Strict control of maize price, movement and storage under the Maize Marketing and Produce Board	Stable prices over the whole country and over time, stable incomes to all maize farmers, food security
1979-1986	Strict control of maize price, movement and storage under the National Cereal and Produce Board.	Stable territorial and seasonal prices over the whole country and over time, stable incomes to all maize farmers, food security Financial losses.
1986-1990	Limited relaxation of control of maize price, movement and storage under the National Cereal and Produce Board. First serious market reform under the CSRP conditional to EEC/WB aid	EEC/WB aid to Kenya. Stable incomes to farmers. Uniform territorial and seasonal prices. Food security. Financial losses by NCPB Gradual reduction of movement controls.
1990-1995	Gradual reduction of control of maize price, movement and storage under the National Cereal and Produce Board. Market reform under the CSRP/KMDP conditional to aid Foreign exchange liberalisation Multi-party politics legal	EEC/WB and USAID aid to Kenya. Unstable territorial and seasonal prices. Unstable incomes to farmers Mixed results of food security. Financial losses by NCPB. Delayed payment to farmers by NCPB Ksh devalued from 32 to 80/\$. Many political parties formed.
1995-1999	Full liberalisation. NCPB buyer and seller of last resort. Private sector participation increased. Government intervenes- tariff & financing NCPB. WB condition for aid.	Mixed market outcomes. Territorial & seasonal prices market determined – unstable. Mixed results of food security. Limited loss of public funds. Lack of awareness on market reforms. Limited registered market institutions. Limited market information.

million bags of maize to last 3 months (Argwings-Kodhek, 1999b). It is argued that holding 3 million bags is unnecessary and expensive (KSh 400 per bag per year). Importing maize from South Africa, Zimbabwe and high seas takes about 2 weeks and another 2 weeks for domestic transportation to various parts of the country. Thus, strategic reserves could be easily reduced to 1 million bags, thereby reducing costs of holding large strategic reserves. In any case, strategic reserves are used to raise unduly the producer prices rather than lower consumer prices. The high prices tend to benefit political elites at the expense of consumers.

CONCLUSION AND RECOMMENDATIONS

The review of literature shows clearly that the liberalisation of maize marketing in Kenya has made great strides. The expected liberalisation has been institutionalised at all levels in the marketing system. Overall, most authors agree that consumers have benefited from the lower prices of sifted and whole maize flour. In addition, consumers accessed numerous posho mills that serve mainly the poor (Jayne and Argwings-Kodhek, 1997). It is acknowledged that liberalisation adversely affected the food security status of the poor in the short-term (Carter ed., 1993). There was an upward shift in the food prices in urban areas. There is no evidence to show that liberalisation increased incomes of the poor. Even so, there is increasing awareness of the legitimacy of the difficult options of liberalisation that are short-lived. The short-run safety nets for the vulnerable groups are difficult to distinguish from the politically vocal groups who

make claims without justification (Argwings-Kodhek, 1999a).

Table 3: Domestic and Import Parity Prices for Maize in Kenya KSh /90kg bag.

Year	NCPB Producer Price Ksh /bag	NCPB Selling Price Ksh /bag	CIF Mombasa Ksh/bag	Import parity price in Nairobi Ksh /bag*
1992/93	470	742	508	651
1993/94	810	877	966	1190
1994/95	950	1231	850	1141
1995/96	600	690	640	798
1996/97	1200	810	1213	1376
1998/99	1280	1500	989	2147**

* CIF plus import duty (currently at 25% plus 50% suspended duty) plus port charges See Appendix 1.

Source: Nyangito, H. 1998. Towards Maize Security In Kenya: An Evaluation of the self-sufficiency Strategy; **G. Argwings-Kodhek, 1999a. Policy Issues Facing the Maize Sector in the North Rift

The Government continues to pursue the policy of self-sufficiency and food security through the protection of poor inefficient producers and boosting profits of the relatively well-endowed efficient producers through levying high import duties and bans. In this regard many poor consumers suffer.

During the post-liberalisation era the pruning of the role of the NCPB in the market left a big institutional vacuum. This situation is repeated every year immediately

after the harvest of maize when unregistered producers haphazardly call on the Government to ban maize imports. Also there is an outcry by maize farmers every year about the high prices of fertilizers, poor seed and lack of credit. In this regard, there is a clear need for individual strong institutions of farmers that can articulate the views of their respective farmers, facilitate proper maize marketing, pricing, procuring fertilizers and, financing of their activities. In addition, there are limited vertical linkages between producers, traders, millers and consumers. Such linkages are beneficial as they increase market transparency and effectiveness.

