

quotas, etc), trade remedy measures (e.g. special safeguards, or any other WTO general trade remedy measures), imports by State Trading Enterprises, and standards and technical requirements (e.g. SPS and TBT measures).

The aim of characterizing the imported products into whether they are “like”, “competitive” or “substitutable” products<sup>1</sup> in relation to the domestic products was to identify the various market participants who could be affected by an import surge of a specific product through a determination of the linkages between the imported product and the affected participants.

Given that price is the central mechanism by which markets are integrated or linked, efforts were also made to try and obtain longer term price series, especially monthly price series where possible, in order to be able to trace the effects of world market prices on local industries. The focus in the collection of price statistics was thus on the farm-gate (producer), wholesale and retail prices, identified on the basis of the markets in which the imported product competes with the domestic product, and/or where the prices of substitute products may have been affected. An evaluation of the production cost structure for the commodity under investigation and the internal handling and transportation charges was also undertaken in order to be able to better understand the nature of competition between domestic and imported products.

### 1.3 Analytical methodology for the identification of import surges

Measuring the impact of import surges on local economies is a difficult task that requires sound, in-depth analyses. In fact none of the reported cases of food import surges in developing countries quoted in the preceding paragraph have been based

on rigorous studies that meet the stringent WTO analytical procedures and criteria for the reported food imports to qualify to be treated as surges. In the case of Kenya, Oxfam studies on the imports of dairy products, rice and maize into Kenya suggest that the import surges for the three identified products may have been injurious to the domestic economy (Sharma, 2005). However, Sharma (2005) is quick to point out that these case studies in Kenya fall short of the standard needed to prove an injurious import surge under the WTO safeguards dispute cases.

Despite the methodological controversies in the determination of whether or not a given level of food imports constitutes an import surge, there is a concern that the problems associated with food import surges will intensify in the coming years as tariffs are further reduced while the developing economies lack alternative forms of safeguards for farmers. It is for this reason that the phenomenon of food import surges is fuelling growing concerns in developing countries such that most of them are not comfortable with undertaking further trade liberalization without putting some safeguard measures in place.

In the Kenyan case study, the identification of an import surge is undertaken using a methodology that is proposed and discussed in FAO (2005). According to that methodology, an import surge is said to occur whenever the level of imports in given year exceeds the moving average for the last three years by at least 30 percent. Mathematically, this approach implies that a surge will be said to have occurred if the outcome of  $\frac{A}{B}$  multiplied by 100 and then reduced by 100 is greater than 30, where  $A$  = Average Level of Imports in a given year and  $B$  = Moving Average Level of Imports over the Previous Three Years in relation to the given year. For the purposes of determining the “moving averages” for the last two most recent observations, one can get an average for each of the two figures by adding each figure to the previous two entries and then getting the average.

## 2. FOOD IMPORTS AND IMPORT SURGES

### 2.1 Introduction

This case study necessarily depends heavily on the official or recorded food imports that enter the

<sup>1</sup> Under the Subsidies and Countervailing Measures (SCM) Agreement: “like’ product is interpreted to mean a product which is identical (i.e. alike in all respect to the product under consideration, or in the absence of such a product, another product which, although not alike in all respects, has characteristics closely resembling those of the product under consideration.) . In contrast to the technical nature of the word substitutable, the interpretation of the word competitive is based on economic reasoning, from the demand or consumer side. Evidence on elasticity of substitution is useful.

commercial marketing chain. However, there may be some food imports into the country that are not intended to be traded, but some of such imports may end up spilling into the commercial marketing chain due to the activities of unscrupulous business people. Such food imports include the imported humanitarian relief food and the “transit food imports” for the neighbouring land-locked countries. The generally accepted but unrecorded cross-border trade also complicates the official position as far as the level of food imports into a given country is concerned.

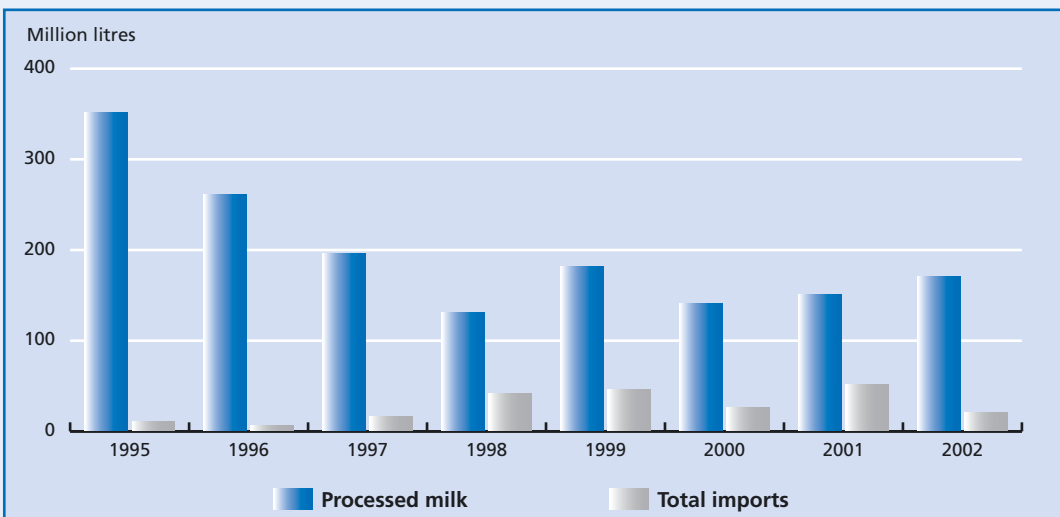
The outcome of any spillages of the imported humanitarian relief food and the diversion of the “transit foods” into the local market, coupled with trade flows through the unrecorded cross-border trade, is that significant volumes of unrecorded food imports enter the commercial marketing chain. Such volumes of unrecorded food imports are likely to contribute to food import surges, and they could thus result into some injuries to the domestic economy.