There is a need to establish or strengthen institutions that would have the responsibility of: making orderly presentations of their views at various forums, negotiating prices, imports and exports with other stakeholders, storing, transporting and marketing maize and realising economies of scale and bargaining power, procuring bulk farm inputs and avoiding farmers being exploited by suppliers, establishing and arranging credit facilities for members instead of relying on the Government and commercial banks, and educating stakeholders on the imminent free trade era that is coming with economic integration of EAC, COMESA and WTO.

There is a need to bring awareness to stakeholders on the need of institutions and facilitate and coordinate their establishment. The Government, KARI, CIMMYT and NGOs such as Winrock International can address this issue.

Finally, stakeholders in the maize sector lack adequate market and marketing information that they require for decision-making. Many of the allegations, outcries and political noises about the status of the maize sector are often baseless and unjustified. In this regard, regular collection and analysis of information on the maize sector would benefit the stakeholders. In particular, information on maize supply, demand, price, imports, exports, relief supplies, tariffs and stocks over time and space should be regularly available to stakeholders.

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APPENDICES

Appendix 1: Calculation of Import Parity Price of Maize FOB Nairobi, 1999.

COST ITEM	COST PER TON	COST KSH/90KG BAG
Shipment load of 25,000 ton	US\$	
FOB Durban, South Africa	130	877.57
Shipping	15	101.26
C&F	145	978.85
Insurance	1	9.79
Total CIF Mombasa (On shore)	146 Ksh 10,984)	988.64
	KSh	
CIF Mombasa	10,984	988.64
Import duty @ 25%	2746	247.16
Suspended duty @ 50%	5492	494.32
Total duty	8238	741.48
Pre-inspection 2.7%	302	27.19
Port charges US\$5+15%Vat	431	38.82
Stevedoring US\$ 15+15% VAT	1294	116.45
Clearing and Forwarding 1%	110	9.89
Importation charges	2,137	192.34
CIF+Duty+Import charges Mombasa	21,357	1,922.45
Transport to Nairobi	2,500	225.02
FOB Nairobi Nov 1999	23,858	2,147.46
NCPB Producer price at all depots		1,188

Source: Argwings-Kodhek, December 9 1999.

Appendix 2: Total Maize production, Marketed Production, Exports, Imports, and Producer Prices, 1975/76 to 1995/96.

Year	Total Production 000mt	Marketed Production 000mt	Value Of Marketed Production K F Million	Exports 000mt	Imports 000mt	Producer Prices Per 90kg Bag	
						KSH	US\$
1975/76	1375	487		121	0	70	9.46
1976/77	1597	565		113	0	77	9.75
1977/78	1671	424		8	0	88	10.86
1978/79	1620	330		23	0	89	10.85
1979/80	1607	242		120	0	77	8.65
1980/81	1888	218		0	224	95	9.05
1981/82	2560	473		1	77	100	8.93
1982/83	2450	571		1	89	107	8.41
1983/84	2215	637	34,028	123	0	154	11.19
1984/85	1500	561	29,990	47	405	156	9.89
1985/86	2440	583	31,187	18	125	175	10.75
1986/87	2870	670	36,066	228	1	188	11.72
1987/88	2400	652	35,120	248	0	209	12.66
1988/89	3140	485	26,141	167	0	214	11.51
1989/90	3030	626	69.89	110	0	223	10.32
1990/91	2890	509	69.05	160	0	264	10.96
1991/92	2253	304	46.37	19	0	287	10.22
1992/93	2205	515	76.93	0.42	415	239	6.60
1993/94	1698	242	97.96	0.11	13	810	11.88
1994/95	2621	316	150.08	1.7	650	950	21.19
1995/96	2370	401	160.38	154	12	665	11.89
1996/97	2052	296	155.9	221		1200	18.46
1997/98	1887	205	140.5	264		980	14.63

Source: Kenya Government, *Statistical Abstracts*, various issues up to 1996; Kenya Government, *Economic Survey*, various issues up to 1998.