## 2.2 Dairy import surges

### 2.2.1 The nature and behaviour of the dairy imports in Kenya

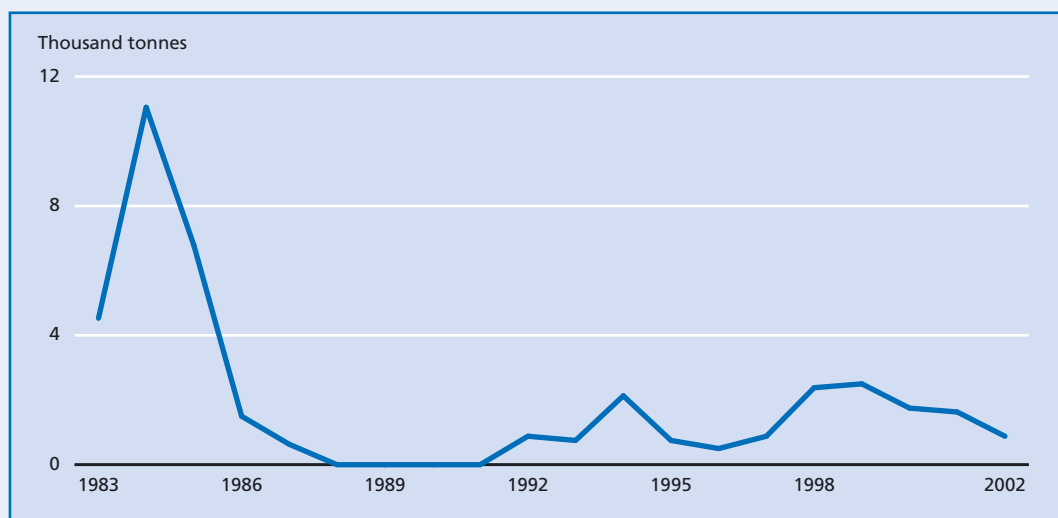
The focus of this study is on the imports of dry milk powders. There are two categories of dry milk powders, namely dry whole milk powder and dry skim milk powder. Dry milk powders are “substitutable products” with regard to raw milk because they can be used in the processing of many products that are normally processed from raw milk, including pasteurized liquid milk. These processed dairy products are consumed principally in the urban areas within Kenya. Therefore, in terms of marketing dynamics, the imported dry milk powders in Kenya should be seen as substitutes for the raw milk that could have been bought from the local farmers through the “formal” channel of the marketing system as given in Figure D2.

**FIGURE D1**  
**Comparisons of trends in total processed milk volume and dairy imports in liquid milk equivalents (LMEs) in Kenya, 1995-2002**



Source: Bar chart based on statistics from the Kenya Dairy Board

**FIGURE D2**  
**Kenya's imports of dried milk powder, 1983-2002**



Source: Mbwika, *et al.* (2005) and Kenya Dairy Board (KDB)/Kenya Revenue Authority (KRA) Records

Figure D1 presents the trends in the volume of locally processed dairy products in Kenya between 1995 and 2002 and also shows that the dairy imports (in liquid milk equivalents, LMEs) were rising relatively fast during the same period, essentially to fill up the gap created by the declining local production of processed dairy products.

The main sources of the dairy products imported by Kenya are Italy, New Zealand, Netherlands, Zimbabwe and South Africa. The minor ones include Belgium, United Kingdom (UK), France and Germany (KDB/KRA Records, 2005).

An evaluation of dairy import figures shows that dry milk powders account for about 44 percent of the total volume and value of dairy imports into Kenya, with milk cream, infant milk and butter being the other important dairy imports (Karanja, A. M. 2003). Dry milk powders are “substitutable products” to raw liquid milk since they can be used in the processing of many products that are normally processed from the raw liquid milk. As such, the prices of the imported dry milk powders may be expected to affect the farm-gate or producer prices for the raw liquid milk. Figure D2 gives the trends in the quantities of dry milk powders imported into Kenya for the 1983 – 2002 period.

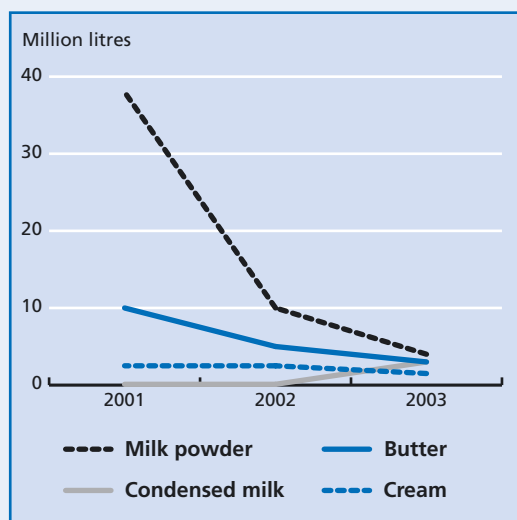
Figure D2 shows that there were substantial increases in the imports of dry milk powders in 1984, 1992, 1994, and from 1998 to 2001.

Dry milk powder imports in liquid milk equivalents (LMEs) in Kenya at any given year rarely exceed 16 percent of all the milk processed in the country. Therefore, it is the increased scale of importation of dry milk powders that should be of concern to development planners.

The government's efforts to revive the KCC since early 2000 appear to have paid off some dividends, judging from the increased amounts of locally produced and processed dairy products and the sharp decline in dairy imports over the last four years. Figure D3 illustrates the behaviour of dairy imports in Kenya since 2001.

Figure D3 shows that the imports of the different types of dairy products by Kenya have declined steadily since 2001, basically reflecting increasing local production of the same products during the same period. Therefore, the remarkable increases in dairy import during the 1999/2000 period were mainly as a result of the collapse of the KCC in 1999, leading to the lack of processed dairy products in the country from local sources.

**FIGURE D3**  
Trends in dairy imports after the revival of local dairy processing through the KCC in Kenya, 2001-2003



Source: Chart based on the Statistics from the Kenya Dairy Board Records.