Appendix 3: Studies on Maize Marketing in Kenya, 1989-1999

YEAR	AUTHOR	TITLE	MAJOR ISSUES	RECOMMENDATIONS/ OUTCOME
1989	DAI	Economic and Social Soundness Analysis for the KMDP	Maize marketing sector was highly controlled. The sector was inefficient. There was need for decontrol.	Liberalisation of the sector. Support to the infrastructure and market information under KMDP
1992	PAM, Egerton University	Proceedings of Conference on "Maize Supply and Marketing Under Market liberalisation"	Decontrolled maize movement from 1 bag in the 1980s to 10, 44, 88 and then infinite in the 1990s.	Increased private sector participation. Increase in posho mills. Prices unstable but reflects market forces.
1993	FAO: S. Carter (Ed).	Structural Adjustment and Trade Liberalisation - Its Effect on Marketing Institutions and Social Life.	Pre-liberalisation strictly controlled by Government. Inefficient marketing. Stable and artificial market prices. Subsidies to consumers. Stable food security.	Reluctance by Government to liberalise. Difficult options of liberalisation short lived. Private trade increased. Limited capital for private traders.
1995	PAM, Egerton University	Towards 2000: Improving Agricultural Performance.	Pre-liberalisation strictly controlled by Government. Inefficient marketing. Stable and artificial market prices. Subsidies to consumers. Stable food security.	Maize prices below import parity prices. Import duty high 75%. Limited market information. Need to monitor and evaluate implementation and impact.
1996	KARI K. Mutahi	Liberalisation of the Domestic Market: Its Implications on the National Agricultural Sector and more so Agricultural Research.	Decontrol of maize movement, price imports and exports. Increased competition. Prices unstable. Mixed food security status	Monitoring and evaluation of food security status. Need market information.
1997 :	IPAR: H. Nyangito and L. Ndirangu	Farmers Response to reforms in the Marketing of Maize in Kenya: A Case Study of the Trans Nzoia District	Implementation and impact of reforms mixed. More private sector participation in the trade. Yields decline/increased. Discouraging delivery to NCPB.	Free market operation. Government interference in pricing.
1997	IPAR: H. Nyangito	A Response of the Policies on the Maize Sub-Sector in Kenya. Import tariffs of 15% ad valorem.	Price and marketing fully liberalised since 1995. NCPB buyer and seller of last resort. NCPB handle strategic stocks.	Market information system lacking. Support to infrastructure development limited. NCPB unable to stabilise prices. Import and export balance for food security
1997	Technoserve: C. Ackello-Ogutu & P. Echessah	Unrecorded Cross-Border Trade Between Kenya and Uganda: Implications for Food Security.	Informal trade growing. Import tariff 75%. Non-tariff barriers high. Imports small but important.	Monitor and evaluate impact of free trade import tariff 5% (EAC, COMESA, WTO).
1998	Technoserve: C. Ackello-Ogutu & P. Echessah	Unrecorded Cross-Border Trade Between Tanzania and Her Neighbours: Implications for Food Security.	Informal trade growing. Import tariff 75%. Non-tariff barriers high. Imports small but important.	Monitor and evaluate impact of free trade import tariff 5% (EAC, COMESA, WTO). Need for market information system on maize trade.

YEAR	AUTHOR	TITLE	MAJOR ISSUES	RECOMMENDATIONS/ OUTCOME
1989	DAI	Economic and Social Soundness Analysis for the KMDP	Maize marketing sector was highly controlled. The sector was inefficient. There was need for decontrol. Private sector important in informal trade.	Liberalisation of the sector. Support to the infrastructure and market information under KMDP
1998	R.M Hassan (Ed).	Maize Technology Development and Transfer	Pre-liberalisation maize prices pan seasonal and pan-territorial.	Unstable maize prices. Increased trade. Shift in maize production regionally. Need for monitoring and evaluation of post liberalisation impact.
1998	Tegemeo Institute: G. Argwings-Kodhek	Strategies for Raising Smallholder Agricultural Productivity and Welfare	Maize production valued at Kshs 20 billion. Immediately after liberalisation prices varied substantially. Private sector import of maize well organised. Consumer prices declined. Posho mills and whole maize meal flour increased. Role of NCPB minimal in 1998.	Farmers and others need market information. Need for increased maize productivity. Establishment of stakeholder associations.
1999	Technosrve : G. Argwings-Kodhek	Policy Implication of Import and export bans on Maize, Wheat and Sugar in Kenya Unrecorded Cross-Border Trade Between Tanzania and Her Neighbours: Implications for Food Security.	Import bans and high tariffs of 75% are politically motivated. Non-tariff barriers high Economic integration will eliminate import and export barriers and tariffs.	Monitor and evaluate impact of free trade import tariff 5% (EAC, COMESA, WTO). Need for market information system on maize trade. Assess impact of relief supplies. Assess value of gains and losses due to import/export interventions.
1999	Tegemeo Institute: G. Argwings-Kodhek	Policy Issues Facing the Maize Sector in the North Rift	Pre-liberalisation maize prices pan seasonal and pan-territorial set by NCPB. Maize prices are determined by market after liberalisation. High import tariffs affect maize prices. Real prices declined by 15% in the post liberalisation era. Economic integration will affect maize prices.	Form associations and forum for consultation. Need regular monitoring and evaluation of the impact of liberalisation. Need for market information and awareness.

Source: Compiled by the author from various sources, 2000