### 2.2.2 Identification of dry milk powders Import surges

For the purposes of the identification of an import surge in this analysis, a surge is said to occur whenever the current level of imports exceeds the previous three-years moving average by at least 30 percent. Therefore, mathematically, a surge will be said to have occurred if **A** divided by **B** multiplied by **100** and then less **100** is greater than **30**, where **A** = Annual Imports Level in a given year and **B** = Previous Three-Years Moving Average Import Level.

#### *Comparisons of annual versus three-years moving average import levels: the case of dry skim milk powder imports*

Table D3 presents the given year's imports of dry skim milk powder versus the previous three-years moving average of the imports of dry skim milk powder.

From Table D3, dry skim milk powder imports were rising in years 1998, 1999, and 2001, but only

**TABLE D3**  
Kenya's imports of dry skim milk powder, 1995-2002

Year	A = Current imports, Kg	B= 3-years moving average imports, Kg	{(A/B) multiplied by 100 less 100 percent
1995	278 332.50	396 545.90	- 29.81
1996	141 888.97	927 273.10	- 84.70
1997	769 416.22	1 367 793.35	- 43.75
1998	1 870 514.11	1 421 126.79	+ 31.62
1999	1 463 149.72	1 237 791.15	+ 18.21
2000	929 716.54	1 003 830.48	- 7.38
2001	1 320 507.20	1 059 980.09	+ 24.58
2002	761 267.71	1 003 830.48	- 24.16
REMARKS	Last column indicates deviations, either below or above 100 percent		

the 1998 import levels at 31.62 percent above the three-years moving average qualify to be described as a surge. Even though the year 2001 import level at 24.58 percent above the three-years moving average is high, it does not merit to be described as a surge.

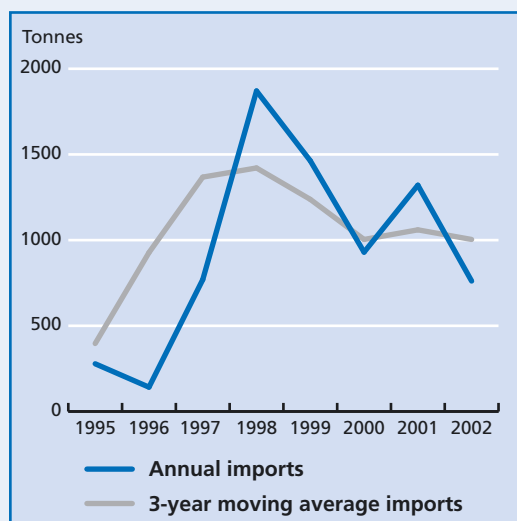
Figure D4 gives a graphical representation of the given year's imports of dry skim milk powder against the background of the previous three-years moving average of the imports of dry skim milk powder.

Figure D4 makes it easy to see that the dry skim milk powder imports into Kenya were actually rising above the normal trend in years 1998, 1999 and 2001.

#### *Comparisons of annual versus three-year moving average import levels: the case of dry whole milk powder imports*

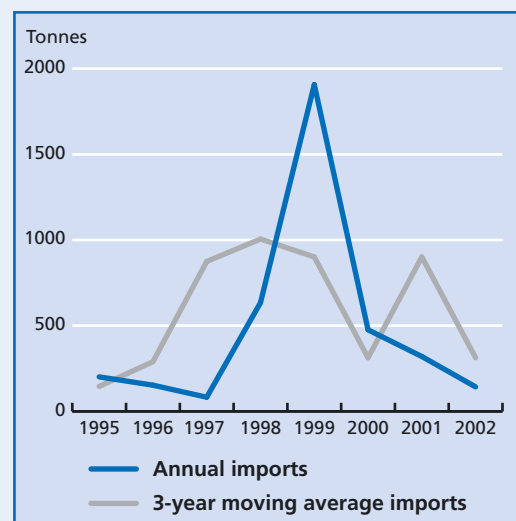
Table D4 presents the given year's imports of dry whole milk powder versus the previous three-years

**FIGURE D4**  
Comparison of trends in dry skim milk powder imports 1995-2002: Annual versus three-years moving averages



Source: Charts based on the Table D3 Data, as obtained from the Kenya Dairy Board Records

**FIGURE D5**  
Comparison of trends in dry skim milk powder Imports 1995-2002: Annual versus three-years moving averages



Source: Charts based on the Table D4 Data, as obtained from the Kenya Dairy Board Records.

**TABLE D4**  
Kenya's imports of dry whole milk powder, 1995-2002

Year	A = Current imports, Kg	B= 3-years moving average imports, Kg	{(A/B) multiplied by 100 less 100 percent
1995	201 150.00	145 458.25	+ 38.29
1996	152 754.45	289 869.75	- 47.30
1997	82 470.30	874 574.89	- 90.57
1998	634 384.51	1 005 712.63	- 36.92
1999	1 906 869.85	900 992.03	+ 111.64
2000	475 883.52	312 969.64	+ 52.05
2001	320 222.72	900 992.03	- 64.46
2002	142 802.68	312 969.64	- 54.37
REMARKS	Last column indicates deviations, either below or above 100 percent.		

moving average of the imports of dry whole milk powder, and the same data are presented graphically in Figure D5.

From Table D4, dry whole milk powder imports were rising in years 1995, 1999, and 2000, with the levels of imports during the three years being 38.29

percent, 111.64 percent and 52.05 percent above the previous three-years moving averages. Hence the import levels during the three given years qualify to be described as surges. The surges are easily discernible from the graphs given in Figure D5.

Figure D5 gives a graphical representation of the given year's imports of dry whole milk powder against the background of the previous three-years moving average of the imports of the dry whole milk powder.

Figure D5 makes it easy to see that the dry whole milk powder imports into Kenya were actually rising above the normal trend in years 1995, 1999, and 2000.

### *Comparisons of annual versus three-year moving average import levels for the combined dry skim and whole milk powder imports*

When the combined imports of dry skim milk powder and dry whole milk powder are considered, only the years 1995, 1998, 1999, and 2000 qualify to be described as years of dairy import surges in Kenya, as demonstrated by the data and calculations that are given in Tables D3 and D4, and the corresponding graphs in Figures D4 and D5.

## 2.3 Sugar import surges

### 2.3.1 The nature and behaviour of the sugar imports in Kenya

Sugar production in Kenya occurs in western Kenya (Nyanza and Western provinces), but consumption occurs in all parts of the country. The six (6) operational sugar factories in western Kenya produce about 450 000 mt of sugar annually, yet domestic demand for sugar is about 620 000 mt. The shortfall is met through imports. The types of imported sugar in Kenya are basically "like products" in relation to the sugar produced and marketed locally. Since the existing sugar milling factories produce mill white sugar (often described as raw sugar), the industrial users of the refined white sugar always have to depend on imported sugar for their manufacturing processes. The import tariffs imposed by Kenya on imported sugar are intended to raise the prices of the imported sugar to a level that is at par with the price of domestically produced sugar.

The level of sugar imports in Kenya has varied from year to year for various reasons. Sugar demand in the country is relatively stable, yet domestic sugar production is dependent on rain-fed conditions. Less than 5 percent of the sugar production is under irrigation. Therefore, rainfall variations, including drought and flood situations, are expected to affect domestic sugar production and sugar import requirements from year to year. For example, Kenya imported some 182 225 mt of sugar in 2003, compared to 129 996 mt imported in 2002, while production actually decreased by 9 percent in 2003, from 494 249 mt in 2002 to 448 489 mt in 2003 (KSB 2003 Annual Report). In 2004, domestic sugar production stood at 516 803 mt, reflecting a 15 percent increase over the 2003 production level.

The government policy is to meet domestic sugar shortfalls primarily through imports from the regional trading bloc comprising the Common Market for Eastern and Southern Africa (COMESA). Based on the average domestic sugar production and consumption levels in any given year, Kenya's sugar imports threshold is 200 000 mt, and this is the current sugar industry safeguard quota allocation that Kenya has been able to negotiate for through the COMESA trading protocol. This quota allocation is shared between mill white sugar and white refined sugar for industrial use, and has been divided into 89 000 mt of mill white sugar for domestic use and 111 000 mt of refined white sugar for industrial use over the last two years.

Figure S1 gives the trends in sugar production, imports, and consumption in relation to the COMESA quota threshold, including the imports and exports when applicable.

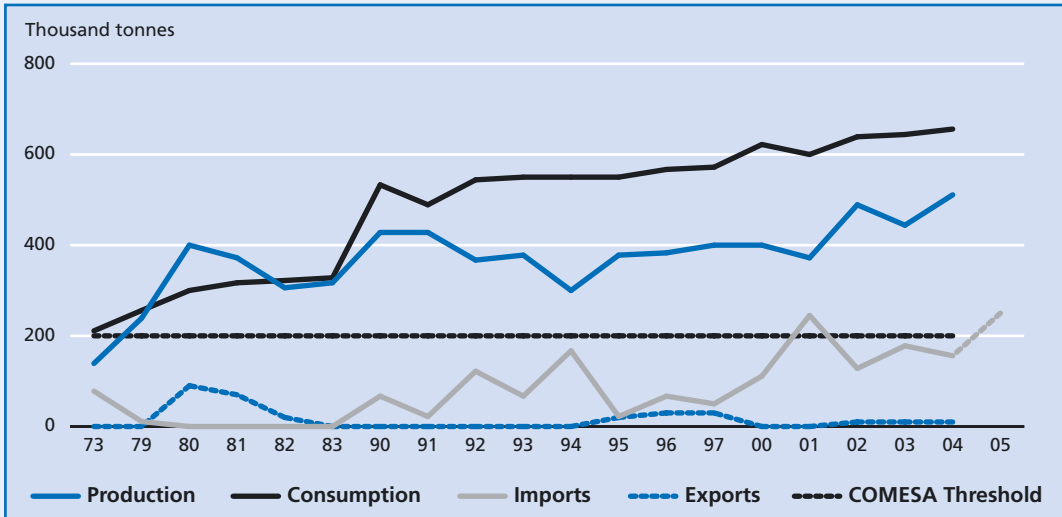
In Figure S1, the gap between the consumption and production trend lines represents the sugar deficit, with major troughs having been recorded in 1995 and 2001. The figure shows that the sugar imports grew in volume from 65 816 mt in 1996 to 171 308 mt in 1998 and to 249 336 mt in 2001. Total sugar imports in 2004 amounted to 164 020 mt.

The main sources of the sugar imported into Kenya include both developing and developed countries. These countries are given in Figure S2.

Figure S2 shows that most of Kenya's sugar imports originate from South Africa and the COMESA region (Egypt, Malawi, Swaziland and Sudan). The KSB/

**FIGURE S1**

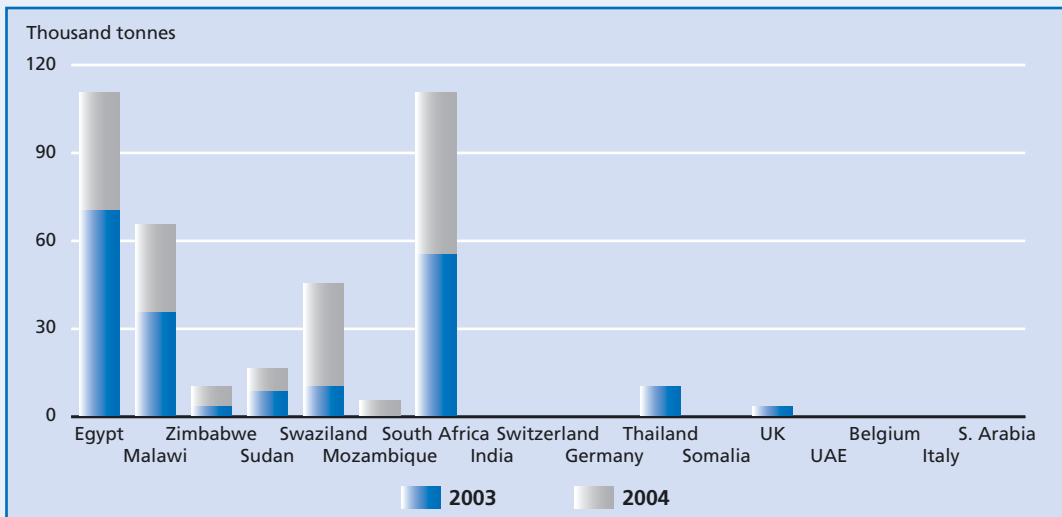
**Trends in sugar production, consumption, imports and exports in Kenya, 1973-2005**



Source: KSB Yearbook, 2005

**FIGURE S2**

**Sugar imports into Kenya by country of origin, 2003-2004**



Source: KSB Year Book 2004

KRA records for the 2001 – 2004 period show that relatively small quantities of sugar were imported from European Union during that time—with the United Kingdom, Germany, Belgium and Italy being the only recorded sources of primarily white refined sugar, except for small quantities of raw (brown) sugar that were imported from the United Kingdom in 2004.

The standing trade arrangements among the COMESA member countries, which include Kenya, require that Kenya sources its sugar requirements within the COMESA region, unless there are compelling reasons to source it outside the region. Under the COMESA Sugar Safeguard Protocol, Kenya is allowed to impose a quantitative restriction of sugar imports into its market until the early part of 2008 as follows:

A quota of 200 000 tonnes of sugar to be imported annually duty free from the COMESA countries. This is to meet the shortfall between domestic production and local consumption. Of the quota, 89 000 tonnes is for domestic mill white sugar while 111 000 tonnes is for industrial refined sugar.

Application of a maximum tariff of 123 percent, made up of 100 percent tariff, 16 percent VAT and 7 percent SDL to any imports above the quota allocation.

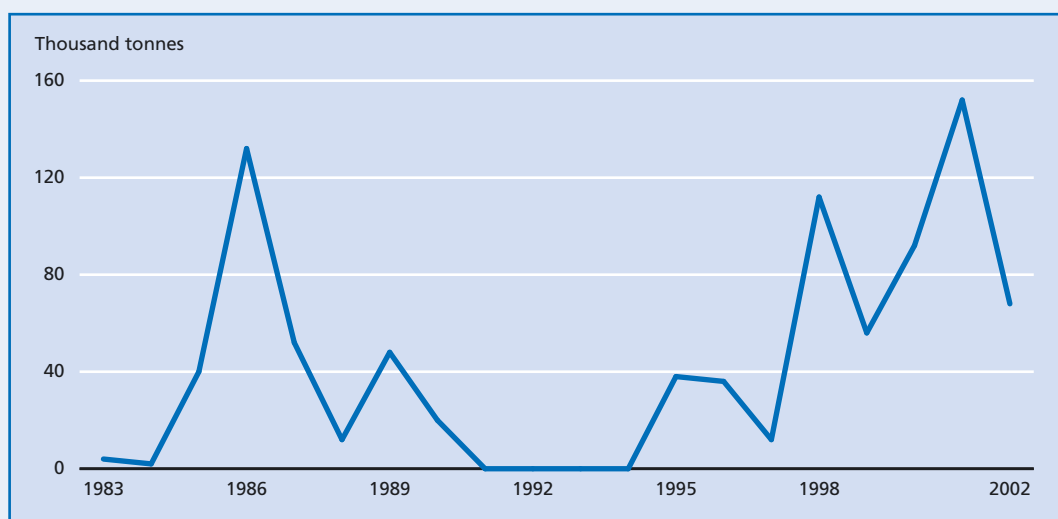
The total sugar imports, as reflected in Figure S1, include both white mill sugar for domestic consumption and refined white sugar for industrial use.

Kenya acquires all its refined sugar requirements, estimated at around 110 000 mt annually, through imports. The white refined sugar is imported from both the COMESA region and the European Union (EU). For example, the EU exported 15 926 mt of sugar into Kenya in 2001/2002 and competed with Malawi, Mozambique, Zambia, South Africa and Sudan for the Kenyan market. However, the proportion of refined sugar imported from the EU into Kenya varies from year to year, and it was about 16 percent in 2001/2002 and less than 1 percent in 2002/2003. Figure S3 gives the trends in the imports of refined sugar by Kenya between 1983 and 2002.

Figure S3 shows that there has been an increasing trend in the imports of refined sugar since 1995, with fairly pronounced increases in 1996, 1998, and 2001.

Both Figures S1 and S3 above are based on the official KSB statistics. However, a study by the Action-Aid (Kegode, 2005) shows that some sugar traders in Kenya have sugar stocks whose origin is Brazil, Thailand or Saudi Arabia, yet such sources are not captured in the KSB records. Therefore, the actual

**FIGURE S3**  
Kenya imports of refined sugar, 1983-2002



Source: Mbwika, *et al.* (2005).



levels of the sugar imports into Kenya must be much higher than what the above figures depict.

Kenya may experience some sugar carry-over stocks in any given year if the local demand for sugar in the previous year falls short of the combined total of the sugar production in that year plus the sugar carry-over stocks from the previous year and the sugar imports made during the previous year. For example, the closing stocks were 5 322 mt in 2004, compared to 14 536 mt in 2003. Figure S4 depicts the relationship between the sugar imports and the closing stocks.

In Figure S4, the KSB graph reflects local sugar production levels, i.e. total domestic sugar production in Kenya. The figure shows that there has been an increasing trend of sugar imports between 1996 and 2005. The figure also shows that the closing stocks of sugar inventory were high only during the 1998 and 2001–2002 periods. From Figure S4, it is evident that Kenya had substantially high levels of sugar carry-over stocks from the previous year in 1998.

### 2.3.2 Identification of sugar import surges

For the purposes of the identification of an import surge in this analysis, a surge is said to occur

whenever the current level of imports exceeds the previous three-years moving average by at least 30 percent. Therefore, mathematically, a surge will be said to have occurred if  $A$  divided by  $B$  multiplied by 100 and then less 100 is greater than 30, where  $A$  = Annual Imports Level in a given year and  $B$  = Previous Three-Years Moving Average Import Level - see Table S1.

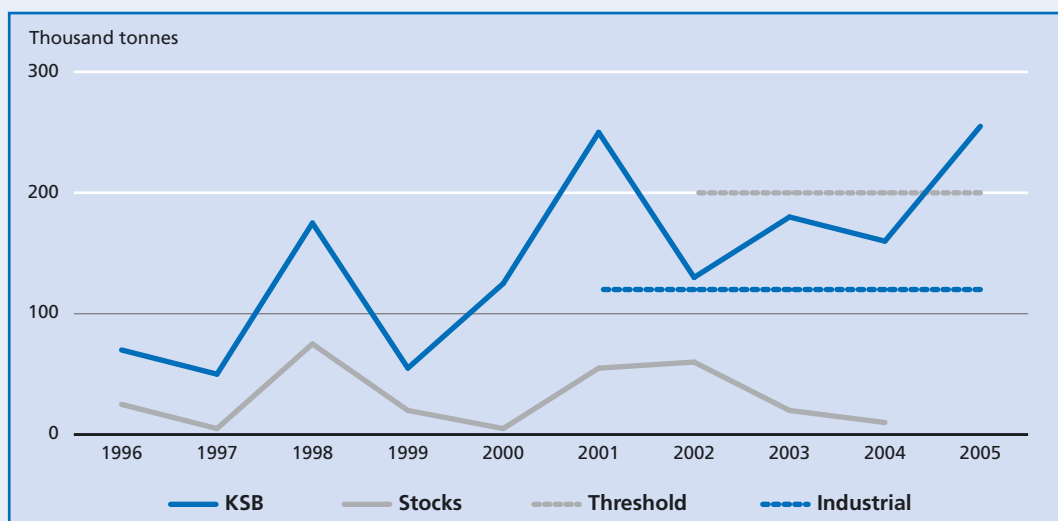
Table S1 presents the comparisons of the annual sugar import levels versus the three-years moving average import levels in a tabular form. The same information is presented graphically in Figure S5.

From Table S1, it is evident that sugar imports in Kenya experienced surges only in 1998 during the last 10 years.

From Figure S5, it is evident that sugar import levels were above the three-years moving averages in 1998, 2001, 2003 and 2004. However, as indicated in Table S1, it is only in 1998 that the degree of the imports increment over the three-years moving average was at least equal to the 30 percent threshold level that qualifies the import increase to be declared a surge.

The Kenya's sugar industry appears to have begun to experience sharp increases in sugar imports after the liberalization of the sugar trade and the removal of price controls in the country in the 1990s.

**FIGURE S4**  
Sugar imports, stocks and quantities for industrial use, 1996-2005



Source: Kenya Sugar Board: Statistics Yearbook, 2004.

**Table S1**  
**Comparisons of the annual sugar import levels and the three-years moving average import levels, 1996-2004**

Year	A = Current Imports, Mt	B= 3-Years Moving Average Imports, Mt	SURGE = {(A/B) Multiplied by 100 Less 100} percent
1996	48 599	95 828	- 49.3
1997	52 370	98 862	- 47.0
1998	186 515	120 741	+ 54.5
1999	57 701	119 389	- 51.7
2000	118 007	143 477	-17.8
2001	182 459	164 883	+ 10.7
2002	129 966	158 670	- 18.1
2003	182 225	164883	+ 10.5
2004	163 820	158 670	+ 3.2
REMARKS	Last column indicates deviations, either below or above 100 percent		

Source: Data from the KSB Records; calculations by the Authors, 2006.

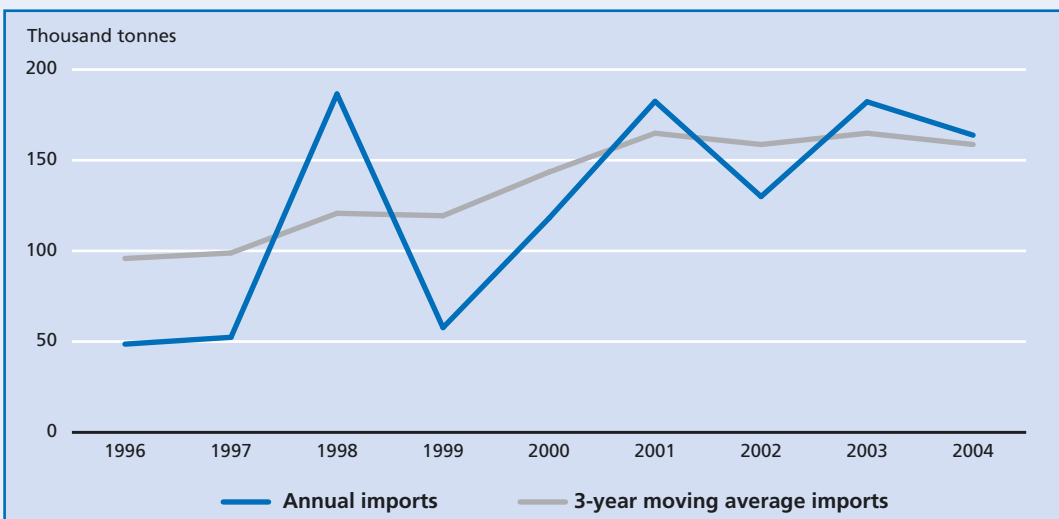
The sugar imports data, as presented in Table S1 and graphically in Figure S5, basically capture the official (recorded) sugar imports by the local traders and the manufacturing industry, which are basically commercial imports. An examination of the Kenya Sugar Board (KSB) and the Kenya Revenue Authority (KRA) records for the sugar imports over the 1996-2004 period indicated negligible amounts of sugar imports for relief food purposes by the World Food Programme (WFP). Therefore, the only sugar imports that could distort the trends given in the above data would be those that enter the country through the unrecorded cross-border trade.

## 2.4 Maize Import surges

### 2.4.1 The nature and behaviour of the maize imports in Kenya

Under the normal conditions, i.e. when the weather in Kenya is favourable, maize production levels in the country range from 24 million to 28 million 90-kg bags per annum (from a cultivated land area of about 1.5 million hectares per annum). Per capita maize consumption in Kenya is estimated at 98 kg per person per year (Jayne, *et al.* 2005). Therefore, the total

**Figure S5**  
**Annual versus three-years moving averages for sugar Imports into Kenya, 1996–2004**



Source: Authors Work, based on Data from the KSB/KRA Records

national demand for maize is about 30-34 million 90-kg bags per year, assuming that Kenya's population is currently about 30 million. Consequently, domestic maize supply deficits have continued to be recorded in the range of from two to six million 90-kg bags (i.e. 180 000 to 540 000 mt) annually.

The maize production deficits in Kenya have been bridged over the years through both recorded and unrecorded cross-border trade. On the basis of cost considerations, the geographical positioning of Kenya limits its sources of the imports for the preferred white maize grain to a few countries, mainly those in the southern Africa region. If necessary, Kenya could import yellow maize grain outside the Africa region, e.g. from the United States of America (USA). Over the last one decade, the principal sources of Kenya's maize imports have been South Africa, Zimbabwe, USA, Britain, Italy and Argentina. However, Zimbabwe was a major supplier of maize to Kenya only up to 1998, after which Zimbabwe itself started to become a maize deficit region.

Figure M1 illustrates the general trend in maize production, imports, exports and prices in Kenya, based on the operations of the NCPB, over the 1988-2004 period.

Figure M1 shows that maize imports in Kenya have steadily been increasing from an annual low

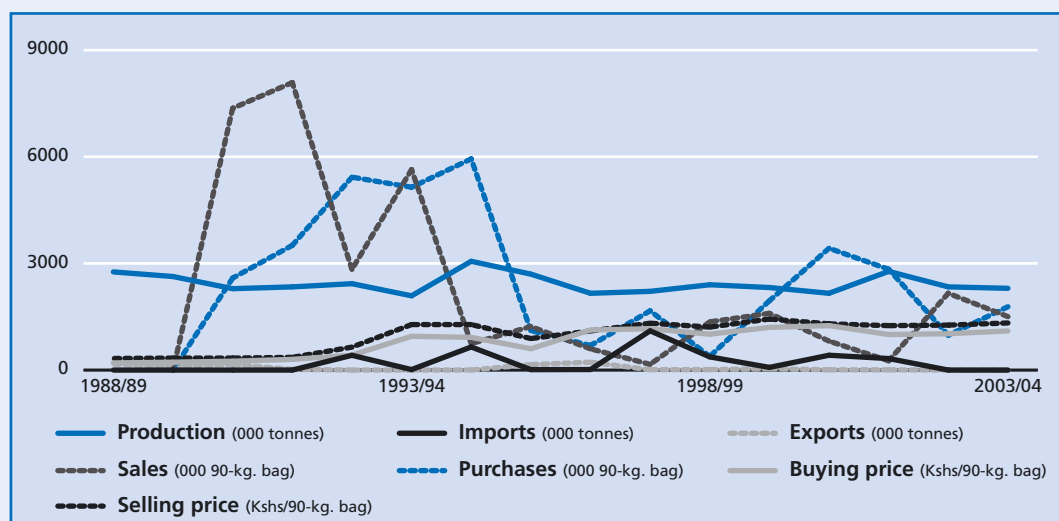
of 2.9 percent to an annual high of 12 percent of domestic consumption since 1988. The figure suggests that Kenya's maize imports increase with the falling quantities of maize that are bought from domestic sources and sold locally by the NCPB. Given the nature of the maize marketing system in Kenya, the NCPB buying and selling prices for maize can be taken as the general indicators of the respective maize producer and consumer price in Kenya, and these prices are also given in Figure M1.

Kenya does not normally produce surplus maize for the export market. However, due to the effects of unrecorded but significant cross-border trade in agricultural and other commodities among the three East African Community (EAC) member states (i.e. Kenya, Uganda and Tanzania), Kenya occasionally finds itself with an accumulation of maize stocks in the NCPB warehouses. As a result, Kenya has had to export over 1.5 million 90-kg bags of maize in the last five years (Nyameino, *et al.* 2003).

#### 2.4.2 Identification of maize import surges

For the purposes of the identification of an import surge in this analysis, a surge is said to occur whenever the current level of imports exceeds the previous three-years moving average by at least

**FIGURE M1**  
**Trends in maize production in Kenya and NCPB nominal prices and trading volumes, 1988/09-2003/04**



Source: Charts based on the data given in Appendix Table M1 (in the Appendices to this report).

30 percent. Therefore, mathematically, a surge will be said to have occurred if **A** divided by **B** multiplied by **100** and then less **100** is greater than 30, where **A** = Annual Imports Level in a given year and **B** = Previous Three-Years Moving Average Import Level.

Table M1 presents the comparisons of the annual maize import levels versus the three-years moving average import levels in a tabular form. The same information is presented graphically in Figure M2.

From Table M1, it is evident that maize imports in Kenya experienced surges in years 1994, 1997, 2000, 2001 and 2004 at levels much, much greater than 30 percent, at over 60 percent in all these years. These surges are well illustrated in Figure M2.

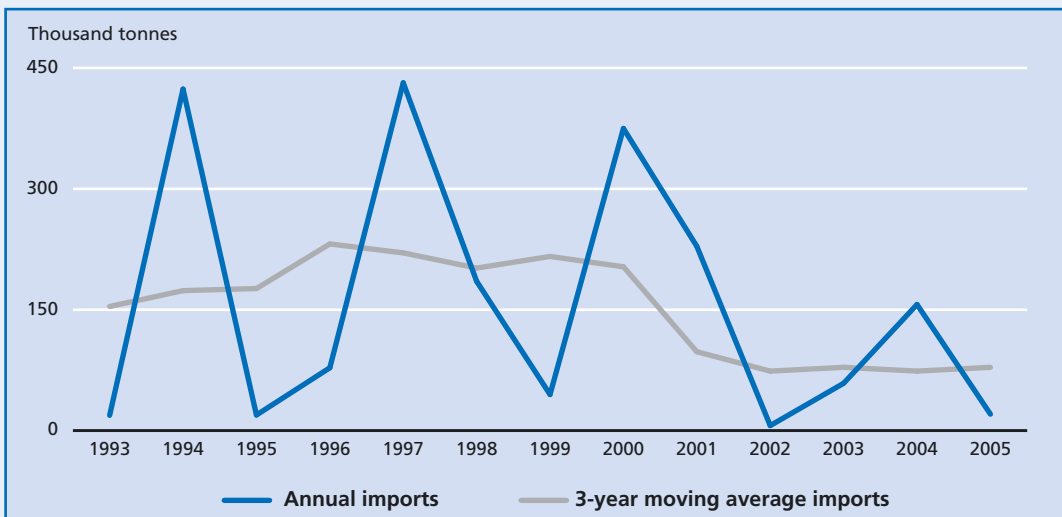
The maize imports data, as presented in Table M1 and graphically in Figure M2, includes both commercial imports by local traders and relief food imports by the World Food Programme (WFP). The available maize imports from the National Cereals and Produce Board (NCPB) were an aggregate of the two types of imports, and it was not possible to disaggregate the 1993-2000 data into commercial and relief food imports. However, it was possible to do so for the 2001-2005 data, as given in Table M2.

**TABLE M1**  
**Comparisons of the annual maize import levels and the three-years moving average import levels, 1993-2005**

Year	A = Current Imports, Mt	B= 3-Years Moving Average Imports, Mt	SURGE = {(A/B) Multiplied by 100 Less 100} percent
1993	19 047	154 090	- 87.6
1994	423 773	173 754	+ 143.9
1995	19 450	176 345	- 89.0
1996	78 038	231 652	- 66.3
1997	431 547	220 592	+ 95.6
1998	185,372	201 726	- 8.1
1999	44 858	216 174	- 79.2
2000	374 949	203 321	+ 84.4
2001	228 714	97 936	+ 133.5
2002	6 300	73 887	- 91.5
2003	58 793	78 620	- 97.8
2004	156 567	73 887	+ 111.9
2005	20 500	78 620	- 73.9
REMARKS	Last column indicates deviations, either below or above 100 percent		

Source: Data from NCPB Records; calculations by the Authors, 2006.

**FIGURE M2**  
**Annual versus three years moving averages for maize imports into Kenya, 1993–2005**



Source: Authors Work, based on Data from NCPB Records.

Over the 2001-2005 period, WFP imports averaged 53.2 percent of total maize imports into Kenya, a factor that reflects the importance of relief food imports in Kenya, especially following drought conditions in Kenya, as was the case during the 2001-2002 period, with relief maize imports averaging over 90 percent of the total maize imports for the 2-years period. It is, therefore, significant to note that the maize import surge in 2001 was actually 133.5 percent of the average level of maize imports, based on the moving average of the maize imports during the previous three years to 2001 (Table M1).

### 3. MAPPING THE SECTOR: THE PRODUCT AND MARKET CHARACTERISTICS

#### 3.1 Overview

This study focuses on the problems associated with the surges in the imports of maize, sugar and dairy (dry milk powders) in Kenya. The marketing systems for the three commodities in Kenya have a lot in common. The farmers are the suppliers of the raw (i.e. the processing) materials whose outputs compete in the domestic market for processed products with the imported products.

At the farm-gate or primary production level, the farmers sell their raw material—i.e. grain maize in

the case of the maize marketing system, sugarcane in the case of the sugar marketing system, and raw milk in the case of the dairy marketing system—to the local commodity processors. After processing, the distributors deliver the processed products either to the wholesalers who then pass them on to the retailers, or directly to the retailers. The retailers then sell the processed products to the final consumers. In this domestic marketing chain, the producer (farm-gate) price is the most important determinant of the development of the local industry, and this is the type of price that gets affected by surges in food imports.

When imports of maize, sugar, or dairy (dry milk powders) become necessary, the local processors and/or wholesalers/distributors of maize, sugar or dairy products normally play the role of the importers, and that is why the local farmers often lack marketing outlets for their produce in the face increasing import of the “like” or “substitutable” products if the local production conditions improve while the imports are taking place.

For Kenya, the analyses indicate that the prices of the imported commodities or their derivatives do not appear to influence the domestic consumer prices for these products: the local consumer prices exhibit an increasing trend even in the face of increasing imports that are deemed cheaper. On the other hand, the analyses indicate that the imported commodities or their derivatives have a depressing effect on the domestic producer prices for the “like” or “substitutable” products.

**TABLE M2**

**Breakdown of 2001-2002 maize imports into commercial and WFP (relief food) components in mt**

Year	Commercial Maize Imports (Mt)—C	WFP (Relief Food) Maize Imports (Mt)—W	Total Maize Imports (Mt)—M	Was percent of M
2001	37 801	190 913	228 714	83.5
2002	0	63 000	63 000	100.0
2003	48 150	10 643	58 793	18.1
2004	140 406	16 251	156 567	10.4
2005	20 500	0	20 500	0.0
Period TOTAL	246 857	280 807	527 664	53.2

Source: Data from NCPB Records; Calculations by the Authors, 2006.